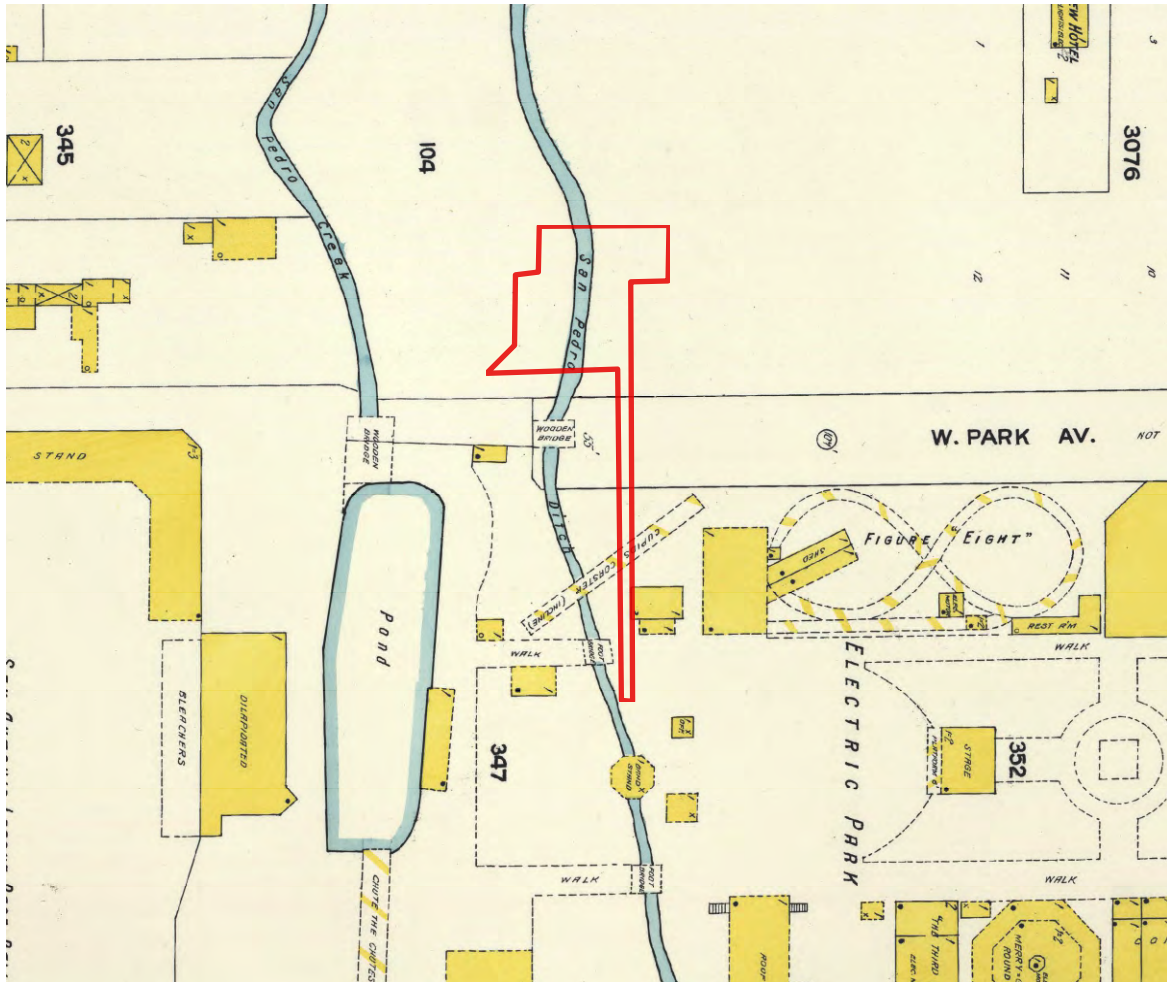


Archaeological Investigations for VIA Metropolitan Transit Authority Underground Storage Tank Replacement, San Antonio, Bexar County, Texas

by
Sarah Wigley



Texas Antiquities Permit No. 30836

REDACTED

Principal Investigator
Leonard Kemp

Prepared for:
VIA-MTA
123 N. Medina Street
San Antonio, Texas 78207



Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249-1644
Technical Report, No. 108

© CAR March 2024

**Archaeological Investigations for
VIA Metropolitan Transit Authority
Underground Storage Tank Replacement,
San Antonio, Bexar County, Texas**

by
Sarah Wigley

Texas Antiquities Permit No. 30836

REDACTED

Principal Investigator
Leonard Kemp



Prepared for:
VIA-MTA
123 N. Medina Street
San Antonio, Texas 78207

Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249
Technical Report, No. 108

© CAR March 2024

Abstract:

From March to September 2023, the Center for Archaeological Research (CAR) at the University of Texas at San Antonio (UTSA), in response to a request from VIA Metropolitan Transit Authority (VIA-MTA) conducted archaeological monitoring of trench excavation in support of the replacement of existing underground storage tanks and associated utilities at 1720 North Flores Street, San Antonio, Texas. As the project area is located on VIA-MTA property, the project required compliance with the Texas Antiquities Code, and review under the Unified Development Code of the City of San Antonio (Article 6 35-630 to 35-634). The project was conducted under Texas Antiquities Permit No. 30836. David Yelacic, former CAR Director, served as the Principal Investigator and directed the fieldwork until his departure from the CAR in August of 2023. Following his departure, Leonard Kemp assumed the role of Principal Investigator and Sarah Wigley served as the Project Archaeologist.

The project area, spanning 0.07 hectares (ha; 0.2 acres), is located east of San Pedro Creek within the current VIA-MTA bus parking lot at the Via Metro Center. Potential resources of concern included the San Pedro Acequia (41BX337), as well as the potential for prehistoric resources associated with the San Pedro Creek. Cultural material dating to the early twentieth century was recovered from one trench. No other artifacts or cultural features were recorded. However, based on the sensitivity of the area, the CAR recommends monitoring of any future ground-disturbing activities that have impacts below the hardscapes within the project area. All artifacts collected and records generated during this project were curated at the CAR curation facility on the UTSA Main Campus under Accession Number 2826.

This page intentionally left blank.

Table of Contents:

Abstract	iii
List of Figures	vii
List of Tables	ix
Acknowledgements	xi
Chapter 1: Introduction	1
Report Outline	2
Chapter 2: Project Background	3
Environment	3
Culture History	4
Texas Prior to European Contact	4
Historic Period	5
Previous Archaeology	11
Chapter 3: Field and Laboratory Methods	15
Field Methods	15
Laboratory and Curation Methods	15
Chapter 4: Results	17
Chapter 5: Summary and Recommendations	21
References Cited	23

This page intentionally left blank.

List of Figures:

Figure 1-1. The project area on an aerial map	1
Figure 2-1. Soils within the project area.....	3
Figure 2-2. The project area overlain on Freisleben 1875 Map of San Pedro Springs Reserve (Freisleben 1875).....	6
Figure 2-3. The project area on the 1911 Sanborn Fire Insurance Map	8
Figure 2-4. The project area on the 1931 Sanborn Fire Insurance Map	9
Figure 2-5. The project area on the 1950 Sanborn Fire Insurance Map	10
Figure 2-6. Previously recorded archaeological sites found within 0.5 km of the project area REDACTED IMAGE	12
Figure 4-1. Trenches monitored within the project area	17
Figure 4-2. Trench profile observed during monitoring.....	18
Figure 4-3. Trench with shallowly buried utilities.....	18
Figure 4-4. Durkee salad dressing bottle and base; note Owens machine suction scar.....	19
Figure 4-5. COSA-OHP acequia projection and locations of the sections of the acequia recorded by Cox (1986, 1993) REDACTED IMAGE	20

This page intentionally left blank.

List of Tables:

Table 2-1. Previously Recorded Archaeological Sites within 0.5 km of the Project Area..... 11

This page intentionally left blank.

Acknowledgements:

The field work for this project was completed by Peggy Wall, Jesus Figueroa, and Dakota Maas of the CAR. Thanks to the field staff for their efforts. David Yelacic, former CAR Director, developed the scope of work and directed most of the fieldwork. Cynthia Munoz, CAR Interim Director, Lead Curator, and Lab Director, oversaw the lab processing and curation of this project. Peggy Wall, in addition to her efforts in the field, processed the GIS data and produced the graphics and final report. Cynthia Munoz, Dr. Raymond Mauldin, and Leonard Kemp provided guidance and assistance during report production, and Dr. Mauldin provided helpful comments on a draft of this report.

Thanks to Kevin Schnitzer of VIA for his assistance facilitating and coordinating this project. Thanks to Matthew Elverson of COSA-OHP and Dr. Emily Dylla of the THC for their assistance and review of this project. J.F. Petroleum Group conducted the excavations.

This page intentionally left blank.

Chapter 1: Introduction

Beginning March 9, 2023 and continuing sporadically through September 15, 2023, CAR-UTSA conducted archaeological monitoring of excavations for the replacement of existing underground storage tanks and associated utilities on VIA-MTA property. The scope of work originally called for proactive backhoe trenching. However, due to the thick pavement layer across the parking lot, only monitoring was conducted. The work was conducted in response to a request from VIA-MTA, a quasi-governmental entity, and carried out on VIA-MTA property. Therefore, the project required compliance with the Texas Antiquities Code and review under the Unified Development Code of the City of San Antonio (Article 6 35-

630 to 35-634). The work was accomplished under Texas Antiquities Permit (TAP) Number 30836. David Yelacic, former CAR Director, served as the Principal Investigator and Project Archaeologist until his departure from the CAR in August 2023. Following his departure, Leonard Kemp assumed the role of Principal Investigator and Sarah Wigley assumed the role of Project Archaeologist.

The project area encompasses 0.07 ha (0.2 acres) within the VIA-MTA bus parking lot located at 1720 North Flores Street in north-central San Antonio, Bexar County, Texas (Figure 1-1). The lot is bounded by West Myrle Street on

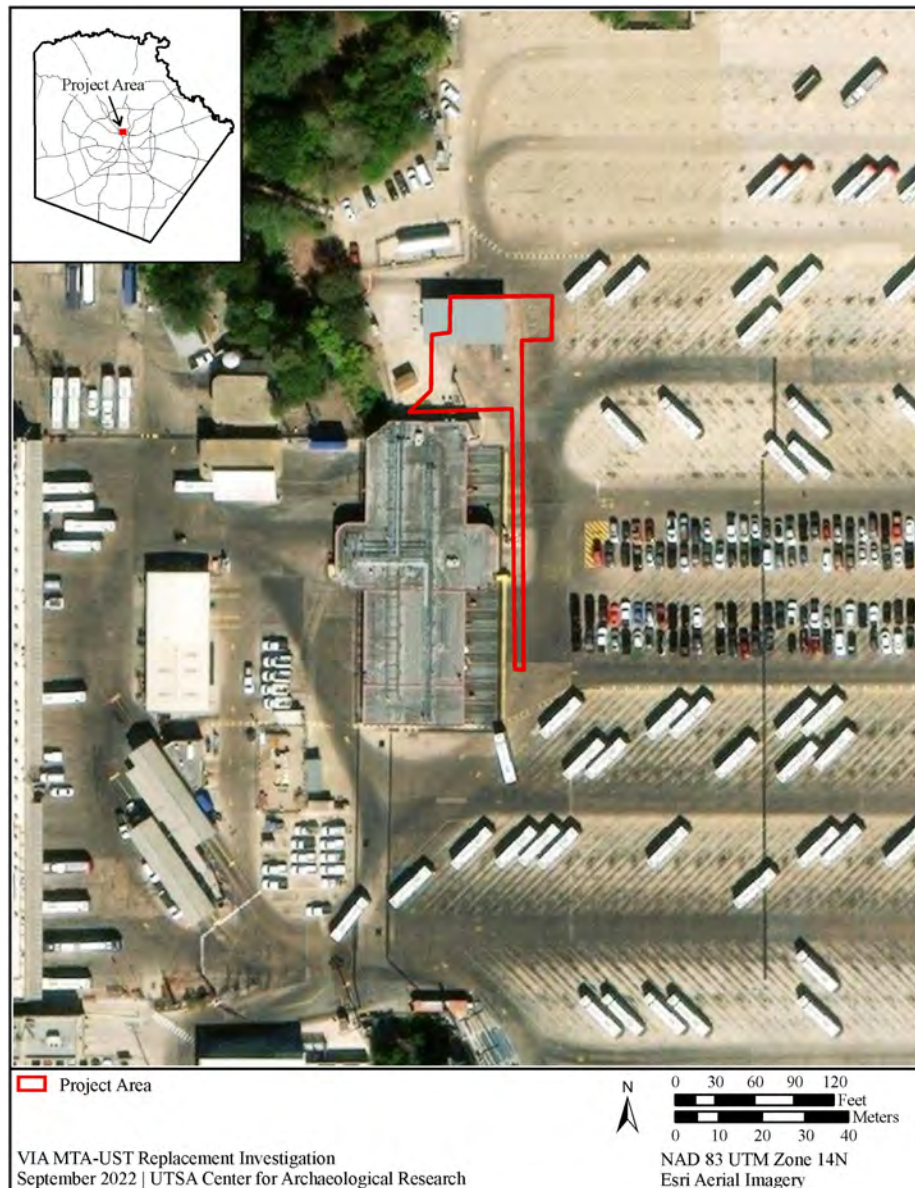


Figure 1-1. The project area on an aerial map.

the north, San Pedro Avenue on the east, East Laurel Street on the south, and San Pedro Creek on the west. Segments of the San Pedro Acequia (41BX337) have been previously recorded within vicinity of the project area (Cox 1986, 1993; Wigley 2020). In addition, the project area's proximity to the San Pedro Creek indicates potential for prehistoric deposits (Mauldin et al. 2015; Meissner 2000; Zapata and Meissner 2003).

CAR staff conducted three days of monitoring over the course of the project. While a limited quantity of early twentieth-century material was seen in one trench, no significant cultural deposits or features were discovered during monitoring. However, due to the sensitivity of the area and previous work recording the *acequia* in the vicinity of the project, CAR recommends archaeological monitoring of

any future impacts below the hardscapes of the parking lot. Records generated and artifacts collected during the project are curated at the CAR under accession 2826.

Report Outline

This report includes five chapters. Following this introduction, the second chapter provides a brief environmental and culture history background, followed by a review of the archaeological sites previously recorded in the area. The third chapter discusses the lab and field methods used during the completion of this project. The fourth chapter discusses the results of the investigation. The fifth chapter provides a project summary and CAR's recommendations.

Chapter 2: Project Background

This chapter includes a brief discussion of the natural environment and culture history of the project area to provide context for the results of the project. The chapter concludes with a discussion of the archaeological sites recorded within 0.5 km of the project area.

Environment

The project area is in north-central San Antonio in a neighborhood known as Five Points, so named due to the unique intersection of Fredericksburg Road, N. Flores Street,

N. Laredo Street, La Harpe Street, and Laurel Street in the vicinity (COSA 2009). It is immediately east of San Pedro Creek and lies 201-214 m above sea level. The project area is currently in use as a parking lot for VIA buses as part of the VIA Metro Center. The surrounding area is a mix of residential and commercial development. San Pedro Springs Park is approximately 260 m to the north.

Soils within the project area are composed of Branyon clays (HtB) of one to three percent slopes (Figure 2-1). These soils are found on stream terraces and reach depths of more than



Figure 2-1. Soils within the project area.

200 cm. They are well drained and considered prime farmland (NRCS 2024). The project area is within the Southern Blackland Prairie ecoregion. This community historically consists of a true tallgrass prairie dominated by big bluestem (*Andropogon gerardii*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), eastern gramagrass (*Tripsacum dactyloides*), and little bluestem (*Schizachyrium scoparium*). Other plant species include midgrasses, a variety of forbs, and live oak (*Quercus virginiana*) and hackberry (*Celtis* spp.) trees. In most areas, the natural vegetation has been lost, first to row crop agriculture and later to urban development (NRCS 2024). This is true within the project area as well.

San Antonio is positioned where the southernmost Great Plains meet the Gulf Coast, which is demarcated by the Balcones Escarpment. It is also near a significant climate boundary, partitioning a humid-subtropical from an arid zone (Petersen 2001). The city's location near these significant geological and climactic boundaries results in a varied resource base. The area has a number of reliable freshwater sources, including the San Antonio River, freshwater artesian springs, and the Edwards Aquifer. The San Pedro Springs Creek, which rises at San Pedro Springs, is located about 300 m north of the project area. The springs were once a reliable fresh water source, but significant reduction in water flow from the springs resulting from the drilling of wells into the aquifer in the late nineteenth century, as well as heavy channelization of the creek in the twentieth century, decimated the source (Eckhardt 2024; Sanborn 1911, 1931, 1950). This decline will be discussed in more detail in the following section. The growing season in San Antonio averages 270 days (Petersen 2001:22). The lowest average temperature is 39°F (4°C) in January, with the highest average of 96°F (36°C) occurring in July (Long 2024). Though highly variable, the average annual rainfall is approximately 76 cm, with seasonal peaks in the spring and fall (Petersen 2001:22). The project area is near the borders of the Balconian biotic province, an intermediate ecological area between the eastern forest and the western desert, and the Tamaulipan biotic province, having a semi-arid climate dominated by thorny brush (Blair 1950).

Culture History

The vicinity of the project area includes significant precontact and historic sites. A broad review is included for these periods to provide context for project results.

Texas Prior to European Contact

The precontact record in Texas is generally divided into the Paleoindian, Archaic, and Late Prehistoric periods. Bexar County's archaeological record has been included in reviews of both Central (Collins 2004) and South (Hester 1980)

Texas, as the county is near the boundary between the two cultural areas. The following summary generally follows a Central Texas chronology.

The Paleoindian period in Central Texas spans 13,000-9000 years before present (BP). In-depth reviews of this period are available (see Bousman et al. 2004). Groups inhabiting the area during this period are generally characterized as highly mobile (Bousman et al. 2004). Temporally diagnostic artifacts from the period include Folsom and Clovis points, among others (see Turner et al. 2011). Fauna from Paleoindian components on sites such as Lubbock Lake (41LU1) and Wilson-Leonard (41WM235) suggest a broad subsistence base (Bousman et al. 2004). Within Bexar County, multiple sites have Paleoindian components. These include the St. Mary's Hall site (41BX229; Hester 2024) and the Richard Beene site (41BX831; Bousman et al. 2004; McGraw and Hindes 1987; Thoms and Clabaugh 2011).

The Archaic period in Central Texas ranges from 9000-1200 BP. The period is characterized by several technological developments, including an increased diversity of material culture and the use of heated rock technology (Carpenter and Hartnett 2011; Collins 2004; Johnson and Goode 1994; Thoms and Clabaugh 2011). The period is often subdivided into Early, Middle, and Late Archaic periods (see Collins 2004; Hester 2004). Temporally diagnostic artifacts from the Early Archaic period (9000-6800 BP) include Angostura, Early Split Stem, and Martindale-Uvalde dart points, among others (Collins 2004). The Middle Archaic spans 6800-4200 BP. Temporally diagnostic artifacts from this period include Calf Creek, Bell-Andice, Nolan, and Travis points, among others (Collins 2004; Turner et al. 2011). The Late Archaic spans 4200-1200 BP. Temporally diagnostic artifacts from the Late Archaic include a wide variety of types, with Pedernales, Ensor, and Frio points being common (Collins 2004). Numerous Archaic Period components have been recorded in Bexar County, including Olmos Dam (41BX1; Lukowski 1988; Orchard and Campbell 1954), 41BX17 (Munoz et al. 2011; Schuetz 1966; Wigley 2018), 41BX323 (Figueroa and Dowling 2007; Houk et al. 1999; Houk and Miller 2001; Katz and Fox 1979; Meskill et al. 2000; Meskill and Frederick 1995; Miller et al. 1999; Miller and Barile 2001), and 41BX1396 (Barile et al. 2002; Katz and Fox 1979). In addition, significant Late Archaic deposits have been previously recorded at 41BX19 (San Pedro Springs Park), approximately 395 m north of the project area (Mauldin et al. 2015).

The Late Prehistoric period begins at 1200 BP and ends around 350 BP (see Carpenter 2017; Kenmotsu and Boyd 2012). The period is divided into two intervals, Austin (1200-750 BP) and Toyah (750-350 BP). The period is characterized by a shift to bow and arrow technology, evidenced by arrow points such as Scallorn and Perdiz (Collins 2004). The Toyah style

interval of this period also includes the adoption of ceramic technology (Collins 2004). There is evidence that burned rock middens increased in use (Black et al. 1997; Mauldin et al. 2003). Bison remains are common on Late Prehistoric sites (Mauldin et al. 2012), though they may have been more intensively exploited toward the end of the period (Lohse et al. 2014). Sites with significant Late Prehistoric components in Bexar County include two multi-component sites mentioned previously, site 41BX256 (Osburn et al. 2007; Padilla and Nickels 2010; Padilla and Trierweiler 2012; Scurlock et al. 1976) and site 41BX323 (Figueroa and Dowling 2007; Houk et al. 1999; Houk and Miller 2001; Katz and Fox 1979; Meskill et al. 2000; Meskill and Frederick 1995; Miller et al. 1999; Miller and Barile 2001). Late Prehistoric deposits have also been documented at 41BX19 (Mauldin et al. 2015).

Historic Period

In Central and South Texas, the historic period began with the first documented appearance of Europeans. Spain laid claim to the area that would become Texas early, following the 1519 Alonso Álvarez de Pineda voyage along the Texas Coast, but the first Europeans arrived in AD 1528 when Cabeza de Vaca and other survivors of the Narvaez expedition washed up on the Texas Coast (see Krieger 2000). Although interactions between Europeans and Indigenous people in the area were infrequent within Central Texas, the lifeways of the Indigenous populations there were significantly affected by the spread of European disease as well as displacement of populations by European incursions (Foster 1998; Kenmotsu and Arnn 2012). Spain made little attempt to establish settlements in Texas prior to 1700 (Chipman and Joseph 2010). However, motivated by concerns about the French encroachment into Texas in 1685 by Robert Cavalier Sieur de la Salle's expedition and colonization in Louisiana in the early 1700s, the Spanish government endeavored to strengthen its hold on Texas, which previously was sparsely populated by Europeans (Cruz 1988). Missions founded in East Texas in the early 1700s were attempts to secure Spain's hold on the area. Additionally, a Spanish expedition intended to initiate contact with the Indigenous population and prevent them from establishing trade relationships with the French reached San Pedro Springs in present-day San Antonio on April 13, 1709 (Cruz 1988).

The primary institutions Spain employed to secure its colonies were the missions, which intended to assimilate the Indigenous population through religious conversion, the presidio, which played a military defensive role, and, ultimately, the establishment of chartered town settlements (Cox 1997; de la Teja 1995). The missions and the presidio were intended to be transitory institutions, whose land and possessions would ultimately be distributed among

successfully converted indigenous families (de la Teja 1995). The Spanish Colonial *acequia* system in San Antonio was established to serve as a source of water and irrigation for the inhabitants of these institutions. San Antonio is one of the few large cities of Spanish origin that still has traces of its original *acequia* system, which spanned more than 80 km at its peak (Cox 2005).

Mission San Antonio de Valero, the first Spanish settlement established in what would become San Antonio, was founded on May 1, 1718, on the west bank of the San Antonio River south of San Pedro Springs (Habig 1968:38). The Presidio de Bexar and the Villa de Bexar were established four days later. Archival evidence suggests that these settlements were located near the San Pedro Springs, possibly within modern-day San Pedro Park (Meissner 2000), although firm archaeological evidence of these early settlements has not been discovered. The mission was moved to the east bank of the San Antonio River about a year later, and it was moved a third time to its final location following storm damage in 1724 (Habig 1968:44). The villa and presidio were relocated in 1722 (Habig 1968:38). Archaeological material associated with this second location of the presidio, including a Spanish Colonial sheet midden, has been documented at site 41BX2088 (McKenzie et al. 2016). Four more missions were founded to the south along the San Antonio River between 1720 and 1731 (de la Teja 1995).

Although an early, unofficial town settlement associated with the presidio began to develop with the arrival of presidio soldiers and their families, this settlement lacked legal status (de la Teja 1991). The arrival of a group of immigrants from the Canary Islands in 1731 marked the establishment of the Villa de San Fernando (Buck 1980; de la Teja 1995; Poyo 1991). The villa was granted water rights to the San Pedro Creek (de la Teja 1995). The early years of the settlement were marked with conflict between the villa, the missions, and the earlier settlers, particularly over land and irrigation (Buck 1980; de la Teja 1991, 1995; Poyo 1991). An *acequia* for the new settlement, the San Pedro (41BX337), was in operation by 1735 (Cox 2005: 35). The San Pedro Acequia was approximately 6.4 km in length. It watered 161 ha south of the villa (Cox 2005). The *acequia* ran south from San Pedro Springs between San Pedro Creek and the San Antonio River (Cox 2005). The current project area, located approximately 170 m south of the *acequia*'s origin point at San Pedro Springs, either intersects or is in close proximity to the *acequia* trajectory based on archival evidence and previous archaeological investigations (Figure 2-2; COSA-OHP 2024; Cox 1986, 1993; Freisleben 1875; Sanborn 1911). A second *acequia*, the Upper Labor (41BX1273), drains into San Pedro Creek about 200 m south of the project area. The Upper Labor was constructed by 1778 (Cox et al. 1999; McKenzie 2017; Wigley 2020).

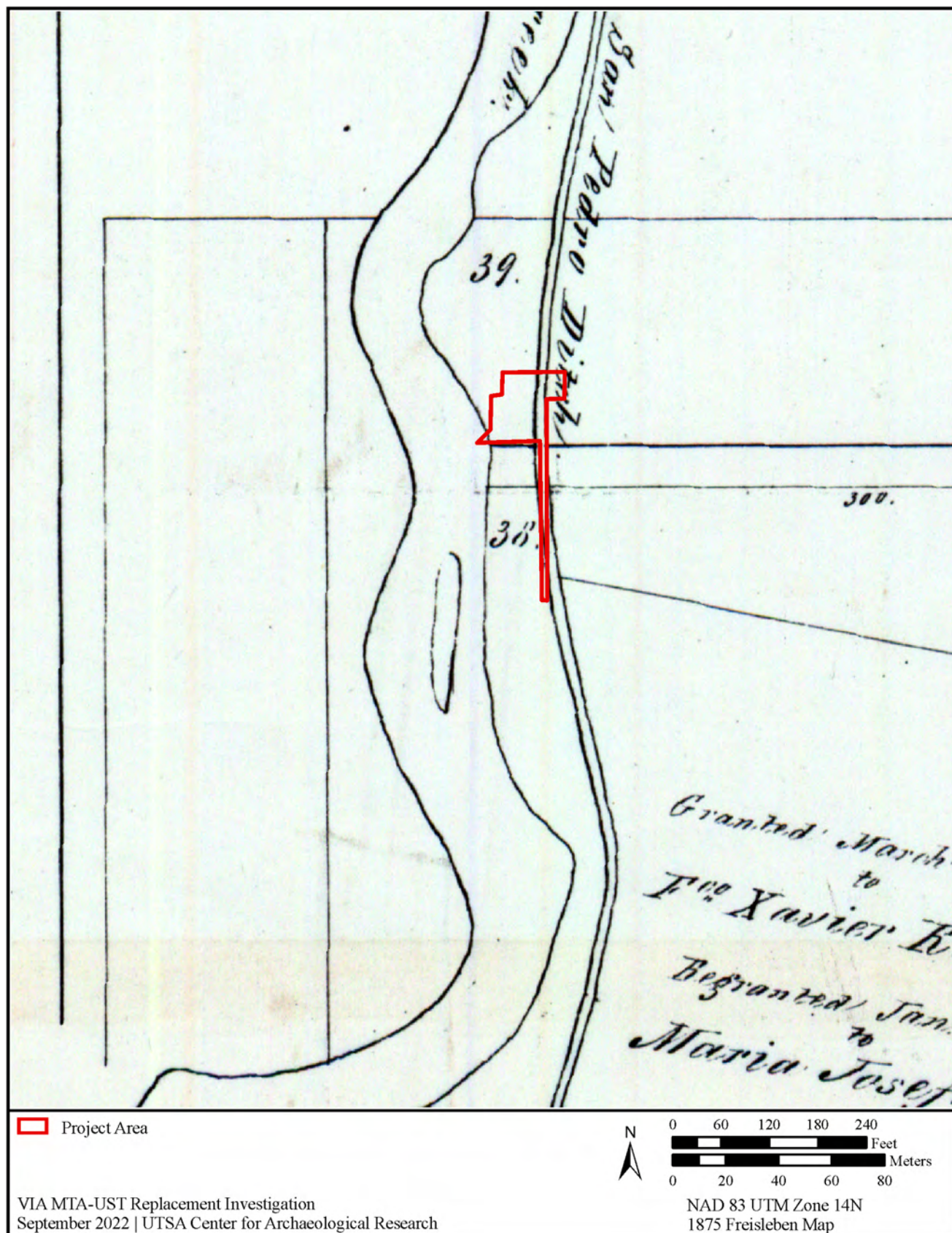


Figure 2-2. The project area overlain on Freisleben 1875 Map of San Pedro Springs Reserve (Freisleben 1875).

In 1793, Mission Valero was secularized and the associated lower farms were surveyed and distributed (Cox 1997; de la Teja 1995). The mission compound later served a primarily military function in the city, and it was, significantly, the site of the Battle of the Alamo in 1836. The other missions were not fully secularized until 1824, when their churches and furnishings were inventoried and surrendered (Habig 1968). However, they were partially secularized in 1794, when their farmlands were surveyed and redistributed, and the distribution of former mission farmlands contributed to the growth of the town (de la Teja 1995).

A failed uprising for independence from Spain in 1812 depleted San Antonio's population and negatively affected the city's development for decades (Cox 1997). Mexico gained independence from Spain in 1821, and Texas became part of the state of Coahuila. Texas revolted against Mexico in 1835. Mexican General Martín Perfecto de Cos fortified the old Mission Valero against the Texans, including diverting a branch of the *acequia* to flow outside the Mission compound (Cox 1997). The Texans defeated General Cos, but they were defeated themselves by Santa Anna after a 13-day siege in 1836 at what became known as the Battle of the Alamo (Cox 1997). In the fall of 1836, Santa Anna was ultimately defeated and Texas became a Republic (Cox 1997). Several sites in downtown San Antonio include features associated with this military activity, including a trench feature associated with General Cos' occupation of Main Plaza at 41BX1752 (Hanson 2016), and a Mexican fortification trench associated with the Siege of Bexar at 41BX2170 (Kemp et al. 2020).

During the century that followed Texas's break with Mexico, San Antonio saw considerable growth despite the impact of numerous conflicts. In December 1837, San Antonio was incorporated as one of the early acts of the newly established Republic of Texas. Several epidemics impacted the city's population during the early to mid-1800s, spread in part by pollution of the *acequia* system. San Antonio tried to combat the issue by establishing standards of cleanliness, but with limited success (Cox 2005). After a turbulent period in which Texas saw conflict with both Mexico, which did not accept the new Republic's independence, and local Native American groups, Texas became part of the United States in 1846. This sparked the Mexican War between the United States and Mexico. The conflict ultimately resulted in setting the Rio Grande as Texas's southern boundary, as well as the United States gaining significant territory on the western side of the continent, including California, Arizona, and New Mexico (Bauer 2023). During the tumultuous period from 1813-1867, the San Pedro Springs area was occupied by various military groups on multiple occasions (Eckhardt 2024).

In the 1840s, French and German immigrants began to settle in San Antonio and the surrounding area. The Five Points neighborhood included several German businesses during the 1800s (Uecker 1991). Cultural material associated with one such business in the area, Wohlfarth's mercantile, was recorded by the CAR in 2014 (McKenzie 2015). By the 1850s, recent European settlers outnumbered the Mexican and Anglo populations in the city (Cox 1997). Texas seceded from the United States, joined the Confederacy in 1861, and primarily served a supply role during the Civil War. Five years later, Texas surrendered to the Union and rejoined the United States (Wooster 2023).

The arrival of the railroad in 1877 resulted in significant growth in San Antonio (Cox 1997). The Five Points neighborhood began to be subdivided for residences in the late 1800s (Uecker 1991). The late 1800s also saw infrastructure and economic development throughout the city, including water, electric, and gas utilities (Heusinger 1951). City leaders also attempted to update the *acequia* system with the construction of new ditches, including the construction of the Alazán Ditch (41BX620) in 1875, originating about 300 north of the project area in San Pedro Park (Cox 2005; McKenzie 2017). The adoption of the new water works system in 1878 transformed the *acequia* system into, primarily, a drainage system, and water flow was reduced in the 1890s due to the increased drilling of wells that had also affected San Pedro Creek. As a result of these infrastructural changes in the city, as well as ongoing cleanliness issues, the San Pedro Acequia was closed in 1912 (Cox 2005).

From 1906-1918, the project area was occupied by an electrified amusement park called Electric Park (Figure 2-3; Zapata and McKenzie 2017). Review of archival maps indicates the decreased flow of San Pedro Springs Creek during this time period (Figure 2-3; Freisleben 1875), as well as channelization and modification of the Creek and *acequia* for the use of the Electric Park (Figure 2-3). By 1931, the project area was occupied by the San Pedro Park Tourists Lodges and was bisected by West Park Avenue. The Electric Park had been demolished. However, the creek retained its straightened trajectory as a result of the previous modifications, and a sharp bend not previously noted to the northwest of the project area suggests additional modification (Figure 2-4). By 1951, the project area had become a bus staging yard and West Park Avenue has been truncated to end east of the project area. A portion of the current fueling station has been built west of the project area. San Pedro Creek at this stage terminated at this fueling station and was directed underground (Figure 2-5).

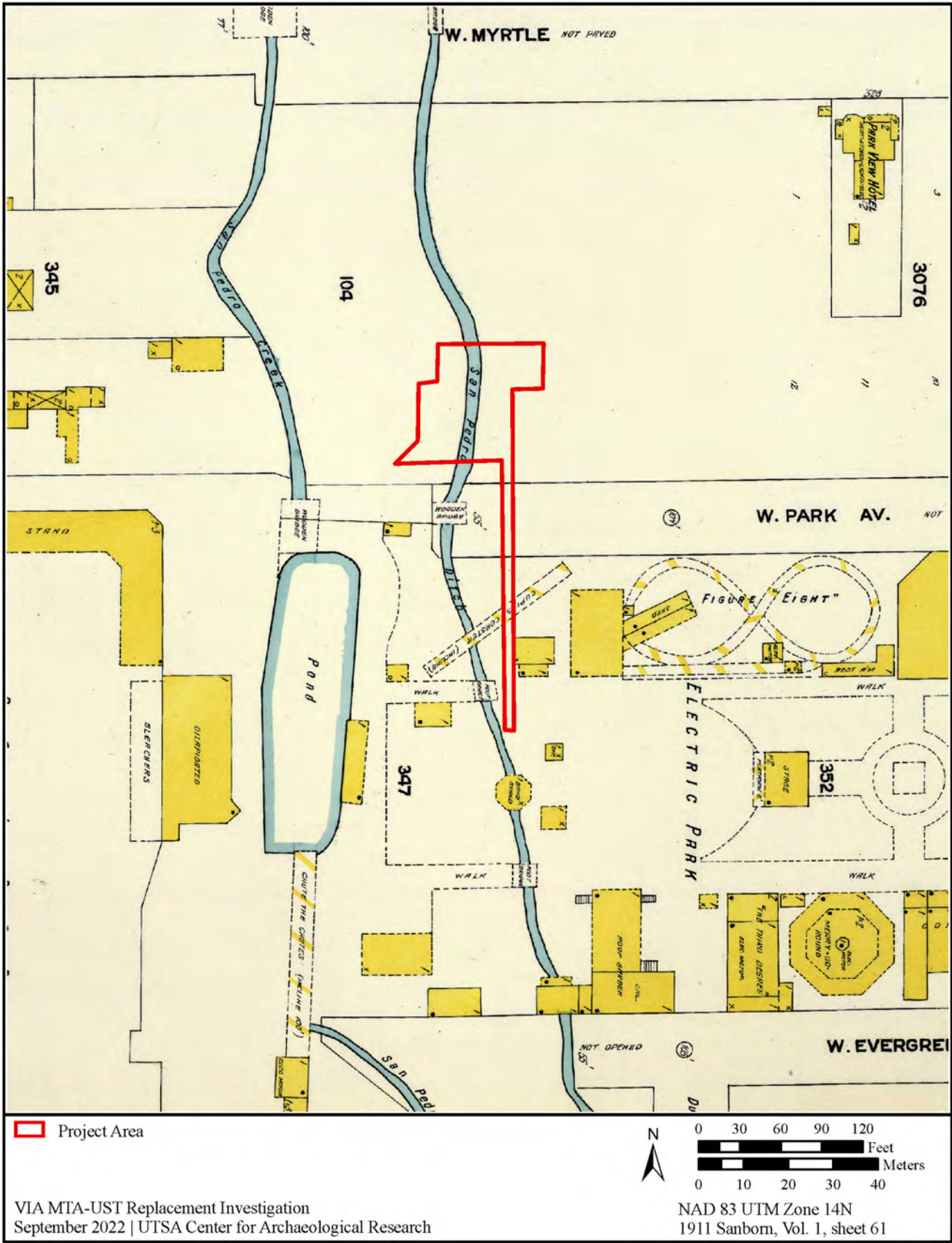


Figure 2-3. The project area on the 1911 Sanborn Fire Insurance Map.

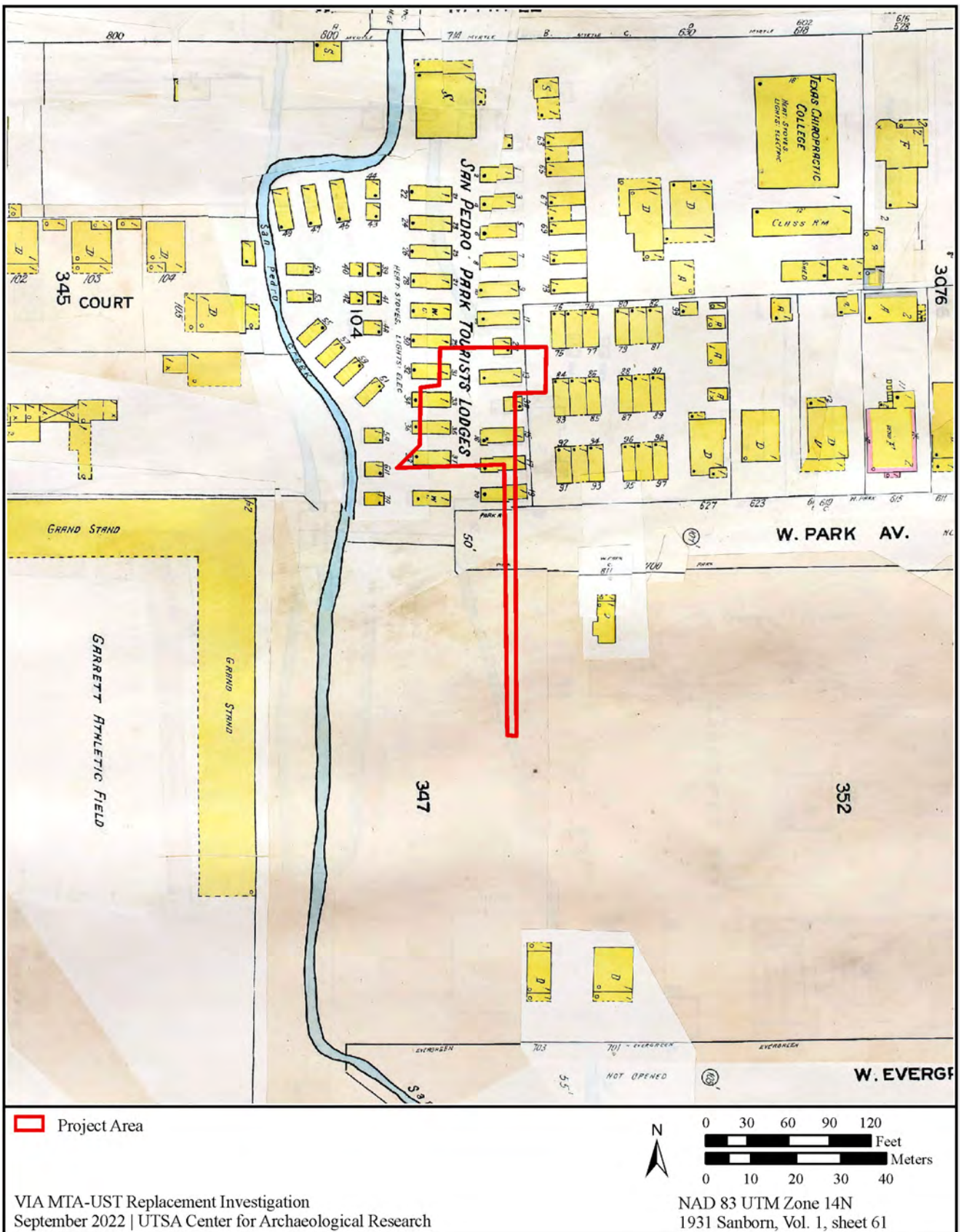


Figure 2-4. The project area on the 1931 Sanborn Fire Insurance Map.

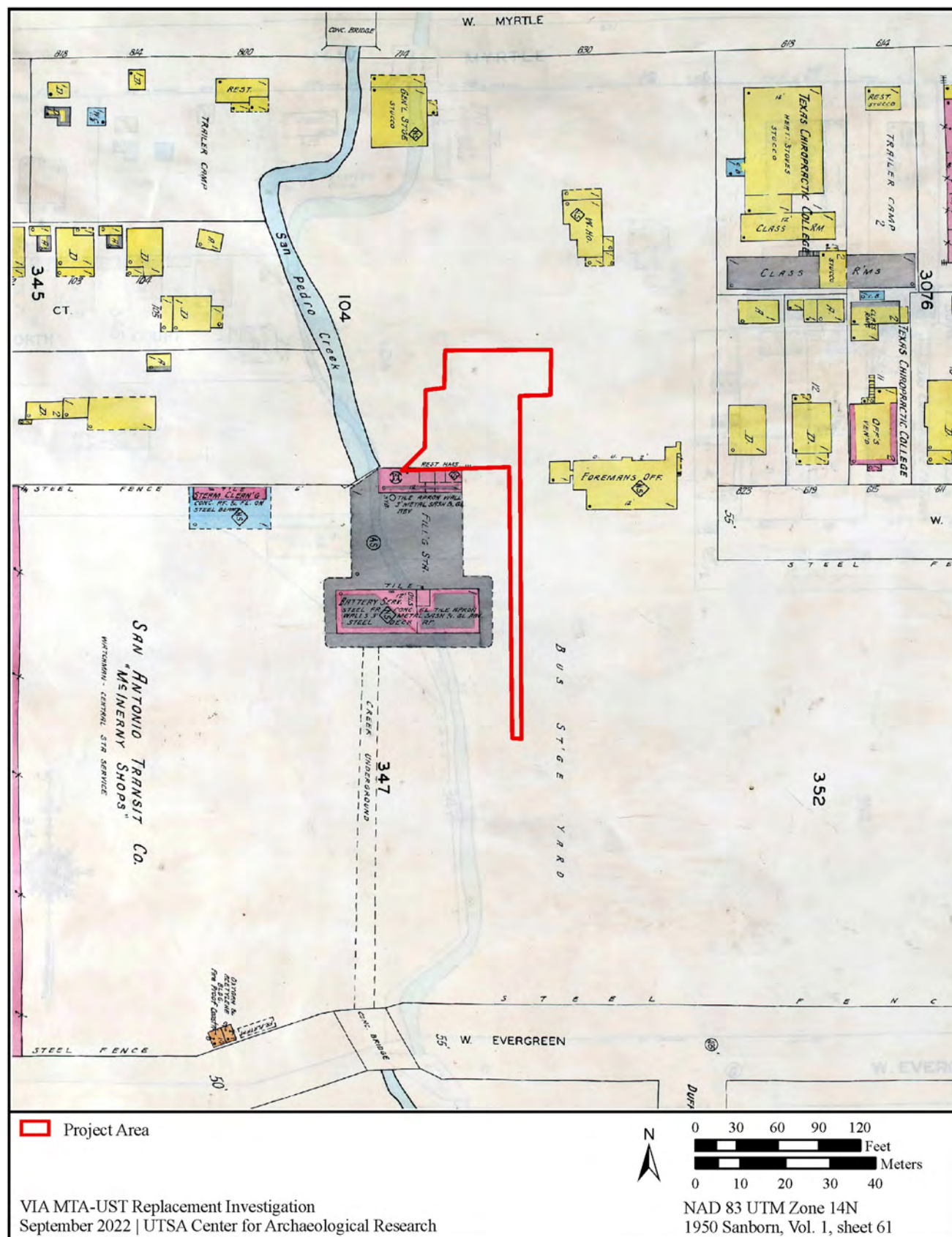


Figure 2-5. The project area on the 1950 Sanborn Fire Insurance Map.

Previous Archaeology

A search of the Texas Archaeological Sites Atlas found five archaeological sites within 0.5 km of the project area (Table 2-1, Figure 2-6). Previous archaeological investigations (Cox 1986, 1993; Wigley 2020) have documented multiple segments of the San Pedro Acequia (41BX337) near the project area. Multiple archaeological surveys that did not record any sites have taken place within 1 km of the project area (THC 2024).

Site 41BX19 includes the San Pedro Springs and surrounding area in modern-day San Pedro Park. The site contains precontact and historic materials, and is a National Register of Historic Places (NRHP) site as well as a State Antiquities Landmark (SAL). The site has an extensive history of avocational exploration dating back to the 1870s, which includes reports of human remains (Mauldin et al. 2015), and has been the subject of multiple archaeological investigations (THC 2024). Site 41BX19 was formally recorded by the Witte Museum in 1966 as a prehistoric site and the location of earliest Spanish settlement in San Antonio (Mauldin et al. 2015; THC 2024). Portions of the Alazán Ditch (41BX620) have been documented within the park boundaries (Fox 1978; Meissner 2000). Multiple investigations have attempted to locate intact portions of the San Pedro Acequia and dam within the park, but none have been successful (Houk 1999; Mauldin et al. 2015). Intact historic deposits have been documented (Zapata and Meissner 2003) as well as intact prehistoric deposits dating to the Late Archaic and Late Prehistoric (Mauldin et al. 2015), despite evidence of extensive disturbance in many areas of the park due to construction (Mauldin et al. 2015). A recent investigation confirmed the presence of significant prehistoric deposits and refined the known extent within the park boundaries (Gadus and Dockall 2022).

Multiple sections of the San Pedro Acequia (41BX337) have been documented within or near the project area and have been documented during archaeological work conducted downtown (Fox 1978; Valdez and Eaton 1979). Multiple sections of the *acequia* were recorded within the

project area by the CAR during trenching in 1986 (Cox 1986). The *acequia* in this area was recorded as lined with cut limestone and found just below the surface. The walls were approximately 46 cm wide, and the total width of the *acequia* was approximately 1.5 m. Predominately twentieth-century artifacts were recovered, likely associated with the period in which the *acequia* was closed (Cox 1986). An additional unlined section was recorded at a depth of 46 cm, approximately 200 m north of the project area, just outside San Pedro Springs Park (Cox 1993). In 2020 a partially lined section was recorded on the other side of Laurel Street approximately 200 m south of the project area, also on VIA property (Wigley 2020). Numerous sections of the San Pedro Acequia, both lined and unlined, have been documented throughout its path through downtown San Antonio (THC 2024).

Site 41BX620 is the Alazán Ditch. This site was recorded by Fox in 1978, who documented a section near the San Pedro Springs, but a trinomial was not assigned until 1983 (Fox 1978; THC 2024). Construction of this late addition to the *acequia* system was completed in 1875. It includes portions encased in limestone that run below ground (Nickels and Cox 1996). The Alazán Ditch functioned poorly from the beginning of its construction and was closed by 1903 (Thomas and McKenzie 2019). Portions of the Alazán Ditch have been documented during a number of archaeological projects (Fox 1978; Labadie 1987; Nickels and Cox 1996; Thomas and McKenzie 2019; THC 2024).

Site 41BX1273/41BX2043 is the Upper Labor Acequia and associated dam. A small, unlined portion of the *acequia* was recorded by the CAR in 1987 (Fox and Cox 1988). In 1996, a portion of the Upper Labor dam was recorded when it was exposed following a rainstorm. Backhoe trenching exposed other portions of the *acequia*, including a Spanish Colonial component composed of rough limestone and a nineteenth-century modification consisting of cut, ashlar-dressed limestone blocks (Cox et al. 1999). At this time, the trinomial 41BX1273 was assigned to both the dam and *acequia*. The site was revisited by the CAR in 2013-2014 (McKenzie 2017) and the dam and the *acequia* were given a new trinomial, 41BX2043 (THC 2024). This trinomial

Table 2-1. Previously Recorded Archaeological Sites within 0.5 km of the Project Area

Trinomial	Time Period	Site Description
41BX19	Prehistoric/Spanish Colonial/Historic	San Pedro Springs
41BX337	Spanish Colonial/Historic	San Pedro Acequia
41BX620	Historic	Alazan Ditch
41BX1273/41BX2043	Spanish Colonial/Historic	Upper Labor Acequia
41BX2422	Late 19th to early 20th century	Abandoned infrastructure and foundation remnants

Redacted Image

Figure 2-6. Previously recorded archaeological sites found within 0.5 km of the project area.

is not used in the associated report, which instead uses the designation 41BX1273 for both the dam and *acequia* (McKenzie 2017). Multiple sections of the *acequia* have been documented along its path through downtown San Antonio (THC 2024).

Site 41BX2422 consists of late nineteenth to early twentieth-century infrastructure recorded by Cox McLain

Environmental Consulting during archaeological monitoring in 2020 (THC 2024). Five clay sewer main remnants and two concrete blocks with square rebar were recorded. The site is at the intersection of North Flores and Fredericksburg Road. Artifacts recovered included container glass, metal, and brick. The site was determined to be not eligible for designation as a SAL or listing in the NRHP within the project right-of-way (ROW).

This page intentionally left blank.

Chapter 3: Field and Laboratory Methods

This chapter discusses the field and laboratory methods used by the CAR during the completion of this project.

Field Methods

The scope originally called for pro-active backhoe trenching to be carried out prior to the commencement of the project to determine if prehistoric deposits were present. However, after consulting with VIA it was determined that this was not feasible due to thickness of the parking lot surfaces. CAR consulted with the THC and COSA-OHP and ultimately submitted a permit amendment to modify the scope of work to monitoring only, which was approved. CAR staff monitored excavations associated with the installation of a new pipe trench to serve the liquid fuel dispensers. Archaeologists kept a daily log of activities. All activities were documented in this log and supported by digital data, including GPS observations and photographs, where appropriate. Where appropriate, diagnostic artifacts were collected. All collected material, recorded with provenience information, was transported to the CAR laboratory for processing, analysis, and curation.

Laboratory and Curation Methods

Throughout the project, the analysis and organization of records, artifacts, and daily logs was ongoing. All records generated during the project were prepared following Federal Regulations 36 CFR Part 79 and THC requirements for State Held-in-Trust collections. Field forms were printed on acid-free paper and completed with pencil.

Collected artifacts were brought to the CAR laboratory, washed, air-dried, and stored in 4-mil zip-lock, archival-quality bags. Materials needing extra support were double-bagged, and acid-free labels were placed in all artifact bags. Each laser printer generated label contains provenience information and a corresponding lot number. Artifacts are stored in acid-free boxes that are labeled with standard tags.

All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper. All recovered artifacts and project-related materials, including the final report, are permanently stored at the CAR's curation facility under accession 2826.

This page intentionally left blank.

Chapter 4: Results

CAR monitored excavations associated with the installation of underground fuel tanks and associated utilities (Figure 4-1). Monitoring activities took place intermittently on three days: March 9, 2023, April 4, 2023, and September 15, 2023. The excavations took place in proximity to the projected location of the San Pedro Acequia (41BX337).

Monitors noted a thick (15-25 cm) layer of concrete at the surface sitting on top of a layer of yellow/orange road base.

This thick layer has been recorded across the bus parking area during previous investigations (Wigley and Yelacic 2023). The excavations contained shallow disturbances by utilities, but the majority of soil consisted of apparently undisturbed very dark gray (10YR 3/1) silty clay (Figures 4-2, 4-3). Trenches ranged in depth from 81-122 cm.

A trash deposit extending to 81 cm below surface was recorded in the northern portion of the monitoring area.



Figure 4-1. Trenches monitored within the project area.



Figure 4-2. Trench profile observed during monitoring.



Figure 4-3. Trench with shallowly buried utilities.

The deposit contained wire nails, unidentified metal fragments, brick fragments, and clear glass. One clear glass bottle that had diagnostic characteristics, discussed below, was collected. Other areas that CAR staff monitored lacked cultural material.

The complete clear glass bottle recovered from the trash deposit appears to be of early Owens machine manufacture, based on the rough suction scar on the base (Figure 4-4; Lindsey 2024). The bottle is embossed “E.R. DURKEE AND CO. NEW YORK” on the body and “BOTTLE PATENTED APRIL 17 1877” on the base, along with an imitation of a British

pottery mark known to be used on this specific brand of bottle (Lockhart et al. 2015). Research on Durkee-branded glass bottles suggests the bottle is a salad dressing bottle that was in use from approximately 1908-1929. This characterization is based on the finish, shape and embossed labeling and designs (Lockhart et al. 2015). However, this bottle has not been solarized as the study notes is common in other Durkee salad dressing bottles from this period. The bottle, along with the nature of the other material noted in the deposit, including wire nails, dates the trash deposit to the early twentieth century. This suggests the trash deposit may be associated with the period that the property was in use as the Electric Park.



Figure 4-4. Durkee salad dressing bottle and base; note Owens machine suction scar.

CAR staff was informed by VIA in December 2023 that no more excavation for the project was planned (Schnitzer email December 18, 2023). No evidence of the acequia, other cultural features, or potentially significant cultural material was found during monitoring. However, the negative survey results do offer some information about the likely trajectory of the acequia in the vicinity of the project area, given that the trenches monitored exhibited limited disturbance.

Archival sources and previous archaeology all agree that the *acequia* path was within 30 m of the project area, but the trajectories differ slightly (see Figures 2-2, 2-3, 4-5). COSA-OHP’s projected path is the furthest west and closest to the San Pedro Creek. When this projected trajectory is compared with the Freisleben map, it intersects the creek path in some areas. The Freisleben map (see Figure 2-2) also provides an indication of how much wider and more meandering the historic path of the creek in this area likely was in contrast to the modern drainage, as in one area the creek itself intersects the project area. This difference is potentially significant when plotting the relative location of the *acequia*. The Freisleben map places the *acequia*

trajectory about 5-10 m to the east of COSA-OHP’s projection, squarely within the trenches monitored during this project. However, no evidence of the channel was found during monitoring. The 1911 Sanborn map (see Figure 2-3), which depicts the *acequia* just before it was closed, shows a more meandering channel than either the Freisleben map or the COSA-OHP projection. As such it matches the COSA-OHP projection within the northern part of the project area, but then meanders to the east until it nearly matches the Freisleben map at the southern end of the project area. It is unclear if these differences are a result of changes to the *acequia* itself over the span of its use or small errors during the mapping process.

Previous investigatory trenching, discussed in Chapter 2, has been conducted within the bus lot north and south of the project area and successfully identified sections of the *acequia* (Cox 1986, 1993; Figure 4-5). These sections are mapped further east than the trajectory shown on any of the archival sources, but most closely follow the Freisleben map trajectory, being 2-10 m to the east. The section of 41BX337 recorded about 215 m to the south in 2020 (see Figure 2-6; Wigley 2020) also



Redacted Image

Figure 4-5. COSA-OHP acequia projection and locations of the sections of the acequia recorded by Cox (1986, 1993).

closely matched the Freisleben map trajectory. The negative results of this project, in conjunction with these earlier results, suggest remaining buried portions of the *acequia* may be

located slightly further to the east than projected by archival sources. This possibility should be considered if any future construction is planned that may affect this area.

Chapter 5: Summary and Recommendations

Sporadically, from March 9, 2023 to September 15, 2023, CAR staff monitored excavations associated with the installation of fueling infrastructure. The improvements had potential to impact the San Pedro Acequia (41BX337) or other cultural deposits potentially present in the area.

Monitoring of backhoe trenches documented an early twentieth-century trash deposit. No other cultural materials or features

were documented. However, due to the recorded presence of the San Pedro Acequia in the area, as well as potential for significant prehistoric and Spanish Colonial deposits due to the proximity to site 41BX19 and San Pedro Springs, the area retains a high probability for significant deposits. Therefore, CAR recommends that any future excavations in the area that impact sediment below the thick hardscape layer should be subject to archaeological investigation.

This page intentionally left blank.

References Cited:

- Barile, K.S., B.A. Houk, and K.A. Miller
2002 *A Cultural Resource Survey of the San Antonio Water System's Customer Distribution Line Project, City of San Antonio, Bexar County, Texas*. SWCA Cultural Resource Report No. 02-304. SWCA, Austin.
- Bauer, K.J.
2024 Mexican War. Handbook of Texas Online. Electronic document, <https://www.tshaonline.org/handbook/entries/mexican-war>, accessed January 11, 2024.
- Black, S.L., L.W. Ellis, D.G. Creel, and G.T. Goode
1997 *Hot Rock Cooking on the Greater Edwards Plateau: Four Burned Rock Midden Sites in West Central Texas*. Studies in Archeology 22. Archeology Studies Program, Report 2. Texas Department of Transportation Environmental Affairs Department, Austin. Texas Archeological Research Laboratory, The University of Texas at Austin.
- Bousman, C.B., B.W. Baker, and A.C. Kerr
2004 Paleoindian Archaeology in Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp. 205-265. Texas A&M University Press, College Station.
- Buck, S.M.
1980 *Yanaguana's Successors: The Story of the Canary Islanders' Immigration into Texas in the Eighteenth Century*. R.M. Benavides, San Antonio. Originally published 1949, Naylor, San Antonio.
- Carpenter, S.M.
2017 The Toyah Complex of South and Central Texas: Long-range Mobility and the Emergence of Dual Economies. *Plains Anthropologist* 62(242):133-156.
- Carpenter, S. and C. Hartnett
2011 Archaic Macroeconomic Spheres: A Case Study from Fort Hood, Central Texas. *Bulletin of the Texas Archaeological Society* 82:223-251.
- Chipman, D.E., and H.D. Joseph
2010 *Spanish Texas, 1519-1821*. Revised edition. University of Texas Press, Austin.
- City of San Antonio (COSA)
2009 5 Point Neighborhood Plan Update: Where it All Comes Together. City of San Antonio Planning and Development Services Department.
- City of San Antonio, Office of Historic Preservation (COSA OHP)
2024 Acequia Maps. Electronic resource, <https://www.sanantonio.gov/historic/Archaeology/AcequiaMaps>, accessed January 11, 2024.
- Collins, M.B.
2004 Archeology in Central Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp. 205-265. Texas A&M University Press, College Station.
- Cox, I.W.
1986 *Excavations of Portions of the San Pedro Acequia (41BX337) and a Search for the Arocha Acequia, San Antonio, Texas*. Archaeological Survey Report, No. 161. Center for Archaeological Research, The University of Texas at San Antonio.
- 1993 *Excavation of a Portion of the San Pedro Acequia (41BX337) VIA Metropolitan Transit System Parking Lot, San Antonio, Bexar County, Texas*. Archaeological Survey Report, No. 219. Center for Archaeological Research, The University of Texas at San Antonio.

References Cited

- 1997 The Growth of San Antonio. In *Archaeology at the Alamo: Investigations of a San Antonio Neighborhood in Transition, Volume 1, Historical, Architectural, and Oral History Research*, edited by A.A. Fox, M. Renner, and R.J. Hard, pp. 8-44. Archaeological Survey Report, No. 236. Center for Archaeological Research, The University of Texas at San Antonio.
- 2005 *The Spanish Acequias of San Antonio*. Maverick Publishing Company, San Antonio.
- Cox, I.W., E.D. Johnson, and C.B. Bousman
1999 *Excavations for the Upper Labor Dam Site, Brackenridge Park, San Antonio, Bexar County, Texas*. Archaeological Survey Report, No. 268. Center for Archaeological Research, The University of Texas at San Antonio.
- Cruz, G.R.
1988 *Let There Be Towns: Spanish Municipal Origins in the American Southwest, 1610-1810*. Texas A&M University Press, College Station.
- de la Teja, J.F.
1991 Forgotten Founders: The Military Settlers of Eighteenth Century San Antonio de Bexar. In *Tejano Origins in Eighteenth-Century San Antonio*, edited by G.E. Poyo and G.M. Hinajosa, pp. 27-41. University of Texas Press, Austin.
- 1995 *San Antonio de Bexar: A Community on New Spain's Northern Frontier*. University of New Mexico Press, Albuquerque.
- Eckhardt, G.
2024 San Pedro Springs. Electronic document, <https://www.edwardsaquifer.net/spspring.html>, accessed January 11, 2024.
- Figueroa, A.L. and J.J. Dowling
2007 *Additional Phase II Testing at 41BX323 in Brackenridge Park, San Antonio, Texas*. Archaeological Report No. 377. Center for Archaeological Research, The University of Texas at San Antonio.
- Fox, A.
1978 *Archaeological Investigations of Portions of the San Pedro and Alazan Acequias in San Antonio, Texas*. Archaeological Survey Report, No. 49. Center for Archaeological Research, The University of Texas at San Antonio.
- Foster, W.C.
1998 *The La Salle Expedition to Texas: The Journal of Henri Joutel 1664-1687*. Texas State Historical Association, Austin.
- Gadus, E.F. and J.E. Dockall
2022 *Archaeological Investigations for the San Pedro Springs Park Improvement Project, City of San Antonio, Bexar County, Texas*. CMEC-AR-412, Cox/McClain Environmental Consulting, Inc., Austin, Texas.
- Freisleben, G.
1875 Plat of Lands in the Northern Portion of San Antonio, Texas. Copy on file at CAR. Original at University of North Texas Libraries.
- Habig, M.A.
1968 *The Alamo Chain of Missions: A History of San Antonio's Five Old Missions*. Franciscan Herald Press, Publishers of Franciscan Literature, Chicago.
- Hanson, C.
2016 *Archaeological Investigations for the Main Plaza Redevelopment Project, San Antonio, Bexar County, Texas*. Atkins, Austin.
- Hester, T.R.
1980 11,000 Years of South Texas Prehistory. In *Digging into South Texas Prehistory*, pp. 131-164. Corona Publishing, San Antonio.
- 2004 The Prehistory of South Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp. 127-155. Texas A&M University Press, College Station.

- 2024 St. Mary's Hall Site. Handbook of Texas Online, Texas State Historical Association. Electronic document, <https://www.tshaonline.org/handbook/entries/st-marys-hall-site>, accessed October 23, 2020.
- Heusinger, E.W.
1951 *A Chronology of Events in San Antonio: Being a Concise History of the City Year by Year, From the Beginning of its Establishment to the End of the First Half of the Twentieth Century*. Standard Printing, San Antonio.
- Houk, B.A.
1999 *Archaeological Survey and Testing in San Pedro Park (41BX19), San Antonio, Texas*. Archaeological Survey Report, No. 289. Center for Archaeological Research, The University of Texas at San Antonio.
- Houk, B.A., K.A. Miller, R.K. Meadows, and C.W. Ringstaff
1999 *Archaeological Investigations at 41BX323, Brackenridge Park, San Antonio, Bexar County, Texas*. SWCA Cultural Resource Report No. 99-67. SWCA, Austin.
- Houk, B. and K.A. Miller
2001 *The Brackenridge Park Rehabilitation Project Archaeological Survey, San Antonio, Bexar County, Texas*. SWCA Cultural Resource Report No. 00-331. SWCA, Austin.
- Johnson, L. and G.T. Goode
1994 A New Try at Dating and Characterizing Holocene Climates, as Well as Archeological Periods, on the Eastern Edwards Plateau. *Bulletin of the Texas Archeological Society* 65:1-51.
- Katz, S.R. and A.A. Fox
1979 *Archaeological and Historical Assessment of Brackenridge Park, City of San Antonio, Texas*. Archaeological Survey Report, No. 33. Center for Archaeological Research, The University of Texas at San Antonio.
- Kemp, L., J.E. Zapata, C.M.M. McKenzie, M. Pfeiffer, and R. Curilla
2020 *Archaeological Monitoring of the Downtown Street Reconstruction Project at North Main Avenue and Soledad Street and the State Antiquities Landmark Testing of 41BX2164 and 41BX2170, San Antonio, Bexar County, Texas*. Archaeological Report, No. 462. Center for Archaeological Research, The University of Texas at San Antonio.
- Kenmotsu, N.A., and J.W. Arnn
2012 The Toyah Phase and the Ethnohistoric Record: A Case for Population Aggregation. In *The Toyah Phase of Central Texas: Late Prehistoric Economic and Social Processes*, edited by N.A. Kenmotsu and D.K. Boyd, pp. 19-43. Texas A&M University Press, College Station.
- Kenmotsu, N.A., and D.K. Boyd
2012 The Toyah Phase in Texas: An Introduction and Retrospective. In *The Toyah Phase of Central Texas, Late Prehistoric Economic and Social Processes*, edited by N.A. Kenmotsu and D.K. Boyd, pp. 1-18. Texas A&M University Press, College Station.
- Krieger, A.D.
2000 *We Came Naked and Barefoot: The Journey of Cabeza de Vaca Across North America*. The University of Texas Press, Austin, Texas.
- Labadie, J.H.
1987 *An Archaeological and Historical Assessment of the Vista Verde South Project, San Antonio, Texas*. Archaeological Survey Report, No. 156. Center for Archaeological Research, The University of Texas at San Antonio.
- Lindsey, B.
2024 Historic Glass Bottle Identification and Information Website. Electronic document, <https://sha.org/bottle>, accessed January 10, 2024.
- Lockhart, B., C. Serr, B. Lindsey, and B. Schriever
2015 E.R. Durkee & Co.-and the Misunderstood Durkee Bottles. Electronic document, <https://sha.org/bottle/pdffiles/ERDurkee&Co>, accessed January 10, 2024.

References Cited

Lohse, J.C., D.B. Madsen, B.J. Culleton, and D. J. Kennett

2014 Isotope Paleoecology of Episodic Mid-to-late Holocene Bison Population Expansions in the Southern Plains, U.S.A. *Quaternary Science Reviews* 102:14-26.

Long, C.

2024 "Bexar County," Handbook of Texas Online. Electronic document, <https://www.tshaonline.org/handbook/entries/bexar-county>, accessed April 19, 2023.

Lukowski, P.D.

1988 *Archaeological Investigations at 41BX1, Bexar County, Texas*. Archaeological Report, No. 135. Center for Archaeological Research, The University of Texas at San Antonio.

Mauldin, R.P., D.L. Nickels, and C.J. Broehm

2003 *Archaeological Testing to Determine the National Register Eligibility Status of 18 Prehistoric Sites on Camp Bowie, Brown County, Texas*. Archaeological Survey Report, No. 334. Center for Archaeological Research, The University of Texas at San Antonio.

Mauldin, R., J. Thompson, and L. Kemp

2012 Reconsidering the Role of Bison in the Terminal Late Prehistoric (Toyah) Period in Texas. In *Toyah Phase of Central Texas: Late Prehistoric Economic and Social Processes*, edited by N.A. Kenmotsu, pp. 90-110. Texas A&M University Press, College Station.

Mauldin, R., S. Smith, S. Wigley, A. Figueroa, and C. McKenzie

2015 *Archaeological Investigations within San Pedro Springs Park (41BX19), San Antonio, Bexar County, Texas*. Archaeological Report, No. 443. Center for Archaeological Research, The University of Texas at San Antonio.

McGraw, A.J. and K. Hindes

1987 *Chipped Stone and Adobe: A Cultural Resources Assessment of the Proposed Applewhite Reservoir, Bexar County, Texas*. Archaeological Report, No. 163. Center for Archaeological Research, The University of Texas at San Antonio.

McKenzie, C.M.M.

2015 *Investigations on the Site of Wohlfarth's Mercantile and the Search for the Arocha Acequia, San Antonio, Bexar County, Texas*. Technical Report, No. 63. Center for Archaeological Research, The University of Texas at San Antonio.

2017 *Archaeological Investigations of the Alamo Dam and the Upper Labor Dam, Brackenridge Park, San Antonio, Bexar County, Texas*. Archaeological Report, No. 444. Center for Archaeological Research, The University of Texas at San Antonio.

McKenzie, C.M., L. Martinez, and R. Mauldin

2016 *Archaeological Monitoring and Test Excavations at the 1722 Presidio San Antonio de Bexar (Plaza de Armas Buildings)*. Archaeological Report No. 445. Center for Archaeological Research, The University of Texas at San Antonio.

Meissner, B.A.

2000 *An Archaeological Assessment of San Pedro Park (41BX19), San Antonio, Texas*. Archaeological Survey Report, No. 269. Center for Archaeological Research, The University of Texas at San Antonio.

Meskill, F. and C. Frederick

1995 *Archeological Testing at the Witte Museum Science Facility Construction Site: An Archeological and Geoarcheological Study on the East Bank of the San Antonio River*. Technical Series Report No. 48. Texas Archeological Research Laboratory, The University of Texas at Austin.

Meskill, F., L. Shaw, and S. Black

2000 *Excavations at 41BX323, the Witte Museum Parcel, Archaic Period Occupations on the Banks of the San Antonio River, Bexar County, Texas*. Technical Series Report No. 50. Texas Archeological Research Laboratory, The University of Texas at Austin.

- Miller, K.A., S. Carpenter, L.C. Nordt, C. Howell, and C. Ringstaff
1999 *Archaeological Testing of 41BX323 and Portions of the Historic Second Waterworks Canal, Brackenridge Park, San Antonio, Bexar County, Texas*. SWCA Cultural Resources Report No. 98-62. SWCA, Austin.
- Miller, K. A. and K.S. Barile
2001 *Archaeological Investigations at the Brackenridge Driving Range, City of San Antonio, Bexar County, Texas*. SWCA Cultural Resource Report 01-250. SWCA, Austin.
- Munoz, C.M., R.P. Mauldin, J.L. Thompson, and S.C. Caran
2011 *Archeological Significance Testing at 41BX17/271, the Granberg Site: A Multi-Component Site along the Salado Creek in Bexar County, Texas*. Archaeological Survey Report, No. 393. Center for Archaeological Research, The University of Texas at San Antonio.
- Natural Resources Conservation Service (NRCS)
2024 Web Soil Survey. United States Department of Agriculture. Electronic document, <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>, accessed January 9, 2024.
- Nickels, D.L., and I.W. Cox
1996 *An Archaeological Assessment of the Alazán Ditch (41BX620) in the Five Points Area of San Antonio, Bexar County, Texas*. Archaeological Survey Report, No. 253. Center for Archaeological Research, The University of Texas at San Antonio.
- Orchard, C.D. and T.N. Campbell
1954 Evidence of Early Man from the Vicinity of San Antonio, Texas. *Texas Journal of Science* 4:454-465.
- Osburn, T. L., C.D. Frederick, and C.G. Ward
2007 *Phase II Archaeological Investigations at Sites 41BX254, 41BX256, 41BX1628, and 41BX1621 within the Historical Mission Reach Project Area, San Antonio, Texas*. Miscellaneous Reports of Investigations No. 373. Prepared for United States Army Corps, of Engineers, Fort Worth District, by Geo-Marine Inc., Plano, Texas.
- Padilla, A.E., and D.L. Nickels
2010 *Archaeological Data Recovery on Three Sites Along the San Antonio River, Bexar County, Texas*. Project No. 011-038. Ecological Communications Corporation, Austin, Texas.
- Padilla, A.E., and W.N. Trierweiler
2012 *Investigation of a Middle Archaic Domestic Structure: Further Archeological Excavations at 41BX256*. AmaTerra Environmental, Inc., Austin, Texas.
- Petersen, J.F.
2001 San Antonio: An Environmental Crossroads on the Texas Spring Line. In *On the Border: An Environmental History of San Antonio*, edited by C. Miller, pp.17-41. University of Pittsburgh Press, Pennsylvania.
- Poyo, G.E.
1991 The Canary Island Immigrants of San Antonio: From Ethnic Exclusivity to Community in Eighteenth-Century Bexar. In *Tejano Origins in Eighteenth-Century San Antonio*, edited by G.E. Poyo and G.M. Hinajosa, pp. 41-61. University of Texas Press, Austin.
- Sanborn Map Company (Sanborn)
1911 Sanborn Fire Insurance Map, San Antonio, Texas, Volume 1, Sheet 69. New York, New York.

1931 Sanborn Fire Insurance Map, San Antonio, Texas, Volume 1, Sheet 61. New York, New York.

1950 Sanborn Fire Insurance Map, San Antonio, Texas, Volume 1, Sheet 61. New York, New York.
- Schuetz, M.K.
1966 *The Granberg Site: An Archaic Indian Habitation in Bexar County, Texas*. Witte Museum Studies, No. 1. San Antonio, Texas.

References Cited

Scurlock, D., A. Benavides, Jr., D. Isham, and J. Clark, Jr.

1976 *An Archeological and Historical Survey of the Proposed Mission Parkway, San Antonio, Texas*. Archeological Survey Report No. 17. Texas Historical Commission, Office of the State Archeologist, Austin.

Texas Historical Commission (THC)

2024 Texas Archaeological Sites Atlas. Electronic document, <https://atlas.thc.state.tx.us/>, accessed January 11, 2024.

Thomas, A., and C.M.M. McKenzie

2019 *Archaeological Monitoring for Frio Street Utility Improvements from Houston Street to Cesar Chavez Boulevard, San Antonio, Bexar County, Texas*. Archaeological Report, No. 460. Center for Archaeological Research, The University of Texas at San Antonio.

Thoms, A.V. and P.A. Clabaugh

2011 The Archaic Period at the Richard Beene Site: Six Thousand Years of Hunter-Gatherer Family Cookery in South-Central North America. *Bulletin of the Texas Archaeological Society* 82:77-117.

Turner, E.S., T.R. Hester, and R.L. McReynolds

2011 *Stone Artifacts of Texas Indians*. Taylor Trade Publishing, Lanham, Maryland.

Uecker, H.G.

1991 *Archival and Historical Research for the San Pedro Creek Channel Improvement Project: The 1989-1990 Investigations*. Archaeological Survey Report, No. 199. Center for Archaeological Research, The University of Texas at San Antonio.

Valdez, F., Jr., and J. Eaton

1979 *Preliminary Archaeological Investigations of Part of the San Pedro Acequia, San Antonio, Texas*. Archaeological Survey Report, No. 85. Center for Archaeological Research, The University of Texas at San Antonio.

Wigley, S.

2018 Hunter-Gatherer Mobility at the Granberg Site (41BX17), Bexar County, Texas. Master's thesis, Department of Anthropology, The University of Texas at San Antonio.

2020 *Archaeological Investigations of Sections of the San Pedro (41BX337) and Upper Labor (41BX1273) Acequias in San Antonio, Bexar County, Texas*. Archaeological Report, No. 481, Center for Archaeological Research, the University of Texas at San Antonio.

Wigley, S. and D. Yelacic

2023 *Archaeological Investigations for the VIA Metropolitan Transit Authority Bus Charging Station, San Antonio, Bexar County, Texas*. Technical Report, No. 99. Center for Archaeological Research, the University of Texas at San Antonio.

Wooster, R.A.

2024 Civil War. Handbook of Texas Online. Texas State Historical Association. Electronic document, <https://tshaonline.org/handbook/online/articles/qdc02>, accessed January 11, 2024.

Zapata, J.E., and C.M.M. McKenzie

2017 *Archaeological Monitoring and Investigations for the Installation of a Compressed Natural Gas Line for the VIA Metropolitan Transit Authority, San Antonio, Bexar County, Texas*. Technical Report, No. 69, Center for Archaeological Research, the University of Texas at San Antonio.

Zapata, J.E., and B.A. Meissner

2003 *San Pedro Springs Park Improvements: Archaeological Testing and Monitoring at 41BX19, San Antonio, Bexar County, Texas*. Archaeological Survey Report, No. 331. Center for Archaeological Research, The University of Texas at San Antonio.