



## Phase I Environmental Site Assessment

**Pennington Triangle Property  
APN 117-06-083A  
126 North 6th Avenue  
Tucson, Arizona**

Presented to:

**City of Tucson  
Environmental Services**  
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Presented by:

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December 3, 2008  
AAI Date: November 5, 2008  
File No. 10207028.05

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## SCS ENGINEERS

December 3, 2008  
File No. 10207028.05

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City of Tucson Environmental Services  
100 North Stone Avenue, 2nd Floor  
Tucson, AZ 85701

Subject: Phase I Environmental Site Assessment  
Pennington Triangle Property  
APN 117-06-083A  
126 North 6th Avenue  
Tucson, Arizona

Dear Lynne:

SCS Engineers (SCS) is pleased to submit this Phase I Environmental Site Assessment for the above-referenced property located in Tucson, Arizona. SCS appreciates the opportunity to assist you with this project. If you have any questions regarding this report, please feel free to contact Pat Hartshorne at (520) 696-1617.

Sincerely,

Patricia M. Hartshorne, RG  
Project Manager

David F. Laney, CHMM  
Manager of Environmental Services  
**SCS ENGINEERS**

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## EXECUTIVE SUMMARY

City of Tucson Environmental Services (COT ES) retained SCS Engineers (SCS) to perform a Phase I Environmental Site Assessment (ESA) for a triangular property bounded by 6<sup>th</sup> and Toole Avenues and Pennington Street in downtown Tucson, Arizona (site). The Pima County Assessor's Parcel Number (APN) for the site is 117-06-083A (formerly 117-06-082, 117-06-083, 117-06-084, and 117-06-085) and the address is 126 North 6<sup>th</sup> Avenue. The ESA consisted of a site reconnaissance; interviews; review of environmental, historical, and physical records pertaining to activities on and adjacent to the site; and interpretation and reporting of findings.

At the time of the site reconnaissance, the site was occupied by a Ticet shuttle bus stop and contained a canopy bus shelter in the center, a parking area for Ticet employees on the west, and paved driveway areas. The majority of the property was paved with asphalt and smaller areas of concrete; several small unpaved gravel areas were located adjoining the streets in the north portion of the site. Parking meters were located along Toole Avenue. Numerous utilities were observed around the exterior of the site, including light poles, traffic signals, fire hydrants, overhead utility lines along Toole Avenue, subgrade utility vaults for various utilities, and an aboveground utility box for traffic signals. No recognized environmental conditions (RECs) were identified on the site during the site reconnaissance.

Based on the historical information reviewed, the site was occupied by a residence in 1880. Occupants of the site through the early 1950s included residences, two auto service stations, stores, restaurants, rooming or lodging houses, a cleaning and pressing business, a grocery, a laundry, and a motor company. By the mid-1950s, the site was occupied by a parking lot. At the end of 2007, a bus shelter for the Ticet shuttle bus was constructed on the site.

Potential historical RECs that were formerly located on the site include the two auto service stations, which were located in the north (1930-1941) and southwest (1929-1953) portions of the site, the motor company in the south portion of the site (1952-1954), and the laundry in the southwest portion of the site (1924). These facilities may have used chemicals and/or petroleum hydrocarbons and the service stations may have had underground storage tanks (USTs). Based on a 1997 geophysical survey of the site, there is an anomaly in the southwest portion of the site that could indicate the presence of USTs. Two other anomalies were identified on the central portion of the site. However, these anomalies were not located in an area that would indicate an environmental concern due to previous historical uses. Locations of these potential historical RECs are shown on Figure 3 in Appendix A.

Properties adjoining the site are currently or have historically consisted of a storage yard, parking lots and a parking garage, office building, a bus transit center, a youth center, engineering firms, telephone and communication companies, a park, a railroad depot, residences, various stores, a milling and machinery shop, bottling works, an ice house, an oil warehouse, hotels, express and freight agencies, a firemen's hall, various offices, lodgings, restaurants, various auto service type shops and gas stations, auto sales and rental companies, a post office, a health studio, warehouses, barber and beauty shops, a dance studio, flooring companies, a school, a car wash, a tire company, a rubber company, a cleaners, a beer distributor, a lock and key shop, a military recruiting office, and a cab company.

The site was not identified in environmental database listings. Environmental regulatory database listings identified in the vicinity of the site included five Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) sites, two Resource Conservation and Recovery Act (RCRA) generator listings, two Water Quality Assurance Revolving Fund (WQARF) sites, one Superfund Programs List site, two Brownfields/Voluntary Remediation Program sites, three UST facilities, 16 leaking UST (LUST) facilities, and 130 registered wells. The following identified environmental regulatory database listings may be considered potential RECs for the site:

- The Union Pacific Railroad (UPRR) Passenger Depot Brownfields/Voluntary Cleanup Program site adjoins the site to the east and southeast and is hydrogeologically upgradient of the site. The UPRR property has groundwater and soil contamination in several locations. The primary source of the contamination is diesel fuel, with lesser amounts of gasoline and VOCs. This contamination could potentially have had an environmental impact on groundwater beneath the site.
- Trailways Inc. has an open LUST case with Arizona Department of Environmental Quality (ADEQ) and is located potentially hydrogeologically upgradient of the site. Soil and groundwater have been impacted, the extent of contamination has been defined, and remediation is required. The release from this LUST facility could potentially have had an environmental impact on groundwater beneath the site.

### **Recognized Environmental Conditions**

SCS has performed a Phase I ESA in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527-05 and COT specifications for a triangular property (APN 117-06-083A) at 126 North 6<sup>th</sup> Avenue in downtown Tucson, Arizona. Any exceptions to, or deletions from, this practice are described in Section 10 of this report. This assessment has revealed evidence of the following potential RECs in connection with the site:

- Former occupants of the site that are potential historical RECs due to the potential use of chemicals and/or petroleum hydrocarbons and the presence of underground storage tanks include two auto service stations, a motor company, and a laundry. Based on a 1997 geophysical survey of the site, there is an anomaly in the southwest portion of the site that could indicate the presence of USTs.
- Groundwater contamination associated with various releases has been previously identified along the railroad corridor northeast of the site, including the train depot property adjoining the site to the east and southeast. It is possible that groundwater beneath the site has been impacted by contamination that originated at these properties.

## Recommendations

Based on the findings of this Phase I ESA for the site, SCS recommends the following:

- An exploratory excavation should be performed in the vicinity of the geophysical anomaly in the southwest portion of the site in the area of the former service station in order to identify the source of the anomaly. If USTs are found, they should be removed and a closure investigation should be performed in accordance with ADEQ requirements. Anomalies were not identified in the north portion of the site where the other service station was located; therefore, no exploratory excavations are recommended for this area.
- Surface soil sampling should be performed at the former locations of the two auto service stations, the motor company, and the laundry in the north, south, and southwest portions of the site to assess any residual contamination that may be present. Suggested analyses may include petroleum hydrocarbons, volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and metals.
- SCS does not recommend investigation of potential impacts to groundwater beneath the site that may have originated on adjoining properties. If construction activities associated with future development of the site include the construction of structures, additional research should be performed to identify whether investigations by UPRR or other parties have determined whether groundwater contamination extends beneath the site. If this information is not available, an onsite monitoring well should be installed for collection of groundwater samples to evaluate existing conditions. Performance of a vapor intrusion assessment in accordance with ASTM E 2600-08 may also be merited.

# 1 INTRODUCTION

## PURPOSE

City of Tucson Environmental Services (COT ES) retained SCS Engineers (SCS) to perform a Phase I Environmental Site Assessment (ESA) for a triangular property bounded by 6<sup>th</sup> and Toole Avenues and Pennington Street in downtown Tucson, Arizona (site). The Pima County Assessor's Parcel Numbers (APN) for the site is 117-06-083A (formerly 117-06-082, 117-06-083, 117-06-084, and 117-06-085) and the address is 126 North 6<sup>th</sup> Avenue. The ESA consisted of a site reconnaissance; interviews; review of environmental, historical, and physical records pertaining to activities on and adjacent to the site; and interpretation and reporting of findings. A Site Location Map is provided as Figure 1 in Appendix A.

This ESA was conducted to evaluate the potential for recognized environmental conditions (RECs) at the site as defined in the American Society of Testing and Materials (ASTM) Standard E 1527-05 and is intended to fulfill the all appropriate inquiry clause of the "innocent landowner defense" and "bona fide prospective purchaser" clauses of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). ASTM Standard E 1527-05 defines RECs as:

*The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not RECs.*

## DETAILED SCOPE OF SERVICES

This work was performed in accordance with the current City of Tucson (COT) contract No. 071100 and our Proposal No. 10.145208 dated October 16, 2008. Notice to proceed was received from COT ES on October 21, 2008. This ESA was conducted in accordance with the guidelines set forth in the ASTM Standard E 1527-05, and consisted of the following four components:

- **Site Reconnaissance** – A visual reconnaissance of the subject site and surrounding properties;
- **Records Review** – Examination of historical documents and state and federal regulatory agency records;

- **Interviews** – Interviews with individuals and public officials familiar with the site’s history; and
- **Report** – Evaluation and Report.

## SHELF LIFE OF AAI DOCUMENTS

The AAI rule specifies that all appropriate inquiries must be conducted within a one-year period prior to the date a property is acquired. The United States Environmental Protection Agency (EPA) has defined the acquisition date to be the date on which the property title is transferred. To ensure full coverage under the AAI rule, a valid ESA report must be completed within a 12-month period prior to transfer of title.

However, selected ESA report components and supporting information sources must be updated if they were completed more than six months (180 days) prior to title transfer. The specific ESA components with a 180-day shelf life include:

- Site inspection;
- Interviews with knowledgeable persons;
- Review of government regulatory records;
- Search for environmental cleanup liens; and
- Declaration/signature of certifying Environmental Professional.

The AAI date included on the cover of the report indicates the date that research was performed for the different components of this project, whichever is the earliest.

## SIGNIFICANT ASSUMPTIONS

Based on documents reviewed, interviews with knowledgeable people, and a site reconnaissance, SCS assumes that information collected during this ESA is accurate and correct. Unless warranted, information collected has not been independently validated as part of this ESA.

## LIMITATIONS AND EXCEPTIONS

This report has been prepared for COT ES with regard to the assessment of environmental conditions of the subject property. This assessment focused on potential sources of hazardous substances or petroleum products that could be considered a REC and a liability due to the presence in significant concentrations (e.g., above acceptable limits set by the federal, state or local government) or due to the potential for contamination migration through exposure pathways (e.g., groundwater). Materials that contain substances that are not currently deemed hazardous by the EPA were not considered as part of this study.

Hazardous substances occurring naturally in plants, soils, and rocks (e.g., heavy metals, naturally occurring asbestos, or radon) are not typically considered in these assessments. Similarly, construction debris (e.g., discarded concrete, asphalt) is not considered unless observation

suggests that hazardous substances are likely to be present in significant concentrations or likely to migrate.

The terms “solid waste debris” or “rubbish” are used to describe wastes such as paper, plastic, glass, food packaging, cans, bottles, and other similar materials. These materials do not represent a REC.

The report has been prepared in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants, under similar circumstances at the time the services were performed, in this or similar localities. No other representations, either expressed or implied, and no warranty or guarantee is made as to the professional advice presented herein. SCS assumes no responsibility for the accuracy of information obtained from, compiled, or provided by third-party sources, such as regulatory agency listings.

## DATA GAPS

Certain limitations that could affect the accuracy and completeness of these reports are as follows:

- **Site Access Limitations** – None.
- **Physical Obstructions to Observations** – None.
- **Outstanding Information Requests** – None.
- **Historical Data Sources Failure** – The earliest identified historical information reviewed that indicated site usage were dated 1880 and 1886; at that time a residence was located on the south portion of the site. Earlier historical data indicating the uses of the site was not found. However, because the earliest uses of the site appear to be residential, this data gap is not expected to affect the conclusions of this report.
- **Other** – None.

## SPECIAL TERMS AND CONDITIONS

SCS and COT ES agreed upon the terms and conditions set forth in SCS’s proposal. If additional services not normally performed as part of a Phase I ESA are included in the scope of services, these additional services are listed herein. This ESA report does not purport to address safety concerns, if any, associated with the use of the subject site or exposure to safety concerns from adjoining facilities. It is the responsibility of the owner and/or the user of this ESA report to establish appropriate safety and health practices and determine the applicability of regulatory limitations. SCS is not required to identify safety concerns unless otherwise required in the scope of work.

This report does not include assessment of issues described by the ASTM as non-scope: asbestos, radon, lead-based paint (LBP), lead in drinking water, wetlands, regulatory compliance, cultural and historical resources, industrial hygiene, health and safety, ecological resources,

endangered species, indoor air quality (including an assessment of potential vapor intrusion into structures), biological agents, mold, and other issues unless otherwise noted. Unless specifically included in our scope of services, consideration of other building materials such as water supply plumbing, urea formaldehyde, and pressure-treated lumber are not considered in this report.

This ESA is not a compliance audit for regulatory compliance with Federal, State, and local statutes, laws, rules or regulations.

Unless otherwise noted, no sampling or laboratory analyses were performed as part of this Phase I ESA. Although this report may provide recommendations regarding the possibility of RECs specific to this site, positive identification of hazardous substances can be accomplished only through sampling and appropriate laboratory analysis.

## USER RELIANCE

This report has been prepared at the request and for the exclusive use of the COT. Reliance cannot be transferred without the written permission of the COT and SCS, and only if the other party agrees to the same terms and conditions to which the COT and SCS agreed.

## 2 SITE DESCRIPTION AND RECONNAISSANCE

### LOCATION AND LEGAL DESCRIPTION

The site consists of a triangular property located at 126 North 6<sup>th</sup> Avenue in Tucson, Arizona. The site is located in the southeast quarter of Section 12, Township 14 South, Range 13 East, Gila and Salt River Base Line and Meridian, Pima County, Arizona. A Site and Vicinity Map is provided as Figure 2 in Appendix A.

### SITE AND VICINITY GENERAL CHARACTERISTICS

The site was occupied by a shuttle bus stop. Land in the vicinity of the site consisted of parking lots, a parking garage, a historic train depot, an office building, the Ronstadt Transit Center, an engineering office, youth center, and telephone companies.

### CURRENT USE OF THE SITE

#### **Methodology and Limiting Conditions**

On November 2, 2008, Ms. Patricia M. Hartshorne, RG of SCS performed a visual reconnaissance of the site. Current conditions and land uses were observed by walking through the site and around the perimeter of the site. During the site visit, adjoining properties were also observed. Photographs of the site and adjoining properties are included in Appendix B.

#### **General Site Setting**

The topography of the site was generally level.

#### **Current Site Uses**

The site was occupied by a Ticet shuttle bus stop and contained a canopy bus shelter in the center, a parking area for Ticet employees on the west, and paved driveway areas. The majority of the property was paved with asphalt and smaller areas of concrete; several small unpaved gravel areas were located adjoining the streets in the north portion of the site. Parking meters were located along Toole Avenue. Numerous utilities were observed around the exterior of the site, including light poles, traffic signals, fire hydrants, overhead utility lines along Toole Avenue, subgrade utility vaults for various utilities, and an aboveground utility box for traffic signals.

#### **Evidence of Past Site Uses**

No evidence of past uses was observed on the site.

## **Site Improvements**

### **Structures**

A metal bus shelter canopy was located in the central portion of the site on a concrete pad. Beneath the canopy were round metal railings for waiting passengers to lean on and rest their bags, two benches, an information kiosk, and a garbage container.

### **Roads**

No roads were located on the site. Driveways crossing the site were accessed from streets that adjoin the south, northeast, and northwest portions of the site.

### **Potable Water Supply**

A potable water source was not observed on the site.

### **Sewage Disposal System**

Evidence of municipal sewer service was not observed on the site.

### **Septic System**

Evidence of septic systems was not observed on the site.

### **Heating/Cooling System**

No heating or cooling systems were observed during the site reconnaissance.

## **HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS**

### **Hazardous Substances and Petroleum Product Containers**

No hazardous substances or petroleum products were observed in association with current uses of the site. No hazardous substance or petroleum product containers were observed on the site. No drums were observed on the site.

### **Storage Tanks**

No evidence of underground storage tanks (USTs) such as fill ports, vent pipes, and dispensers was observed on the site. No evidence of aboveground storage tanks (ASTs) was observed on the site.

### **Indications of PCBs**

One pole-mounted electrical transformer potentially containing polychlorinated biphenyls (PCBs) was observed on a utility pole on the eastern portion of the site or in the right of way adjoining Toole Avenue. The transformer appeared to be in good condition with no evidence of

leaks or spills. The transformer is owned by Tucson Electric Power Company, which is responsible for maintenance, repair, and any required cleanup of releases from the transformer.

## **OTHER CONDITIONS OF POTENTIAL CONCERN**

### **Indications of Solid Waste Disposal**

There was no evidence of the burial of solid waste or other materials on the site.

### **Odors**

No odors were observed on the site.

### **Pools of Liquid**

No pools of liquid were observed on the site.

### **Pits, Ponds, or Lagoons**

No pits, ponds, or lagoons were observed on the site.

### **Wastewater and Other Liquid Discharges**

No indications of wastewater or other liquid discharges were observed on the site.

### **Drains and Sumps**

No drains or sumps were observed on the site.

### **Drywells**

No drywells were observed on the site.

### **Wells**

No wells were observed on the site.

### **Stained Soil or Pavement**

*De minimis* oily stains and markings from tires were observed on the site pavement; these stains and markings are typical of traffic and parking areas.

### **Stains or Corrosion Inside Buildings**

No stains or corrosion were observed under the bus shelter canopy in the central portion of the site.

### **Stressed Vegetation**

Unnaturally stressed vegetation was not observed on the site.

## GENERAL DESCRIPTION OF ADJOINING PROPERTIES

Properties adjoining the site consisted of parking lots, a parking garage, a historic train depot, an office building, the Ronstadt Transit Center, an engineering office, youth center, and telephone companies. A brief description of properties adjoining the site, including evidence of past uses, is provided below. Photographs are included in Appendix B.

### **North, Northeast, and East**

Toole Avenue, which is oriented in a northwest-southwest direction, adjoins the northeast side of the site. East of Toole Avenue, north of the site, was a storage yard containing metal forms, storage units, a dumpster, and equipment. East of Toole Avenue, northeast and east of the site, was a public parking lot. Rain For Rent storage containers were visible on the east side of the parking lot, north of the restored historic train depot located east and southeast of the site. The north portion of the depot was occupied by the Southern Arizona Transportation Museum, galleries, and shops.

### **South and Southeast**

East Pennington Street adjoins the site to the south. Southwest of the intersection of Toole Avenue and Pennington Street, south of the east portion of the site, was the MacArthur Building, which contains offices. South of the central and western portions of the site, south of East Pennington Street, was the Ronstadt Transit Center, which is a bus station. Between the MacArthur Building and the Ronstadt Transit Center was a fenced entrance to a construction site located south of the MacArthur Building.

### **West**

Adjoining the site to the west was North 6<sup>th</sup> Avenue. West of the site, west of North 6<sup>th</sup> Avenue, from north to south were Big Brothers Big Sisters Angel Youth Center, an unmarked adjoining building, a parking lot, Alpha Engineering, a parking area, and an unmarked building. The north parking lot was marked as a telephone company parking area with signs mentioning AT&T and US West, and Qwest vehicles were observed in the south parking area. Aerial photographs indicate that the two parking areas are connected. These parking areas and the unmarked buildings are likely associated with the telephone utility buildings that are located to the west.

### 3 RECORDS REVIEW – ENVIRONMENTAL RECORD SOURCES

#### INTRODUCTION

Allands was retained by SCS to perform a database search of the standard and additional federal, state, tribal, and local environmental record sources for the site, as identified in the table below. The database search was conducted by Allands on November 5, 2008. A copy of the Allands *Regulatory Database Search Report* is included in Appendix C.

The following table lists the reviewed environmental databases, the database compilation dates, the distances searched by Allands from the site boundary, and whether the site or a facility interpreted to be adjacent to the site was identified on each database.

**Table 1. Regulatory Database Search Summary**

Database	Date of Database	Approximate Minimum Search Distance (miles)	Reported Facilities	Site	Adjoining Site
<b>Standard Federal ASTM Environmental Record Sources</b>					
NPL (National Priorities List) / Proposed NPL / DOD (Department of Defense Sites)	06/08	1.0	0	No	No
Delisted National Priorities List	06/08	0.5	0	No	No
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)/No Further Remedial Action Planned (NFRAP)	04/08	0.5	5	No	No
RCRA (Resource Conservation and Recovery Act) Large and Small Quantity Generators	06/08	0.125	2	No	No
RCRA – CORRACTS TSDFs (Corrective Action Treatment, Storage, and Disposal Facilities)	06/08	1.0	0	No	No
RCRA – Non-CORRACTS TSDFs	06/08	0.5	0	No	No
ERNS (Emergency Response Notification System)	06/08	0.125	0	No	No
<b>Standard State and Tribal ASTM Environmental Record Sources</b>					
WQARF (Water Quality Assurance Revolving Fund) Areas	06/08	1.0	2	No	No
Superfund Program List (replaces ACIDS)	08/04	0.5	1	No	No
Solid Waste Facilities/Landfill Sites - Operating and Closed	05/99 & 5/04	0.5	0	No	No
Control Registries	06/08	Site and adjoining	0	No	No
Brownfields / Voluntary Remediation Program	06/08	0.5	2	No	Yes
Registered USTs (Underground Storage Tanks)	05/08	0.125	3	No	Yes
LUSTs (Leaking Underground Storage Tanks) Incident Reports	05/08	0.5	16	No	Yes
<b>Additional Environmental Record Sources</b>					
RCRA Compliance Facilities	06/08	0.125	0	No	No
Hazardous Materials Incidents Emergency Response Logbook	1984-06/01	0.125	0	No	No

**Table 1. Regulatory Database Search Summary**

Database	Date of Database	Approximate Minimum Search Distance (miles)	Reported Facilities	Site	Adjoining Site
ADEQ Drywell Registration Database	06/08	0.125	0	No	No
Environmental Permits	06/08	Site	0	No	No
Arizona Department of Water Resources Well Registration Database	06/08	Site and adjoining	130	No	Yes

## ENVIRONMENTAL RECORD SOURCE FINDINGS

Based on the groundwater flow direction in relation to the subject site and the location and status of the environmental database listing, only the database listings deemed to be potential RECs are discussed below in this section. The hydrogeologic flow direction (“gradient direction”) with respect to the site is identified for each database listing using the following descriptors:

**Upgradient** – Based on the assumed direction of groundwater flow, the site may be in the path of groundwater flowing from the location of the database listing. If groundwater is impacted by contaminants, there is a potential for groundwater beneath the site to be impacted.

**Downgradient** – Based on the assumed direction of groundwater flow, the site is not in the path of groundwater flowing from the location of the database listing. If groundwater is impacted by contaminants, it is not likely that groundwater beneath the site would be impacted.

**Crossgradient** – Based on the assumed direction of groundwater flow, the site is not in the path of groundwater flowing from the location of the database listing. If groundwater is impacted by contaminants, it is not likely that groundwater beneath the site is significantly impacted. However, if the database listing is on a property that adjoins the site, there could potentially be some impacts to groundwater beneath the site depending on the location of the impacted area.

The direction of regional groundwater flow in the site area is generally toward the northeast and the direction of perched groundwater flow is generally toward the northwest, as discussed in Section 4 under *Summary of Regional Hydrogeology*.

### Standard Federal ASTM Environmental Record Sources

#### Federal CERCLIS/NFRAP List

**Explanation.** The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) is a comprehensive database and management system, compiled and maintained by the EPA, which inventories and tracks suspected or actual hazardous substances sites under the Superfund program. These sites were reported to the EPA by states, municipalities, private companies, and private persons. Actions that may be taken under CERCLA include a preliminary assessment, remedial investigation, feasibility study, and

remedial cleanup. Inclusion of a specific site or area in the CERCLIS database does not represent a determination of any party's liability, nor does it represent a finding that any response action is necessary.

As of February 1995, CERCLA sites designated "No Further Remedial Action Planned" (NFRAP) were removed from CERCLIS. As a result of an initial investigation, NFRAP sites were those that had no contamination found, contamination was removed quickly without the need for the site to be placed on the NPL, the contamination was not serious enough to require Federal Superfund action or NPL consideration, or the site was referred to another regulatory program. The NFRAP sites were removed from the CERCLIS database and information was archived as historical records in order to document that the evaluations took place and to avoid the possibility of duplication. The CERCLIS and NFRAP databases are searched for a distance of one-half mile from the subject site.

**Search Results.** The site and adjoining properties were not identified on the CERCLIS/NFRAP list. Five CERCLIS/NFRAP facilities were identified within 0.5 mile of the site.

**Table 2. Federal CERCLIS/NFRAP List Results**

Facility	Address	NFRAP	Distance/Gradient Direction	Environmental Concern (Y/N)
Downtown Auto Center	330 N 5 <sup>th</sup> Ave		0.2 mi NE / Down to Crossgradient	N
Universal Waste Control	330 N 5 <sup>th</sup> Ave	X	0.2 mi NE / Down to Crossgradient	N
United Fire Company / United Fire Auto	335 N 4 <sup>th</sup> Ave / Approx S of 300 E 7 <sup>th</sup> St	X	0.3 mi NE / Down to Crossgradient	N
Olivers Cleaners / 7 <sup>th</sup> St & Arizona Ave.	300 East 7 <sup>th</sup> St		0.3 mi NE / Down to Crossgradient	N
Descal-It Products Co	127 S 4 <sup>th</sup> Ave	X	0.3 mi SE / Up to Crossgradient	N

Three of the CERCLIS sites were designated NFRAP, which indicates that CERCLA investigations by the EPA did not identify significant environmental problems at the facilities, identified concerns have been adequately addressed under CERCLA, or the case has been transferred to another regulatory program. Two of the facilities were not NFRAP facilities (Downtown Auto Center and Oliver's Cleaners / 7<sup>th</sup> St & Arizona Ave); however, these two facilities did not appear to be located upgradient of the site. The Oliver's Cleaners/7<sup>th</sup> Street & Arizona Avenue site is discussed later in this section under *Arizona WQARF Areas*. The Downtown Auto Center is located in the same area as the 7<sup>th</sup> Street and Arizona Avenue WQARF Registry site discussed later in this section. The distance of these facilities from the site, NFRAP status, and/or their hydrogeologic locations relative to the site indicate that they are not likely to have contributed environmental impacts to the site.

### Federal RCRA Database – Generators

**Explanation.** The Resource Conservation and Recovery Act (RCRA) database is a list of facilities that have obtained an EPA identification number due to their involvement in the generation, transportation, treatment, storage, or disposal of hazardous waste. The database is

compiled and maintained by the EPA. RCRA generators are separated into the following categories:

- Large Quantity Generators (LQG) – produce at least 1,000 kilograms (kg) of hazardous waste per month;
- Small Quantity Generators (SQG) – produce more than 100 but less than 1,000 kg of hazardous waste per month;
- Conditionally Exempt Small Quantity Generators (CEG) - produce less than 100 kg of hazardous waste per month;
- Deactivated generator (DAG); and
- Deactivated transporter of hazardous waste (DAT).

These generator categories are further defined in the regulations regarding the types of hazardous wastes generated, and also the lengths of time the hazardous wastes are allowed to be stored at the facility. RCRA Generator listings do not necessarily indicate a REC. These types of listings are generally indicative of the potential for an environmental concern. This database is searched for the site and adjoining properties.

**Search Results.** The site was not identified on the RCRA Database list. Two RCRA database listings were identified within 0.125 mile of the site.

**Table 3. RCRA Facilities Results**

Facility	Address	Status	Distance/Gradient Direction	Environmental Concern (Y/N)
US West Business Resources	120 E Pennington	N	<0.125 mi W/ Down to Crossgradient	N
AT&T Co Tucson	120 E Pennington	CEG	<0.125 mi W/ Down to Crossgradient	N

Codes: N Not a generator verified or inactive generator

Portions of the properties adjoining the site to the west may be associated with the address listed for these two facility listings. The address is not identified on other reviewed environmental databases. Due to the status of these listings and the hydrogeological location of the facilities relative to the site, these facilities are not expected to be of environmental concern to the site.

### Standard State and Tribal ASTM Environmental Record Sources

#### Arizona WQARF Areas

**Explanation.** The Arizona Water Quality Assurance Revolving Fund (WQARF) program is the State version of the Federal Superfund program. The WQARF program was established to remedy sites for which there is an actual or potential threat of impact to waters of the State by hazardous substances.

**Search Results.** The site and adjoining properties were not identified within a WQARF Registry area. Two WQARF Registry areas were identified within a 1.0-mile search distance from the subject site.

**Table 4. Arizona WQARF Areas Results**

WQARF Registry site	Distance/Gradient Direction	Environmental Concern (Y/N)
7th Street & Arizona Avenue / Oliver's Cleaners	0.2 mi N / Down to Crossgradient	N
Park-Euclid / WQ – Mission Linen Cleaners	0.8 mi. SE/ Up to Crossgradient	N

Current project summaries for these two WQARF study areas and maps showing the estimated boundary of the groundwater contamination plumes are included with the Allands database report in Appendix C. According to the map for the 7<sup>th</sup> Street & Arizona Avenue WQARF area, the groundwater contamination plume is east of the railroad corridor and extends toward the northwest, then turns to the north along Stone Avenue. This indicates an initially northwest and then northward flow direction in the perched aquifer. According to the map for the Park-Euclid WQARF area, the groundwater contamination plume extends toward the north-northeast. Therefore, neither of these two WQARF study areas appear to be located hydrogeologically upgradient from the site, and thus are not likely to have a direct environmental impact on the site.

#### Arizona Superfund Program List

**Explanation.** The Arizona Superfund Program List (SPL) replaces the Arizona CERCLIS Information and Data System (ACIDS) list. This list is maintained by ADEQ, and consists of sites and potential sites subject to investigation under the ADEQ Superfund Programs Section (SPS). This database is searched for a distance of one-half mile from the subject site.

**Search Results.** The site and adjoining properties were not identified on the Arizona Superfund Program List. One facility was identified within the Arizona Superfund Program list search distance.

**Table 5. Arizona Superfund Facilities Results**

Facility	Program	Status	Distance/Gradient Direction	Environmental Concern (Y/N)
Oliver's Cleaners / 7 <sup>th</sup> St and Arizona Ave	WQARF	Pending PI on Registry	0.2 mi N / Down to Crossgradient	N

A pending Preliminary Investigation for Oliver's Cleaners/7<sup>th</sup> Street and Arizona Avenue was listed as January 1998. The Preliminary Investigation, dated April 2000, resulted in the area being placed on the WQARF Registry. This WQARF and SPL site is discussed above in this section under *Arizona WQARF Areas*.

#### Brownfields / Voluntary Cleanup Program

**Explanation.** ADEQ has developed the AZURITE Database, which includes facilities in the ADEQ Voluntary Remediation Program and the ADEQ Brownfields Tracking System. The database was searched for sites located within a 0.5-mile search distance from the site.

**Search Results.** No Brownfields or Voluntary Cleanup Programs were identified on the site. Two such project areas were identified within 0.5 mile of the site.

**Table 6. Brownfields / Voluntary Cleanup Program Results**

Site Name	Address	Start and Close Dates	Status	Distance/Gradient Direction	Environmental Concern (Y/N)
UPRR Passenger Depot	400 E Toole Ave	2/11/02 to 7/18/02	Closed	E and SE Adjoining / Up to Crossgradient	Y
Arizona Department of Transportation	35 E Toole Ave	4/8/2004 to ?	Active	0.2 mi NW / Down to Crossgradient	N

The Union Pacific Railroad (UPRR) Passenger Depot, 400 East Toole Avenue, is located east and southeast of the site. The work was started in February 2002 and ended in July 2002; the status was listed as closed. According to previous communications with Mr. David Barraza of COT ES, the COT is responsible for the property from the ground surface to a depth of 50 feet below ground surface (bgs) and UPRR is responsible for the subsurface below 50 feet bgs due to the known impacts to groundwater in the railroad corridor. The UPRR has been performing ongoing investigations of contamination along the railroad corridor. Mr. Barraza stated that no known contamination was identified in soils above 50 feet bgs at the property during the renovation work.

Arizona Department of Water Resources (ADWR) on-line registered well records indicated that Union Pacific Railroad drilled two wells in 1999 and two wells in 2002 at the Passenger Depot, which is assumed to be the same location as the Brownfields facility discussed above. Petroleum odors were first detected at depths ranging from 58 to 70 feet bgs, and stained soil (black to dark gray) was observed in two well borings at depths of 73 to 73.5 feet bgs and at 71.5 and 72.5 feet bgs. Estimated depths to water in these four wells ranged from 70.5 to 80 feet bgs. This information indicates that there is soil contamination at the depot property below 50 feet bgs and that the groundwater is also contaminated. Based on the proximity to the site, there is a potential for groundwater beneath the site to also be impacted.

Also identified was a property owned by Arizona Department of Transportation at 35 East Toole Avenue. This property is not located hydrogeologically upgradient of the site; therefore, it is not likely to be a REC for the site.

### Arizona Registered USTs

**Explanation.** ADEQ maintains a list of registered USTs in Arizona that contain or have contained regulated substances, primarily petroleum products. The list includes information, where available, regarding the location, owner, number of registered tanks, contents, capacity, age, tank and piping construction material, and type of piping system.

**Search Results.** No USTs were identified on the site. Three facilities located within a 0.125-mile search distance from the site were listed as having registered USTs.

**Table 7. Arizona Registered USTs Database Results**

Facility	Address	# of Tanks	Status	Distance/Gradient Direction	Environmental Concern (Y/N)
AT&T – Tucson Central Office	125 N 6 <sup>th</sup> / 111 E Alameda / 112 E Alameda St	4	3 Perm Removal, 1 Active	W Adjoining / Cross to Downgradient	N
Tucson, City of – Ronstadt Bus Transit Center	315 E Congress St	1	Perm Removal	S Adjoining/ Upgradient	N
Tanner Motor Tours	139 N Scott Ave	5	Perm Removal	0.1 mi W / Crossgradient	N

Two of the facilities listed above were located on properties that adjoin the site. One of the facilities (Ronstadt Bus Transit Center) is located hydrogeologically upgradient of the site. SCS previously performed a Phase I ESA for the COT ES for this property in 2007. This facility was also identified as having had a UST release, and is discussed below under the *Arizona LUSTs* section.

The AT&T facility also adjoins the site. All but one of the USTs has been removed from this facility. This facility was not identified on the LUST list and is not located hydrogeologically upgradient of the site; therefore, it is not likely that this facility is a REC for the site.

All the USTs have been removed from the Tanner Motor Tours facility. This facility was identified as having had a UST release, and is discussed below under the *Arizona LUSTs* section.

### Arizona LUSTs

**Explanation.** ADEQ maintains a list of LUSTs in Arizona that have had a reported release of regulated substances, primarily petroleum products. The list identifies the owner, location, date of release, and date of closure, if applicable. The database is searched for a distance of 0.5 mile from the site.

**Search Results.** The site was not listed on the LUST list. Sixteen LUST facilities were identified within 0.5 mile of the site.

**Table 8. Arizona LUSTs Database Results**

Facility	Address	Date Closed	P Code	Distance/Gradient Direction	Environmental Concern (Y/N)
Ronstadt Bus Transit Center	315 E Congress St	12/28/1992	5R1	S Adjoining/ Upgradient	N
Tanner Motor Tours	139 N Scott	8/8/1997	5R1	0.1 mi W / Crossgradient	N
Firestone Mastercare Store	445 N 6 <sup>th</sup> Ave	3/28/2002	5G1	0.2 mi N / Downgradient	N
Oliver's Cleaners	300 E 7 <sup>th</sup> St	2/26/1993	6	0.2 mi NE / Down to Crossgradient	N
Adot Equipment Services-Possess / Tucson, City of – Remediation Area	35 E Toole Ave	OPEN	2	0.2 mi NW / Down to Crossgradient	N
Trailways Inc-TLI Inc	201 E Broadway	OPEN	1D	0.2 mi. SE/ Up to Crossgradient	Y

**Table 8. Arizona LUSTs Database Results**

Facility	Address	Date Closed	P Code	Distance/Gradient Direction	Environmental Concern (Y/N)
Rich Rodgers South Inc Property	151 E Broadway	9/30/2003	5R1	0.2 mi S / Up to Crossgradient	N
Southern Pacific Transportation	10 <sup>th</sup> St & 3 <sup>rd</sup> Ave	12/7/1993	6	0.2 mi SW / Up to Crossgradient	Y
Bank One Arizona	2 E Congress St	6/11/1997	5R1	0.2 mi SW / Up to Crossgradient	N
Yellow Cab Company	411 N 5 <sup>th</sup> Ave	OPEN	1F	0.3 mi NE / Down to Crossgradient	N
Charlie's Autos Warehouse	331 E 7 <sup>th</sup> St	2/16/1994	6	0.3 mi NE / Down to Crossgradient	N
Wakefield Investments	107 E 6 <sup>th</sup> St	1/27/1989	5R1	0.3 mi NW / Down to Crossgradient	N
City of Tucson/Mobil/D P Jones	142 or 146 S 6 <sup>th</sup> Ave @ 12 <sup>th</sup> St	05/27/1997	5R1	0.3 mi S / Up to Crossgradient	N
ADOT Property	121 S 4 <sup>th</sup> Ave	09/15/1993	5S	0.3 mi. S / Up to Crossgradient	N
Police/Fire Fuel Island	260 S Stone Ave	11/9/1999	5S	0.4 mi. SW/ Up to Crossgradient	N
Former Standard Brands Paint	702 E Broadway Rd	03/03/1998	5R3	0.5 mi. SW/ Up to Crossgradient	N

## Priority (P) Codes:

- 1D Defined soil & GW requires remediation (levels exceed standards for one or more media)
- 1F Free product present on GW and/or SW
- 2 Undefined soil contamination (default for newly reported LUSTs)
- 5G1 Closed soil/GW levels meet RBCA Tier 1
- 5R1 Closed soil levels meet RBCA
- 5R3 Closed soil levels meet RBCA Tier 3
- 5S Closed case for suspected release (false alarm)
- 6 Incident/tank was determined not to be UST jurisdiction and referred to another program

One of the facilities listed above (Ronstadt Bus Transit Center) was located on a property that adjoins the site and is located potentially hydrogeologically upgradient of the site. SCS previously performed a Phase I ESA for the COT ES for this property in 2007. One 300- or 550-gallon UST was reportedly removed from the western portion of the property in July 1990. Hydrocarbons and benzene were detected in soil collected from beneath the UST; subsequent collection and analysis of soil samples from a soil boring at the former UST location did not detect hydrocarbons or benzene. There was speculation that the original samples had been cross-contaminated at the laboratory. ADEQ closed the LUST file stating that the soil was apparently defined to below the soil cleanup levels in effect at that time. Based on this information, it does not appear likely that this UST is a REC for the site.

Of the facilities listed in the table above, only Trailways Inc. has both an open LUST case with ADEQ and is located potentially hydrogeologically upgradient of the site. Based on the ADEQ priority code for this facility, soil and groundwater have been impacted, the extent of contamination has been defined, and remediation is required. Reports by Pima Association of Governments (1992) and Dulaney (1992) stated that free product was found in one of three groundwater monitoring wells installed at the former Trailways bus station; therefore, the release from this LUST facility could potentially have had an environmental impact on groundwater beneath the site.

The other two facilities listed above that have open LUST cases with ADEQ, Yellow Cab Company and ADOT Equipment Services, are not located hydrogeologically upgradient of the site. Therefore, releases from these two facilities are not expected to be RECs for the site.

Of the seven remaining potentially upgradient facilities, four were listed as closed cases with soil contaminant levels that met the Risk Based Corrective Action (RBCA) guidelines, two were listed as closed cases with false alarms, and one was listed as a closed case because it was determined not to be in the UST jurisdiction and the case was transferred to another program. Only the latter facility (Southern Pacific Transportation) is of potential concern to the site. As discussed above in this section under *Brownfields / Voluntary Cleanup Program*, the railroad corridor is an area of known groundwater contamination. Based on the proximity to the site, there is a potential for groundwater beneath the site to also be impacted.

The remaining five facilities identified on the above table are not located on a property that adjoins the site. Three of these facilities have closed LUST cases with ADEQ and soil and groundwater levels meet RBCA. Two of these facilities were determined not to be in the UST jurisdiction and their cases have been transferred to another program (Oliver's Cleaners and Charlie's Autos Warehouse). However, none of these five facilities are located hydrogeologically upgradient of the site. Therefore, it is not likely that these five facilities are a REC for the site.

### **Additional Environmental Record Sources**

#### **Arizona Department of Water Resources Well Registration Database**

**Explanation.** The Arizona Department of Water Resources (ADWR) Well Registration Database contains information provided to the ADWR Operations Division by well drillers and/or owners of wells.

**Search Results.** A total of 130 registered well listings were identified in the Allands report; all were located in the same section as the site. Owners identified for the listings were Union Pacific Railroad, Yellow Cab, Bridgestone/Firestone, Arizona Department of Transportation (ADOT), City of Tucson, ADEQ, ADWR, Patricia Collier, Haskell Joint Venture, BFS Retail & Commercial Operations, Continental Trailway, Arizona Land Title & Trust, Pima County Public Works, Tucson Local Development Corporation (City of Tucson Parks), and Valley National Bank of Phoenix. Water uses were listed as domestic, industrial, remediation, commercial, municipal, test, none, and monitoring. Forty-five listings included water level information: depths ranged from 55 to 78 feet below ground surface (bgs) for 40 listings; 105 feet bgs for one listing; and from 136 to 171 feet bgs for four listings.

SCS also reviewed registered well listings on the ADWR Fortis registered well database website for the section that contains the site. A total of 10 registered well listings were located in the quarter-quarter-quarter section that contains the site. All 10 wells were associated with the railroad; five of the wells were located at the Passenger Depot. All but one well was drilled to groundwater; depths to groundwater ranged from 66 to 83.5 feet bgs. For the five wells that included detailed boring log information, all identified strong diesel or petroleum odors beginning at about 66 to 70 feet bgs and extending to about 70.5 to 80 feet bgs; one well boring

log also identified slight petroleum odors starting at 40 feet bgs. One well boring log identified dark gray staining from 71 to 74 feet bgs and indicated the soil was saturated with product. A second well boring log stated that there was a 5-millimeter black band of staining at 71.5 feet bgs and a 3-inch band of dark gray staining at 72.5 feet bgs.

## 4 RECORDS REVIEW – PHYSICAL SETTING SOURCES

### STANDARD PHYSICAL SETTING SOURCE – USGS 7.5-MINUTE TOPOGRAPHIC MAP

The United States Geological Survey (USGS) 7.5-minute topographic map containing the site, *Tucson, Arizona*, was obtained and reviewed to evaluate the topographic characteristics of the site area. The reviewed maps were dated 1957 (photorevised in 1971 and 1975), 1983, and 1992. Also reviewed was a topographic layer on the PCDOT MapGuide website, which showed elevation contours at 2-foot intervals for the site area.

The maps showed the elevation on the site as ranging from approximately 2,386 to 2,388 feet above mean sea level. The site gradient was shown as relatively level, with a slight slope to the north. The Santa Cruz River is located approximately three-quarter mile west of the site. A copy of a topographic map of the site area is provided in the Allands *Regulatory Database Search Report* in Appendix C.

### OTHER PHYSICAL SETTING SOURCES

#### **Summary of Local Geology**

The site is within the Basin and Range Physiographic Province, which is characterized by broad alluvial-filled basins bounded by steep, fault-block mountains. The Tucson Basin is a structural depression within the Basin and Range Physiographic Province. The Tucson Basin fill deposits are characterized by three stratigraphic units (from bottom to top): the Pantano Formation, the Tinaja beds, and the Fort Lowell Formation. Overlying the Fort Lowell Formation are younger, well-preserved surficial alluvium terrace deposits.

The Pantano Formation is thousands of feet thick, and consists of conglomerate, sandstone, mudstone, gypsiferous mudstone, volcanic flows and tuffs, landslide debris, and megabreccia lenses. The Tinaja beds are also thousands of feet thick, and the upper, middle, and lower units consist of silty gravel, conglomerate, volcanic flows and tuffs, gypsiferous and anhydritic clayey silt and mudstone, and sand and clayey silt in the central portion of the basin, grading to gravel and sand near the mountains at the edges of the basin. The Fort Lowell Formation is generally 300 to 400 feet thick, and consists of unconsolidated to moderately consolidated sediments grading from silty gravel at the basin margins to a sandy silt and clayey silt in the center of the basin. The surficial alluvium terrace sediments are generally thin (averaging 30 to 70 feet in thickness) and silty, and become younger and lower in relief closer to the Santa Cruz River (Anderson 1987; McKittrick 1988; Murphy and Hedley 1984).

#### **Summary of Regional Hydrogeology**

The site is located within the Tucson sub-area of the Upper Santa Cruz Basin area, in the Tucson Active Management Area. The Pantano Formation, Tinaja beds, and Fort Lowell Formation form a single aquifer; however, the primary source of groundwater in the Tucson sub-area is the Fort Lowell Formation. The site is located approximately three-quarter mile east of the Santa Cruz River.

Depth to groundwater measured in wells shown on the ADWR map (Murphy and Hedley 1984) within approximately one mile of the site ranged from 89 to 142 feet bgs. Regional groundwater flow in the vicinity of the site was shown on ADWR maps (Murphy and Hedley 1984; Mason & Bota 2006) to be generally toward the north. Groundwater flow direction and gradient may be significantly influenced by localized sources of withdrawal and recharge, such as irrigation wells and unlined channels, respectively.

A report by Alan R. Dulaney of ADEQ (1992) listed the depth to the regional groundwater aquifer across the downtown Tucson area as 140 to 170 feet bgs, with shallower depths occurring nearer the Santa Cruz River. The direction of regional groundwater flow in the downtown area was shown to be between the northeast and northwest. According to the ADEQ summary for the 7<sup>th</sup> Street and Arizona WQARF area (included in Appendix D), the regional groundwater in this area is at a depth of approximately 170 feet and the flow direction is to the northeast.

In addition, a large area of perched groundwater has been identified in the downtown Tucson area and to the south and east at depths ranging from approximately 30 to 80 feet bgs. The thickness of the perched aquifer may range up to 20 feet. The direction of groundwater flow in the perched aquifer is variable, and was estimated as ranging between southwest to northwest, with major flow components to the west and northwest (Dulaney 1992). Information in the ADEQ summary for the 7<sup>th</sup> Street and Arizona WQARF area (see Appendix D) stated that the perched groundwater in this area is at a depth of approximately 65 feet and a map of the groundwater contamination plume indicated that the flow direction is toward the northwest.

The perched groundwater aquifer under portions of downtown Tucson and the Aviation Parkway/railroad corridor has been contaminated in several locations primarily by diesel fuel, with lesser amounts of gasoline and volatile organic compounds, and the regional aquifer has also been impacted in some places (Dulaney 1992). Previous personal communications with Mr. David Barraza and Ms. Lynne Birkinbine of COT ES have indicated that there are several properties with known groundwater contamination in the vicinity of the site, including the train depot adjoining the site to the east and southeast.

## 5 RECORDS REVIEW – HISTORICAL USE INFORMATION

### STANDARD HISTORICAL SOURCES

A summary of the standard historical sources and the dates researched is provided in the table below.

**Table 9. Standard Historical Source Summary**

Dates	Aerial Photos	Sanborn Maps	Topographic Maps	City Directories	Building Records	Land Title Records	Other <sup>1</sup>
Pre-1900		1886, 1889, 1896				1872 (earliest title reviewed)	1871 <sup>1</sup> 1880 <sup>2</sup>
1900-1904		1901					
1905-1909		1909					
1910-1914							
1915-1919		1919		1918			
1920-1924	1924			1920, 1921, 1924			
1925-1929				1929			
1930-1934				1930			
1935-1939				1935, 1939			
1940-1944				1940, 1944			
1945-1949		1947, 1949					
1950-1954	1953		1957	1951, 1954	1951, 1953, 1954		
1955-1959							
1960-1964	1960			1960			
1965-1969	1967			1965	1967		
1970-1974	1973		1971	1970, 1974			
1975-1979	1979		1975				
1980-1984			1983	1980			
1985-1989	1988			1985			
1990-1994	1994		1992	1990			
1995-1999	1998			1995			1997 <sup>3</sup>
2000-2004	2000, 2002, 2003			2001			
2005-2009	2005, 2006, 2007			2005	2007, 2008		
Able to determine date when site was undeveloped:				<input type="checkbox"/> YES		<input checked="" type="checkbox"/> NO	

Note: Dates shown without highlighting did not have coverage for the site.

<sup>1</sup> Surveyor General's Office map of the site section

<sup>2</sup> Historic Tucson map

<sup>3</sup> Geophysical survey report

### Aerial Photographs

Historical aerial photographs of the site were reviewed for the period 1924 through 2007 to evaluate past uses of the site and adjoining area. Historical aerial photographs were reviewed at Cooper Aerial Survey Company for the years 1924, 1953, 1960, 1967, 1973, 1979, 1988, 1994, and 2000 and on the Pima County MapGuide website for the years 1998, 2002, 2003, 2005, 2006, and 2007. In addition, a 2007 aerial photograph was included in the Allands *Regulatory Database Search Report* in Appendix C. Copies of the 1924, 1953, 1960, 1973, and 1988

historical aerial photographs are included in Appendix D and the 2005 aerial photograph is used as a base for Figure 2 in Appendix A.

### Site

In 1924, the site was occupied by structures in the southwest, southeast, central, and northern portions. In 1953, the site was occupied by a building in the southeast and a building and a canopy in the southwest, and the remainder of the site was occupied by parking lots. In 1960, a building was located in the south-central portion of the site and an apparent billboard was on the west portion of the site; the remainder of the site was occupied by parking lots. The site was occupied by a parking lot from 1967 through 2007.

### Adjoining Properties

**North.** From 1924 through 1953, the area east and northeast of the site, east of Toole Avenue, appeared to be occupied by a park and a railroad spur. This area was occupied by railroad spurs and parking lots from 1960 through 2002; the railroad spurs appeared to have been inactive or removed by 1973. In 2003, this area was occupied by a parking lot on the west and apparent tractor trailers on the east. From 2005 through 2007, this area appeared vacant except for a few parked vehicles in 2005.

**East.** The railroad depot structures were present east and southeast of the site, east of Toole Avenue, on all reviewed aerial photographs; there appeared to be construction activities underway in this area in 2003.

The area southeast of the site, southwest of the intersection of Toole Avenue and Pennington Street, was occupied by the existing MacArthur Building on all reviewed aerial photographs.

**South.** From 1924 through 1979, a continuous row of buildings was located along the south side of East Pennington Street; the buildings had been removed in the eastern portion of the area after 1953. Areas without buildings were used for parking. In 1988, the area was vacant and graded. The existing bus facility was present from 1994 through 2007.

**West.** Various buildings and parking areas were present west and northwest of the site on the west side of North 6<sup>th</sup> Avenue from 1924 through 2007; a vacant lot was located at the north end of this block in 1924.

The area southwest of the site was occupied by possible residences in 1924 and a larger structure from 1953 through 1960. From 1967 through 2003, the area was occupied by a parking lot. From 2005 through 2007, the area was occupied by a parking garage.

### Fire Insurance Maps

Historical fire insurance rate maps, such as those published by the Sanborn Map Company, show locations of structures and other features, and uses of buildings for numerous cities in the United States. Sanborn maps were reviewed for the site area on the City of Phoenix Library online database for the years 1886, 1889, 1896, 1901, 1909, 1919, 1947 (revised from the 1919 map and

reprinted in 1948), and 1949 (revised from the 1919 map). Copies of the site portions of the Sanborn Maps are provided in Appendix E.

### Site

Occupants of the site on the reviewed Sanborn maps are summarized in the table below.

**Table 10. Sanborn Map Results – Site**

Site Area	Address	Occupant
Southeast	None	Vacant (1886, 1889)
	21, 202, and 208 E Pennington St	Dwelling (1896); Rooms and Dwelling (1901)
	200, 202, and 212 E Pennington St; 307 E Toole Ave	Dwelling, Cleaning and Pressing, and Vacant on 1 <sup>st</sup> Floor; Furnished Rooms on 2 <sup>nd</sup> Floor (1909)
	202 and 208 E Pennington St, 307 and 323 E Toole Ave	Lodgings (1919, 1947, 1949)
South	194 E Pennington St	Store and Storage (1947, 1949)
Southwest	None	Dwelling, well, oven, and shed (1886)
	None, 33 or 116 N 6 <sup>th</sup> Ave	Chinese Grocery (1889, 1896); Dwelling (1901, 1909, 1919)
	118 N 6 <sup>th</sup> Ave	Restaurant (1947, 1949)
	116 N 6 <sup>th</sup> Ave	Store (1947, 1949)
	100 N 6 <sup>th</sup> Ave, 180 E Pennington St	Auto Greasing and Gasoline & Oil (1947, 1949)
Central	None	Street (1886)
	None	Vacant (1889)
	34 or 35 N 6 <sup>th</sup> Ave	Dwelling (1896)
	124 N 6 <sup>th</sup> Ave	Furnished Rooms (1901, 1909); Lodgings (1919, 1947, 1949)
North	None	Vacant (1886, 1889, 1896)
	142, 144, or 146 N 6 <sup>th</sup> Ave	Dwelling (1901, 1909, 1919)
	126 or 146 N 6 <sup>th</sup> Ave, 301 E Toole Ave	Store (1947); Restaurant (1949)

### Adjoining Properties

Properties adjoining the site on the reviewed Sanborn maps are summarized in the table below.

**Table 11. Sanborn Map Results – Adjoining Properties**

Adjoining Property	Occupants
East, Northeast, and North	Noble & Hall's hardware, milling, & machinery (1886-1889); bottling works, warehouses, storage, ice house, and cold storage (1896-1901); ice house (1896-1901); oil warehouse, oil tank (1889-1901); park (1909); vacant and railroad spur (1919-1949)
East and Southeast (East of Toole Ave)	Dwelling, San Xavier Hotel (1886-1901); Wells Fargo & Co Express (1909-1919); Express Agency (1947-1949)
Southeast (West of Toole Ave)	Vacant (1886-1901); Hotel Heidel & Hotel MacArthur with stores, saloon, barber, restaurant, sample rooms, auto sales room, store room (1909-1949)
South	Hall for Brotherhood of Locomotive Firemen (1886); office (1896); vacant land (1886-1889); dwellings (1886-1919); furnished rooms, lodging (1909-1949); oil & gasoline station (1919); stores (1947-1949); restaurant (1949)
Southwest	Dwellings (1886-1919); Sears Roebuck & Co Department Store (1947-1949)
West and Northwest	Dwellings (1886-1919); auto electric shop & battery service (1919); auto sales, supplies, repairs, and service (1919-1947); express company office and storage (1947); stores (1947-1949); Post Office (1947-1949)

## USGS 7.5-Minute Topographic Maps

The USGS 7.5-minute topographic map containing the site, *Tucson, Arizona*, was obtained and reviewed. The reviewed maps were dated 1957 (photorevised in 1971 and 1975), 1983, and 1992. The maps showed the site and adjoining properties as undifferentiated urban development area with no individual structures identified, except for the train depot located east and southeast of the site on the 1957 through 1983 map versions. A copy of the 1983 topographic map of the site area is provided in the Allands *Regulatory Database Search Report* in Appendix C.

## Local Street Directories

City directories identify occupants of listed addresses; later directory listings also identify the first year a particular listing was published. SCS performed a search of city directories at the Tucson-Pima Public Library in approximate five-year intervals for addresses in the vicinity of the site from 1918 to 2005. If a particular directory was not available, the directory with the closest available year was reviewed. The following city directories were reviewed: 1918, 1920, 1921, 1924, 1929, 1930, 1935, 1939, 1940, 1944, 1951, 1954, 1960, 1965, 1970, 1974, 1980, 1985, 1990, 1995, 2001, and 2005. Earlier directories do not provide address listings. The 1919, 1921, 1929, and 1939 directories were reviewed to supplement pages missing from the 1920, 1930, and 1940 directories.

## Site

Occupants of the site listed in the reviewed city directories are summarized in the table below.

**Table 12. City Directory Results – Site**

Site Area	Address	Occupant
Southeast	202 E Pennington, Cor of Toole	White Horse Rooms (1918), American Hotel (1921-1954)
	204 E Pennington	Vacant (1918)
South	194 E Pennington	TM Motors (1954)
Southwest	116 N 6 <sup>th</sup> Ave	Residence (1918-1920), Yick Lee Laundry (1924), auto ignition and service stations (1929-1935), D F Dossett restaurant (1935), Sophie's Lunch (1939-1941)
	100 N 6 <sup>th</sup> Ave	Tom & Ray's Uptown Service Station (1939-1941), Tiemann Feed & Supply (1944), Mack U Dr (1951)
	100-126, 126 N 6 <sup>th</sup> Ave	Mallory Parking Lot (1954-1960)
Central	124 N 6 <sup>th</sup> Ave	Russell House (1919-1951)
North	142 N 6 <sup>th</sup> Ave	Residence (1919-1929)
	126 or 142 N 6 <sup>th</sup> Ave	Service station (1930-1941), Fin & Feather poultry (1944), Jones Lunch & Fountain (1951)
	144 N 6 <sup>th</sup> Ave	John and Sue Cassarion (2002-2005)

## Adjoining Properties

Properties adjoining the site in the reviewed city directories are summarized in the table below.

**Table 13. City Directory Results – Adjoining Properties**

Adjoining Property	Occupants
Northeast, East, and Southeast (East of Toole Ave)	Eagle Service Station (1939), Express agencies (1951-1974), Southern Pacific Co (1951-1990), parking lots (1954-1960), Southern Arizona Yrk Con (1965), Amtrak Shipping (1972-2001), residences (1974-1990), health studio (1980), Tucson Coop Warehouse (1988-1995), Haagen-Daz Co (1992-1995), Rocks and Ropes (1993-1995), Summit Hut (1993-1995), B Bizarre III (1995), Resurrection (1995), Dreyers Grand AZ (1995-2001), Union Pacific RR Co (2001), apartments (2001-2005)
Southeast (West of Toole Ave)	Hotel (1918-1980), barber and beauty shops (1924, 1935-1944, 1980), tailor shops (1924-1960), coffee shop (1951), sportswear (1954), residence? (1954), lounge (1970-1974), books (1980), office building (1988-2005)
South	Union Oil Co (1918); residences and apartments (1918-1944), battery & electrical service station (1921-1924), Beatrice Dance (1924), barber (1929), cafe (1935-1939), meats (1944), Gay Nineties, exterminator, sales company, driving school, beauty supplies, trading stamp company, business machines, table pad company, spraying company, maintenance company, fence company, Western Chemical Co, advertising (1951), Acousticon Bohnig Co, meat company, Service Unlimited, clothes, answering service (1951-1954), insurance (1954), flooring companies (1960-1970)
Southwest	Residences (1918-1924), Auto Stage Depot (1924), school (1924), flower shop (1930-1935), auto supplies (1930-1940), Sears Roebuck & Co (1930-1960), insurance (1960)
West and Northwest	Auto electric service, motor companies, garages, service stations & accessories, auto sales, auto rentals (1918-1954), residences and rooms (1918-1944), creamery (1919), drug store (1919-1920), grocery (1920), auto laundry (1924), tire company (1929-1930), rubber company (1929-1930), cleaners (1930-1939), wholesale paper (1939), express company (1944), display service (1944), beer distributor (1944), post office (1944-1954), wholesale dry goods (1951-1954), carloading & freight forwarding companies (1951), finance company (1951-1965), advertising (1954-1960), lock & key shop (1954-1960), cafe (1954-1974), luggage & sporting goods (1954), military recruiting office (1960-1970), Henri's (1960), cab company (1960), finance company (1965), soil engineers (1970-1974), commercial suppliers (1970), Tucson Skill Center (1980), Rogers & Assoc (1985), The Megna Group (1988-1995), communications company (1989-2005), attorney (1990), Sanchez Burrito Co (1990), investigation services (1993-1995), process servers (1995), engineering company (1995-2005)

## Building Department Records

An on-line search of Pima County Development Services permits did not identify records for the site APN 117-06-083A. A search of on-line City of Tucson Development Services Department activity records identified plans for the location, electrical, structural, and foundation details for the existing bus shelter canopy on the site dated August and October 2007. Inspection information dated November 2007 through January 2008 indicated that the work had been completed.

A search for permit records for the site was performed at the COT building permit records department. Files were requested for potential site addresses 180, 194, 200, 202, 204, 208, and 212 East Pennington Street; 100, 116, 118, 124, 126, 142, 144, and 146 North 6<sup>th</sup> Avenue; and 301, 307, and 323 East Toole Avenue. The following permits for the site addresses were identified.

**Table 14. Summary of Building Permit Records**

Site Address	Date and Owner	Type of Permit
194 E Pennington St	1952 – T.M. Motors	Sign wiring, building permit
194 E Pennington St	1955 – Foster & Kleiser	Electrical
202 E Pennington	1954 – Margaret Strong	Demolition hotel room
204 E Pennington	1967 – R. Peterson	Sign permit
100 N 6 <sup>th</sup> Ave	1985 – U.S. Parking System	Sign permit
116 N 6 <sup>th</sup> Ave	1954 – Don Jones (lessee)	Occupancy permit, demolition permit to remove grease rack and canopy on west end of building
124 & 126 N 6 <sup>th</sup> Ave	1951 – Malloy Parking	Occupancy permit for parking lot, electrical permit, office building
124 & 126 N 6 <sup>th</sup> Ave	1951 – Meyer Feldman	Demolish old 2-story house and brick service station
124 N 6 <sup>th</sup> Ave	1953 – Foster & Kleiser	Sign permit
124 N 6 <sup>th</sup> Ave	? – Don’s Auto Parks	Electrical
126 N 6 <sup>th</sup> Ave	1951 – Jones Lunch	Sign permit
323 E Toole Ave	? – Foster & Kleiser	Sign permit

### Property Tax Files

Parcel information, plat maps, and other information were reviewed for the site parcel on the Pima County Assessor website. The site has the APN 117-06-083A and is owned by the City of Tucson.

### City and County Departments of Transportation and Urban Planning

Aerial photographs (1998, 2002, 2003, 2005, 2006, and 2007), parcel information, plat maps, site topography, sanitary sewer locations, and other information were reviewed for the site parcel on the Pima County Department of Transportation website and the City of Tucson Urban Planning and Design websites. COT zoning on the site parcel was shown to be OCR-2 (Office/Commercial/Residential). The site was shown as being owned by COT DOT and the use was shown as “Pennington Intermodal Project.”

Toole Avenue adjoining the site to the east currently has addresses listed as “North Toole;” however, based on review of various historical documents, it appears that addresses up to now have primarily been listed as “East Toole.”

Owners of properties adjoining the site parcel were shown as the City of Tucson, Big Brothers/Big Sisters of Tucson, Level 3 Communications, LLC, AT&T Property Tax, and Dinkar D. and Lalita D. Gangwal.

The water service provider in the site area was shown as Tucson Water. Pima County sanitary sewer lines were not shown on the site parcel, but were shown generally in the center of Toole and 6<sup>th</sup> Avenues adjoining the site. The site was shown within the Tucson Fire District. No landfills were shown on the site. The aerial photographs are discussed at the beginning of this section, under *Aerial Photographs*.

### Recorded Land Title Records

A historical chain of title search back to 1872 was performed by Allands. The Historical Chain of Title Search’s title plant date is October 20, 2008. The title plant date is the date of the report

that reflects the most current data made available by the information sources used at the time the research was performed. A copy of the Allands *Historical Title Report* is provided in Appendix F.

Title to the site parcel, APN 117-06-083A (formerly known as 117-06-082, -083, -084, and -085), is currently held by the City of Tucson. The central portion of the site, formerly occupied by 9<sup>th</sup> Street, was dedicated to the City of Tucson in 1872. Owners of the various site parcels since 1872 have included the City of Tucson, private individuals, Union Construction Company, investment companies, Arizona Autoparks, Inc., a trust, and 4-D/G. A lease between a private individual and Rio Grande Oil Company was dated 1933 (expired 1935). The site was acquired by the City of Tucson in 2005. Parcel maps and other information for the site are included in the Allands report.

## OTHER HISTORICAL SOURCES

A land survey map by the Surveyor General's Office for the township and range containing the site section indicated the area was surveyed and filed in 1871. A structure was shown in the approximate vicinity of the site; structures and roads were shown in the south and west portions of the section.

A historic map called *Tucson, Arizona Territory, circa 1880* showed the site area. Two structures were shown in the same position as the dwelling and shed on the 1886 Sanborn map discussed earlier in this section.

## HELPFUL DOCUMENTS

### Geophysical Survey

A geophysical survey was previously performed on the site by Zonge Engineering & Research Organization, Inc. (Zonge; included in *Final Report, Electromagnetic Surveys, Broadway Projects, Tucson, Arizona, May 5, 1997*). A copy of the site portion of the survey and an overlay of the anomalies on the 1949 Sanborn map for the site area are included in Appendix G.

The geophysical survey identified a large geophysical anomaly (probably metallic) that could not be attributed to known cultural features; the approximate location of this anomaly (labeled "A") was in an area formerly occupied by an automotive service station. A smaller anomaly in the central portion of the site ("B") was in the vicinity of cultural features observed on the site by SCS in April 2005 (metal barrel, payment box, sign, and barricades). Another smaller anomaly that could not be attributed to known features was located on the eastern portion of the site ("C"). Anomalies B and C are located in the central portion of the site, which has only been occupied by residences and a rooming house.

## 6 INTERVIEWS

### INTERVIEW WITH OWNER

Ms. Lynne Birkinbine, Environmental Manager with COT ES was contacted to provide information regarding the site. Ms. Birkinbine provided a completed owner questionnaire on November 19, 2008. Ms. Birkinbine stated that the site was currently occupied by a Ticet bus stop. She stated that a previous site use was a gas station, as shown on 1947 and 1949 Sanborn maps. She did not know of other site uses, owners, or occupants, but assumed that there had been significant changes to features on the site. Ms. Birkinbine did not know if potable water, sewage service, septic systems, and heating or cooling systems were located on the site. Ms. Birkinbine did not know of hazardous materials stored, treated, or disposed of on the site or spills that had taken place at the site. Ms. Birkinbine indicated that a geophysical survey performed in 1997 identified anomalies on the site in the location of the former gas station that may be USTs. Ms. Birkinbine did not identify concerns related to adjoining properties. The only previous report identified for the site was the 1997 geophysical survey by Zonge. She stated that there were no proceedings involving the property. A copy of the owner questionnaire is provided in Appendix H.

### INTERVIEW WITH SITE MANAGER

There were no managers of the site other than discussed above under the site owner section.

### INTERVIEW WITH OCCUPANTS

There were no occupants of the site other than discussed above under the site owner section.

### INTERVIEWS WITH STATE AND/OR LOCAL GOVERNMENT OFFICIALS

#### **Fire Department**

SCS contacted Ms. Rachel Duarte of the City of Tucson Fire Department for a search of UST records for the potential site addresses on North 6<sup>th</sup> Avenue, East Toole Avenue, and North Pennington Avenue. Ms. Duarte stated in a fax dated November 18, 2008 that there were no records for the site address.

## 7 USER PROVIDED INFORMATION

Ms. Lynne Birkinbine, Environmental Manager for the COT ES provided SCS with a user questionnaire completed on November 19, 2008. A copy of the user questionnaire is included in Appendix I. The information included on the questionnaire is discussed below in this section.

### TITLE RECORDS

Historical title information was obtained by SCS from Allands, as discussed in Section 5 under *Recorded Land Title Records*. The *Allands Historical Title Report* is included in Appendix F.

### ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS (AULS)

Ms. Birkinbine was not aware of environmental cleanup liens or activity and land use limitations (AULs) for the site.

A search of environmental liens, deed restrictions such as Voluntary Environmental Mitigation Use Restrictions (VEMURs) or Declaration of Environmental Use Restrictions (DEURs), and Arizona Department of Environmental Quality (ADEQ) AZURITE tracking system for the site was performed by Allands at the Pima County Recorder's Office. No VEMURs, DEURs, environmental liens, brownfields, institutional controls, engineering controls, or AULs were found for the site. This information is included in the *Allands Regulatory Database Search Report* included in Appendix C and the *Allands Historical Title Report* included in Appendix F.

### KNOWLEDGE OR EXPERIENCE REGARDING THE SITE

Ms. Birkinbine stated that she did not have specialized knowledge or experience related to the site. She was aware that the site was previously occupied by a gas station, as was shown on 1947 and 1949 Sanborn maps. A 1997 geophysical survey by Zonge identified anomalies in the former location of the gas station that could be USTs.

### VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The site is already owned by the City of Tucson. Ms. Birkinbine stated that the purchase price reasonably reflects the fair market value of the property.

### OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The current owner, property manager, and occupant of the site parcel are listed below.

- **Owner:** City of Tucson
- **Property Manager:** City of Tucson
- **Occupants:** Ticet shuttle bus stop

## REASON FOR PERFORMING PHASE I ESA

This assessment was performed for COT ES in order to evaluate potential environmental concerns on the site.

## OTHER

The COT ES provided SCS with a copy of a geophysical survey report that is discussed in Section 5 under *Helpful Documents*.

## 8 FINDINGS AND OPINIONS

### SCOPE OF WORK

COT ES retained SCS to perform a Phase I ESA for a triangular property bounded by 6<sup>th</sup> and Toole Avenues and Pennington Street in downtown Tucson, Arizona (site). The APN for the site is 117-06-083A (formerly 117-06-082, 117-06-083, 117-06-084, and 117-06-085) and the address is 126 North 6<sup>th</sup> Avenue. The ESA consisted of a site reconnaissance; interviews; review of environmental, historical, and physical records pertaining to activities on and adjacent to the site; and interpretation and reporting of findings.

### CURRENT CONDITIONS

At the time of the site reconnaissance, the site was occupied by a Ticet shuttle bus stop and contained a canopy bus shelter in the center, a parking area for Ticet employees on the west, and paved driveway areas. The majority of the property was paved with asphalt and smaller areas of concrete; several small unpaved gravel areas were located adjoining the streets in the north portion of the site. Parking meters were located along Toole Avenue. Numerous utilities were observed around the exterior of the site, including light poles, traffic signals, fire hydrants, overhead utility lines along Toole Avenue, subgrade utility vaults for various utilities, and an aboveground utility box for traffic signals.

### HISTORICAL REVIEW

Based on the historical information reviewed, the north portion of the site was vacant until sometime between 1896 and 1901, and was occupied by a residence (1901-1929), a service station (1930-1941), a store (1944-1947), and a restaurant (1949-1951). The central portion of the site was occupied by 9<sup>th</sup> Street in 1886, was vacant in 1889, and was occupied by a residence (1896) and a rooming house (1901-1951). The southeast portion of the site was vacant until sometime between 1889 and 1896, and was occupied by a residence (1896-1909), cleaning and pressing business (1909), and rooms (1901-1954). The south-central and southwest portions of the site was occupied by residences (1880-1886, 1901-1920), a grocery (1889-1896), a laundry (1924), an auto service station (1929-1953), a restaurant (1935-1949), a store (1947-1949), a store and storage (1947-1949), and a motor company (1952-1954). The site was occupied by parking lots by about 1951 to 1954 through 2007. One structure remained in the south-central portion of the site until sometime in the early 1960s. At the end of 2007, the bus shelter for the Ticet shuttle bus was constructed on the site.

Potential historical RECs for the site include the two auto service stations, which were located in the north and southwest portions of the site, the motor company in the south portion of the site, and the laundry in the southwest portion of the site. These facilities may have used chemicals and/or petroleum hydrocarbons and the service stations may have had USTs. Based on a 1997 geophysical survey of the site, there is an anomaly in the southwest portion of the site that could indicate the presence of USTs. Two other anomalies were identified on the central portion of the site. However, these anomalies were not located in an area that would indicate an environmental

concern due to previous historical uses. Locations of these potential historical RECs are shown on Figure 3 in Appendix A.

## ADJOINING PROPERTIES

Properties adjoining the site are currently or have historically consisted of a storage yard, parking lots and a parking garage, office building, a bus transit center, a youth center, engineering firms, telephone and communication companies, a park, a railroad depot, residences, various stores, a milling and machinery shop, bottling works, an ice house, an oil warehouse, hotels, express and freight agencies, a firemen's hall, various offices, lodgings, restaurants, various auto service type shops and gas stations, auto sales and rental companies, a post office, a health studio, warehouses, barber and beauty shops, a dance studio, flooring companies, a school, a car wash, a tire company, a rubber company, a cleaners, a beer distributor, a lock and key shop, a military recruiting office, and a cab company.

## REGULATORY REVIEW

The site was not identified in environmental database listings. Environmental regulatory database listings identified in the vicinity of the site included five CERCLIS sites, two RCRA generator listings, two WQARF sites, one Superfund Programs List site, two Brownfields/Voluntary Remediation Program sites, three UST facilities, 16 LUST facilities, and 130 registered wells. The following identified environmental regulatory database listings may be considered potential RECs for the site:

- The UPRR Passenger Depot Brownfields/Voluntary Cleanup Program site adjoins the site to the east and southeast and is hydrogeologically upgradient of the site. The UPRR property has known groundwater and soil contamination in several locations. The primary source of the contamination is diesel fuel, with lesser amounts of gasoline and VOCs. This contamination could potentially have had an environmental impact on groundwater beneath the site.
- Trailways Inc. has an open LUST case with ADEQ and is located potentially hydrogeologically upgradient of the site. Soil and groundwater have been impacted, the extent of contamination has been defined, and remediation is required. The release from this LUST facility could potentially have had an environmental impact on groundwater beneath the site.

## 9 CONCLUSIONS AND RECOMMENDATIONS

### RECOGNIZED ENVIRONMENTAL CONDITIONS

SCS has performed a Phase I ESA in conformance with the scope and limitations of the ASTM Practice E 1527-05 and COT specifications for a triangular property (APN 117-06-083A) at 126 North 6<sup>th</sup> Avenue in downtown Tucson, Arizona. Any exceptions to, or deletions from, this practice are described in Section 10 of this report. This assessment has revealed evidence of the following potential RECs in connection with the site:

- Former occupants of the site that are potential historical RECs due to the potential use of chemicals and/or petroleum hydrocarbons and the presence of underground storage tanks include two auto service stations, a motor company, and a laundry. Based on a 1997 geophysical survey of the site, there is an anomaly in the southwest portion of the site that could indicate the presence of USTs.
- Groundwater contamination associated with various releases has been previously identified along the railroad corridor northeast of the site, including the train depot property adjoining the site to the east and southeast. It is possible that groundwater beneath the site has been impacted by contamination that originated at these properties.

### RECOMMENDATIONS

Based on the findings of this Phase I ESA for the site, SCS recommends the following:

- An exploratory excavation should be performed in the vicinity of the geophysical anomaly in the southwest portion of the site in the area of the former service station in order to identify the source of the anomaly. If USTs are found, they should be removed and a closure investigation should be performed in accordance with ADEQ requirements. Anomalies were not identified in the north portion of the site where the other service station was located; therefore, no exploratory excavations are recommended for this area.
- Surface soil sampling should be performed at the former locations of the two auto service stations, the motor company, and the laundry in the north, south, and southwest portions of the site to assess any residual contamination that may be present. Suggested analyses may include petroleum hydrocarbons, volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and metals.
- SCS does not recommend investigation of potential impacts to groundwater beneath the site that may have originated on adjoining properties. If construction activities associated with future development of the site include the construction of structures, additional research should be performed to identify whether investigations by UPRR or other parties have determined whether groundwater contamination extends beneath the site. If this information is not available, an onsite monitoring well should be

installed for collection of groundwater samples to evaluate existing conditions. Performance of a vapor intrusion assessment in accordance with ASTM E 2600-08 may also be merited.

## 10 DEVIATIONS AND ADDITIONAL SERVICES

Additions to the general ASTM scope of work for Phase I ESAs included the following: 1) geologic and hydrogeologic information for the site area was researched in order to assess the direction of regional groundwater flow in this area; and 2) additional environmental record sources were automatically included as part of the standard environmental database search report performed by Allands.

Certain business environmental risks associated with a property's current or planned use could have a material environmental or environmentally-driven impact on the business or real estate transaction. The assessment of business environmental risks may involve the investigation of considerations that are outside the subject of the ASTM standard practice (non-ASTM). No implication is intended as to the relative importance of inquiry into such non-ASTM considerations. COT ES did not request investigation of non-ASTM considerations as part of the Scope of Services.

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Zonge Engineering & Research Organization, Inc. (Zonge). May 5, 1997. Section on site included in *Final Report, Electromagnetic Surveys, Broadway Projects, Tucson, Arizona*.

## 12 QUALIFICATION AND SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

This report, entitled *Phase I Environmental Site Assessment*, has been prepared for a triangular property (APN 117-06-083A), bound by Pennington Street and Toole and 6<sup>th</sup> Avenues, at 126 North 6<sup>th</sup> Avenue in downtown Tucson, Arizona. It has been prepared in accordance with the guidelines set forth in the American Society for Testing and Materials (ASTM) Standard E 1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. It has been prepared in accordance with accepted quality control practices and has been reviewed by the undersigned. Resumes for the personnel listed below are included in Appendix J.

**Patricia M. Hartshorne, RG** is a Project Manager in SCS's Tucson, Arizona office.

**David F. Laney, CHMM** is Manager of Environmental Services for SCS's Arizona operations.

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 40 CFR Part 312.10. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

---

Patricia M. Hartshorne, RG

Date

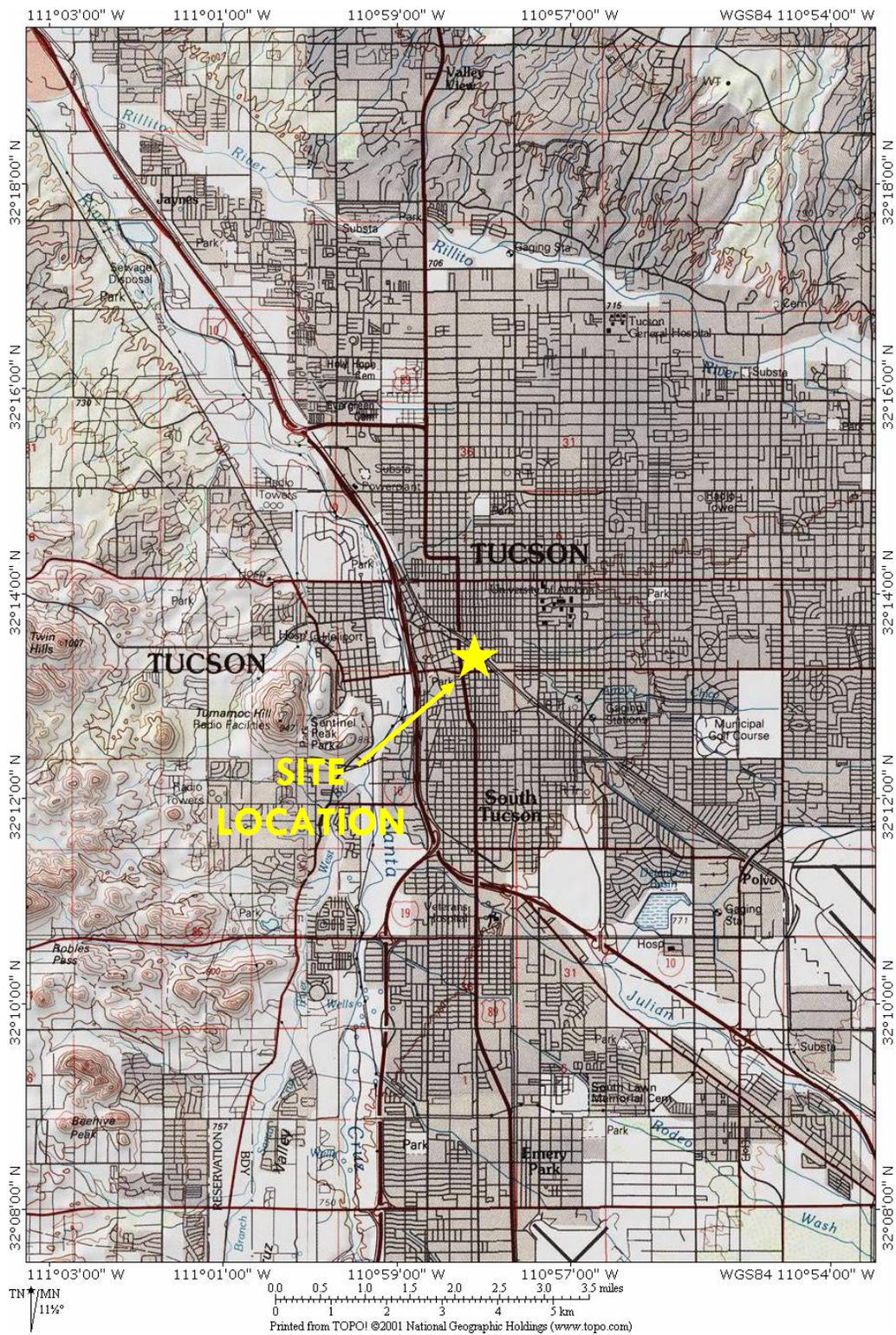
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David F. Laney, CHMM

Date

## APPENDICES

**APPENDIX A**  
**FIGURES**

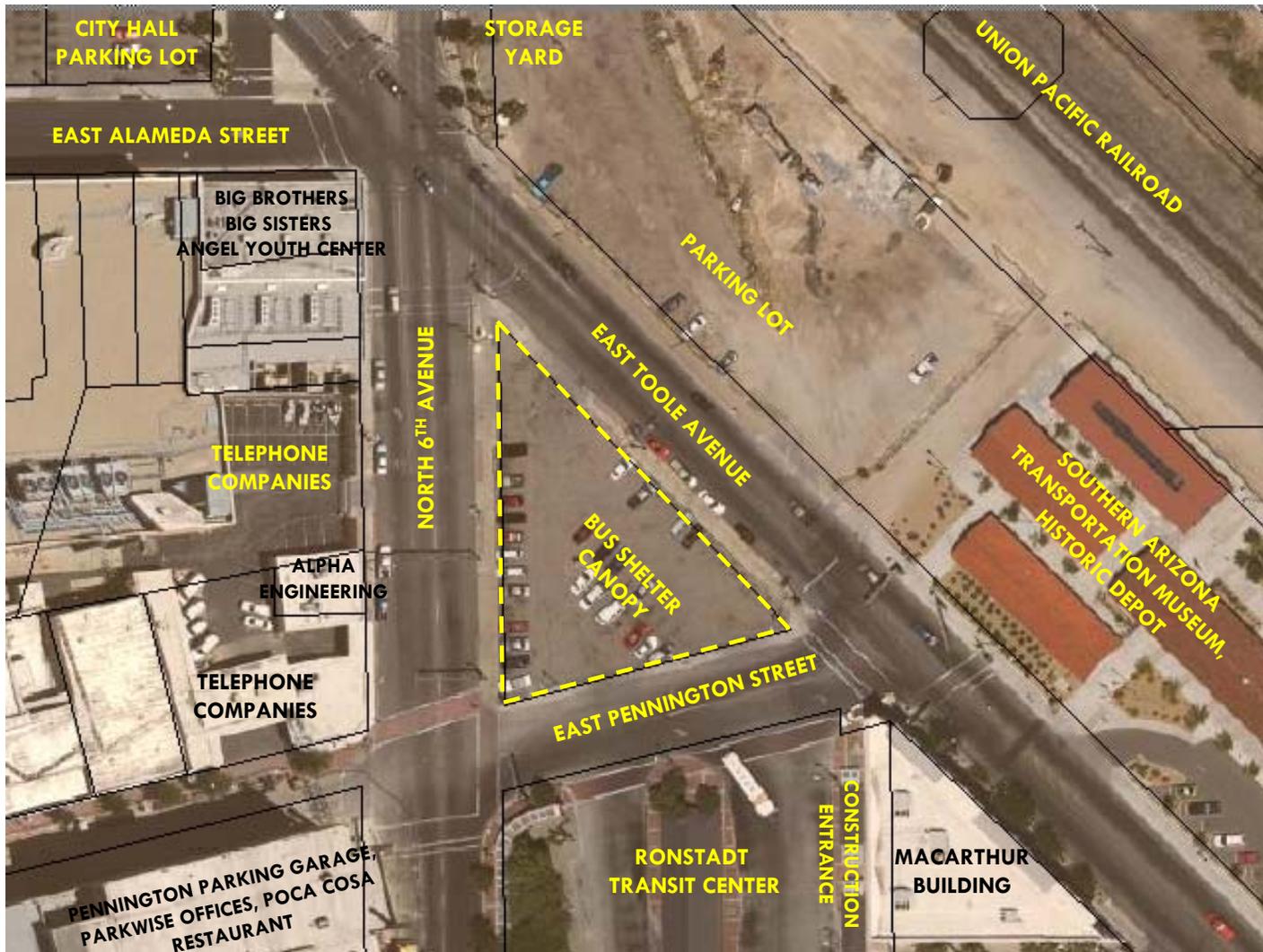


Source: TOPO! Map printed from "ARIZONA.TPO"

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

Pennington Triangle Property  
APN 117-06-083A  
126 North 6<sup>th</sup> Avenue  
Tucson, Arizona

Figure 1  
Site Location Map



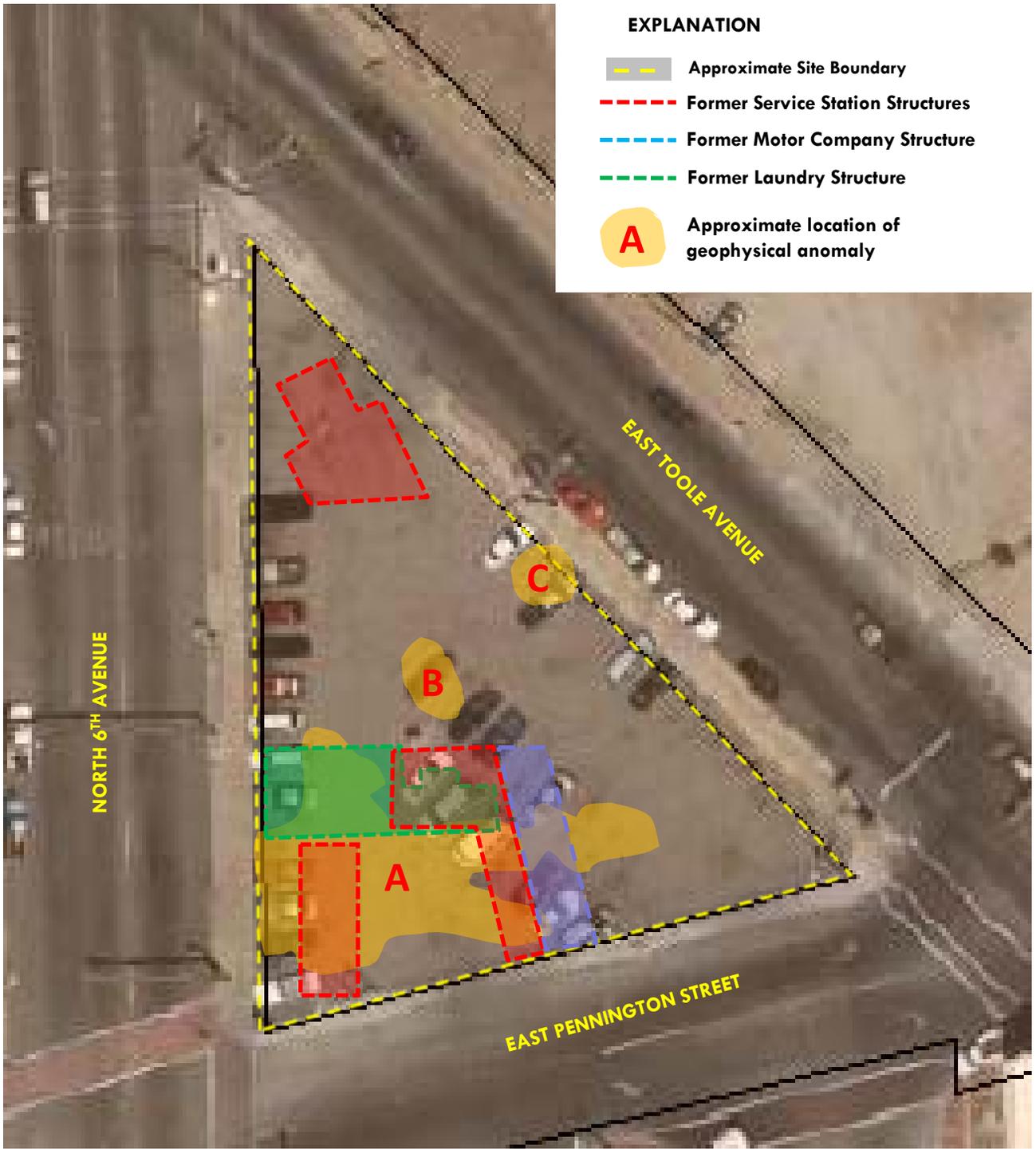
Source: PCDOT MapGuide Website, 2005 aerial

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

 APPROXIMATE SITE BOUNDARY

0 75 150  
APPROXIMATE SCALE IN FEET





Source: PCDOT MapGuide Website, 2005 aerial

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

**APPENDIX B**  
**PHOTOGRAPHS**



North portion of the site; view to the southeast.



Southeast portion of the site; view to the northwest.



Southwest portion of the site; view to the northeast.



Canopy bus shelter in the central portion of the site; view to the north.



Intersection of 6<sup>th</sup> Avenue, Alameda Street, and Toole Avenue northwest of the site; view to the north.



Traffic island and City Hall parking lot northwest of the site; view to the northwest.



A storage area and a parking lot adjoining the site to the north, northeast, and east, east of Toole Avenue; view to the northeast. Rain For Rent storage containers are visible on the east side of the parking lot in the central portion of the photograph.



The Southwest Train Museum, shops, and historic Depot southeast of the site, southeast of the intersection of Pennington Street and Toole Avenue; view to the southeast.



MacArthur Building (offices) south of the site, south of Pennington Street; view to the south.



Parking garage, offices, and restaurant southwest of the site, southwest of the intersection of Pennington Street and 6<sup>th</sup> Avenue; view to the southwest.



Ronstadt Transit Center (municipal bus terminal) south of the site, south of Pennington Street; view to the southwest. The entrance for a construction project south of the MacArthur Building and east of the Ronstadt Transit Center is on the left side of the photograph.



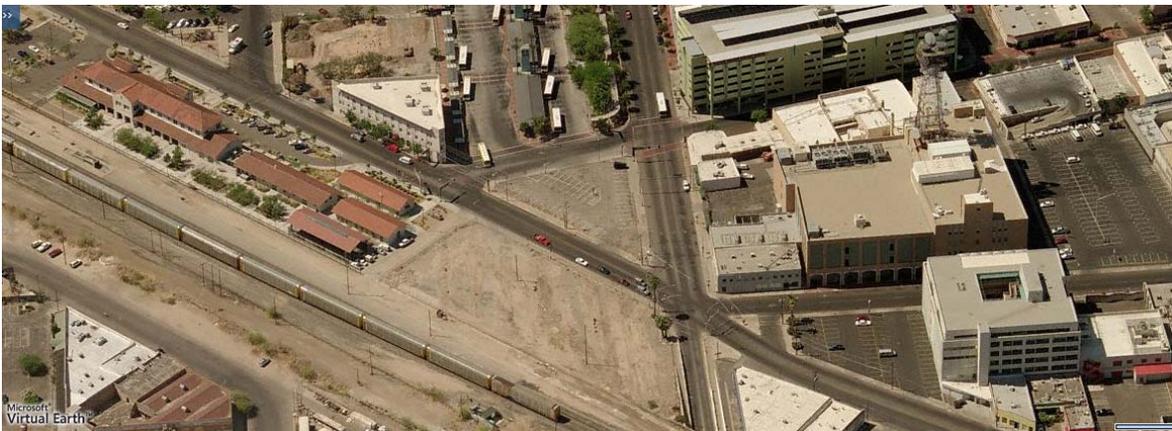
Adjoining the site to the west, west of 6<sup>th</sup> Avenue, was an unmarked building on the left (Qwest vehicles in the parking lot to the right of the building), Alpha Engineering in center, and a parking lot to the right (signs for telephone company vehicles only, AT&T, and US West); view to the west.



Big Brothers Big Sisters Angel Youth Center west of 6<sup>th</sup> Avenue, west and northwest of the site; view to the west.



The site on August 20, 2006 (photograph was taken during a previous site assessment project for an adjoining property); view to the east.



Aerial "bird's eye" view of the site (triangular area in the center) and adjoining properties; view to the south (Microsoft Virtual Earth website, date not provided).

**APPENDIX C**

**ALLANDS REGULATORY DATABASE SEARCH REPORT**



14947 W. Piccadilly Road, Goodyear, AZ 85395 • Phone: 623-535-7800 • Fax: 623-535-7900  
www.allands.com • e-mail: sharon@allands.com

Historical Title and Environmental Research

## REGULATORY DATABASE (ASTM) SEARCH

YOUR FILE NO:

ALLANDS FILE NO: 2008-10-099D

DATE OF REPORT: November 5, 2008

ALLANDS hereby reports the search results of Federal and State Databases according to ASTM standards for Phase I Environmental Site Assessments E 1527-05. Allands is not responsible for errors in the available records. The total liability is limited to the fee paid for this report. This is a confidential, privileged and protected document for the use of SCS Engineers.

1. The land referred to in this report is located in Pima County, Arizona, described as follows:

Property located at 126 North 6<sup>th</sup> Avenue, Tucson, Arizona, being in the Southeast quarter of Section 13, Township 1 North, Range 3 East, Gila and Salt River Base and Meridian.

## REGULATORY DATABASE SEARCH SUMMARY

Database	Date of Database	Approximate Minimum Search Distance (miles)	Reported Facilities
<b>Standard Federal ASTM Environmental Record Sources</b>			
NPL (National Priorities List) / Proposed NPL / DOD (Department of Defense Sites)	06/08	1.0	0
Delisted National Priorities List	06/08	0.5	0
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)/No Further Remedial Action Planned (NFRAP)	04/08	0.5	5
RCRA (Resource Conservation and Recovery Act) Large and Small Quantity Generators	06/08	0.125	2
RCRA – CORRACTS TSDFs (Corrective Action Treatment, Storage, and Disposal Facilities)	06/08	1.0	0
RCRA – Non-CORRACTS TSDFs	06/08	0.5	0
ERNS (Emergency Response Notification System)	06/08	0.125	0
<b>Standard State ASTM Environmental Record Sources</b>			
WQARF (Water Quality Assurance Revolving Fund) Areas	06/08	1.0	2
Superfund Program List (replaces ACIDS)	08/04	0.5	1
Solid Waste Facilities/Landfill Sites – Operating and Closed	05/99 & 05/04	0.5	0
Control Registries	06/08	Site and adjoining	0
Brownfields / Voluntary Remediation Program	06/08	0.5	2
Registered USTs (Underground Storage Tanks)	05/08	0.125	3
LUSTs (Leaking Underground Storage Tanks) Incident Reports	05/08	0.5	16
<b>Additional Environmental Record Sources</b>			
RCRA Compliance Facilities	06/08	0.125	0
Hazardous Materials Incidents Emergency Response Logbook	1984-06/01	0.125	0
ADEQ Drywell Registration Database	06/08	0.125	0
Environmental Permits	06/08	Site	0
Fire Insurance Maps	Various	Site and adjoining	1
Topographical / Aerial Maps	See text	Site and adjoining	2
VEMUR / DEUR / LIENS	06/08	Site	0
Arizona Department of Water Resources Well Registration Database	06/08	Site and adjoining	See Text

**Allands contacts the appropriate sources on a monthly basis to maintain currency of data**

## **Standard Federal ASTM Environmental Record Sources**

### **SUPERFUND NATIONAL PRIORITIES LIST (NPL)**

Under Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act the Environmental Protection Agency established a National Priorities List (NPL) of Superfund sites. In addition, Proposed NPL and DOD (Department of Defense) Sites are researched in the section. These databases are provided by the EPA and the Arizona Department of Environmental Quality, dated June, 2008, and searched to identify all NPL/Proposed NPL/ DOD sites within a 1.0 mile search distance from subject property exterior boundaries.

Note: Due to inconsistency between the general area site description in the Narrative site information and the detailed site map, the distance/directions are determined based upon the most current site map available from ADEQ.

No National Priorities List (NPL) / Proposed NPL / DOD Sites were found located within a 1.0 mile search distance from subject property exterior boundaries.

### **DELISTED NATIONAL PRIORITIES LIST**

Site may be delisted from the National Priorities List where no further response is appropriate. This database is provided by the Environmental Protection Agency, dated June, 2008, and searched to identify all Delisted NPL Sites within a 0.5 mile search distance from subject property exterior boundaries.

No Delisted National Priorities List (NPL) Sites were found located within a 0.5 mile search distance from subject property exterior boundaries.

## FEDERAL CERCLIS / NFRAP LIST

The CERCLIS list contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. Those sites on the NFRAP list have no further remedial action planned. This database is provided by EPA dated April, 2008, and searched for facilities within a 0.5 mile search distance from subject property exterior boundaries.

EPA ID	NFRAP	FACILITY	ADDRESS	DISTANCE/ DIRECTION
AZD983484882		Downtown Auto Center	330 N 5th Ave	0.2 mi. NE
AZT000646059	X	Universal Waste Control	330 N Fifth Ave	0.2 mi. NE
AZD983484890	X	United Fire Company / United Fire Auto	335 N 4th Ave / Approx S Of 300 E 7th St	0.3 mi. NE
AZD982002990		Oliver's Cleaners / 7th St & Arizona Ave	300 E 7th St	0.3 mi. NE
AZD983474818	X	Descal-It Products Co	127 S 4th Ave	0.3 mi. SE

## RESOURCE CONSERVATION AND RECOVERY ACT FACILITIES (RCRA)

Under RCRA the Environmental Protection Agency compiles a database of facilities that are involved in the generation of hazardous materials. This database is from the Arizona Department of Environmental Quality RCRAInfo Database, dated June, 2008 and checked for Federal RCRA facilities located within a <=0.125 mile search distance from subject property exterior boundaries.

EPA ID	FACILITY	ADDRESS	NOTIF. DATE	STATUS
AZD042370684	Uswest Business Resources	120 E Pennington	6/17/1998	N
AZT050010537	AT&T Co Tucson	120 E Pennington	3/31/1991	CEG

**CODES:**

LQG: Large quantity generator (more than 1000 kg per month)  
 SQG: Small quantity generator (100 – 1000 kg per month)  
 CEG: Conditionally exempt small quantity generator (less than 100 kg per month)  
 N : Not a generator verified or inactive generator

## **CORRACTS FACILITIES**

Under RCRA the Environmental Protection Agency compiles a database of Corrective Action Sites, sites with known contamination. Also known as the RCRA CORRACTS List, this is a list maintained by the EPA of RCRA sites at which contamination has been discovered and where some level of corrective clean-up activity has been undertaken. For example, a site may have been on the RCRA TSD or the RCRA Generators site list, and was placed on the CORRACTS list once contamination was discovered and remediation was underway. This database is dated June, 2008, and checked for facilities which occurred within a 1.0 mile search distance from subject property exterior boundaries.

No Facilities were found which occurred within a 1.0 mile search distance from subject property exterior boundaries.

## **TSD FACILITIES**

Under RCRA the Environmental Protection Agency compiles a database of facilities that are involved in the transportation, treatment, storage, or disposal of hazardous materials. This database is from the Arizona Department of Environmental Quality Arizona Hazardous Waste Treatment, Storage and Disposal Facilities, dated June, 2008, and checked for Facilities which occurred within a 0.5 mile search distance from subject property exterior boundaries.

No TSD Facilities were found which occurred within a 0.5 mile search distance from subject property exterior boundaries.

## **FEDERAL EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) LIST**

The ERNS list is a national database used to collect information on reported releases of oil and hazardous substances. This database is provided by the National Response Center and the EPA through the Right of Know Net by OMB Watch and Unison Institute from 1983 to June, 2008, and checked for incidents located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No incidents were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

## Standard State ASTM Environmental Record Sources

### WATER QUALITY ASSURANCE REVOLVING FUND (WQARF)

The state of Arizona established a remedial program under A.R.S. 49-282 to facilitate the conservation and clean-up of Arizona drinking water and water sources. Under the authority of the WQARF program, the state actively identifies any actual or potential impact upon state waters, evaluates the extent of contamination, identifies parties responsible, and provides money grants to assist in clean-up activities. This database is provided by the Arizona Department of Environmental Quality dated June, 2008, and searched to identify all WQARF sites within a 1.0 mile search distance from subject property exterior boundaries.

Note: Due to inconsistency between the general area site description in the Narrative site information and the detailed site map, the distance/directions are determined based upon the most current site map available from ADEQ.

7TH ST & ARIZONA AVE / OLIVER'S CLEANERSWQARF Registry List Site boundaries are located 0.2 mi. North of subject property. More information attached.

PARK-EUCLID / WQ - MISSION LINEN CLEANERSWQARF Registry List Site is located 0.8 mi. Southeast of subject property. More information attached.

### ARIZONA SUPERFUND PROGRAM LIST

The Arizona Superfund Program List replaces the Arizona CERCLIS Information Data System (ACIDS). This list is more representative of the sites and potential sites within jurisdiction of the Arizona Department of Environmental Quality Superfund Programs Section (SPS). This database is provided by the Arizona Department of Environmental Quality, dated August, 2004, and searched to identify all sites within a 0.5 mile search distance from subject property exterior boundaries.

SITE	PROGRAM	PROGRAM STATUS	PROGRAM DATE	DISTANCE/DIRECTION
Oliver's Cleaners / 7th St & Arizona Ave	WQARF	PENDING PI ON REGISTRY	01-01-98 04-27-00	0.2 mi. North

Program Status codes:

Pending PI	WQARF Preliminary Investigation (PI) is scheduled or in process
On Registry	PI has resulted in inclusion of a site on the WQARF Registry
ACTIVE	The Department of Defense is presently addressing the site
On NPL	site has been listed on the CERCLA National Priorities List

## **LANDFILLS**

The state of Arizona maintains listings of closed and permitted, operating landfills and solid waste dump sites. Lists of closed facilities are not necessarily complete - older dumping areas may not be documented. This database is from the Arizona Department of Environmental Quality Waste Programs Division; Solid Waste Section Directory of Arizona Active and Inactive Landfills dated May, 1999 and May, 2004, and checked for active and inactive landfills located within a 0.5 mile search distance from subject property exterior boundaries.

No active nor inactive landfills were found located within a 0.5 mile search distance from subject property exterior boundaries.

### **Codes:**

<b>MSWLF:</b>	<b>Municipal Solid Waste Landfills</b>
<b>CSWLF:</b>	<b>Closed Solid Waste Landfills</b>
<b>CSWOD:</b>	<b>Closed Solid Waste Dumps</b>

## CONTROL REGISTRIES

Under ASTM E 1527-05, Federal, State and Tribal institutional control / engineering control registries need to be researched. The Arizona Department of Environmental Quality has developed the AZURITE Database, reviewed through ADEQ GIS eMaps, which retrieves any institutional or engineering controls, dated June, 2008, and searched for sites which occurred at subject property or adjoining properties.

No institutional or engineering controls were found which occurred at subject property or adjoining properties.

## BROWNFIELDS / VOLUNTARY CLEANUP PROGRAM

The Arizona Department of Environmental Quality has developed the AZURITE Database, reviewed through ADEQ GIS eMaps, which includes the ADEQ Voluntary Remediation Program and the ADEQ Brownfields Tracking System, dated June, 2008, and searched for sites which occurred within a 0.5 mile search distance from subject property exterior boundaries.

<b>SITE NAME</b>	<b>ADDRESS</b>	<b>ADEQ FILE NO.</b>	<b>STATUS</b>	<b>DATE</b>
UPRR Passenger Depot	400 E Toole Ave	100149-00	Closed	2/11/2002 started 7/18/02 Closed
Arizona Department of Transportation	35 E. Toole	505721-00	Active	4/8/2004 Started

## REGISTERED UNDERGROUND STORAGE TANKS (UST)

State (A.R.S. 49-1001 to 1014) and Federal (RCRA Subtitle I) laws require that persons who own or have owned underground storage tanks containing “regulated substances” complete a notification form and register the tank with the state. Tribal UST records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the Arizona Department of Environmental Quality UST Log dated May, 2008, and searched for UST sites located within a <=0.125 mile search distance from subject property exterior boundaries.

ID	FACILITY	ADDRESS	TANK ID	CLOSURE TYPE	REMOVAL DATE
0-000555	AT&T - Tucson Central Office	125 N 6 <sup>th</sup> / 111 E Alameda / 112 E Alameda St	1	Perm Removal	11/1/1994
0-000555	AT&T - Tucson Central Office	125 N 6 <sup>th</sup> / 111 E Alameda / 112 E Alameda St	2	Perm Removal	6/21/1991
0-000555	AT&T - Tucson Central Office	125 N 6 <sup>th</sup> / 111 E Alameda / 112 E Alameda St	3	Perm Removal	6/21/1991
0-000555	AT&T - Tucson Central Office	125 N 6 <sup>th</sup> / 111 E Alameda / 112 E Alameda St	4		
0-006897	"Tucson, City Of - Ronstadt Bus Transit Center"	315 E Congress St	1	Perm Removal	07/24/1990
0-008601	Tanner Motor Tours – Former	139 N Scott Ave	1	Perm Removal	8/21/1995
0-008601	Tanner Motor Tours – Former	139 N Scott Ave	2	Perm Removal	8/22/1995
0-008601	Tanner Motor Tours – Former	139 N Scott Ave	3	Perm Removal	8/23/1995
0-008601	Tanner Motor Tours – Former	139 N Scott Ave	4	Perm Removal	8/24/1995
0-008601	Tanner Motor Tours – Former	139 N Scott Ave	5	Perm Removal	8/25/1995

### DETAILS

NOTE: Details section is from the ADEQ 2003 UST list, newer lists do not provide this information.

CG: Closed in Ground

TC: Temporarily Closed

Facility Id	Facility	Owner Id	Owner
Tank No.	Status	Capacity	Age
Tank Release Detection	Pipe Material	Piping Type	Tank Material
			Pipe Release Detection

0-000555 **AT&T Tucson Main Bldg Az0220** Pima Co. 348 AT&T Communications

125 N 6th/111 E Alameda ,Tucson AZ 85701

1 REMV Diesel 10000 Galvanized Steel Double-Walled

2 REMV Diesel Unknown Unknown

3 REMV Diesel Unknown Unknown

4 ACTV Diesel 10000 Automatic Tank Gauging Interstitial Copper Double-Walled Suction: Check

Interstitial Monitoring

Monitoring (Double Walled) (Double Walled) Interstitial Monitoring (Secondary Containment)

**REGISTERED UNDERGROUND STORAGE TANKS  
(DETAILS CONT.)**

Facility Id	Facility	Owner Id	Owner
Tank No.	Status	Capacity	Age
Tank Release Detection	Content	Piping Type	Tank Material
	Pipe Material		Pipe Release Detection

0-006897 **Ronstadt Bus Transit Center** Pima Co. 932 City Of Tucson Fleet Services  
 315 E Congress ,Tucson AZ 85701  
 1 REMV Gasoline 300

0-008601 **Tanner Motor Tours** Pima Co. 5311 Harry Siebenger  
 139 N Scott Ave ,Tucson AZ 85701  
 1 REMV Gasoline 2000 Bare Steel Suction: Check  
 2 REMV Gasoline 2000 Bare Steel Suction: Check  
 3 REMV Gasoline 2000 Bare Steel Suction: Check  
 4 REMV Gasoline 2000 Bare Steel Suction: Check  
 5 REMV Gasoline 10000 Bare Steel Unknown Suction: Check

**REGISTERED LEAKING UNDERGROUND STORAGE TANKS  
(LUST)**

Owners of USTs are required to report to the Arizona Department of Environmental Quality any and all releases of tank contents for which ADEQ maintains an ongoing file documenting the nature of contamination and the status of each such incident. Tribal LUST records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the ADEQ LUST Log dated May, 2008, and searched for LUST sites located within a 0.5 mile search distance from subject property exterior boundaries.

<b>ID</b>	<b>LUST ID NO</b>	<b>FACILITY</b>	<b>ADDRESS</b>	<b>DATE OPEN</b>	<b>DATE CLOSED</b>	<b>P CODE</b>	<b>DIST./ DIREC.</b>
0-008601	4206.01 4206.02	Tanner Motor Tours	139 N Scott Ave	9/7/1995 9/7/1995	8/8/1997 8/8/1997	5R1 5R1	0.1 mi. W
0-007556	0505.01 0505.02	Firestone Mastercare Store	445 N 6th Ave	8/4/1988 8/15/1994	3/28/2002 3/28/2002	5G1 5G1	0.2 mi. N
0-000813	1685.01	Oliver's Cleaners	300 E 7th St	2/27/1991	2/26/1993	6	0.2 mi. NE
0-007734	2965.01 2965.02	Adot Equipment Services-Possess / "Tucson, City Of - Remediation Area"	35 E Toole Ave	8/12/1993 8/12/1993	OPEN OPEN	2 2	0.2 mi. NW
0-005063	0232.01	Trailways Inc-TLI Inc	201 E Broadway	10/23/1986	OPEN	1D	0.2 mi. S
0-009939	5323.01	Rich Rodgers South Inc Property	151 E Broadway Blvd	5/28/2003	9/30/2003	5R1	0.2 mi. S
0-006897	1435.01	Ronstadt Bus Transit Center	315 E Congress	9/12/1990	12/28/1992	5R1	0.2 mi. SE
0-007884	3138.01	Southern Pacific Transportation	10th St & 3rd Ave	9/27/1993	12/7/1993	6	0.2 mi. SW
0-009008	4622.01	Bank One Arizona	2 E Congress St	11/25/1996	6/11/1997	5R1	0.2 mi. SW
0-006763	1136.01 1136.02	Yellow Cab Company	411 N 5th Ave	3/6/1990 3/6/1990	OPEN OPEN	1F 1F	0.3 mi. NE
0-007088	1832.01	Charlie's Autos Warehouse	331 E 7th St	6/18/1991	2/16/1994	6	0.3 mi. NE
0-007815	0560.01	Wakefield Investments	107 E 6th St	10/17/1988	1/27/1989	5R1	0.3 mi. NW
0-008644	4494.01	City of Tucson /Mobil/D P Jones	142 or 146 S 6th Ave @ 12th St	6/20/1996	5/27/1997	5R1	0.3 mi. S
0-007679	3006.01	ADOT Property	121 S 4th Ave	8/31/1993	9/15/1993	5S	0.3 mi. SE
0-005176	3208.01	Police/Fire Fuel Island	260 S Stone Ave	11/26/1993	11/9/1999	5S	0.4 mi. SW
0-009070	4674.01	Former Standard Brands Paint	702 E Broadway Rd	02/06/1997	03/03/1998	5R3	0.5 mi. SW

P CODE (Leaking UST Priority):

1D	Defined soil & GW requires remediation (levels exceed standards for one or more media)
IF	Free product present on GW and/or SW
2	Undefined soil contamination (default for newly reported LUSTs)
5G1	Closed soil/GW levels meet RBCA Tier I
5R1	Closed soil levels meet RBCA
5R3	Closed soil levels meet RBCA Tier 3
5S	Closed case for suspected release (false alarm)
6	Incident/tank was determined not to be UST jurisdiction and referred to another program

## **Additional Environmental Record Sources**

### **RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) COMPLIANCE FACILITIES**

The RCRA Compliance Log lists facilities that have been or presently are under investigation for non-compliance with RCRA regulations. Inclusion of any facility on this list indicates a history of compliance problems and RCRA regulatory violation. This database is from the Arizona Department of Environmental Quality RCRA Compliance Log, dated June, 2008, and searched for compliance facilities within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No compliance facilities were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

### **HAZARDOUS MATERIAL INCIDENTS**

The Arizona Department of Environmental Quality (ADEQ) Response Team documents spills and incidents involving hazardous materials that are reported to the unit. This database is from the Arizona Department of Environmental Quality Emergency Response Log from 1984 through June, 2001, and checked for hazardous material incidents located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No hazardous material incidents were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

## **ADEQ DRY WELL REGISTRATION DATA BASE**

Dry wells are constructed for the purpose of collecting storm waters. Dry wells are required to be registered with ADEQ. This database is from the ADEQ dry well registration database dated June, 2008, and searched for dry wells located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No registered dry wells were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

## **ENVIRONMENTAL PERMITS**

These lists include Groundwater Permits, Reuse Permits; National Pollutant Discharge Elimination System (NPDES) Permitted Facilities and Aquifer Protection Permits. Any facility which discharges a material that directly or indirectly adds any pollutant to the waters of the state may be required to obtain a permit as required by the Aquifer Protection Permit Rules. These databases are from the Arizona Department of Environmental Quality through its AZURITE Database System and the Environmental Protection Agency and updated to June, 2008, and checked for inclusion of subject property.

Subject property was not found on these lists.

## **FIRE INSURANCE MAPS**

A review was made at the Arizona State Capital Archives for Fire Insurance Maps, more commonly known as Sanborn Maps, which covered the area in which the subject property is located. Subject property is located within the boundaries of available maps.

## **USGS 7.5 MINUTE TOPOGRAPHICAL MAPS AERIAL PHOTOS**

The United States Geological Survey Topographic maps and Aerial Photos are derived from Terrain Navigator Software from Maptech, Inc. ([www.maptech.com](http://www.maptech.com)) and are for informational purposes only.

<b>NAME</b>	<b>TYPE</b>	<b>DATE</b>	<b>REVISION</b>	<b>CONTOUR</b>
Tucson	Topo	1983	None	10 feet
Tucson NW	Aerial	6-10-2007		

**VOLUNTARY ENVIRONMENTAL MITIGATION USE RESTRICTIONS BY OWNERS (VEMUR'S); DECLARATION OF ENVIRONMENTAL USE RESTRICTIONS (DEUR); AND ENVIRONMENTAL LIENS**

A.R.S. 49-152. This states that the Director of the Arizona Department of Environmental Quality shall allow property owners, who have voluntarily elected to remediate their property for nonresidential uses, to record in the applicable county recorder's office a VEMUR limiting, by legal description, the area necessary to protect public health and the environment to nonresidential uses if contamination remains on the property at or above certain levels. In accordance with Arizona Administrative Code (A.A.C.) R18-7-201 et. Seq., a Declaration of Environmental Use Restriction (DEUR) is a voluntary notice to deed which restricts the use of a property to non-residential use. ADEQ maintains a repository listing of sites remediated under programs administered by the department. This is called the Remediation and DEUR Tracking System (RDT) ADEQ's RDT was researched for inclusion of subject property.

No VEMUR'S, DEUR'S; Environmental Liens, or activity and use limitations, if any, were found currently recorded against the property as searched at the subject county recorder's office.

## ARIZONA DEPARTMENT OF WATER RESOURCES WELL REPORT

This database is from the Arizona Department of Water Resources Well Report Operations Division Report, dated June, 2008. This report identifies existing wells sequenced by legal description and checked for inclusion of subject site and adjacent properties within 10 Acres.

Imaged Records are available at: <http://www.water.az.gov/adwr/Content/ImagedRecords/default.htm>

### Water Uses (WU)

A Irrigation  
 B Utility (Water Co.)  
 C Commercial  
 D Domestic  
 E Municipal  
 F Industrial  
 G Recreational  
 H Remediation  
 I Mining  
 J Stock  
 K Other - Exploration  
 L Drainage  
 M Monitoring  
 N None  
 O Other - Non-Production  
 R Recharge  
 T Test  
 V dewatering

### Legal Description

T Township  
 N/S North or South  
 R Range  
 E/W East or West  
 S Section  
 Q1 Quarter of Section (160 Acres)  
 Q2 Quarter Quarter of Section (40 Acres)  
 Q3 Quarter Quarter Quarter of Section (10 acres)  
 ID Well Registration Number  
 WD Well Depth  
 WL Water Level  
 DIA Casing width

ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
567584	14	S	13	E	12				N				Union Pacific Railroad Company
700343	14	S	13	E	12				D	151		12	
575074	14	S	13	E	12				T				Union Pacific Railroad
907287	14	S	13	E	12				N				Arizona Department Of Transportation
575594	14	S	13	E	12				N				Union Pacific Railroad Company
516151	14	S	13	E	12				N	97	55	0	Adot,
528939	14	S	13	E	12				N	0	0	0	Yellow Cab,
544806	14	S	13	E	12				N	66	64	0	Bridgestone/Firestone,
575614	14	S	13	E	12	SE			N				City Of Tucson -Dot-Engineering Div
588783	14	S	13	E	12	SE			N				Union Pacific Railroad
553725	14	S	13	E	12	SE	NW	NE	M	0	0	0	Yellow Cab Co-Tucson,
553724	14	S	13	E	12	SE	NW	NE	M	0	0	0	Yellow Cab Co-Tucson,
214639	14	S	13	E	12	SE	NW	NE	M	85		4	Adeq
214640	14	S	13	E	12	SE	NW	NE	M	200	105	1	Arizona Dept Of Environmental Quality
700415	14	S	13	E	12	SE	NW	NE		603		12	Arizona Department Of Water Resources

**ARIZONA DEPARTMENT OF WATER RESOURCES  
WELL REPORT (cont.)**

ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
571702	14	S	13	E	12	SE	NW	NW	T	70		4	Arizona Department Of Environmental Quality
555798	14	S	13	E	12	SE	NW	NW	M	65	65	0	Yellow Cab Co-Tucson,
577677	14	S	13	E	12	SE	NW	NW	N	60			Yellow Cab Co Of Tucson
553162	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
577676	14	S	13	E	12	SE	NW	NW	T	110	66	3	Yellow Cab Co Of Tucson
555548	14	S	13	E	12	SE	NW	NW	M	85	65	4	Yellow Cab Co-Tucson,
555547	14	S	13	E	12	SE	NW	NW	M	65	65	0	Yellow Cab Co-Tucson,
553723	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
553722	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
553721	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
553718	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
553163	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
553160	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
552817	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
552814	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
552813	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
553717	14	S	13	E	12	SE	NW	NW	M	0	0	0	Yellow Cab Co-Tucson,
613786	14	S	13	E	12	SE	NW	NW	F	620	0	12	Collier, Patricia,
902378	14	S	13	E	12	SE	NW	NW	M				Arizona Department Of Environmental Quality
529984	14	S	13	E	12	SE	NW	SE	M	0	0	0	Yellow Cab,
552811	14	S	13	E	12	SE	NW	SE	M	0	0	0	Yellow Cab Co-Tucson,
529978	14	S	13	E	12	SE	NW	SE	M	75	62	4	Yellow Cab,
591718	14	S	13	E	12	SE	NW	SE	M	85	65	1	Arizona Dept Of Environmental Quality
591719	14	S	13	E	12	SE	NW	SE	M	85	65	1	Arizona Dept Of Environmental Quality
591720	14	S	13	E	12	SE	NW	SE	M	85	65	1	Arizona Dept Of Environmental Quality
553161	14	S	13	E	12	SE	NW	SE	M	0	0	0	Yellow Cab Co-Tucson,
576299	14	S	13	E	12	SE	NW	SE	T	81		4	Arizona Dept Of Environmental Quality
591721	14	S	13	E	12	SE	NW	SE	M	85	65	1	Arizona Dept Of Environmental Quality
576297	14	S	13	E	12	SE	NW	SE	T				Union Pacific Railroad
591722	14	S	13	E	12	SE	NW	SE	M	200	171	10	Arizona Dept Of Environmental Quality
529983	14	S	13	E	12	SE	NW	SE	M	0	0	0	Yellow Cab,
529982	14	S	13	E	12	SE	NW	SE	M	0	0	0	Yellow Cab,
620307	14	S	13	E	12	SE	NW	SE	E	500	136	0	Tucson, City Of
529981	14	S	13	E	12	SE	NW	SE	M	70	65	4	Yellow Cab,
529980	14	S	13	E	12	SE	NW	SE	M	75	65	4	Yellow Cab,
529979	14	S	13	E	12	SE	NW	SE	M	80	62	4	Yellow Cab,
571705	14	S	13	E	12	SE	NW	SE	T	71		0	Arizona Department Of Environmental Quality
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**ARIZONA DEPARTMENT OF WATER RESOURCES  
WELL REPORT (cont.)**

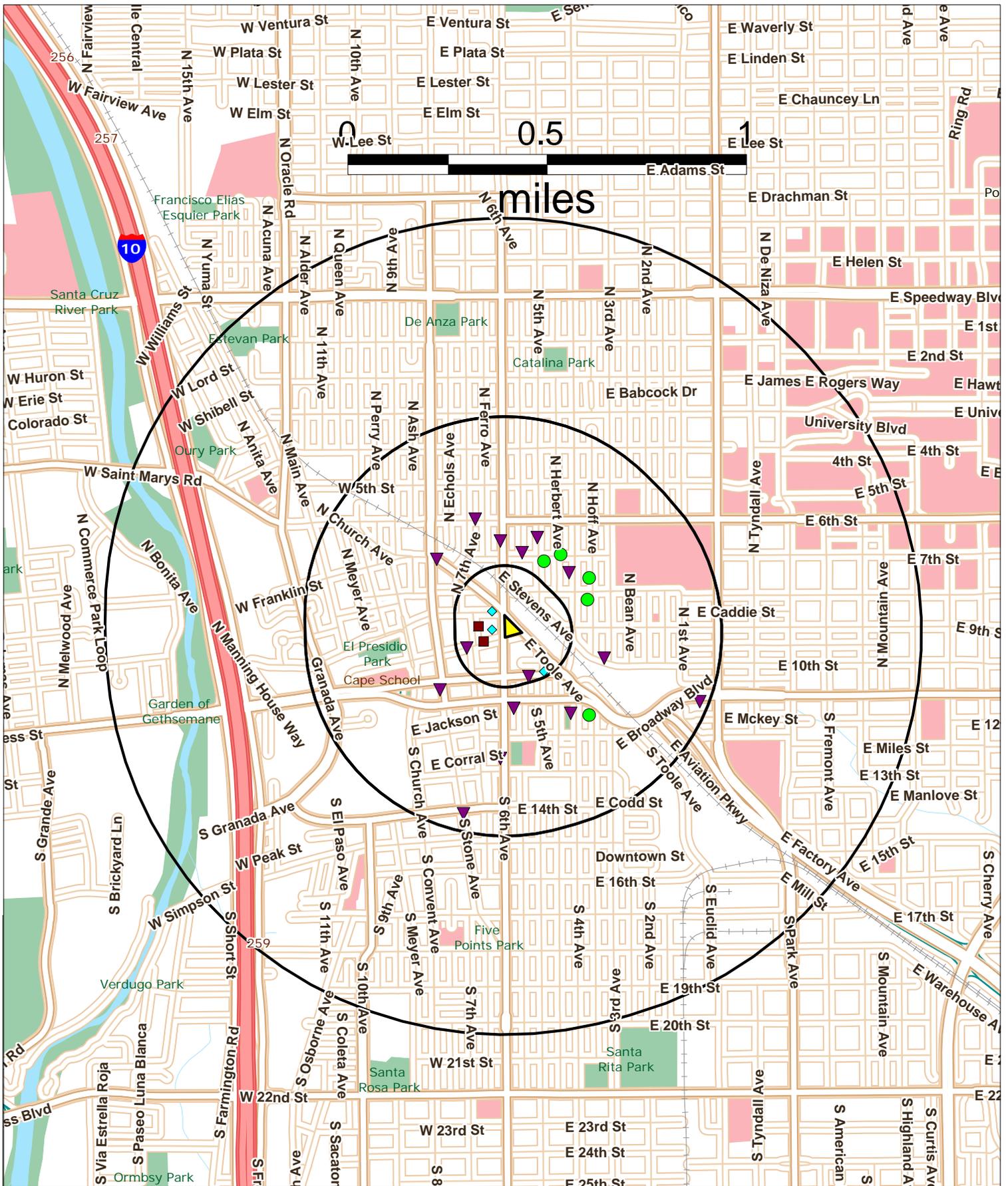
ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
581740	14	S	13	E	12	SE	NW	SE	T				Arizona Department Of Environmental Quality
551760	14	S	13	E	12	SE	NW	SW	M	0	0	0	Yellow Cab Co Of Tuc,
516158	14	S	13	E	12	SE	NW	SW	T	110	65	2	Adot,
516156	14	S	13	E	12	SE	NW	SW	T	124	64	2	Adot,
552934	14	S	13	E	12	SE	NW	SW	M	0	0	0	Yellow Cab Co-Tucson,
904282	14	S	13	E	12	SE	SW	NE	M	88	70	4	Union Pacific Railroad (Upr)
588782	14	S	13	E	12	SE	SW	NE	T	84		4	Union Pacific Railroad
588781	14	S	13	E	12	SE	SW	NE	T	86		4	Union Pacific Railroad
588780	14	S	13	E	12	SE	SW	NE	T	89		4	Union Pacific Railroad
212084	14	S	13	E	12	SE	SW	NE	H				Union Pacific Railroad Company
904284	14	S	13	E	12	SE	SW	NE	M	87	69	4	Union Pacific Railroad (Upr)
904285	14	S	13	E	12	SE	SW	NE	M	93	73	4	Union Pacific Railroad (Upr)
531236	14	S	13	E	12	SE	SW	NE	M	77	68	4	Union Pacific Railroad Company
904283	14	S	13	E	12	SE	SW	NE	M	88	71	4	Union Pacific Railroad (Upr)
537624	14	S	13	E	12	SE	SW	NE	M	78	0	4	Union Pacific Railroad Company
588779	14	S	13	E	12	SE	SW	NE	T	90		4	Union Pacific Railroad
593341	14	S	13	E	12	SE	SW	NW	T	86		4	Union Pacific Railroad
571706	14	S	13	E	12	SE	SW	NW	T	86		4	Arizona Department Of Environmental Quality
514258	14	S	13	E	12	SE	SW	NW	N	61	0	0	Adot,
514259	14	S	13	E	12	SE	SW	NW	N	120	66	0	Adot,
593342	14	S	13	E	12	SE	SW	NW	T	89		4	Union Pacific Railroad
517519	14	S	13	E	12	SE	SW	NW	M	84	68	3	Adot,
574266	14	S	13	E	12	SE	SW	NW	T				Union Pacific Railroad Company
575075	14	S	13	E	12	SE	SW	NW	T	86		4	Arizona Department Of Environmental Quality
574265	14	S	13	E	12	SE	SW	NW	T				Union Pacific Railroad Company
574264	14	S	13	E	12	SE	SW	NW	T				Union Pacific Railroad Company
543890	14	S	13	E	12	SE	SW	SE	M	83	74	4	Adeq,
543895	14	S	13	E	12	SE	SW	SE	M	0	0	0	Adeq,
522514	14	S	13	E	12	SE	SW	SE	N	88	77	4	Arizona Dept Of Environmental Quality
552578	14	S	13	E	12	SE	SW	SE	N	189	160	3	Adeq,
543889	14	S	13	E	12	SE	SW	SE	M	0	0	0	Adeq,
551771	14	S	13	E	12	SE	SW	SE	N	87	71	4	Adeq,
551770	14	S	13	E	12	SE	SW	SE	N	87	71	4	Adeq,
551769	14	S	13	E	12	SE	SW	SE	N	86	70	4	Adeq,
545653	14	S	13	E	12	SE	SW	SE	M	89	77	4	Arizona Department Of Environmental Quality
516263	14	S	13	E	12	SE	SW	SE	M	87	77	2	Continental Trailway,
551772	14	S	13	E	12	SE	SW	SE	N	0	0	0	Adeq,
531237	14	S	13	E	12	SE	SW	SE	M	91	78	4	Union Pacific Railroad Company

**ARIZONA DEPARTMENT OF WATER RESOURCES  
WELL REPORT (cont.)**

ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
556378	14	S	13	E	12	SE	SW	SE	N	85	77	4	Adeq,
556379	14	S	13	E	12	SE	SW	SE	T				Arizona Dept Of Environmental Quality
522516	14	S	13	E	12	SE	SW	SE	N	88	77	4	Arizona Dept Of Environmental Quality
545654	14	S	13	E	12	SE	SW	SE	M	86	77	4	Adeq,
522515	14	S	13	E	12	SE	SW	SE	N	88	77	4	Arizona Dept Of Environmental Quality
543887	14	S	13	E	12	SE	SW	SE	M	0	0	0	Adeq,
700382	14	S	13	E	12	SE	SW	SE	M				Union Pacific Railroad
543888	14	S	13	E	12	SE	SW	SE	M	0	0	0	Adeq,
543885	14	S	13	E	12	SE	SW	SE	M	0	0	0	Adeq,
593344	14	S	13	E	12	SE	SW	SE	T	91			Union Pacific Railroad
543886	14	S	13	E	12	SE	SW	SE	M	0	0	0	Adeq,
593343	14	S	13	E	12	SE	SW	SE	T	89		4	Union Pacific Railroad
535189	14	S	13	E	12	SE	SW	SW	M	87	78	4	Arizona Department Of Environmental Quality
543894	14	S	13	E	12	SE	SW	SW	N	83	76	4	Adeq,
902365	14	S	13	E	12	SE	SW	SW	M				
801604	14	S	13	E	12	SW	NE	NE	F	630	150	8	Haskell Jnt Venture,
555810	14	S	13	E	12	SW	NE	NE	M	75	60	4	Arizona Dept Of Environmental Quality
576300	14	S	13	E	12	SW	NE	NE	T	77		4	Arizona Department Of Environmental Quality
562046	14	S	13	E	12	SW	NE	NE	M	79	64	2	Bfs Retail & Commercial Operations
553726	14	S	13	E	12	SW	NE	NE	M	0	0	0	Yellow Cab Co-Tucson,
700412	14	S	13	E	12	SW	NE	NE	F	730		8	Arizona Department Of Water Resources
700413	14	S	13	E	12	SW	NE	NE	U	660		5	Arizona Land Title & Trust Tr 5073-T
553159	14	S	13	E	12	SW	NE	NE	M	0	0	0	Yellow Cab Co-Tucson,
552816	14	S	13	E	12	SW	NE	NE	M	0	0	0	Yellow Cab Co-Tucson,
204470	14	S	13	E	12	SW	NE	SE	H				City Of Tucson Environmental Services
904789	14	S	13	E	12	SW	NE	SE	N				Pima County Public Works
576298	14	S	13	E	12	SW	NE	SE	T				Arizona Department Of Environmental Quality
553158	14	S	13	E	12	SW	NE	SE	M	0	0	0	Yellow Cab Co-Tucson,
552812	14	S	13	E	12	SW	NE	SE	M	0	0	0	Yellow Cab Co-Tucson,
700344	14	S	13	E	12	SW	NE	SE	D	30			Arizona Department Of Water Resources
552815	14	S	13	E	12	SW	NE	SE	M	0	0	0	Yellow Cab Co-Tucson,
571701	14	S	13	E	12	SW	NE	SE	T				Union Pacific Railroad Company
599676	14	S	13	E	12	SW	SE	NE					City Of Tucson
599677	14	S	13	E	12	SW	SE	NE	N				City Of Tucson
700414	14	S	13	E	12	SW	SE	NE	C	728		12	Tucson Local Development Corporation (City Of Tucson Parks)
906745	14	S	13	E	12	SW	SE	NE	N				City Of Tucson
514264	14	S	13	E	12	SW	SE	SE	N	74	63	2	Adot,

**ARIZONA DEPARTMENT OF WATER RESOURCES  
WELL REPORT (cont.)**

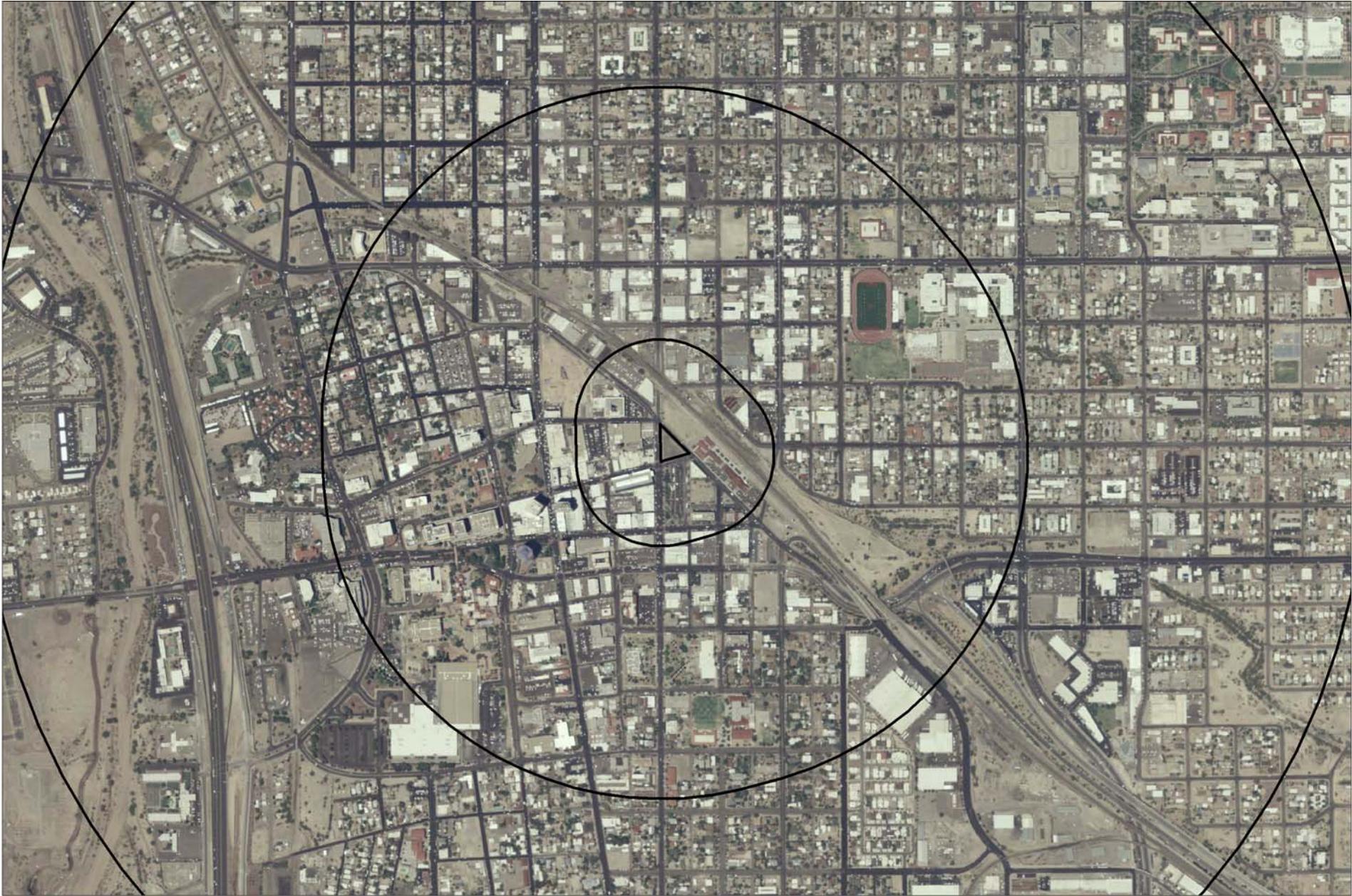
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902366	14	S	13	E	12	SW	SE	SE	M				Arizona Department Of Environmental Quality
700348	14	S	13	E	12	SW	SE	SE	D	315		12	Valley National Bank Of Phoenix

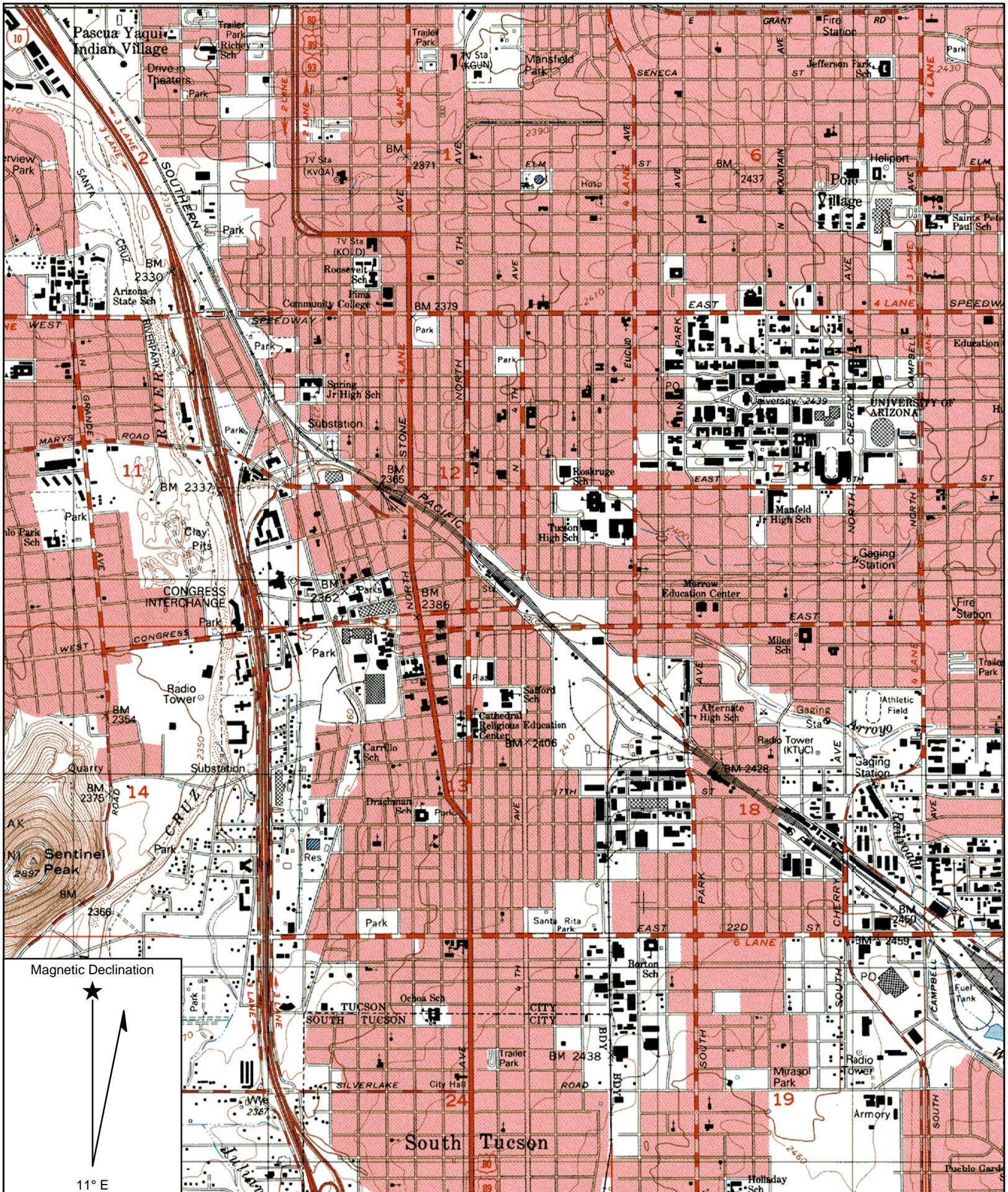


**LEGEND**

	SITE	USTs	CERCLA / NFRAP	RCRA (Generators, TSD & CORRACTS TSD)	SCHOOL
LUSTs	LANDFILLS	RCRA COMPLIANCE			







Name: TUCSON  
 Date: 10/24/2008  
 Scale: 1 inch equals 2000 feet

Location: 032° 13' 20.66" N 110° 57' 57.39" W NAD27  
 Caption: Job No. 2008-10-099  
 Contour interval is 10 feet

## **7th Street and Arizona Avenue**

### Water Quality Assurance Revolving Fund ([WQARF](#)) Site

#### **Boundaries:**

The [7th Street and Arizona Avenue Site](#) (Site) is located in downtown Tucson, north of Broadway Boulevard and east of Interstate 10, and is bounded approximately by Speedway Boulevard to the north, 4th Avenue to the east, 8th Street and the railroad to the south, and Ash Avenue to the west.

#### **Site Status Update:**

Through March 2008, approximately 752 pounds of [volatile organic compounds](#) (VOCs) have been removed by a [soil vapor extraction \(SVE\)](#) system.

#### **Community Involvement Activities:**

The Arizona Department of Environmental Quality ([ADEQ](#)) distributes fact sheets and public notices to the nearby community when significant events occur. The most recent [fact sheet](#) for the 7th Street and Arizona Avenue WQARF Site can be found on the ADEQ Web site.

#### **Site History:**

**1957-1989:** From approximately 1957 to 1989, dry cleaning businesses were located on the property at 300 E. 7th Street. The building was destroyed by fire in 1989 and now the property is vacant and used for parking. [Tetrachloroethene](#) (PCE) for the dry cleaning process was stored in [underground storage tanks \(USTs\)](#).

**1991:** Seven USTs, five solvent and two heating and waste oil tanks, were removed from the property.

**1992:** An assessment of site soils and groundwater was conducted. Soils near the heating and waste oil tanks were found to contain [petroleum hydrocarbons](#). Analysis of a groundwater sample from a water supply well on the Site revealed the presence of PCE and [trichloroethene](#) (TCE) in the regional [aquifer](#) underlying the Site.

**2000:** On April 27, 2000, the Site was placed on the [WQARF Registry](#) with an eligibility and evaluation (E&E) score of 40 out of a possible 120.



**Groundwater Monitor Well Being Installed  
near Historic Dry Cleaners**

**2003:** In July, a report of the findings and recommendations for a potential [early response action](#) (ERA) under WQARF was completed. Investigations showed that while a release of PCE, and possibly TCE, had occurred at the property at 300 E. 7th Street, there appeared to be no route for human exposure.

**2005:** From January through May, ADEQ conducted two groundwater monitoring events. Elevated concentrations of PCE and TCE existed in the surrounding perched groundwater [monitor wells](#). No contaminants were detected above regulatory standards in the regional aquifer.

**2006:** In June, ADEQ began operating a SVE system at the former Oliver's Cleaners, 300 E. 7th Street. The SVE system was estimated to operate for approximately two years.

**2007:** In February, five additional wells were installed to further investigate the boundary of PCE and TCE. Two more wells were installed in November. An [air sparging](#) pilot test was conducted in October 2007 to evaluate the feasibility of air sparging as a remedial method.



**Sampling at the Site from a Monitor Well**

### **Contaminants:**

The current contaminants of concern in groundwater include [tetrachloroethene](#) (PCE), [trichloroethene \(TCE\)](#) and cis-1,2-[dichloroethene](#) (cis-1,2-DCE). Contaminants of concern at the Site may change as new data become available. Currently, there are no known drinking water uses of the perched aquifer. However, if you are drinking water from a private well within the boundaries of the Site, please contact the [ADEQ Project Manager](#).

### **Public Health Impact:**

To ensure that no drinking water wells have been impacted by contamination from the Site, ADEQ completed a drinking water well inventory. The nearest known drinking water wells are in the regional aquifer and are located one-half to one mile northeast of the Site.

### **Site Hydrogeology:**

The Site is located within the Tucson Basin, a northwest trending [alluvial](#) valley covering an area of about 750 square miles in the Santa Cruz River drainage basin of southeastern Arizona. The Site is predominantly fine-grained sands and silts interbedded with fine-grained sediments from ground surface to approximately 80 feet below ground surface (bgs). The interbedded material is underlain by a clay [aquitard](#) approximately 12 feet in thickness, forming a perched aquifer.

Depth to perched water is approximately 65 feet bgs. The regional aquifer is encountered approximately 170 feet bgs. Flow direction in the regional aquifer is to the northeast.

## Contacts:

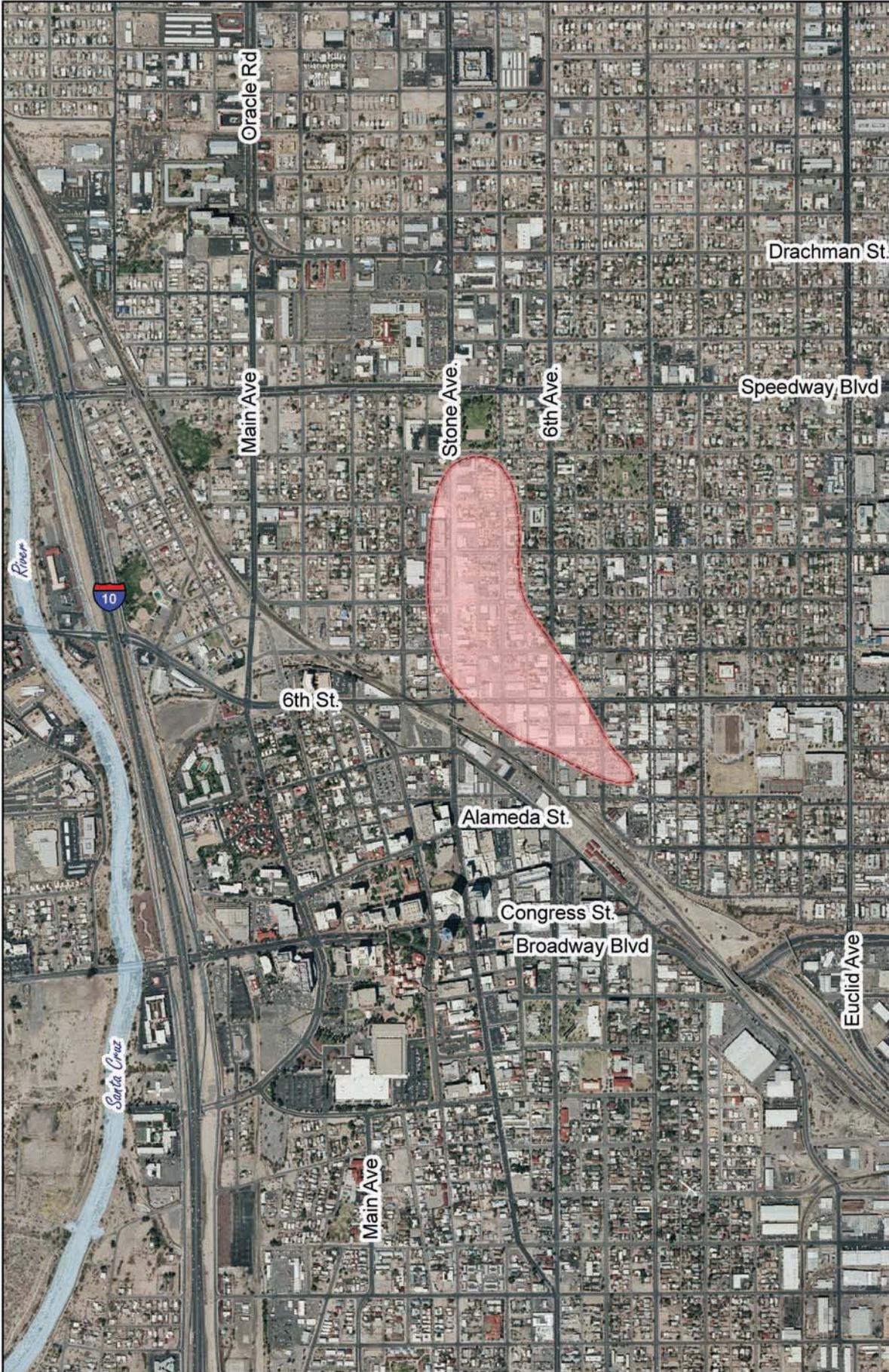
Name	Phone/Fax	E-Mail
Sherri Zendri, ADEQ Project Manager	(520) 770-3126*/ (520) 628-6745 fax	<a href="mailto:zendri.sherri@azdeq.gov">zendri.sherri@azdeq.gov</a>
Melissa Hayes, ADEQ Community Involvement Coordinator	(520) 770-3309*/ (520) 628-6745 fax	<a href="mailto:hayes.melissa@azdeq.gov">hayes.melissa@azdeq.gov</a>

\* In Arizona, but outside the Tucson area, call toll free (888) 271-9302.

## Information Repositories:

The complete official site file is located in Phoenix at the ADEQ Central Office at 1110 W. Washington Street; however, select documents are also available in Tucson at the [Southern Regional Office](#) at 400 W. Congress, Suite 433. Files are available for review Monday through Friday from 8:30 a.m. to 4:30 p.m. To arrange for a time to review the site file at the main ADEQ office, please call the ADEQ Records Management Center with 24-hour notice at (602) 771-4380 or (800) 234-5677 (Arizona toll-free). Please call (520) 628-6715 to arrange a file review appointment at the Southern Regional Office.

# 7th Street and Arizona Avenue WQARF Site



## Legend

 Estimated Plume Boundary

N



0.4

Miles

Tucson, Arizona  
April, 2008

WASTE PROGRAMS DIVISION  
GIS and Data Management Unit

Map produced by Arizona Department of Environmental Quality (ADEQ), GIS and Data Management Unit, TS Summers

D:\superfund\tucson\2008\arizave\_7thst\projects2008\17th\_AZave2008.mxd.

Data Sources: Arizona Department of Environmental Quality  
Arizona Land Resources Information System,  
Arizona Department of Transportation,  
Image:

*"Site boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the geographic boundaries for this site may change in the future as new information becomes available."*

## Park-Euclid

### Water Quality Assurance Revolving Fund ([WQARF](#)) Site

#### Boundaries:

The [Park-Euclid Site](#) (Site) is located east of downtown Tucson, and is bounded approximately by 8th Street on the north, Mountain Avenue on the east, 14th Street on the south, and Park Avenue on the west. The Site includes facilities located at both 299 and 301 South Park, where three companies have conducted laundry and dry cleaning operations since the late 1930's.

#### Site Status Update

The Arizona Department of Environmental Quality ([ADEQ](#)) is currently completing the [Remedial Investigation](#) (RI).

Mission Linen has completed construction of a multi-phase extraction (MPE) system to remediate contaminants including [tetrachloroethene](#) (PCE) in the perched aquifer. The MPE system became operational in April 2008. Also in April, ADEQ installed a deeper sentinel well at the UAM-2 well location. The well will be used for monitoring a deeper portion of the regional aquifer near the [University of Arizona](#) (UA) wells.

#### Community Involvement Activities:

A [community advisory board](#) (CAB) was formed for the Site in March 2000 and meets on a regular basis. CAB members are only selected from [applications](#) that are received. Details of meeting agendas and minutes for 2007 and 2008 can be viewed at the [ADEQ Web site](#). These meetings are open to the public. The most recent [fact sheet](#) can be found on the ADEQ Web site.

#### Site History:

**1990:** During an early 1990 investigation of diesel contamination in the area conducted by ADEQ, a groundwater sample was collected from a well on the [Mission Uniform & Linen Service](#) (Mission Linen) property. Analysis of the sample indicated that contamination was a combination of diesel product and [volatile organic compounds](#) (VOCs), including [tetrachloroethene](#) (PCE), [trichloroethene](#) (TCE) and [dichloroethene](#) (DCE).



Mission Uniform and Linen Service  
on Park Avenue

**1992:** Mission Linen conducted a Phase I investigation which included soil gas sampling, groundwater sampling and the abandonment of an inactive water supply well.

**1993:** Mission Linen conducted investigations that focused on the perched [aquifer](#) and the installation of a short term pilot [soil vapor extraction \(SVE\)](#) system.

**1994:** Mission Linen began investigating the regional groundwater aquifer including the examination of potential hydraulic connections between the perched and regional aquifers.

**1998:** The [Environmental Protection Agency](#) (EPA) initiated site assessment activities in the area with the installation of two [upgradient](#) perched groundwater [monitor wells](#).

**1999:** The Site was placed on the [WQARF Registry](#) with an eligibility and evaluation score of 51 out of a possible 120. In October 1999, ADEQ initiated an RI. As part of the investigation, ADEQ began sampling two UA water supply wells located downgradient from the Site.

**2000-2001:** In January 2000, three regional groundwater sentinel wells were installed south of UA's Main Campus to monitor groundwater conditions upgradient of UA's wells. In February 2000, EPA informally delegated responsibility for the Site to ADEQ through the RI/FS stages.

In 2000, Mission Linen completed the installation of an SVE system beneath the facility at 301 South Park Avenue. The pilot SVE system operated from June 2000 to August 2003 and removed approximately 6,000 pounds of PCE.

Since August 2000, monthly groundwater samples have been collected from the three sentinel wells. ADEQ is continuing to sample these sentinel wells and UA's water supply wells on a monthly basis to minimize the risk of drinking contaminated water. No PCE contamination above [Aquifer Water Quality Standards](#) (AWQS) has been detected in UA's water supply wells or the groundwater sentinel wells.

From November 2000 to February 2001, ADEQ installed 12 additional groundwater monitor wells to further characterize VOC and diesel contamination in the two aquifers underlying the Site. ADEQ conducted site investigation activities within the [vadose zone](#) and shallow aquifer.

**2002-2003:** ADEQ installed an additional eight groundwater and three [soil vapor](#) monitoring wells from May 2002 to February 2003. In February 2003, ADEQ conducted site investigation activities that focused on the sewer near the Mission Linen property.

**2004:** In July, ADEQ released the Draft RI Report summarizing site characterization activities. Also in 2004, Mission Linen expanded the pilot SVE system and continued remediation of the shallow soils beneath the facility. An additional 420 pounds of PCE were removed from the shallow soils by the existing SVE system.



**Monitor Well at the Site near  
Historic Dry Cleaning Operations**

**2006:** In August, ADEQ completed the RO Report following the completion of the public comment period. The RO for land use beneath Mission Linen is to restore soil conditions to the State's non-residential [soil remediation levels](#). The RO for drinking water use of groundwater from the regional aquifer is to protect the use of the groundwater supply

of the University of Arizona and the [City of Tucson](#) from contamination from the Park-Euclid WQARF Site.

**2007:** During 2007, ADEQ selected a new consultant to perform site work. Periodic groundwater monitoring and sampling resumed along with monthly sampling of the UA production wells and ADEQ's sentinel wells.

### **Contaminants:**

The current contaminants of concern in groundwater include [volatile organic compounds](#) (VOCs), including [tetrachloroethene](#) (PCE), [trichloroethene](#) (TCE) and cis-1,2 [dichloroethene](#) (DCE). PCE, TCE, and 1,2-DCE are present in concentrations above the AWQS. Contaminants of concern at the Site may change as new data become available.

### **Public Health Impact:**

A preliminary risk assessment was completed by the [Arizona Department of Health Services](#) (ADHS) in March 1995. There are no significant health risks associated with the Site at this time.

ADEQ conducted soil gas flux testing and sampling in February 2004 of soils overlying the contaminant plume in the perched aquifer to assess potential risks to human health due to vapor intrusion into overlying businesses and residences. Results of a screening health risk assessment indicated that VOCs migrating upward from subsurface soils and groundwater did not pose a significant risk to current or future off-site residential structures; but could pose a significant risk to workers at the Mission Linen facility. Based on this risk assessment, Mission Linen performed ambient air quality sampling inside the Mission Linen facility that indicated vapor concentrations inside the building were significantly below applicable occupational health exposure limits.

UA operates three active production wells downgradient from the regional aquifer contaminant plume. ADEQ samples these UA wells on a monthly basis to ensure these wells have not been impacted by contamination from the Site. No PCE contamination has been detected in these water supply wells. No one is known to be drinking contaminated water from this site; however, if you are drinking water from a private well within the boundaries of the Site, please contact the [ADEQ Project Manager](#).

### **Site Hydrogeology:**

The Site is located within the Tucson Basin, a northwest trending [alluvial](#) valley covering an area of about 750 square miles in the Santa Cruz River drainage basin of southeastern Arizona. The subsurface materials underlying the Site are predominately fine to coarse-grained sands and silts, interbedded with clay and gravel-sized sediments. A clay [aquitard](#) of variable thickness occurs at around 100 feet below ground surface (bgs), underlying the perched aquifer.

Depth to the perched aquifer is about 90 feet bgs; the regional aquifer is about 200 feet bgs. The current flow direction in the regional aquifer is to the north/northeast.

**Contacts:**

<b>Name</b>	<b>Phone/Fax</b>	<b>E-Mail</b>
Tina Le Page, ADEQ Project Manager	(520) 628-6663*/ (520) 628-6745 fax	<a href="mailto:lepage.tina@azdeq.gov">lepage.tina@azdeq.gov</a>
Eileen Palese, ADEQ Community Involvement Coordinator	(520) 628-6712*/ (520) 628-6745 fax	<a href="mailto:palese.eileen@azdeq.gov">palese.eileen@azdeq.gov</a>

\* In Arizona, but outside the Tucson area, call toll free (888) 271-9302.

**Information Repositories:**

Interested parties can review select site documents at the [Joel D. Valdez Main Library](#) located at 101 N. Stone Avenue in Tucson, (520) 791-4393.

The complete official site file is located in Phoenix at the ADEQ Central Office at 1110 W. Washington Street; however, select documents are also available in Tucson at the [Southern Regional Office](#) at 400 W. Congress, Suite 433. Files are available for review Monday through Friday from 8:30 a.m. to 4:30 p.m. To arrange for a time to review the site file at the main ADEQ office, please call the ADEQ Records Management Center with 24-hour notice at (602) 771-4380 or (800) 234-5677 (Arizona toll-free). Please call (520) 628-6715 to arrange a file review appointment at the Southern Regional Office.

# Park - Euclid WQARF Site



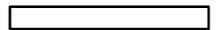
## Legend

 Estimated Plume Boundary

N



0.5



Miles

**Tucson, Arizona  
December, 2007**

**WASTE PROGRAMS DIVISION  
GIS and Data Management Unit**

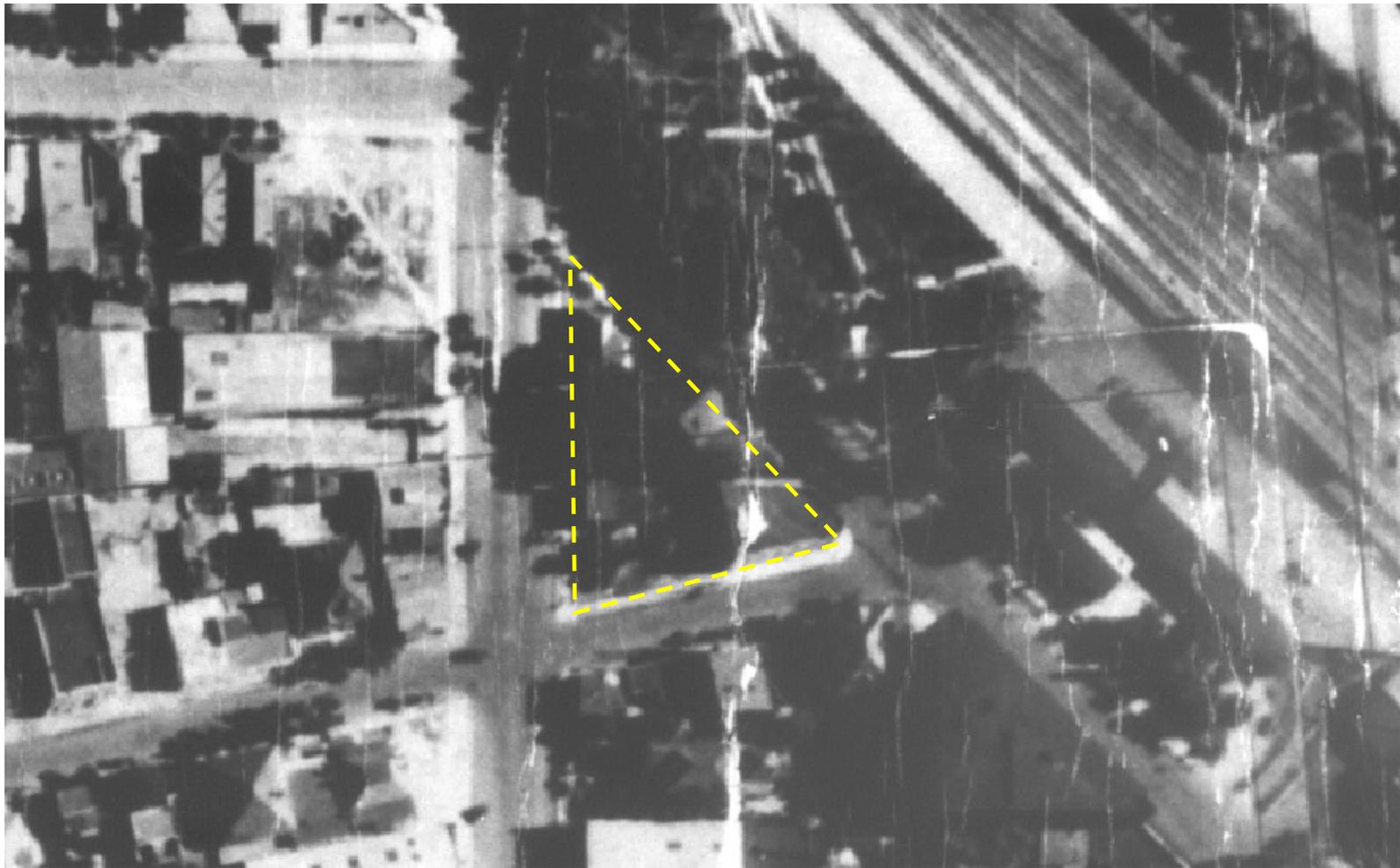
Map produced by Arizona Department of Environmental Quality (ADEQ), GIS and Data Management Unit, TS Summers

D:\superfund\tucson\2007\park\_euclid\projects2007\ParkEuclid2007-08.mxd.

Data Sources:  
Arizona Department of Environmental Quality  
Arizona Land Resources Information System  
Arizona Department of Transportation.  
Image: StateWide

*\*Site boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the geographic boundaries for this site may change in the future as new information becomes available.\**

**APPENDIX D**  
**HISTORICAL AERIAL PHOTOGRAPHS**



Source: Cooper Aerial Survey, 1924

 **APPROXIMATE SITE BOUNDARY**

0 75 150  
  
**APPROXIMATE SCALE IN FEET**

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

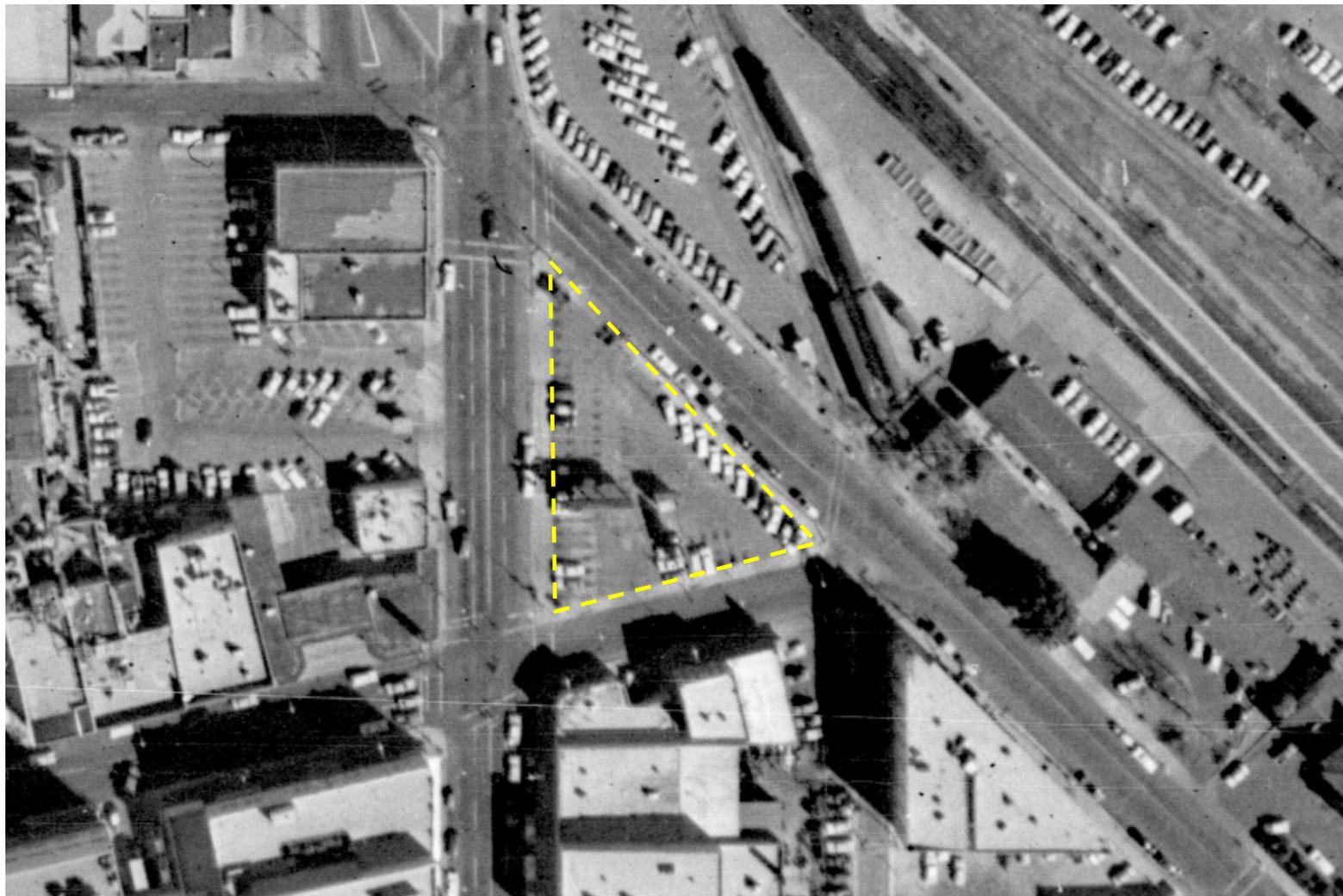


Source: Cooper Aerial Survey, 1953

 APPROXIMATE SITE BOUNDARY

0 75 150  
  
APPROXIMATE SCALE IN FEET

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

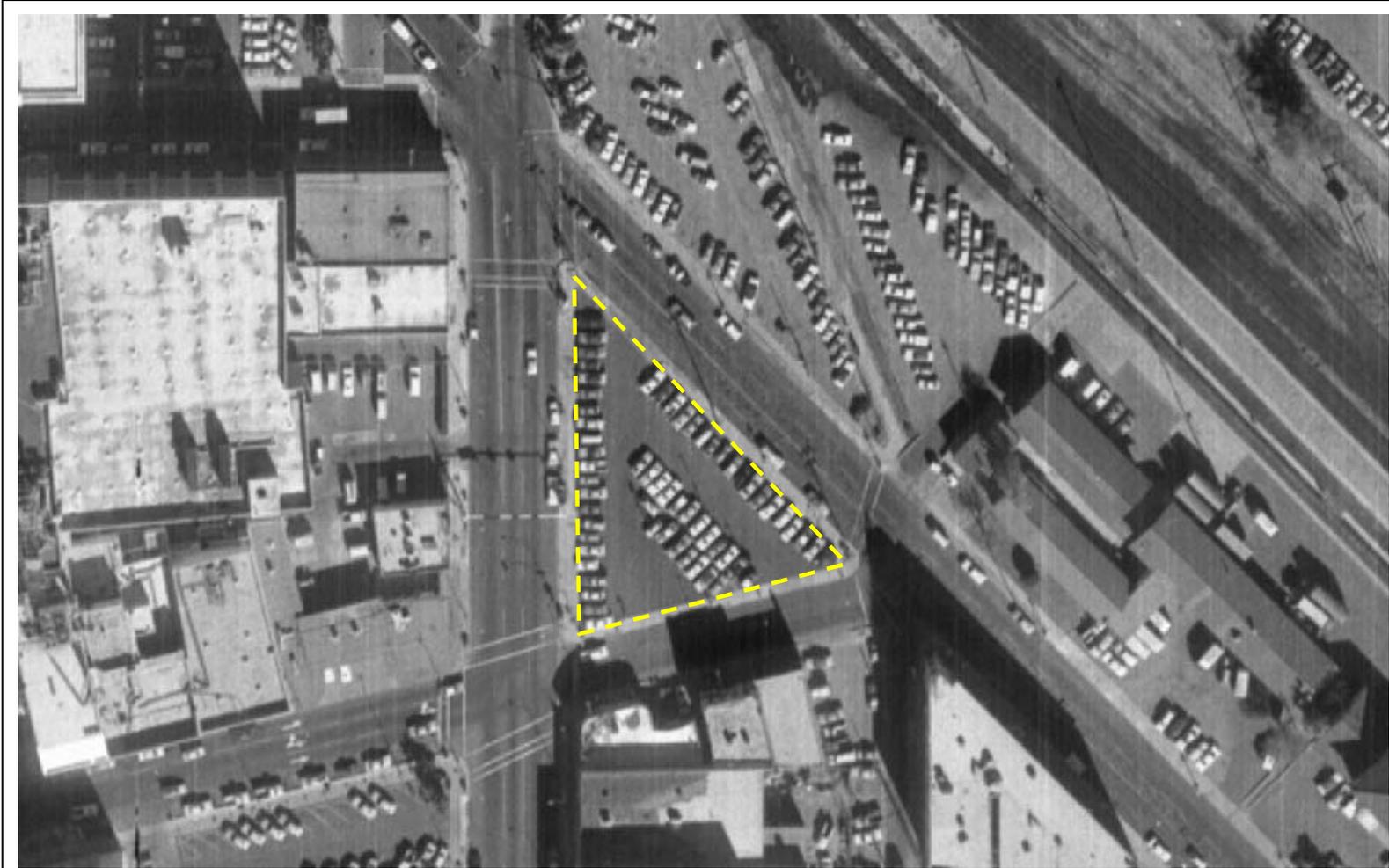


Source: Cooper Aerial Survey, 1960

 APPROXIMATE SITE BOUNDARY

0 75 150  
  
APPROXIMATE SCALE IN FEET

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

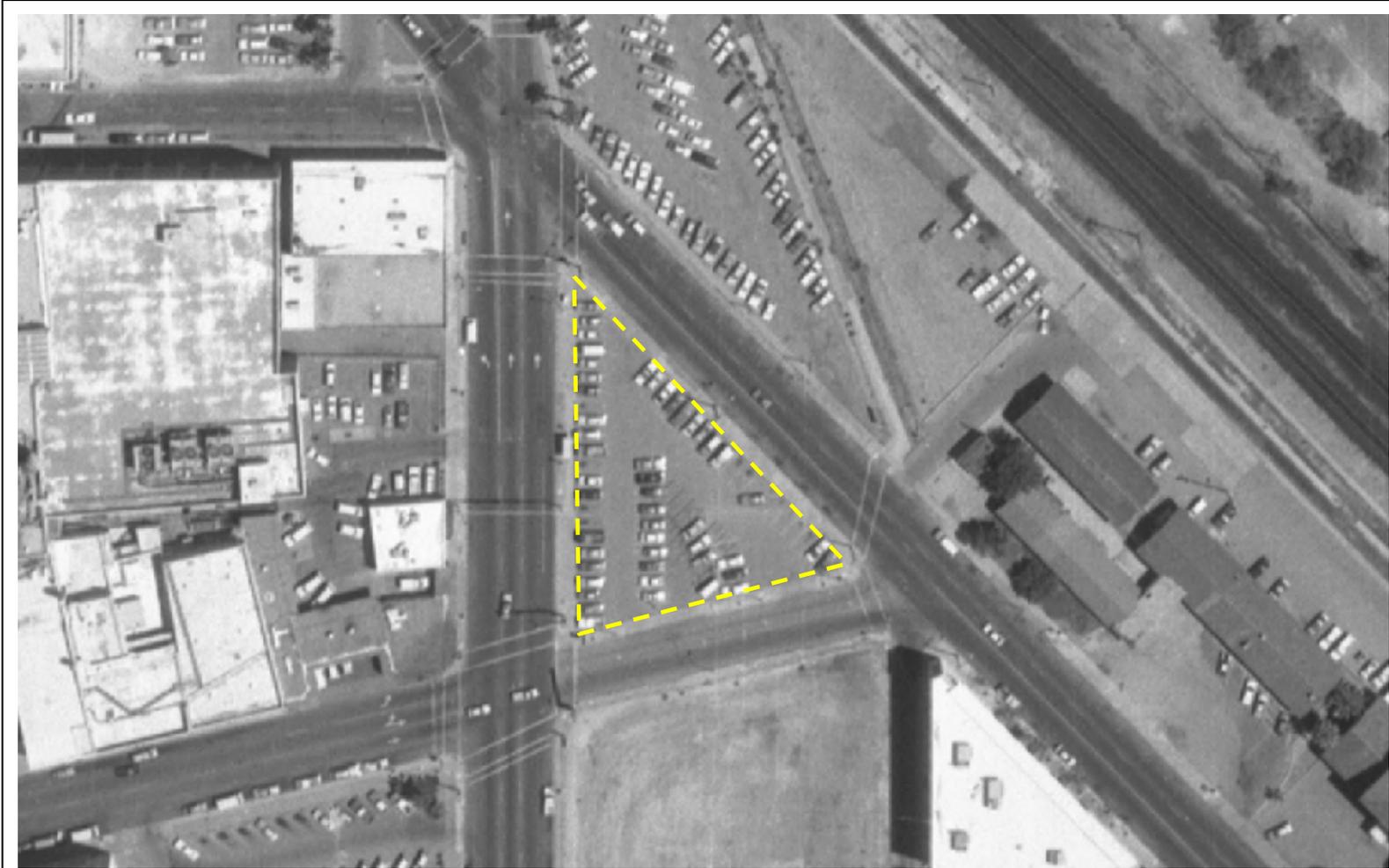


Source: Cooper Aerial Survey, 1973

 APPROXIMATE SITE BOUNDARY

0 75 150  
  
APPROXIMATE SCALE IN FEET

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.



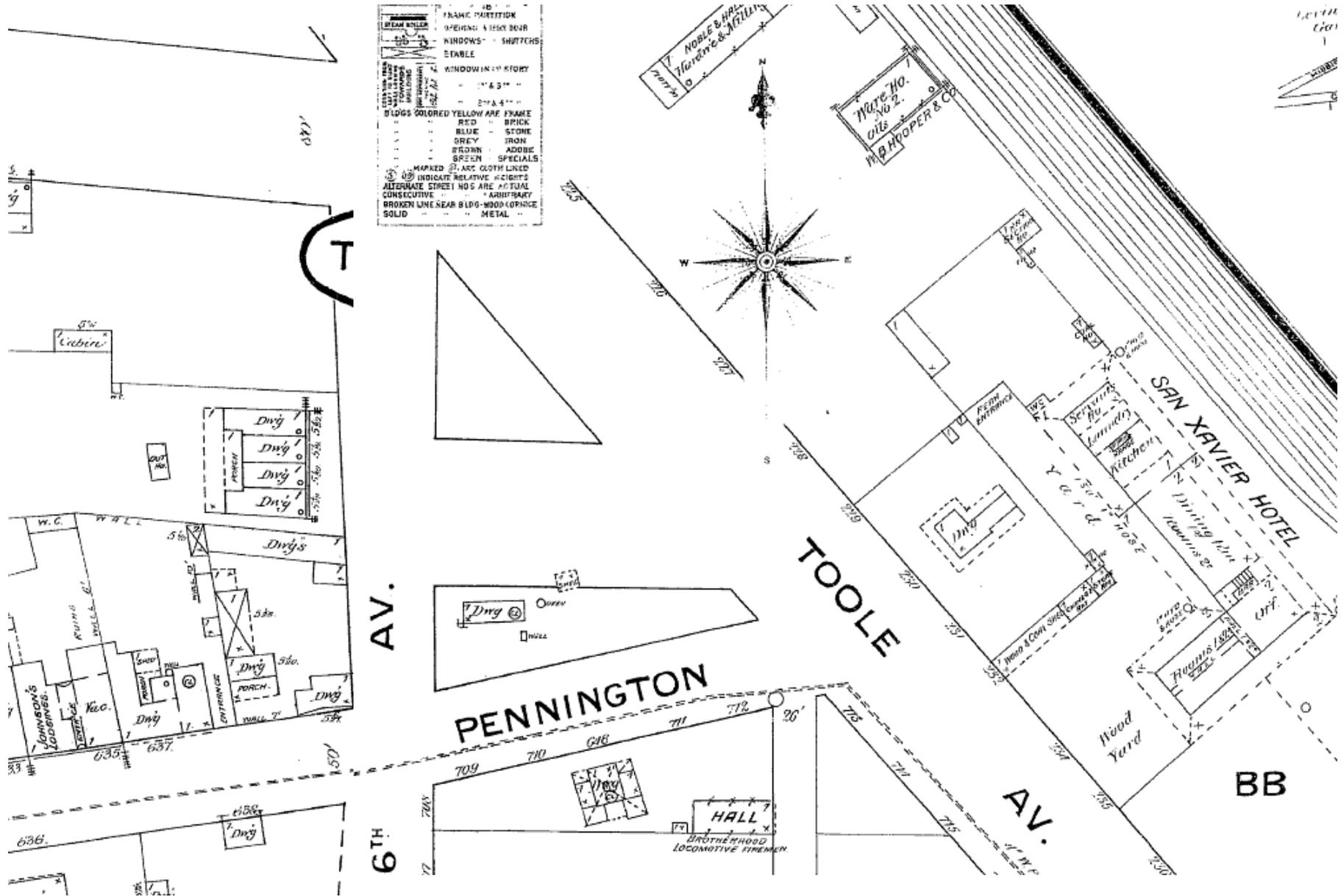
Source: Cooper Aerial Survey, 1988

 APPROXIMATE SITE BOUNDARY

0 75 150  
  
APPROXIMATE SCALE IN FEET

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

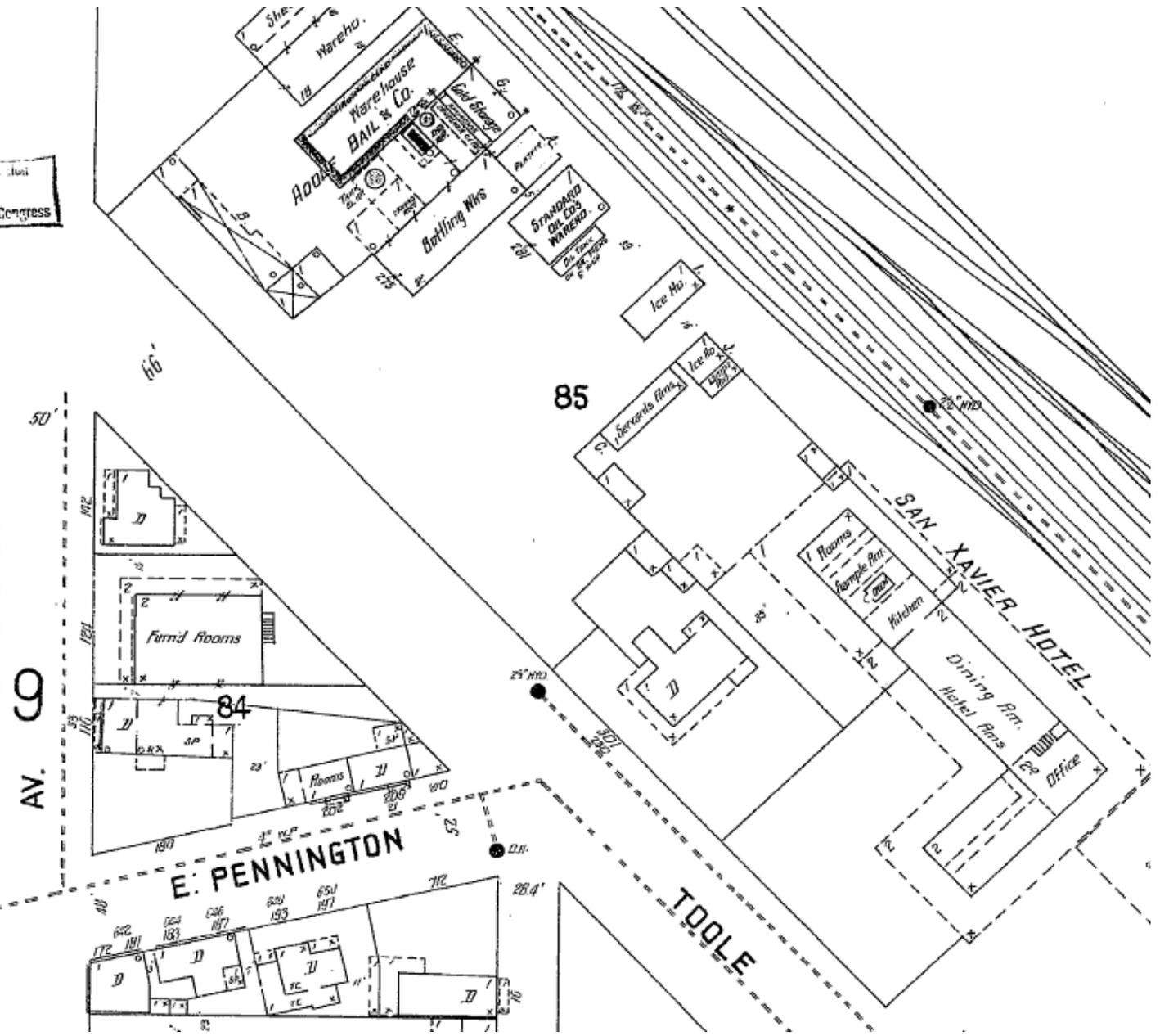
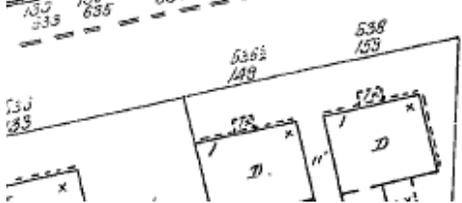
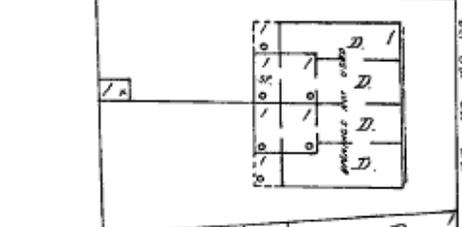
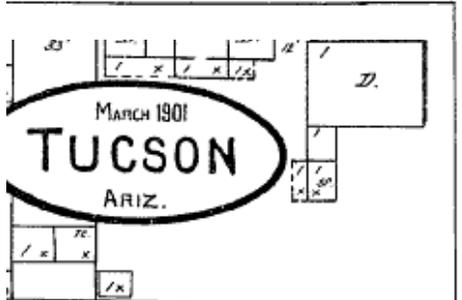
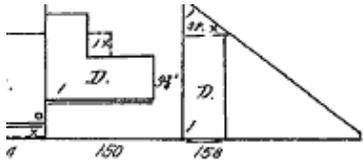
**APPENDIX E**  
**SANBORN MAPS**



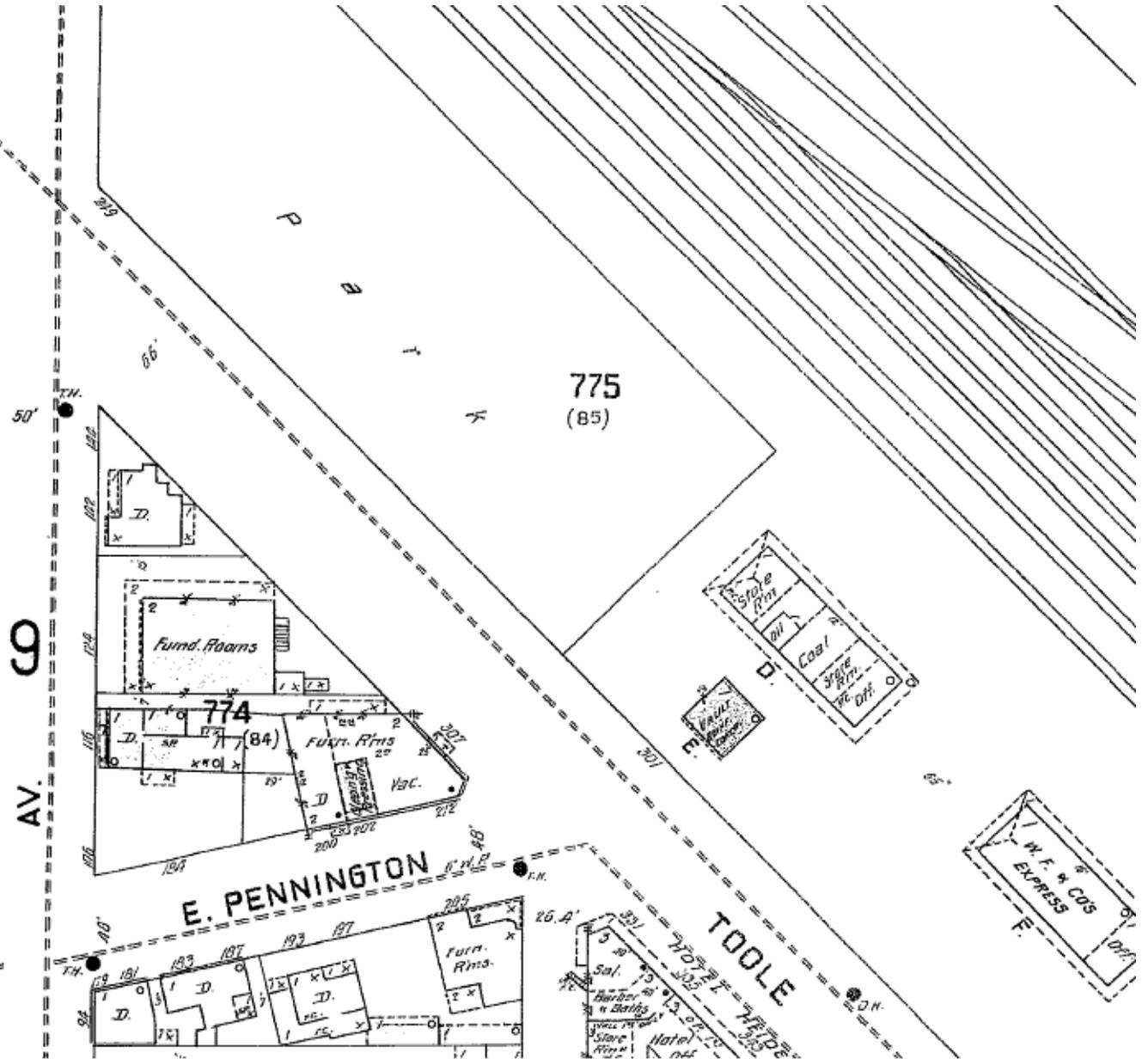
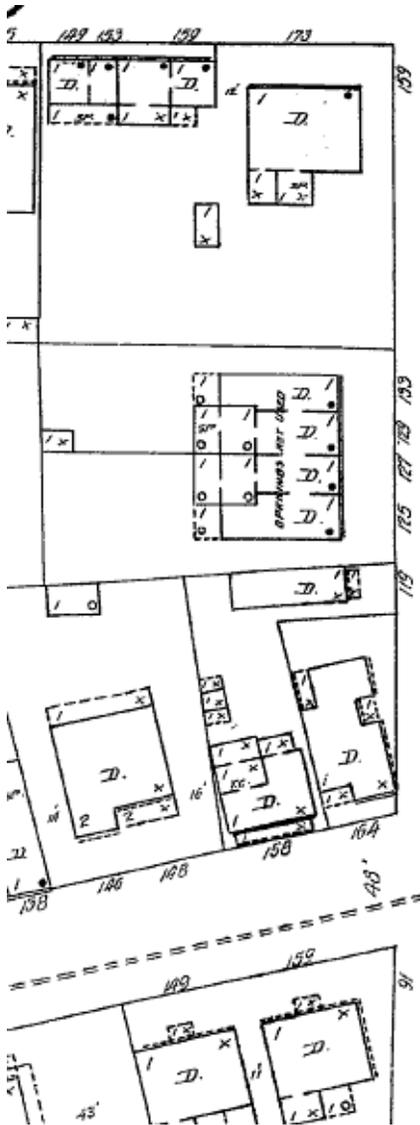
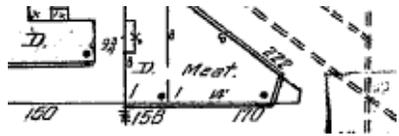
1886 SANBORN MAP



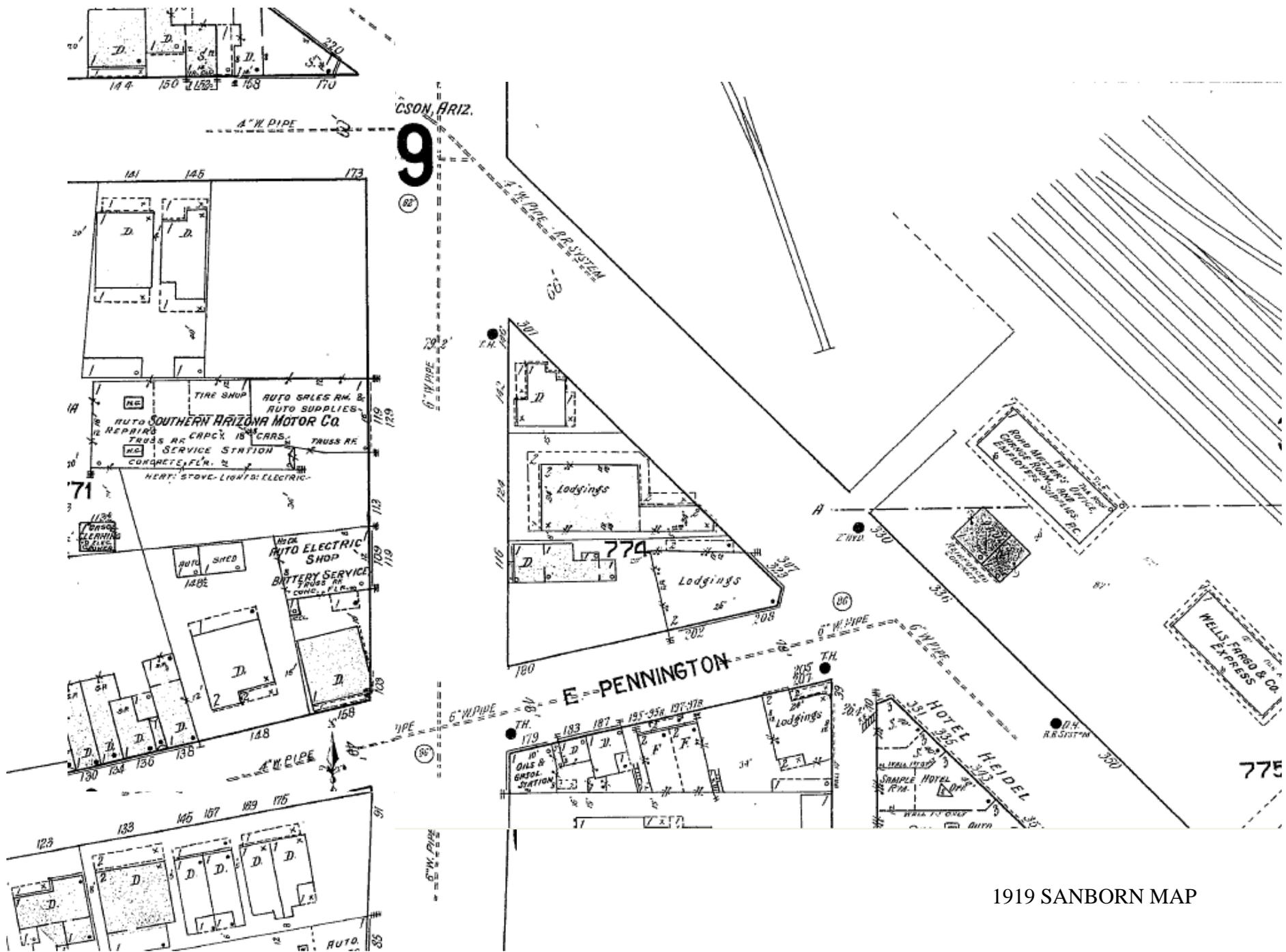




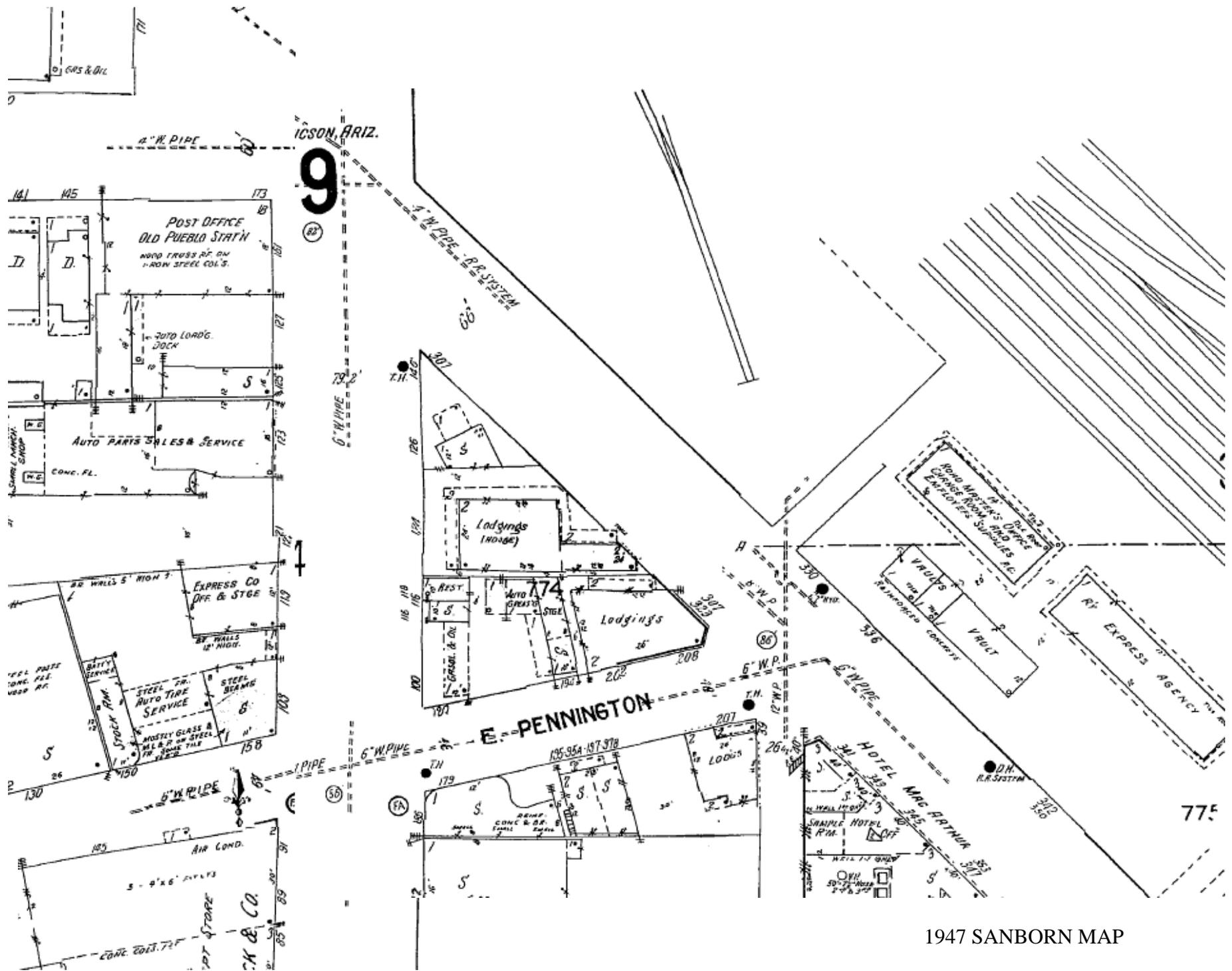
1901 SANBORN MAP



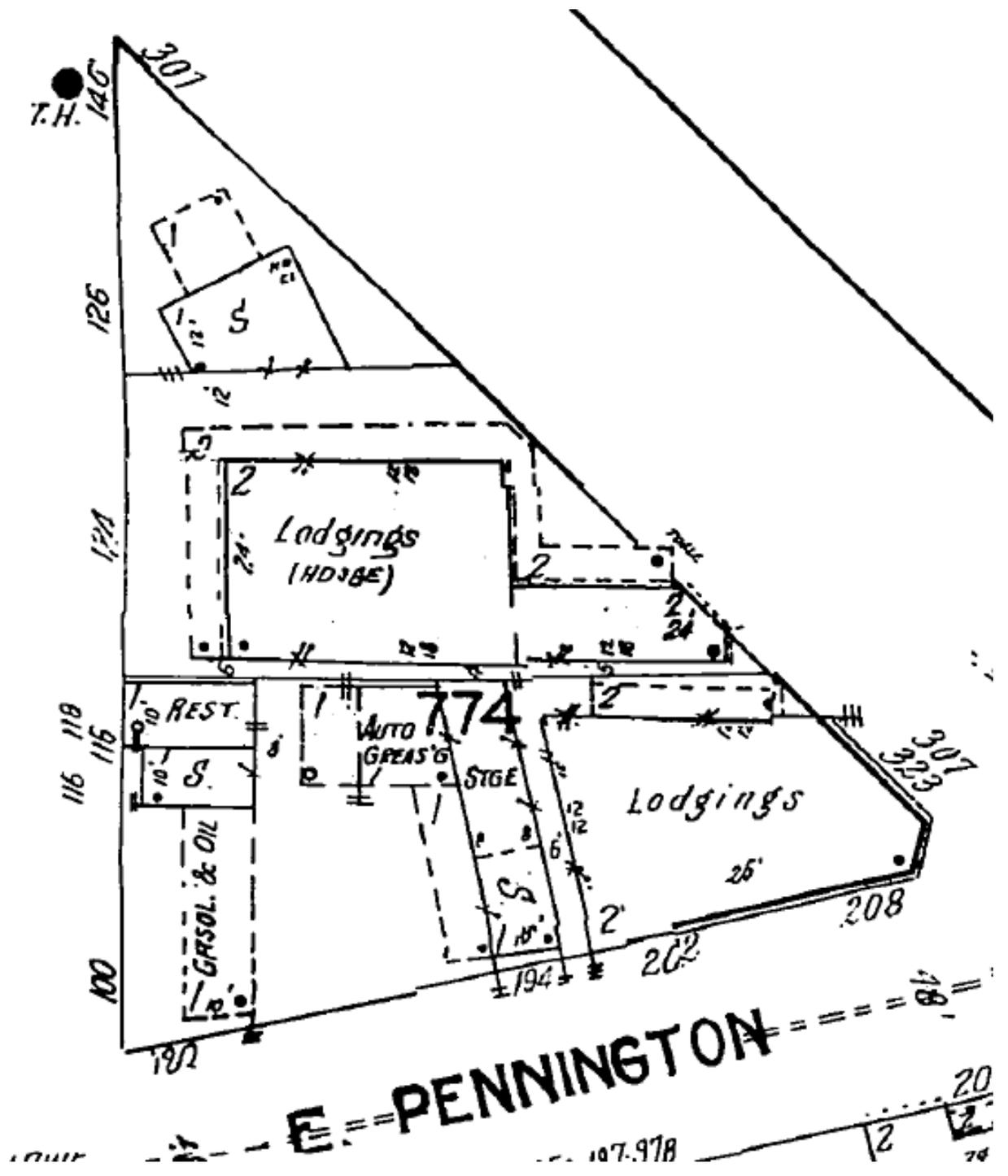
1909 SANBORN MAP



1919 SANBORN MAP



1947 SANBORN MAP



1947 SANBORN MAP





**APPENDIX F**  
**ALLANDS HISTORICAL TITLE REPORT**



# Allands

14947 W. Piccadilly Road, Goodyear, AZ 85395 • Phone: 623-535-7800 • Fax: 623-535-7900  
www.allands.com • e-mail: sharon@allands.com

Historical Title and Environmental Research

## HISTORICAL TITLE REPORT

YOUR FILE NO:

ALLANDS FILE NO: 2008-10-099T

Date of Report: November 5, 2008

Title Plant Date\*\*\*: October 20, 2008

\*\*\*The Title Plant Date reflects the most current data made available by the information sources used at the time the research was performed.

ALLANDS hereby reports a Historical Title Report to the land described below, subject to the items as shown in Schedule B. This is a historical title report ONLY and is neither a guarantee of title, a commitment to insure or a policy of title insurance. Allands is not responsible for errors in the available records. The total liability is limited to the fee paid for this report. This is a confidential, privileged and protected document for the use of SCS Engineers.

1. Title to the estate or interest covered by this report is vested in: THE CITY OF TUCSON, A MUNICIPAL CORPORATION
2. By virtue of that certain chain of title attached.
3. The land referred to in this report is located in Pima County, Arizona, described as follows:

Assessor's No.: 117-06-083A, formerly known as 082, 083, 084 and 085

SEE LEGAL DESCRIPTION ATTACHED

## SCHEDULE B

1. Unrecorded Lease by and between Marietta S. Franklin aka Maryetta Franklin, wife of Selim H. Franklin, as her sole and separate property, Lessor, and Rio Grande Oil Company, Lessee dated 1-1-33, expired July, 1935 as disclosed in Gift Deed recorded 8-18-33 in Book 173 of Deeds, page 389. (082 & 083)
2. No VEMUR'S, DEUR'S; Environmental Liens, or activity and use limitations, if any, were found currently recorded against the property as searched at the subject county recorder's office. \*\*\*

\*\*\* A.R.S. 49-152. This states that the Director of the Arizona Department of Environmental Quality shall allow property owners, who have voluntarily elected to remediate their property for nonresidential uses, to record in the applicable county recorders office a VEMUR limiting, by legal description, the area necessary to protect public health and the environment to nonresidential uses if contamination remains on the property at or above certain levels. In accordance with Arizona Administrative Code (A.A.C.) R18-7-201 et. Seq., a Declaration of Environmental Use Restriction (DEUR) is a voluntary notice to deed which restricts the use of a property to non-residential use. Effective July 18, 2000, the Declaration of Environmental Use Restriction (DEUR) replaced the Voluntary Environmental Mitigation Use Restriction (VEMUR) as a restrictive use covenant.

## CHAIN OF TITLE

1. Dedication to the City of Tucson on 6-26-1872, as shown on Official Map of the City of Tucson, recorded 1-18-1918 in Book 3 of Maps and Plats, page 70. (083)
2. Deed from the Mayor of the city of Tucson to Chas. E. Warren, dated 6-16-1894, recorded 6-18-1894 in Book 24 of Deeds, page 604. (117-06-084)
3. Deed from Chas. E. Warren to Adele B. Russell, dated 6-18-1894, recorded 6-18-1894 in Book 25 of Deeds, page 424. (084)
4. Deed from the Mayor of the city of Tucson to Selim H. Franklin, dated 7-21-1898, recorded 8-27-1899 in Book 29 of Deeds, page 567. (117-06-082 & 083)
5. Deed from Andrew Jackson Bell to Isabella M. Bell, recorded 9-29-14 in Book 59 of Deeds, page 160. (082)
6. Deed from Board of Supervisors to Adele B. Russell, dated 3-9-16, recorded 3-9-16 in Book 61 of Deeds, page 168. (083)
7. Deed from Adele B. Russell and Albert E. Russell to Harriet L. Tebbetts, dated 12-22-1915, recorded 3-13-16 in Book 61 of Deeds, page 268. (084)
8. Deed from Harriet L. Tebbetts, formerly Harriet L. Bauman, and H. B. Tebbetts, her husband to Adele B. Russell, dated 9-2-15, recorded 3-9-16 in Book 61 of Deeds, page 176. (084)
9. Deed from Isabella M. Bell, a widow to Union Construction Company, recorded 4-13-20 in Book 77 of Deeds, page 301. (082)
10. Deed from Union Construction Company to R. V. von Kleinsmid, recorded 5-15-20 in Book 85 of Deeds, page 109. (082)

CHAIN OF TITLE CONTINUES

## CHAIN OF TITLE CONTINUED

11. Deed from R. B. von Kleinsmid to Selim Herring Franklin, recorded 11-22-21 in Book 84 of Deeds, page 153. (082)
12. Deed from the Mayor of the city of Tucson to Ida DeConcini, a widow, recorded 10-14-39 in Book 137 of Deeds, page 532. (085)
13. Deed from Adele B. Russell to Albert E. Russell, 3-1-30, recorded 3-1-30 in Docket 141, page 545. (084)
14. Gift Deed from Selim H. Franklin, a married man to Marietta S. Franklin aka Maryetta Franklin, wife of Selim H. Franklin, as her sole and separate property, dated 8-14-33, recorded 8-18-33 in Book 173 of Deeds, page 389. (082 & 083)
15. Deed from Albert E. Russell to Olive S. Brown, not found. (084)
16. Deed from Olive S. Brown, a widow to John S. Brown, dated 10-9-44, recorded 10-9-44 in Docket 271, page 551. (084)
17. Deed from Marietta S. Franklin aka Maryetta Franklin, wife of Selim H. Franklin, as her sole and separate property to Meyer Feldman and Esther B. Feldman, husband and wife, dated 5-14-51, recorded 5-18-51 in Docket 352, page 104 and 105. (082 & 083)
18. Deed of Distribution of the estate of John S. Brown, deceased, awarding property to Marguerite R. Strong, sister, and to Clarissa Winsor, sister, dated 11-15-65, recorded 11-17-65 in Docket 2621, page 245 (084)
19. Decree of Distribution of the estate of Esther B. Feldman aka Esther Feldman, deceased, awarding property to Meyer Feldman, dated 1-31-55, recorded 5-23-55 in Docket 845, page 387. (082 & 083)
20. Deed from Clarissa Winsor, a widow, as to an undivided 1/2 interest to Lyon H. Strong and Dorothy J. Strong, husband and wife, dated 8-16-72, recorded 9-19-72 in Docket 4339, page 683. (084)

CHAIN OF TITLE CONTINUES

## CHAIN OF TITLE CONTINUED

21. Deed from Marguerite Olive Brand, as to an undivided 1/8 interest to Lyon H. Strong and Dorothy J. Strong, husband and wife, dated 8-28-72, recorded 9-19-72 in Docket 4339, page 684. (084)
22. Deed from William S. Strong, an undivided 1/8 interest to Lyon H. Strong and Dorothy J. Strong, husband and wife, dated 8-18-72, recorded 9-19-72 in Docket 4339, page 685. (084)
23. Deed from James K. Strong, an undivided 1/8 interest to Lyon H. Strong and Dorothy J. Strong, husband and wife, dated 8-28-72, recorded 9-19-72 in Docket 4339, page 686. (084)
24. Deed from Ida De Concini, a widow to Evo Deconcini, Trustee of the IDeC. Trust dated 3-20-73, recorded 3-20-73 in Docket 4535, page 546. (085)
25. Decree of Distribution of the estate of Meyer Feldman, deceased, awarding property to Felco Investors, Ltd, an Arizona general partnership, dated 5-28-76, recorded 5-28-76 in Docket 5298, page 807. (082 & 083)
26. Warranty Deed from Felco Investors, Ltd., an Arizona general partnership to Arizona Autoparks, Inc., an Arizona corporation, dated 11-26-90, recorded 12-4-90 in Docket 8927, page 79. (082 & 083)
27. Certificate of Fictitious name showing De La Warr Investment Corporation, a Delaware corporation doing business as in Arizona as Arizona Autoparks, Inc., an Arizona corporation, dated 12-12-90, recorded 12-17-90 in Docket 8936, page 1505. (082 & 083)
28. Warranty Deed from Lyon H. Strong and Dorothy J. Strong, husband and wife, to De La Warr Investment Corporation, a Delaware corporation, dated 5-11-98, recorded 5-15-98 in Docket 10797, page 3309. (084)

CHAIN OF TITLE CONTINUES

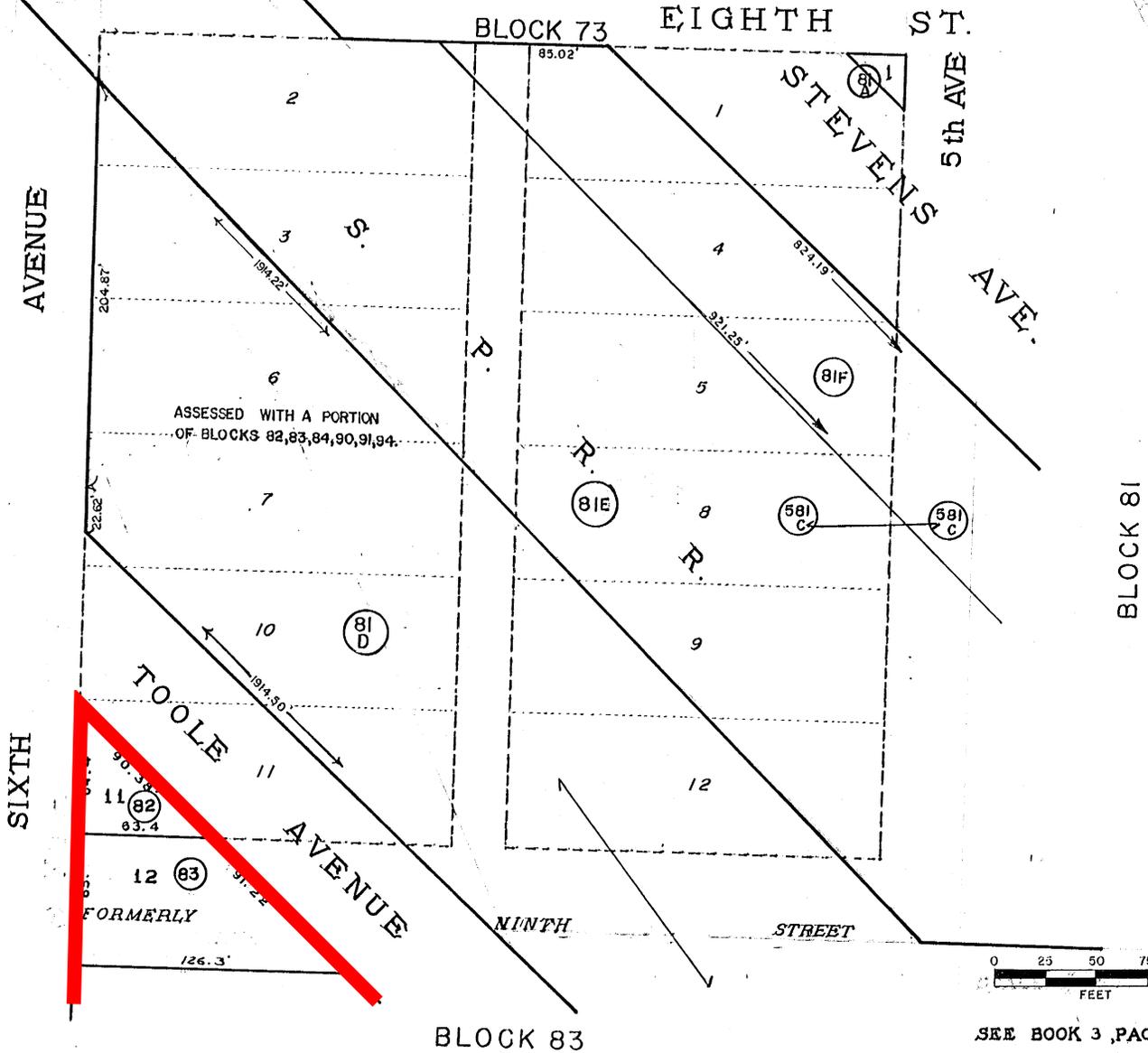
CHAIN OF TITLE CONTINUED

29. Quit-claim Deed from IDeC. Trust dated 3-20-73, to 4-D/G, an Arizona general partnership, dated 11-3-03, recorded 11-18-03 in Docket 12179, page 396. (085)
30. Deed from 4-D/G, an Arizona general partnership to the city of Tucson, a municipal corporation, dated 7-29-05, recorded 7-29-05 in Docket 12605, page 13752. (085)
31. Deed from De La Warr Investment Corporation, a Delaware corporation to the city of Tucson, a municipal corporation, dated 10-24-05, recorded 10-28-05 in Docket 12669, page 9705. (082, 083 & 084)

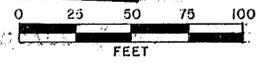
# ASSESSOR'S RECORD MAP

117-06  
5/25

## BLOCK 82, CITY OF TUCSON



COUNTY PROJECT



SEE BOOK 3, PAGE 71 M & P.

2003-1  
S12, T14S, R13E

03071082  
SCANNED







## Pima County Department of Transportation

### Geographic Information Services Division

# Parcel 117-06-083A

Read the [Disclaimer](#). Information is on this page is **unofficial**.

#### Mail name and address

CITY OF TUCSON  
 REAL ESTATE DIVISION  
 ATTN: PROPERTY MANAGMENT  
  
 PO BOX 27210  
 TUCSON AZ 85726-7210

#### Legal description

TUCSON PTN LOT 11 BLK 82 & PTN LOT 2 BLK 83  
 & PTN ABAND 9TH ST LYG SWLY TOOLE AVE

#### Situs (property) address

[\(About situs addresses\)](#)

#### Address sources

Street Address	Jurisdiction	Permits	GIS	Postal City	Zip Code
126 N 6TH AV	TUCSON	✓	✓	TUCSON	85701

[ZIP+4 Lookup](#)

#### Additional information for this parcel

- [Assessor Parcel Detail](#) for tax year 2009 from the [Pima County Assessor's Office](#). Also see [Assessor Record Maps](#).
- [Real Estate Property Tax Inquiry](#) from the [Pima County Treasurers's Office](#).
- **Recorder's Information** from the [Pima County Recorder's Office](#)
  - [Recorded Documents](#) for Docket 12669, Page 9705.
  - [Voter Precinct and Districts](#)
- [Subdivision Plat Map](#) for Book 3, Page 71.
- Pima County [Sanitary Sewer Connection Search](#) and [Connection Records Overview](#).
- [Permits](#) (Ignore Back button. Dismiss new window after viewing.) from [Pima County Development Services](#).
- [Development Activity Records](#) (permit, plat, rezoning) from City of Tucson DSD [Property](#)

[Research Online.](#)

- [Section Information and Maps](#) for Township 14S, Range 13E, Section 12
- **Floodplain Information:** City of Tucson jurisdiction. See City of Tucson [Development Services Site Reviews](#) or call (520) 791-5609.
- **Zoom to maps** of the parcel's area:

 <ul style="list-style-type: none"> <li>• <a href="#">Main map</a></li> <li>• <a href="#">Orthophoto map</a></li> <li>• <a href="#">Sanitary Sewer map</a></li> </ul>	<p><b>Oblique Aerial Photos</b></p> <hr/> <p>You can change the view (N,S,E,W) or pan and zoom the oblique photo.</p> <p>If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.</p> <hr/> <p><a href="#">Pictometry Photos</a></p> <p><a href="#">Learn more</a></p> <hr/> <p><a href="#">Live Search Photos</a></p> <p>If you don't see the oblique photo, pick "2D" then "Bird's Eye".</p>	 <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Parcel marker</li> <li><input type="checkbox"/> Add markers?</li> <li><input type="checkbox"/> Add traffic?</li> </ul> <p><a href="#">Google Maps</a></p> <p>Pick "Satellite" for photo. <a href="#">Help</a></p>	<ul style="list-style-type: none"> <li> <a href="#">Area Map</a></li> <li> <a href="#">Area Map</a></li> <li> <a href="#">Area Map</a></li> <li> <a href="#">Area Map</a></li> </ul>
--	---	--	--

- **Parcel attributes derived from GIS data or by [GIS overlay analysis](#):**  
**This information is inferred.** It does not come from parcel records. **Accuracy is limited to that of the underlying GIS parcel data.** All data subject to this [disclaimer](#).

<p><b>Parcel centroid coordinates</b></p>	<p>Approximately 32.223738 degrees latitude, -110.968323 degrees longitude.</p>
<p><b>Parcel area</b></p>	<p><b>This is only an estimate from GIS data.</b> The <a href="#">Subdivision Plat Map</a> may also specify parcel area. See <a href="#">Finding Parcel Areas</a>.</p> <hr/> <p>Approximately 0.37 acres or 16,282 square feet.</p>

E  
A  
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F. ANN RODRIGUEZ, RECORDER  
RECORDED BY: NMB  
DEPUTY RECORDER  
1134 AS1

TICOR  
CITY OF TUCSON  
201 N STONE AVE 6TH FL  
TUCSON AZ 85719



DOCKET: 12669  
PAGE: 9705  
NO. OF PAGES: 5  
SEQUENCE: 20052101722  
10/28/2005  
DEED 17:30  
MAIL  
AMOUNT PAID \$ 10.00

TUCSON, AZ 85701

ORDER NO.: 70101635-PEN

**DO NOT REMOVE THIS COVER SHEET. IT IS NOW PART OF THE RECORDED DOCUMENT.**

**DOCUMENT TO BE RECORDED:**

**DEED**

**EXEMPT A-3**

100-100 000-010

5

**DEED**

For the consideration of One Dollar (\$1.00), and other valuable considerations, the undersigned, De La Warr Investment Corporation, a Delaware corporation, does hereby release and quitclaim unto the CITY OF TUCSON, a municipal corporation, the Grantee, all the undersigned's interest in the following described property situate in Pima County, Arizona:

**SEE ATTACHED EXHIBIT "A"**

Subject to all provisions, conditions, easements, restrictions, covenants, encumbrances and other matters of record, and to all zoning, building or other laws or ordinances.

Affidavit Exempt A.R.S. §11-1134 (A) (3)

DATED this 24<sup>th</sup> day of October, 2005.

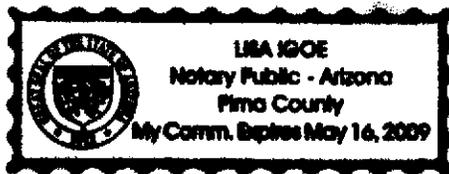
De La Warr Investment Corporation, a  
Delaware corporation

BY:

[Signature] \_\_\_\_\_  
ITS \_\_\_\_\_

STATE OF ARIZONA     )  
  )ss.  
COUNTY OF PIMA     )

This instrument was acknowledged before me this 24 day of October, 2005  
by Jeffrey P. Shepard as president  
of De La Warr Investment Corporation, a Delaware corporation



[Signature]  
Notary Public

RP #           Sec-T S-R   E

QCD-RP-IN   Rev 3/00

1101000 001000

**Legal Description**

70101635

Exhibit A

**PARCEL NO. 1:**

**That part of Lot 11, Block 82, of THE CITY OF TUCSON, Pima County, Arizona, according to the official field notes, map and survey of said city made and executed by S. W. Foreman and approved by the Mayor and common council of said city (then village) of Tucson, on June 26, 1872, and which said map is of record in the office of the County Recorder of Pima County, Arizona, in Book 3, Page 70 of maps and plats, more particularly described as follows:**

**Commencing at the Southwest corner of said Lot 11;**

**Thence North along the East boundary line of sixth avenue for a distance of 64.4 feet to the Southwesterly line of Toole Avenue;**

**Thence Southeasterly along the said Southwesterly line of said Toole Avenue for a distance of 90-38/100 feet to a point;**

**Thence in a Westerly direction for a distance of 63-45/100 feet, more or less, to the Place of Beginning.**

**PARCEL NO. 2:**

**Those portions of East Ninth Street lying between the Easterly line of North Sixth Avenue and the Southwesterly line of Toole Avenue as they existed on May 9, 1951 in the City of Tucson, Pima County, Arizona, described as follows:**

**Commencing at a point 415.2 feet distant Northerly from the Southwest corner of Block 83, according to the Official Survey of said Block 83, made and executed by S. W. Foreman and approved by the Mayor and common council of said city (then village) of Tucson, on June 26, 1872, and which said map is of record in the office of the County Recorder of Pima County, Arizona, in Book 3, Page 70 of maps and plats thereof;**

**Thence Northerly along the East line of North Sixth Avenue 60 feet, more or less, to the Southwest corner of Block 82 in said City of Tucson;**

**Thence Easterly along the South line of said Block 82 a distance of 63.3 feet, more or less, to the Southwesterly line of Toole Avenue;**

**Thence Southeasterly along the Southwesterly line of Toole Avenue a distance of 84.9 feet;**

**Thence Westerly 126.3 feet, more or less, to the Place of Beginning.**

**Also beginning at a point on the Easterly line of said North Sixth Avenue, North 0 degrees 25 minutes West 73.4 feet North of the Northeast corner of North Sixth Avenue and Pennington Street as they existed on May 9, 1951;**

**Thence North 89 degrees 35 minutes East 130.85 feet, more or less, to a point on the Southwesterly line of Toole Avenue;**

**Thence North 45 degrees 04 minutes West 6.94 feet along the Southwesterly line of Toole Avenue to a point;**

**Thence South 89 degrees 35 minutes West 126.04 feet to a point on the East line of North Sixth Avenue;**

**Thence Southerly along the East line of North Sixth Avenue 5 feet to the Point of Beginning.**

**PARCEL NO. 3:**

**That part of Lot 2, Block 83, of THE CITY OF TUCSON, Pima County, Arizona, according to the official field notes, map and survey of said city made and executed by S. W. Foreman and approved by the Mayor and common council of said city (then village) of Tucson, on June 26, 1872, and which said map is of record in the office of the County Recorder of Pima County, Arizona, in Book 3, Page 70 of maps and plats, more particularly described as follows:**

**Commencing at a point on the Northerly boundary line of Pennington Street, 90.2 feet Northeasterly of the Northeast corner of Sixth Avenue and Pennington Street, as the same is now located;**

**Thence due North a distance of 53.5 feet, more or less, to the South line of the property conveyed to Adele B. Russell, by Deed recorded March 9, 1916, in Book 61 of Deeds, at page 168, in the office of the County Recorder of said Pima County;**

**Thence East along the South line of the property described in said Deed a distance of 54.6 feet, more or less, to the Westerly boundary of Toole Avenue;**

100-100 000000

**Thence Southeasterly along the Westerly Boundary line of Toole Avenue 49.6 feet, more or less, to the intersection of the Northerly boundary line of Pennington Street with the Westerly boundary line of Toole Avenue;**

**Thence Westerly along the Northerly boundary line of Pennington Street, 79.8 feet more or less to the Place of Beginning.**



**DEED**

For the consideration of One Dollar (\$1.00), and other valuable considerations, the undersigned, 4-D/G, an Arizona General Partnership, does hereby release and quitclaim unto the CITY OF TUCSON, a municipal corporation, the Grantee, all the undersigned's interest in the following described property situate in Pima County, Arizona:

**SEE ATTACHED EXHIBIT "A"**

Subject to all provisions, conditions, easements, restrictions, covenants, encumbrances and other matters of record, and to all zoning, building or other laws or ordinances.

Affidavit Exempt A.R.S. §11-1134 (A) (3)

DATED this 29<sup>th</sup> day of July, 2005.

4-D/G, an Arizona General Partnership

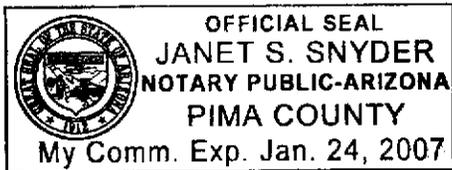
Steven Thu  
David DeConcini

STATE OF ARIZONA )

)ss.

COUNTY OF PIMA )

This instrument was acknowledged before me this 29<sup>th</sup> day of July, 2005  
by Steven Thu, 4-D Properties as Managing Agent, David DeConcini, Partner,  
of 4-D/G, an Arizona General Partnership



Janet S. Snyder  
Notary Public

Downtown Tucson Intermodel Project

Sec12-T14S-R13E

Exhibit A

THAT PORTION OF LOT 2 IN BLOCK 83 OF THE CITY OF TUCSON, AND OF THE STRIP OF LAND 10.2 FEET IN WIDTH ADJOINING SAID LOT 2 ON THE NORTH, ALL ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF PIMA COUNTY, ARIZONA, RECORDED IN BOOK 3 OF MAPS, PAGE 70 AND ACCORDING TO THE FOREMAN SURVEY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SIXTH AVENUE AND PENNINGTON STREET, AS THE SAME ARE NOW LOCATED; RUNNING

THENCE NORTHEASTERLY ALONG THE NORTHWESTERLY LINE OF SAID PENNINGTON STREET, A DISTNACE OF 90.2 FEET TO A POINT;

THENCE DUE NORTH A DISTANCE OF 53.5 FEET, MORE OR LESS, TO THE SOUTH LINE OF THE PROPERT HERETOFORE CONVEYED BY HARRIETT L. TEBBETTS AND HIRAM B. TEBBETTS, HERE HUSBAND, BY DEED RECORDED IN BOOK 61, OF DEEDS OF REAL ESTATE AT PAGE 168, RECORDS OF SAID PIMA COUNTY TO WHICH SAID DEED REFERENCE IS HEREBY MADE;

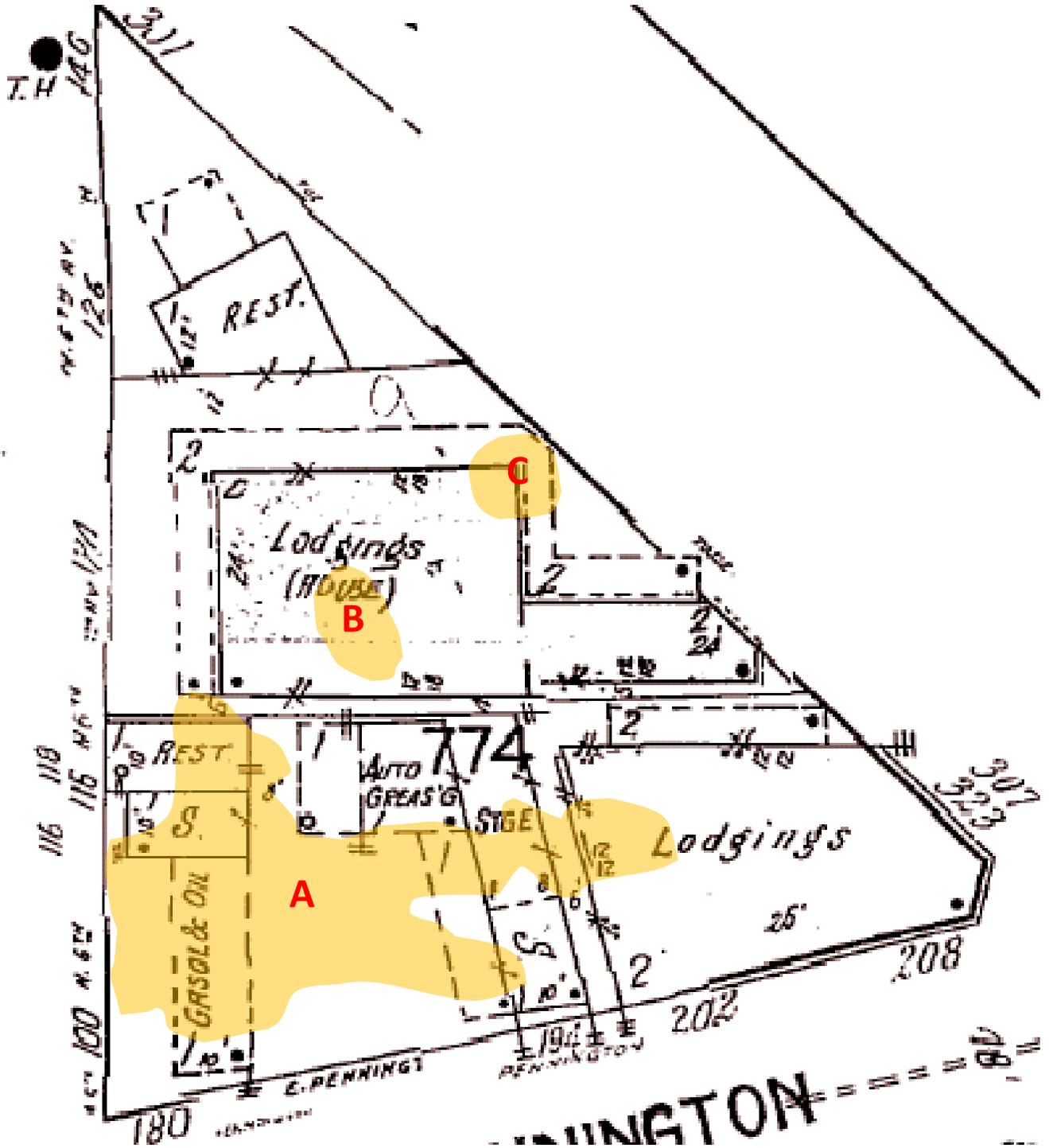
THENCE WESTERLY ALONG THE SOUTH LINE OF SAID LAST MENTIONED PROPERTY, A DISTANCE OF 75 FEET, MORE OR LESS, TO THE EAST LINE OF SIXTH AVENUE;

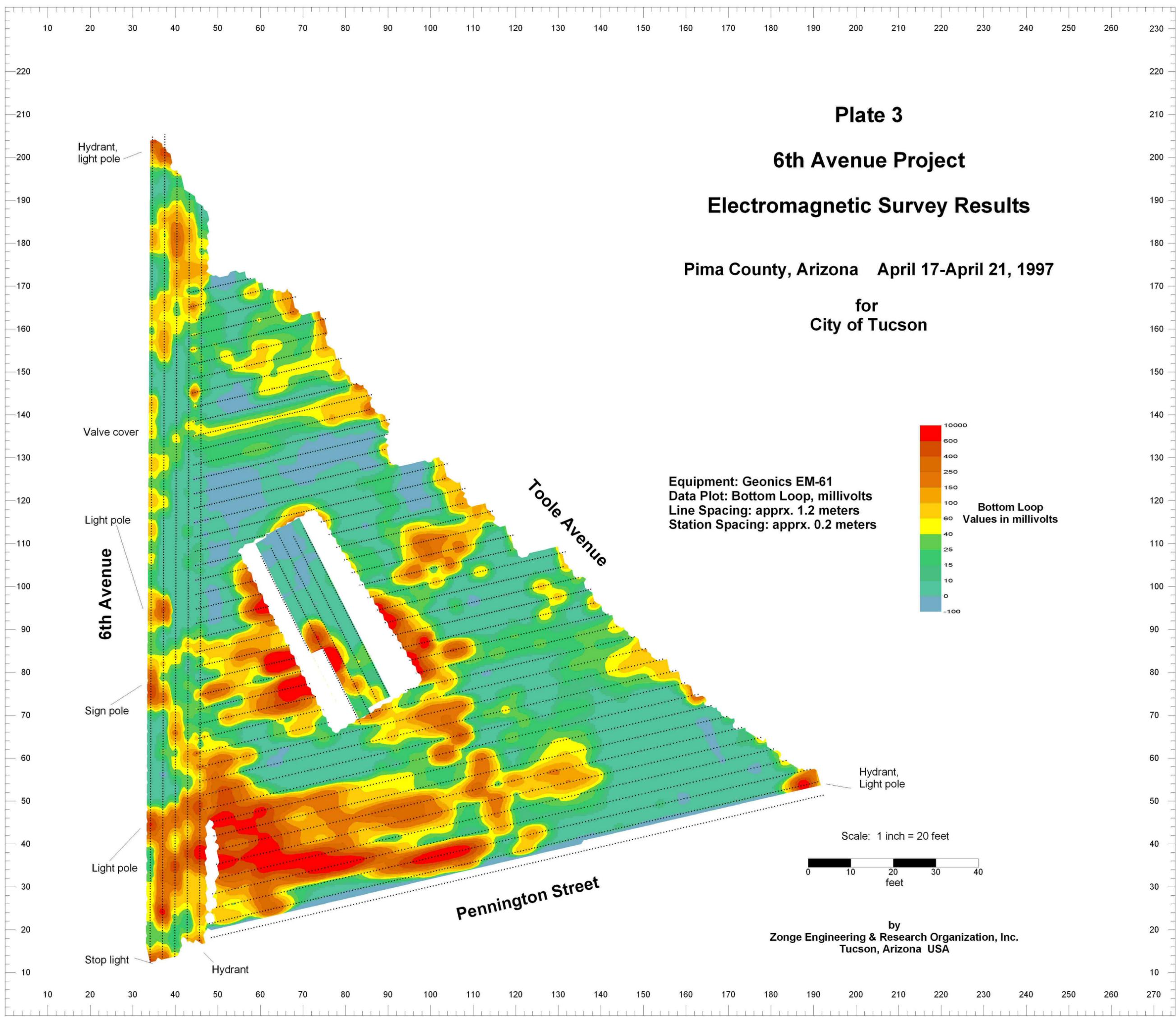
THENCE SOUTH ALONG THE EAST LINE OF SICTH AVENUE TO THE PLACE OF BEGINNING.

407-104 000010

**APPENDIX G**  
**GEOPHYSICAL SURVEY REPORT**

Overlay of anomalies identified in report by Zonge Engineering & Research Organization, Inc. (Zonge; included in *Final Report, Electromagnetic Surveys, Broadway Projects, Tucson, Arizona, May 5, 1997*) on the 1949 Sanborn map for the site area.





# Plate 3

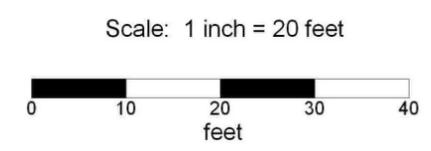
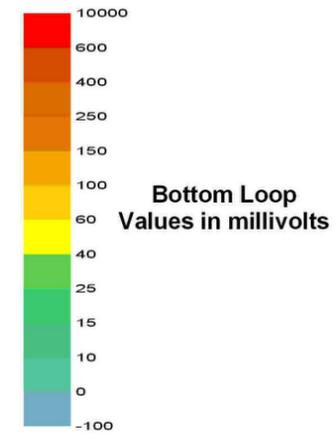
## 6th Avenue Project

### Electromagnetic Survey Results

Pima County, Arizona April 17-April 21, 1997

for  
City of Tucson

Equipment: Geonics EM-61  
Data Plot: Bottom Loop, millivolts  
Line Spacing: appr. 1.2 meters  
Station Spacing: appr. 0.2 meters



by  
Zonge Engineering & Research Organization, Inc.  
Tucson, Arizona USA

FINAL REPORT

ELECTROMAGNETIC SURVEYS  
BROADWAY PROJECTS

Tucson, Arizona

for  
City of Tucson

Issue date: May 5, 1997  
Zonge Job# 9712

Zonge Engineering & Research Organization, Inc.  
3322 East Fort Lowell Road, Tucson, AZ 85716 USA  
Tel (520) 327-5501 Fax (520) 325-1588 Email zonge@zonge.com

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LIST OF PLATES

(see back pockets of this report)

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1st Avenue to 4th Avenue	Plate 1
Broadway Project	
Tyndall to 1st Avenue	Plate 2
6th Avenue Project	Plate 3

FINAL REPORT

ELECTROMAGNETIC SURVEY

BROADWAY PROJECT  
Tucson, Pima County, Arizona

for  
City of Tucson

EXECUTIVE SUMMARY

On April 17, 1997, Zonge Engineering and Research Organization, Inc. began work on an electromagnetic geophysical survey on Broadway Avenue in Tucson, Arizona. The goal of the project was detect unknown underground storage tanks (USTs) or unmapped utilities such as pipelines associated with old railroad facilities. Also included in the project was a small property located in downtown Tucson bounded by 6<sup>th</sup> Avenue, Toole Avenue, and Pennington Street. The goal of that survey was also to detect unknown USTs. The equipment used on this survey was a Geonics EM-61. The properties were surveyed along lines spaced approximately 4 feet apart (1.2 meters), and the station spacing along the lines was 0.6 feet apart (0.2 meters). Data were acquired at a total of 100,012 stations over the four day survey period.

Plates 1 and 2 show the electromagnetic data for the Broadway site, and Plate 3 shows the data for the downtown site. On Plate 1, the area along Broadway from 1<sup>st</sup> Avenue to 2<sup>nd</sup> Avenue shows smooth background with very few anomalies. West of 2<sup>nd</sup> Avenue, however, numerous strong linear anomalies are seen, indicating buried utilities or pipelines. Most of these linear features are oriented northwest-southeast. Several other anomalies are oriented north-south, and one east-west linear anomaly is evident in the data acquired north of the wash.

Plate 2 shows the data acquired along Broadway from Tyndall to 1<sup>st</sup> Avenue. An extremely large, very strong anomaly is seen extending diagonally northwest through the survey area from Broadway, crossing Euclid, and then probably extending underneath Hughes. This feature is probably the metal reinforcement in a large drainage tunnel that connects to the wash on Plate 1. Also evident on this plot is a weak linear anomaly that extends between two storm sewer man holes, as well as several utility lines.

Plate 3 shows the data gathered on the downtown 6<sup>th</sup> Avenue Project. The dominant feature in

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this area is a large, strong anomaly in the southwestern corner of the property. This anomaly may be the result of reinforced concrete under the asphalt, USTs, or both. A smaller anomaly of interest is also evident at grid location 106E 108N on this plot.

The electromagnetic survey data should now be correlated to city utility maps and, if possible, historical records.

## PROJECT LOGISTICS

Survey Logistics: The electromagnetic survey data were acquired on April 17, 18, 19, and 21. The survey began on the morning of April 17<sup>th</sup> at the downtown site bounded by 6<sup>th</sup> Avenue, Toole Avenue, and Pennington Street. Bart Black of Zonge Engineering was the equipment operator; Norman Carlson of Zonge Engineering and Richard Byrd of the Tucson's Office of Environmental Management were also present. The 6<sup>th</sup> Avenue site is currently a parking lot, so the survey was scheduled for the early morning to minimize the effects of parked cars. Measurements in the areas where cars were already parked were repeated on Saturday, April 19.

After completing the 6<sup>th</sup> Avenue site, work began on the Broadway project. Measurements were made along lines oriented north-south, beginning at the eastern sidewalk along Tyndall, running north from Broadway to Hughes. Lines were spaced approximately 1 to 1.2 meters (3.3 to 3.9 feet) apart, and data readings were made in "wheel mode", i.e., measurements were made automatically by a wheel trigger as the operator walked along the lines. Measurements were made along the lines approximately every 0.2 meters (0.6 feet). Data could not be acquired in the wash that runs approximately due west from 1<sup>st</sup> Avenue (see Plate 1); east-west lines were run between the northern boundary of the wash and 10<sup>th</sup> Street, and east-west lines were also added between the southern edge of the wash and the large fence. Several curved lines were added that extended west from this "Wash South" area around the curvature of the wash. These lines are not gridded and contoured in the plan view plots, but profiles of the data are included.

In areas bounded by fences or vegetation, data were acquired as close to the boundary as possible, resulting in an irregular boundary in some areas (see Plate 2 for example).  
Electromagnetic Equipment: The EM-61 system is a modified transient electromagnetic (TEM) survey technique. This type of survey involves transmitting a 50% duty cycle, time domain, square wave signal into an ungrounded loop of wire. This square wave signal alternates between positive, zero, negative, and zero voltages, and this cycle repeats 75 times per second. The measurements are made when the transmitter is off, i.e., when the transmitter voltage is zero. During these times, decaying magnetic fields from subsurface conductors can be measured. In the EM-61 system, these magnetic fields are detected with two horizontal ungrounded loops of wire. The measurements are made at fixed times after the

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background earth response has decayed, but while decaying secondary fields from strong conductors (such as metallic objects) are still detectable.

The instrument itself consists of one transmitter loop and two receiver loops mounted on the coil assembly. The loops are squares, measuring 1 meter on each side. Measurements of both the top and bottom loop are recorded and displayed by the integrated data logger. The EM-61 is relatively insensitive to variations in ground resistivities, and normally responds only to metallic objects. The EM-61 data can not normally be used to discriminate metal types (copper, steel, etc.), thus interpretation is usually based on the size, shape, and strength of anomalous features.

#### DISCUSSION OF THE DATA

**Data Quality:** Data quality in both project areas is excellent. Most of the cultural features (fences, posts, pipes, etc.) that were visible on the surface were located along the boundaries of the survey areas and are noted on the plan view plots of the data.

**Data Presentation:** The data are presented as plan view plots of the bottom loop measurements, in millivolts. On these plots, “warm” colors (red, orange, yellow) indicate anomalous readings, showing metallic objects in the subsurface. “Cool” colors (blue) indicate background, non-anomalous noise levels. The color shading is based approximately on a logarithmic scale, in order to show weak anomalies in addition to several extremely anomalous features. The data have been gridded and colored using an inverse distance relationship and a very small search area (one meter by two meters) in order to avoid averaging out small-isolated anomalies.

Grids have been added to the plan view plots in order to make identification of features easier in the text discussion. The grids are in feet, and the origin for each plot grid is arbitrarily placed in the lower left corner of each plot. It is very important to note that the EM-61 “wheel mode” station spacing method is not an exact surveying technique in the formal sense of civil engineering, thus the locations of anomalies should not be considered exact. For this reason, landmarks noted by the operator are included on the plan view plots, and location of anomalous features should be measured from those landmarks. Plates 1 and 2 have been plotted at a scale of 1 inch = 50 feet, while Plate 3 has been plotted at a scale of 1 inch = 20 feet.

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## INTERPRETATION

Broadway Project- Plate 1: Plate 1 shows the data acquired along Broadway west of 1<sup>st</sup> Avenue to 4<sup>th</sup> Avenue. The survey area is bounded on the north by 10<sup>th</sup> Street, and on the south by a row of trees, based on discussions with Richard Byrd. The data were acquired in north-south lines from the southern boundary to a large fence. North of the fence is a large wash; data were acquired on east-west lines on the north and south sides of this wash. South of the wash, from 1<sup>st</sup> Avenue to approximately 800E, there are very few anomalies, and none that would indicate any USTs. Anomalous values are noted along the fence, but these are the result of the fence and poles only. West of 800E, there are numerous linear anomalies probably associated with pipelines and buried utilities. Most of these features are oriented northwest-southeast. Possible north-south features are seen at 275E, 575N; 450E, 525N; and 500E, 375N. The area centered at 430E, 350N had several barricades and had been recently excavated; the data suggest that several of the pipelines are connected or intersect in this area. One pipeline apparently extends from this area to the southwest, approximately perpendicular to the orientation of most of the other anomalies.

One interesting feature is a weak linear anomaly extending northwest-southeast from approximately 700E, 350N to 870E, 200N. This anomaly is comprised of weak anomalies, which weaken to the southeast, and probably represents a pipeline which deepens to the southeast.

The Wash North data show a narrow east-west anomaly extending approximately from 990E to 1220E. Nearby, at grid location 1250E, 500N is an large, irregular anomaly with no obvious source. Along 10<sup>th</sup> Street, a fire hydrant and sign pole caused small anomalies; east of the sign pole is another anomaly which has no obvious source. This isolated anomaly is probably the result of buried metallic debris.

The Wash South data show fence effects on the southern-most line, where the data were gathered very close to the fence. On the eastern end of this data, anomalous values centered at grid location 1320E, 380N are the result of surface objects, possibly complicated by a large steel pipe that extends into the wash. An isolated line of data centered at 1300E, 330N was run as an attempt to avoid the surface culture, and appears to show the pipeline.

In order to survey the area west of the Wash South data, following the curvature of the wash

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to the north, two passes were made with the EM-61 following the curve between the wash and the fence. These two curved lines were called Line 22 and Line 23. The data for these two lines are shown in profile format in Inset A in the upper right corner of Plate 1. Both passes through this area showed three anomalies, labeled A, B, and C. Their approximate positions are shown on Plate 1; anomaly B probably correlates with a north-northeast trending feature, and this area also appears to be the conjunction of several linear features. Anomaly A also may be a northeastern extension of a linear feature, though it is substantially stronger than the linear feature, and therefore may be shallower north of the fence than it is south of the fence.

Broadway Project- Plate 2: Plate 2 shows the data acquired along Broadway from Tyndall to 1<sup>st</sup> Avenue. The southern boundary of the survey area is the sidewalk along the north side of Broadway, and the northern boundary of the survey area is Hughes, although vegetation and concrete wheel stops made it impossible to survey all the way to Hughes in most places. The dominant feature in this data set is an extremely strong, very large anomaly which extends northwest from Broadway (grid location 625E, 70N) through the survey area to Euclid Avenue. It is also detected west of Euclid in the northern part of the survey area, extending west to about grid location 440E, 150N). This anomaly is significantly larger and stronger than any other anomaly detected during this survey. It is probably a drainage tunnel which connects to the east-west wash in Plate 1, based on examination of topographic maps of the area. Figure 1 shows a profile plot of this anomaly (along Line 124 on Plate 2) in comparison to Line 258 on Plate 1, which crosses two parallel pipelines and some metallic debris. Note that this anomaly is significantly wider and stronger than the comparison anomalies.

Also evident in this data set are two manhole covers (grid locations 685E, 75N and 910E, 90N) that provide access to a storm sewer. The storm sewer itself is seen as a weak, straight-line anomaly between the two man holes. Along the sidewalk on the southern boundary of the survey area, anomalies are seen which correlate with signs, street light poles, tree grates, and utility access covers.

Several utility and pipeline anomalies are evident crossing the property in the area centered at approximately grid location 825E, 110N. Buried metallic debris is probably responsible for most of the small, isolated anomalies in this area.

West of Euclid, there are no utilities or pipelines evident in the data. All anomalies west of the bus shed and benches can be explained by surface objects. The anomalous area at the corner of

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Euclid and Hughes (grid location 475E, 140N) is complicated by the large anomaly discussed above; the effects of the drainage tunnel could be obscuring other anomalies in this area.

6<sup>th</sup> Avenue Project- Plate 3: Plate 3 shows the data acquired at the parking lot bounded by 6<sup>th</sup> Avenue, Toole Avenue, and Pennington Street in downtown Tucson. All measurements were made within the boundaries of the sidewalks and wheel stops. These data are complicated by the fact that there were several cars in the parking lot at the time of the survey, in addition to metal posts, a metal payment collection box, 55 gallon metal drum, and metal chain in the central part of the parking lot. Five lines of data along 6<sup>th</sup> Avenue were repeated on Saturday April 19 when no cars were present, and 5 lines of data were also run through the center of the lot to verify that cars and the surface culture were the primary source of the central anomalies. The central part of the survey area is very anomalous, primarily due to the culture and the parked cars that were present on the first morning of the survey. The five lines that were run in that area on April 19 have been spliced into the original plot; the only anomaly that appears to remain is associated with the steel posts, payment box, and barrel.

The dominant feature in this data set is in the southwestern corner of the parking lot. A large, irregular anomalous area is evident, centered approximately at grid location 60E, 36N. This anomaly could be the result of a large amount of buried metal, reinforced concrete, one or more USTs, or a combination of these features.

A smaller, weaker anomaly is also seen centered at location 106E, 108N. This may also be reinforced concrete, or possibly a single UST. Utility anomalies are evident as linear features; one crosses the parking lot from Toole to 6<sup>th</sup> centered at grid location 66E, 136N. Weak linear features are also seen centered at grid location 130E, 84N. Most of the anomalous readings along Toole Avenue are the result of steel in the wheel stops; several of the smaller anomalies along 6<sup>th</sup> Avenue are also wheel stops.

SUGGESTIONS FOR FUTURE WORK

The electromagnetic survey data should now be correlated with city utility maps and historical records. Once the primary features are identified, adjacent or connecting anomalies can be better interpreted. Since the EM-61 data do not distinguish between different metal types, this data should not be used as the sole planning tool for excavations. Comparison of this data with city records will also be useful in determining the maximum depth of investigation in this area, which may be important information in deciding what (if any) features may have been missed by this survey method.

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Norman Carlson  
Chief Geophysicist

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Kenneth L. Zonge, Ph.D.  
President

**APPENDIX H**  
**OWNER QUESTIONNAIRE**

**PHASE I ENVIRONMENTAL ASSESSMENT REPORT  
INTERVIEW QUESTIONNAIRE**

PROJECT NAME: Pennington Triangle Lot 126 N. 6th Ave.  
PROJECT #: \_\_\_\_\_

<b>DATE:</b>		<b>TIME:</b>		<b>SCS EMPLOYEE:</b>	
<input type="checkbox"/> In Person <input type="checkbox"/> Telephone <input type="checkbox"/> In Writing (mail/delivery) <input type="checkbox"/> E-Mail <input type="checkbox"/> Other:					
<b>CONTACT NAME/TITLE:</b>					
<input type="checkbox"/> User		<input checked="" type="checkbox"/> Owner		<input type="checkbox"/> Occupant	
<input type="checkbox"/> Past Owner		<input type="checkbox"/> Past Occupant		<input type="checkbox"/> Past Operator	
<input type="checkbox"/> Other (Explain):					
<b>CONTACT COMPANY:</b> <u>Lynne Birkinbine, Environmental Manager</u>					
<b>ADDRESS:</b> <u>100 N. Stone Ave, 2nd Floor</u>					
<b>CITY:</b> <u>Tucson</u>		<b>STATE:</b> <u>AZ</u>		<b>ZIP CODE:</b> <u>85701</u>	
<b>TELEPHONE #:</b> <u>(520) 837-3708</u>				<b>MOBILE #:</b>	
<b>FAX #:</b> <u>(520) 791-5417</u>				<b>EMAIL:</b> <u>lynne.birkinbine@tucsonaz.gov</u>	
<b>ADDITIONAL CONTACT DATES</b>					
<b>PROJECT ADDRESS/LOCATION:</b> <u>126 N. 6th Ave (APN 117-06-083A)</u>					

**A. QUESTIONS:** Please be as specific as reasonably feasible in answering questions regarding current and past conditions on the site. Please answer in good faith and to the extent of your knowledge regarding conditions that you personally observed or heard about. If more room is needed for answers, please continue on additional pages.

<p><b>1. What is (are) the current site use(s)?</b> <u>Ticket bus stop</u></p>
<p><b>2. Were there other past site use(s)?</b>    <input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> Don't know  <b>What were they and when did they occur?</b>  <u>gas station shown in 1947 + 1949 Sanborn maps</u></p>
<p><b>3. Do you know of past site owners or occupants?</b>    <input type="checkbox"/> Yes    <input checked="" type="checkbox"/> No    <input type="checkbox"/> Don't know  <b>Who were they and when did they own or occupy the site?</b></p>
<p><b>4. Have there been significant changes to the site structures, roads, and other features?</b>  <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input checked="" type="checkbox"/> Don't know <u>Probably yes.</u>  <b>If yes, please describe on a separate page.</b></p>
<p><b>5. Is or was there potable water on the site?</b>    <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input checked="" type="checkbox"/> Don't know  <b>If yes, what is (was) the source (e.g., on-site well, municipal service, etc.)?</b></p>
<p><b>6. Is or was there sewage service to the site?</b>    <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input checked="" type="checkbox"/> Don't know  <b>If yes, who is (was) the provider?</b>  <b>When was the site hooked up to the system?</b></p>
<p><b>7. Are or were there septic systems, cesspools, or other on-site waste disposal methods used on site (or evidence of clean-out ports or manholes)?</b>  <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input checked="" type="checkbox"/> Don't know  <b>If yes, what are their locations and what portions of the site drain(ed) into them?</b></p>

**PHASE I ENVIRONMENTAL ASSESSMENT REPORT  
INTERVIEW QUESTIONNAIRE**

<p><b>8. Are or were heating and/or cooling systems located on the site?</b>  <input type="checkbox"/> Yes   <input type="checkbox"/> No   <input checked="" type="checkbox"/> Don't know  <b>Type of heating (e.g., natural gas, electric, heating oil, propane, etc.):</b>  <b>Type of cooling (e.g., evaporative cooler, AC, etc.):</b></p>
<p><b>9. Are or were hazardous materials used, stored, disposed, treated, etc. on the site?</b>  <input type="checkbox"/> Yes   <input type="checkbox"/> No   <input checked="" type="checkbox"/> Don't know  <b>If yes, please describe in detail (types, uses, amounts, contents, locations, etc.) on a separate page.</b></p>
<p><b>10. Have there been any spills or chemical releases that have taken place on the site?</b>  <input type="checkbox"/> Yes   <input type="checkbox"/> No   <input checked="" type="checkbox"/> Don't know  <b>If yes, please describe in detail (when, types, amounts, locations, etc.) on a separate page.</b></p>
<p><b>11. ARE OR WERE ANY OF THE FOLLOWING LOCATED ON THE SITE? If yes, please describe in detail (numbers, ages, construction, sizes, contents, locations, staining, spills, leaks, etc.) on a separate page.</b></p>
<p>a. <input type="checkbox"/> Drums, pails, buckets, or other containers of hazardous materials, petroleum products, or wastes</p>
<p>b. <input type="checkbox"/> Storage areas for hazardous materials, petroleum products, or wastes</p>
<p>c. <input checked="" type="checkbox"/> Underground storage tanks (USTs) or evidence of vent pipes, fill pipes, dispensers, pads, etc. -</p>
<p>d. <input type="checkbox"/> Aboveground storage tanks (ASTs) or evidence of stands, containment areas, etc.</p>
<p>e. <input type="checkbox"/> Electrical transformers or other electrical equipment that may contain PCBs</p>
<p>f. <input type="checkbox"/> Hydraulic elevators</p>
<p>g. <input type="checkbox"/> Burial, landfilling, dumping, burning, etc. of solid or other wastes, or evidence such as mounds, pits, depressions, etc.</p>
<p>h. <input type="checkbox"/> Fill dirt (and source if known)</p>
<p>i. <input type="checkbox"/> Strong, pungent, or noxious odors</p>
<p>j. <input type="checkbox"/> Pools of liquid, pits, ponds, lagoons, wastewater, or other liquid discharges</p>
<p>k. <input type="checkbox"/> Drains, separators, sumps, grates, vaults, etc. and where the inlets and outlets are located</p>
<p>l. <input type="checkbox"/> Drywells</p>
<p>m. <input type="checkbox"/> Water wells (active, inactive, or abandoned)</p>
<p>n. <input type="checkbox"/> Injection wells</p>
<p>o. <input type="checkbox"/> Stained soil or pavement</p>
<p>p. <input type="checkbox"/> Corrosion or staining inside buildings</p>
<p>Note: Examples of types of hazardous materials or petroleum products include fuel, oil, solvents, antifreeze, acid, batteries, paint, etc.</p>
<p><b>12. ADJOINING PROPERTY USES: Are there properties adjacent to the site with current or past occupants that use, store, treat, dispose, etc. hazardous materials or petroleum products?</b>  <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No   <input type="checkbox"/> Don't know  <b>If yes, please provide information.</b></p>
<p><b>13. Have there been any spills or chemical releases that have taken place on properties that are adjacent to the site?</b>  <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No   <input type="checkbox"/> Don't know  <b>If yes, please describe in detail (when, types, amounts, locations, etc.) on a separate page, and indicate whether the site may have been impacted.</b></p>

1997  
geophysical  
survey  
shows  
evidence  
of an  
anomaly

## PHASE I ENVIRONMENTAL ASSESSMENT REPORT INTERVIEW QUESTIONNAIRE

**B. HELPFUL DOCUMENTS:** Do you know whether any of the documents listed below exists and, if so, whether copies can and will be provided to SCS Engineers within a reasonable time and cost, preferably before the site visit?

	Yes	No	Don't know	
1.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environment site assessment reports
2.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environment compliance audit reports
3.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)
4.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Registrations for USTs and ASTs
5.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Registrations for underground injection systems
6.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Material safety data sheets (MSDSs)
7.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Community right-to-know plan
8.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc.
9.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Reports regarding hydrogeologic conditions on the property or surrounding area
10.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property
11.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hazardous waste generator notices or reports
12.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Geotechnical studies <i>geophysical survey by Zonge Engineering 1997</i>
13.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Risk assessments
14.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Recorded Activity and Use Limitations (AULs)
15.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Historical photographs

**C. PROCEEDINGS INVOLVING THE PROPERTY:** Do you know of any of the following proceedings listed below. If yes, please provide information regarding the type of proceeding, what violations or laws are involved, status of the proceeding, etc.

	Yes	No	Don't know	
1.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property
2.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property
3.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products

**D. COMMENTS:**

**APPENDIX I**  
**USER QUESTIONNAIRE**

## USER QUESTIONNAIRE<sup>1</sup>

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user (you) must provide the following information (if available) to the environmental professional (SCS Engineers). Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

**(1) Environmental Cleanup Liens:** Are you aware of any environmental cleanup liens against the property that are filed or recorded against the site under federal, tribal, state, or local law?

No

Yes      If Yes, explain:

**(2) Activity and Land Use Limitations (AULs):** Are you aware of any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

No

Yes      If Yes, explain:

**(3) Specialized Knowledge or Experience:** As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No

Yes      If Yes, explain:

**(4) Purchase Price vs. Fair Market Value:** Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

No

Yes

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

No

Yes      If Yes, explain:

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<sup>1</sup> The document is designed to comply with Section X3. User Questionnaire, of ASTM E1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and the USEPA AAI regulations (40 CFR §312).

**USER QUESTIONNAIRE (continued)**

**(5) Commonly Known or Reasonably Ascertainable Information:** Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional (SCS Engineers) to identify conditions indicative of releases or threatened releases? For example, as the user,

- (a) Do you know the past uses of the property?  
 No     Yes    1947 + 1949 Sanborn maps indicate it was a gas station
- (b) Do you know of specific chemicals that are present or once were present at the property?  
 No     Yes
- (c) Do you know of spills or other chemical releases that have taken place at the property?  
 No     Yes
- (d) Do you know of any environmental cleanups that have taken place at the property?  
 No     Yes

If you answered Yes to any of the above, explain:

**(6) Obvious Indications of Contamination:** As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

- No
- Yes

If Yes, explain:

1997 Zonge Engineering + Research Organization geophysical survey identified a large geophysical anomaly, which may be an underground storage tank.

Name: Lynne Birkinbine

Organization: City of Tucson Environmental Services

Title: Environmental Manager

Date: 11/19/08

## **APPENDIX J**

### **RESUMES**

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## DAVID F. LANEY, CHMM

### Education

BS – Resource Development, Michigan State University, 1983

### Professional Licenses

Academy of Certified Hazardous Materials Manager (CHMM) # 13573

### Specialty Certifications

OSHA Hazardous Waste Site Investigation and Manager/Supervisor

### Professional Affiliations

Arizona Hydrological Society (AHS)  
Arizona State Bar - Environment and Natural Resources Law Section  
Arizona Association of Industries (AAI) EH&S Committee; Water Subcommittee  
ASTM Technical Committee E50 Environmental Assessment, Risk Management and Corrective Action  
ASTM Technical Subcommittee E50.02 – Real Estate Assessment and Management  
ASTM Technical Subcommittee E50.06 – Vapor Intrusion  
Environmental Professionals of Arizona (EPAZ)

### Professional Experience

Mr. David Laney, CHMM has over 23 years of experience in environmental engineering and consulting. His special areas of expertise include Phase I and II Environmental Site Assessments (ESAs); project management; remedial investigations/feasibility studies; remediation of contaminated soil, soil gas, and groundwater; regulatory compliance; chemical process safety; air toxics; and senior technical quality assurance/quality control (QA/QC) review. He has experience with American Society for Testing and Materials (ASTM) Standard E 1527-05 and Environmental Protection Agency (EPA) All Appropriate Inquiry (AAI) regulations for performance of ESAs, as well as regulations for the National Pollutant Discharge Elimination System (NPDES), Arizona Pollutant Discharge Elimination System (AZPDES), Clean Water Act (CWA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Water Quality Assurance Revolving Fund (WQARF), Aquifer Protection Permit (APP), and National Environmental Policy Act (NEPA).

Mr. Laney has managed numerous studies to assess the cost, effectiveness, and implementability of remediation alternatives for surface water, soil, and groundwater contaminated with petroleum hydrocarbons, chlorinated hydrocarbons, metals, pesticides, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and explosives.

Mr. Laney has extensive experience in providing senior technical review of Phase I and II ESA reports, work plans, sampling plans, quality assurance project plans, site assessment and remedial investigation reports, feasibility study reports, remedial action plans, corrective action

plans, closure reports, and remediation system designs. Mr. Laney performed this work for the EPA, Arizona Department of Environmental Quality (ADEQ), and the California Energy Commission, as well as private sector clients. This work frequently required submittal of a technical critique in the form of a comment letter or report on the deficiencies identified in the documents under review, as well as the development of recommendations to address/correct deficiencies. Mr. Laney and members of his team were frequently required to present the results of the work in meetings with regulatory agencies, Potential Responsible Parties (PRPs), other contractors and consultants, and/or members of the public. Below is a partial listing of representative projects.

**Phase I ESA for Semiconductor Facility, Foresight Technologies, Tempe, Arizona.** Project Manager. Assisted company with due diligence during acquisition of semiconductor facility in Tempe.

**Computer Assembly Facility Environmental Compliance Audit, Woodland Hills, California.** Project Manager. Environmental compliance audit of a computer assembly facility in Woodland Hills, California. Work included an evaluation of the compliance of existing operations with local, state, and federal laws and regulations and a review of files maintained by and correspondence with the California Department of Health Service, the California Regional Water Quality Control Board (Los Angeles Region), Los Angeles County Department of Public Works, etc. The audit also included a review of compliance with Worker-Right-To-Know and Community-Right-To-Know, and an evaluation of materials storage and handling.

**Property Transfer Site Phase I Preliminary Site Assessment for Former Orange Grove, Frito Lay, Mission Viejo, California.** Project Manager. Developed a preliminary site assessment as part of a property transfer in Mission Viejo, California. This work included review of historic aerial photographs, agency files, and studies conducted by consultants for the previous landowners. Also included was the collection and analysis of several soil samples to confirm that the concentration of pesticides on the site were below levels of concern.

**Petroleum Production Site Phase I Preliminary Site Assessment, Signal Hill, California.** Project Manager. Conducted a Phase I Preliminary Site Assessment on a site that had been used for 60 years for the production of petroleum in Signal Hill, California. This work, which was conducted prior to residential development of the property, included review of historic aerial photographs, agency files, and drilling logs for production wells. Recommendations included which wells were properly abandoned, which needed to be abandoned, and which needed to be reabandoned.

**California RWQCB Phase I Soil and Groundwater Sampling and Site Characterization, Indio, California.** Assistant Site Manager. Prepared a site characterization report for the California Regional Water Quality Control Board (RWQCB), Colorado River Basin, for a dry cleaner site contaminated with trichloroethylene in Indio, California.

**U.S. Army Toxic and Hazardous Materials Agency Phase I Soil Contamination Assessment Report.** Environmental Engineer. Prepared Phase I Soil Contamination Assessment Reports to aid in identification of those areas of the 17,000-acre Rocky Mountain Arsenal polluted by hazardous substances (primarily pesticides). Developed Phase II drilling programs to better define the extent of any contamination discovered during Phase I activities.

**Multiple Phase I and II ESAs, Phoenix, Arizona.** Provided senior review of multiple Phase I and II ESA reports prepared for City of Phoenix Light Rail and Community Noise Reduction Projects. These were compliant with ASTM standard E 1527-05 and EPA's AAI regulations. Responsible for visual observation and testing of excavated soil during preparation of site for building construction for City of Phoenix Rio Salado Restoration and Redevelopment Project. Also provided on-call emergency response services for removal of underground storage tanks, piping, and stained soil discovered during construction and earthmoving activities for City of Phoenix Civic Plaza Expansion Project.

**Former Cotton Mill Facility, Prologis, Phoenix, Arizona.** Prepared a Phase I ESA of a former cotton mill facility in Phoenix, Arizona. Work included a site reconnaissance, review of regulatory databases and aerial photographs, interviews with owners and operators, review of operational records, and review of previous environmental investigations and reports.

**Various Phase I ESAs, Chandler, Arizona.** Prepared Phase I ESAs as part of intersection improvement projects. Work included a site reconnaissance and review of regulatory databases, aerial photographs, City of Chandler records, and previous environmental investigations and reports. Provided senior review of multiple Phase II ESA reports for the City of Chandler City Hall Expansion. Conducted oversight of soil sampling at custom automotive garage.

**Closed Landfills, Maricopa County, Arizona.** Directed Phase I and II ESAs for five closed landfills for Maricopa County Risk Management. Work included site reconnaissances, reviews of regulatory databases and aerial photographs, interviews of operators, reviews of operational records, and reviews of previous environmental investigations and reports.

**Pima County Department of Transportation, Arizona** - Provided senior review of multiple Phase I ESA reports. prepared for Pima County Department of Transportation. These were compliant with ASTM standard E 1527-05 and EPA's AAI regulations.

**Broadway Pantano WQARF Site, Tucson, Arizona.** Performed a Phase I ESA for the Broadway Pantano WQARF Site in Tucson, Arizona for Arizona Department of Environmental Quality. Work included a site reconnaissance, review of regulatory databases and aerial photographs, review of operational records, and review of previous environmental investigations and reports.

**Papago Park Military Reservation Site Characterization and Remediation/Closure, Arizona Army National Guard/National Guard Bureau, Phoenix, Arizona.** Senior Project Manager. Responsible for site characterization and remediation/closure of 18 areas of historical chemical use at the Papago Park Military Reservation in Phoenix. Contaminants included volatile organic compounds (VOCs), PAHs, pesticides, PCBs, and metals. Former land use of each site included fuel storage, waste storage, grenade training, and skeet range training.

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## PATRICIA M. HARTSHORNE, RG

### Education

BS – Geology, University of Wisconsin, Madison, 1985  
MS – Geology, University of Arizona, 1988

### Professional Licenses

Registered Geologist – Arizona

### Specialty Certifications

OSHA Hazardous Waste Site Investigation and Manager/Supervisor  
AHERA Certified Asbestos Building Inspector and Contractor/Supervisor  
EPA Certified Lead Inspector and Risk Assessor

### Professional Affiliations

Arizona Geological Society  
Arizona Hydrological Society  
Arizona State Bar - Environment and Natural Resources  
Association for Women Geoscientists  
ASTM Committee E50 on Environmental Assessment, Risk Management & Corrective Action  
ASTM Committee E47.05 on Risk Assessment, Communications, & Management  
National Ground Water Association  
Southern Arizona Environmental Management Society

### Professional Experience

Ms. Patricia M. Hartshorne, RG has been performing environmental and solid waste management projects for SCS Engineers since 1990. Ms. Hartshorne's qualifications include management, interpretation, and presentation of data generated by small and large multi-task projects. She has extensive experience in Phase I and II Environmental Site Assessments (ESAs) of industrial, commercial, and agricultural sites, remedial activities at hazardous and non-hazardous project sites, and landfill investigations. This includes historical and regulatory research; collection of soil, groundwater, landfill gas, and suspect asbestos or lead containing material samples; supervision of subcontractors; health and safety compliance; data management; interpretation of laboratory analytical results; remediation oversight; and technical report preparation. She has performed, managed, and assisted with more than 450 environmental assessments, remedial investigations, and landfill investigations in Arizona, California, New Mexico, Missouri, Colorado, Louisiana, Texas, and Ohio. Below is a partial listing of representative projects.

**Phase I and II ESA Projects in Pima County, Arizona.** Performed numerous projects throughout Pima County, including Phase I ESAs of residential properties, commercial properties, agricultural land, a former mine ore rail site, and vacant land; pre-demolition asbestos surveys of

12 structures along Wetmore Road; sampling of soil piles potentially contaminated by metals; and a Phase II ESA investigation of a former service station property.

**Redevelopment Projects in Tucson, Arizona.** Performed and managed Brownfields redevelopment projects for the City of Tucson, including a former railroad depot, the Fox Theatre, Presidio Terrace, El Campo Tire property, and two structures on Broadway Road. Various tasks performed for the projects included Phase I ESAs, Phase II ESAs, and/or comprehensive asbestos surveys prior to building demolition. The El Campo Tire project also included preparation of a Sampling and Analysis Plan (SAP) and submittal to EPA, a geophysical survey, closure and assessment of on-site USTs, investigation of contamination associated with off-site USTs, excavation of exploratory test pits, drilling of soil borings, collection and analysis of soil samples, data validation of laboratory reports, and preparation of technical reports.

**Agricultural Land Near Arlington, Arizona.** Performed a Phase I ESA for 240 acres of agricultural land near Arlington, Arizona, including agricultural fields, riparian areas, a former residence, and former weed spraying business. Limited soil sampling was performed in an area of yellow-stained soil at the former weed spraying business, and remediation of soils exceeding pesticide cleanup levels was recommended.

**Automatic People Mover Project, Sky Harbor International Airport, Phoenix, Arizona.** Performed extensive file and historical aerial photograph reviews of former and current aboveground and underground storage tank systems and other issues of potential environmental concern within the planned Automatic People Mover Phase I Project Site Study Area at Sky Harbor International Airport for the City of Phoenix. Prepared a report documenting each of the tanks, other features, and environmental issues identified within the study area, and the potential concerns associated with each feature and issue.

**Vacant Desert in Bullhead City, Arizona.** Performed a Phase I ESA of multiple parcels of land located in Bullhead City, Arizona. The site consisted of 590 acres of vacant and undeveloped native desert that contained wildcat dumping of solid waste materials in areas that were readily accessible by vehicles, including at least five wrecked and partially burned motor vehicles and several containers with hazardous or unidentified substances.

**Yuma Area Service Highway, Yuma, Arizona.** Performed an Environmental Baseline Survey of a portion of the proposed alignment for the Yuma Area Service Highway for Arizona Department of Transportation. The site portion of the proposed alignment extends approximately nine miles across a vacant portion of the Barry M. Goldwater Range (BMGR) east of Yuma. Because no vehicles were allowed in the BMGR, SCS performed an aerial reconnaissance of the area by flying over the route and adjoining areas in a small plane, and then performed a site reconnaissance by walking through selected areas of the site. Other tasks performed for this project were a regulatory database search interviews, review of previous reports, and preparation of a report.

**Traffic Interchanges in North Phoenix, Arizona.** Performed a Phase I ESA of two planned future highway traffic interchanges in northern Phoenix, Arizona. The site area included all or portions of approximately 42 parcels, and was occupied by residences, a roofing company, plant

nurseries, a landscaping company, a commercial garage, a municipal well property, a cell tower, river channels, and vacant undeveloped land.

**Right-of-Way Projects, Phoenix, Arizona.** Performed or provided technical review of many Phase I and Phase II ESAs for the City of Phoenix to evaluate risks associated with acquisition of portions of commercial, residential, and vacant parcels for street construction and urban renewal projects, including the Light Rail and Community Noise Reduction Projects. Site reconnaissances, site history searches, and regulatory records reviews were performed and reports were prepared for numerous separate projects. Phase II ESA investigations included soil gas surveys, evaluation of the potential presence of contamination from solid waste disposal sites, collection of soil samples, etc.

**Former Feedlot Near Arlington, Arizona.** Performed Phase I and Phase II ESA investigations at an inactive 40-acre cattle feedlot for the Arizona State Land Department. The Phase II ESA investigation included groundwater sampling for nitrates, collection of samples from surface soil and soil borings, asbestos sampling, characterization of the nature and volume of veterinary and solid wastes, and evaluation of cleanup alternatives for solid waste and pesticide-contaminated soils.

**Los Reales Landfill West Side Closure Project, Tucson, Arizona.** Performed closure investigations for the west side of the Los Reales Landfill, including extensive file review and historical research; installation and sampling of groundwater monitoring wells; excavation of numerous test pits; oversight of geotechnical borings, geophysical surveys, and soil vapor investigations; soil vapor extraction system pilot testing; and preparation of technical reports. Managed and performed excavation and test boring investigations to evaluate a former industrial waste burial area for proposed clean closure. Prepared a detailed Site Characterization Report for work performed to date and a Remedial Action Plan for the clean closure area.

**Ranch Land in New Mexico.** Performed a Phase I ESA of an approximately 64,000-acre ranch in New Mexico. The assessment was facilitated by conducting an aerial over-flight of the property prior to performing the on-ground reconnaissance in order to focus on areas of potential environmental concern.

**Vacant Land Near Casa Grande, Arizona.** Performed Phase I ESAs of vacant former agricultural land near Casa Grande, Arizona totaling more than 4,000 acres. The properties contained gravel pits and abandoned mining areas. Oversaw excavation of backhoe test pits throughout and around former waste disposal areas to characterize waste types and the extent of waste disposal, and to evaluate whether hazardous wastes had been disposed.

**Chase Field (Formerly Bank One Ballpark), Phoenix, Arizona.** Performed Phase I environmental assessments of 20 parcels within the Chase Field (formerly Bank One Ballpark) project area in Phoenix, Arizona. Assessments included extensive historical research and compilation of findings, management of large amounts of data, review and summarization of groundwater contamination issues in that portion of the East Washington WQARF area, and preparation of technical reports. Also performed Phase II ESA investigations for historical features of concern, including collection of soil samples, and oversight of geophysical surveys, soil vapor surveys, soil borings, and excavations.