

Archaeological Monitoring and Investigations for the Installation of a Compressed Natural Gas Line for the VIA Metropolitan Transit Authority, San Antonio, Bexar County, Texas

by
José E. Zapata and Clinton M. M. McKenzie



Texas Antiquities Permit No. 7815

**Principal Investigator
Paul Shawn Marceaux**

***Prepared for:*
Tillium CNG
1111 Bagby Street, Suite 1111
Houston, Texas 77002**



© 2017

***Prepared by:*
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249
Technical Report, No. 69**

**Archaeological Monitoring and Investigations for the
Installation of a Compressed Natural Gas Line for the
VIA Metropolitan Transit Authority,
San Antonio, Bexar County, Texas**

by
José E. Zapata and Clinton M. M. McKenzie

Texas Antiquities Permit No. 7815

Principal Investigator
Paul Shawn Marceaux



Prepared for:
Trillium CNG
1111 Bagby Street, Suite 1111
Houston, Texas 77002

Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249
Technical Report, No. 69

©2017

Abstract:

Between October 2016 and January 2017, The University of Texas at San Antonio (UTSA) Center for Archaeological Research (CAR), on behalf of Trillium CNG, conducted archaeological investigations for proposed development activities at 1720 North Flores Street in San Antonio, Bexar County, Texas. Development activities planned for the proposed project included the Phase 1 installation of a 30.48-cm (12-in.) compressed natural gas (CNG) line and the Phase 2 construction of a CNG facility and related utility trenches. Archaeological services were in response to a request for testing and monitoring of culturally sensitive areas along the west bank of San Pedro Creek. Testing and monitoring failed to locate any intact cultural features, and recovered artifacts were limited to diagnostic material. The project was conducted under Texas Antiquities Permit No. 7815, with Dr. Paul Shawn Marceaux serving as Principal Investigator and José E. Zapata serving as Project Archaeologist.

Artifacts and records generated during this project were prepared for curation according to THC guidelines and are permanently curated at the CAR.

This page intentionally left blank.

Table of Contents:

Abstract.....	i
List of Figures	v
List of Tables	vii
Acknowledgements.....	ix
Chapter 1: Introduction	1
Area of Potential Effect (APE).....	2
Report Organization	5
Chapter 2: Historical and Archival Research and Previous Archaeology	7
Historical and Archival Background	7
The <i>Presita de Arocha</i> and The <i>Arocha Acequia</i>	7
Lots 13 through 17, NCB 1917	10
Lots within NCB 345	11
Previous Archaeology.....	15
The Five Points Area.....	15
<i>Acequia de San Pedro</i> (41BX337)	19
The Upper Labor <i>Acequia</i> (41BX2048).....	19
San Pedro Springs Park.....	21
Summary.....	21
Chapter 3: Preliminary Research, Field Methods, and Laboratory Procedures	23
Preliminary Research.....	23
Field Methods	23
Laboratory Procedures.....	24
Chapter 4: Results of the Fieldwork	25
Phase 1 (November 2016)	26
Phase 2 (October 2016 through January 2017).....	28
Recovered Artifacts	33
Chapter 5: Summary and Recommendations.....	37
References Cited	39

This page intentionally left blank.

List of Figures:

Figure 1-1. San Pedro Springs Park, VIA MTA, and San Pedro Creek with the project area in yellow	1
Figure 1-2. Location of APE outlined in red on San Antonio West USGS 7.5-minute topographic map....	2
Figure 1-3. Location of APE outlined in blue on Google satellite imagery map.....	3
Figure 1-4. 1911 Sanborn Map of project area (Sheets 45 and 61 cropped and merged). Approximate footprint of Phase 1 and 2 are shown in green highlight.....	4
Figure 2-1. The 1850 Arocha Plat (BCDR I2:119).....	8
Figure 2-2. The Meüinch Plat of 1872 (BCDR 7:16). Blue arrow indicates Lots 1 through 11	9
Figure 2-3. 1904 Sanborn Fire Insurance Map of NCBs 1917 and 345. NCBs and 1917 and 345 indicated by blue directional arrows.....	10
Figure 2-4. 1911 Sanborn Fire Insurance Map	12
Figure 2-5. 1911 Sanborn Fire Insurance Map	13
Figure 2-6. Electric Park San Antonio, Texas, post card. (Geo. M. Bearce, San Antonio, Tex.).....	14
Figure 2-7. Previous investigations near the current APE	16
Figure 2-8. Previous investigations.....	18
Figure 4-1. Project area, locations of backhoe trenches, and associated finds	25
Figure 4-2. Large access pit excavated at south end of CNG line install, view to the southwest; existing CNG line exposed at approximately 3.66 m (12 ft.) below the surface.....	27
Figure 4-3. CNG trench at south end, view to the northeast; heavily disturbed strata	27
Figure 4-4. BHT 1 trench profile, area impacted to 90 cm below the surface (cmbs; 35.4 in.).....	29
Figure 4-5. BHT 2 with BHT 1 in background, facing northwest (Oct. 31, 2016).....	30
Figure 4-6. BHT 3, trenching in progress, facing northeast (Nov. 1, 2016)	31
Figure 4-7. BHT 3, Trench Profile 1 at east end, facing south (Nov. 1, 2016).....	32
Figure 4-8. Typical trench profile, east of propane tank.....	33
Figure 4-9. Lithic artifacts recovered during monitoring; the flake and retouched uniface are from the southwest end of the APE, and the Langtry was located at the north end of the APE	34

This page intentionally left blank.

List of Tables:

Table 2-1. List of Recorded Trinomial Sites Area.....	15
Table 4-1. Artifacts Recovered from Phase 1 and Phase 2 Monitoring.....	35

This page intentionally left blank.

Acknowledgements:

The completion of this project would not have been possible without the support and cooperation of the following individuals. We are thankful to Jared Barber of Trillium CNG, Gabriel Perez of Perez Project Consulting, Kevin Schnitzer of VIA Metropolitan Transit Authority (VIA MTA), Anthony Moy of CPS Energy, Gregg Garrison of Cissell Mueller Construction, and Eric Lozano of Lozano Construction for working with us on this project. Thanks also to City of San Antonio City Archaeologist Kay Hindes and to Mark Denton of the Archaeology Division of the Texas Historical Commission (THC) for their continued support and guidance. Among the CAR staff involved in this study were David Barron who assisted with most of the fieldwork, Clinton McKenzie composed the site history and previous archaeology, Dr. Jessica Nowlin provided geospatial analysis, José Zapata compiled the report, and Dr. Kelly Harris served as technical editor. Dr. Paul Shawn Marceaux, CAR Director, served as Principal Investigator of this project.

This page intentionally left blank.

Chapter 1: Introduction

The University of Texas at San Antonio (UTSA) Center for Archaeological Research (CAR), on behalf of Trillium CNG, conducted archaeological investigations for proposed development activities at 1720 North Flores Street in San Antonio, Bexar County, Texas (Figure 1-1). Development activities planned for the proposed project included the Phase 1 installation of a 30.48-cm (12-in.) compressed natural gas (CNG) line and the Phase 2 construction of a CNG facility and related utility trenches. The archaeological services were in response to a request for testing and monitoring of culturally sensitive areas along the west bank of San Pedro Creek.



Figure 1-1. San Pedro Springs Park, VIA MTA, and San Pedro Creek with the project area in yellow.

Given the site is the property of VIA Metropolitan Transit Authority (VIA MTA), a quasi-governmental entity, and that federal funds are being used for the project, the project required compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 and the Texas Antiquities Code, as well as review under the Unified Development Code of the City of San Antonio (Article 6 35-630 to 35-634). CAR initiated formal consultation with the THC as required per the NHPA Section 106 process. CAR also consulted with the City of San Antonio Office of Historic Preservation before commencing fieldwork.

Area of Potential Effect (APE)

The Area of Potential Effect (APE) was approximately 0.99 hectares (2.47 acres) bounded by La Harpe Street on the west, San Pedro Creek on the east, Laurel Street on the south, and VIA MTA Building G2 on the north (Figures 1-2 and 1-3). The APE is approximately 200-m (656.17-ft.) long and 50-m (164.04-ft.) wide. In anticipation of discovering historic features, the APE was overlaid on a 1911 Sanborn Insurance map (Figure 1-4).

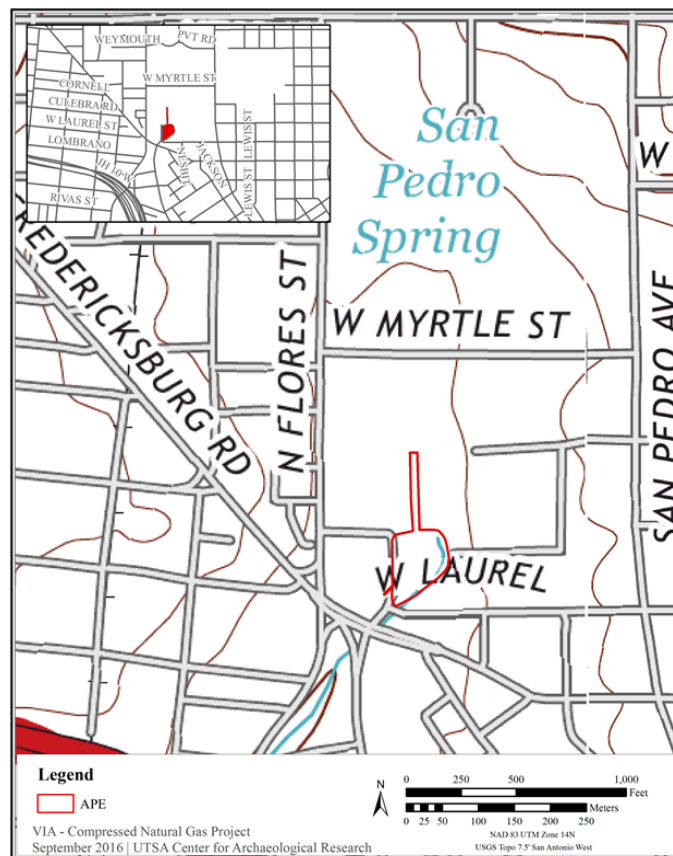


Figure 1-2. Location of APE outlined in red on San Antonio West USGS 7.5-minute topographic map.

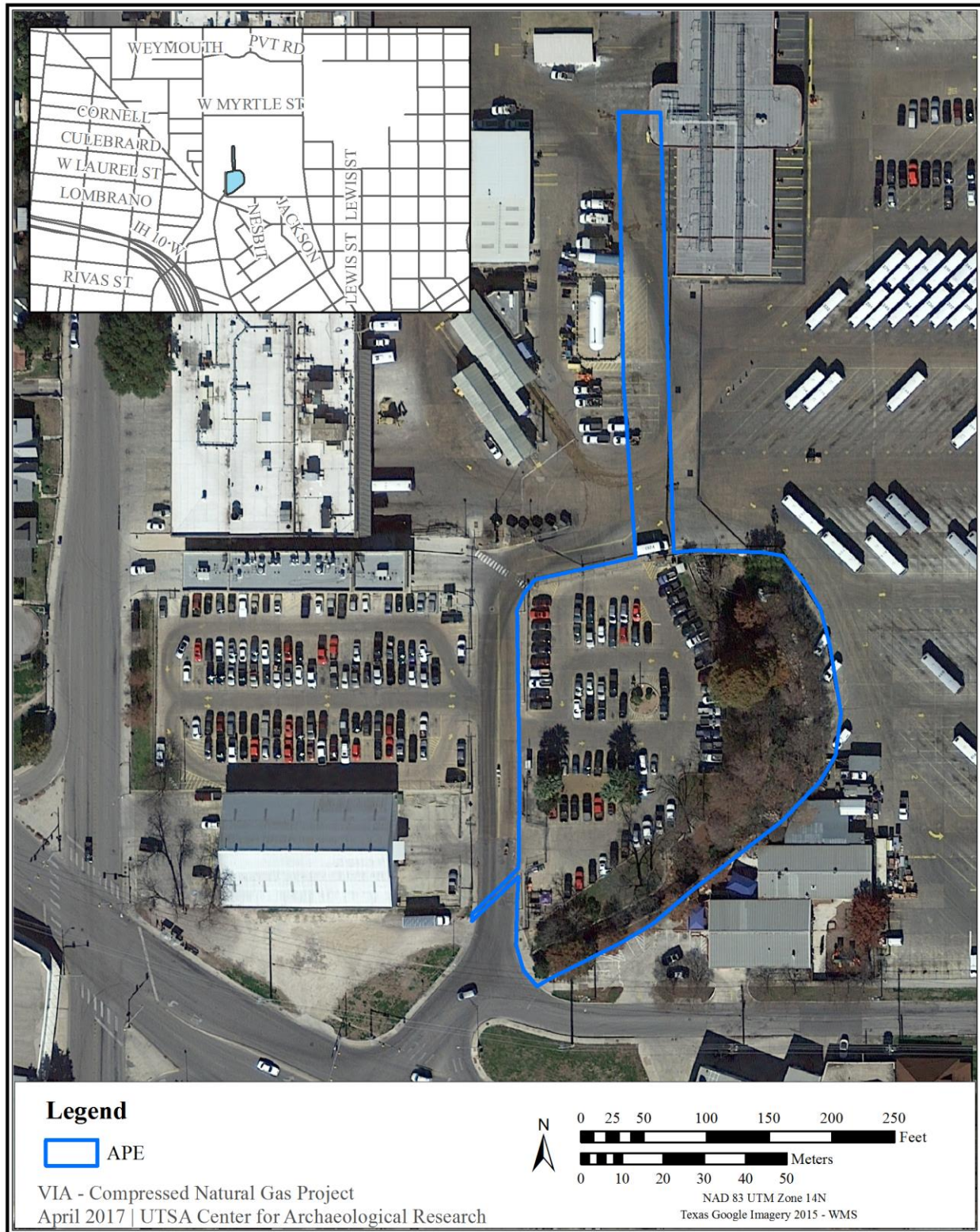


Figure 1-3. Location of APE outlined in blue on Google satellite imagery map.

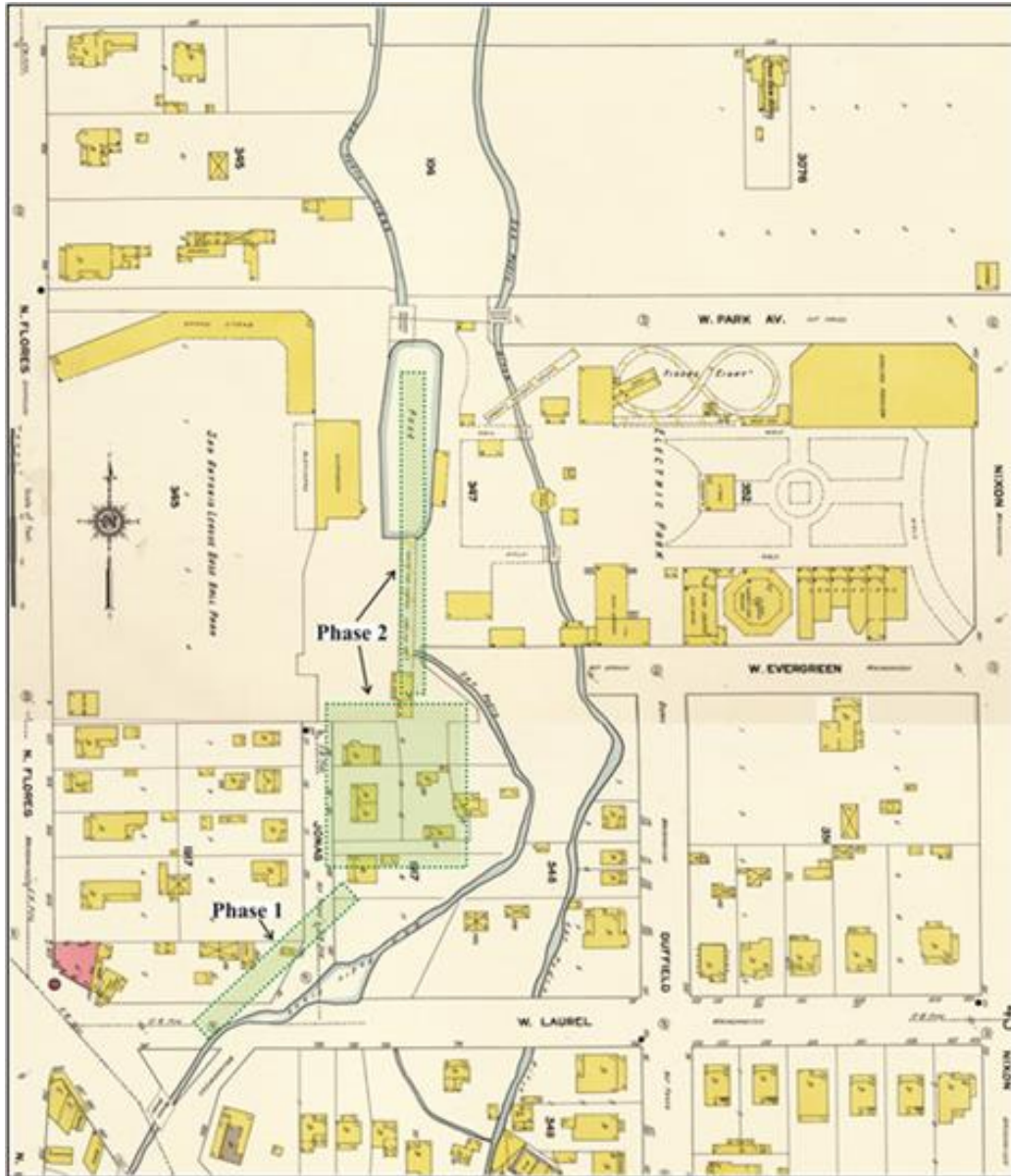


Figure 1-4. 1911 Sanborn Map of project area (Sheets 45 and 61 cropped and merged). Approximate footprint of Phase 1 and 2 are shown in green highlight.

While no archaeological sites have been recorded on the subject property, the area of potential effect (APE) is adjacent to San Pedro Creek and just south of San Pedro Springs. Native Americans intermittently used these locations for more than 10,000 years. For this reason, there was a high probability of buried prehistoric materials within the APE. Additionally, the project area was used during the Spanish Colonial period as a farm before it was converted to residential use during the period of 1880-1900 (Uecker 1991:7). Foundations and accessory structures associated with the residential use of these properties had the potential to be present within the project boundary.

Report Organization

The following report is divided into five chapters. Following this introduction, Chapter 2 includes historical background, archival research, and previous archaeology. Chapter 3 covers the archival, field, and laboratory methods used on this project. Chapter 4 presents the results of the archaeological investigations. Finally, Chapter 5 provides a project summary and recommendations.

This page intentionally left blank.

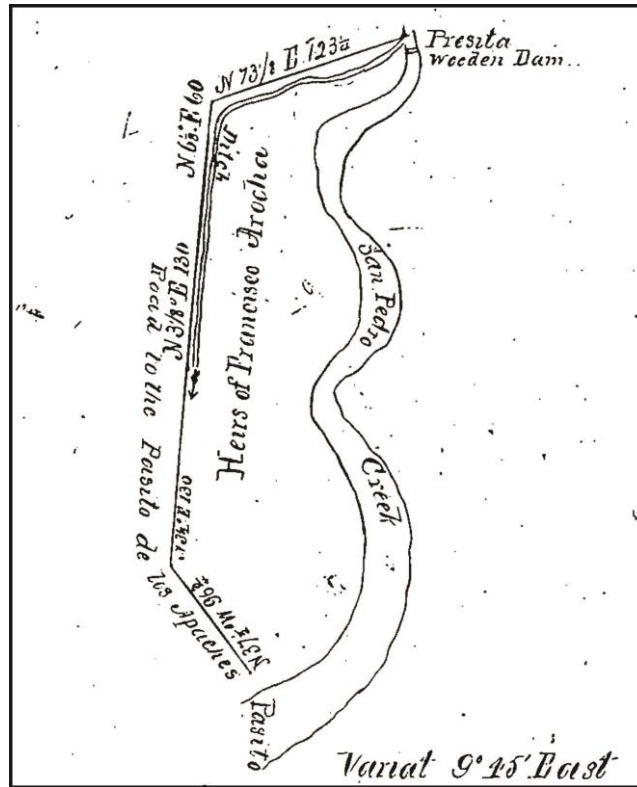
Chapter 2: Historical and Archival Research and Previous Archaeology

Historical and Archival Background

This chapter begins with a summary discussion of the historic background within or immediately adjacent to the project APE followed by addressing, in chronological order, the recorded and/or anticipated resources within New City Block (NCB) 1917 and NCB 345. The discussion does not include San Pedro Springs Park as it is not within or adjacent to the APE. The supporting materials for this discussion are taken from a wide variety of historical resources including but not limited to Bexar County Deed and Record (BCDR) files, Municipal Archives, Sanborn Fire Insurance Maps, CAR Archival collections, City Directories, the *San Antonio Express News* and *San Antonio Light*, and secondary sources. The historical research will cover the period of actual historic use of the subject property beginning in 1743 with the award of the lands to Francisco Arocha and conclude with the beginning of the VIA MTA's land assembly during the period 1960 to 1990.

The *Presita de Arocha* and The *Arocha Acequia*

The dam and accompanying acequia were built by Francisco Arocha sometime after four *solares* of land on the west side of San Pedro Creek were awarded to him by the *Cabildo* in April of 1743 (Bexar County Archives, Land Grant Sales). The presumed route of this private dam and acequia system began in the far north of the APE, most likely near Myrtle Street's intersection with San Pedro Creek. The acequia travelled in a westerly direction to the boundary of the property and then south before returning east and depositing excess water back into San Pedro Creek. A plat of the Arocha property from 1850 demonstrates the route of the acequia as well as the relative location of the small dam (labeled "*Presita – Wooden Dam*" on the plat itself in Figure 2-1). The *Pasito* listed at the bottom of the 1850 plat map is the *Pasito de los Apaches*, or what is now the historic Five Points Intersection. The entirety of the current APE lies within the former boundaries of the Arocha tract. Despite no less than four separate archaeological investigations, no portion of the *Arocha Acequia* has been identified.



The Arocha family held the original grant of lands until 1851 when it was awarded via Court Decree to the City of San Antonio (Cox 1986; Crook 1967; McKenzie 2015). The City was presented with a dilemma in the late 1840s as land speculators began to claim land without sanction or authority of the municipality. This ultimately resulted in the City filing suit against the largest of the speculators, Nat Lewis, and arguing that the City was entitled to hold the two leagues of land formerly granted to the municipality by the King of Spain and confirmed by the Congress of *Coahuila y Tejas* in 1827 (Corner 1890:37-38). The City was affirmed in its ownership by the Texas Supreme Court in the case of *Lewis et al. v. San Antonio*. Following the award of all the previously un-deeded properties, or those, like the Arochas, that had defective deeds, the City then sold much of the land to private individuals.

The APE was part of the lands sold to Sam Smith in 1852 (BCDR L1:93). Smith subsequently conveyed the lots to William Lange in January of 1865 (BCDR T1:326). Lange in turn sold the lots to Martin Meüinch in 1872 (BCDR W2:295). Meüinch divided the large Lot 2 into “town tracts” numbered 1 through 11 (Figure 2-2). The APE is part of what was Meüinch’s Lots 1 through 11. In the 20-year period between Smith in 1852 and Meüinch in 1872, the subject property remained undeveloped.

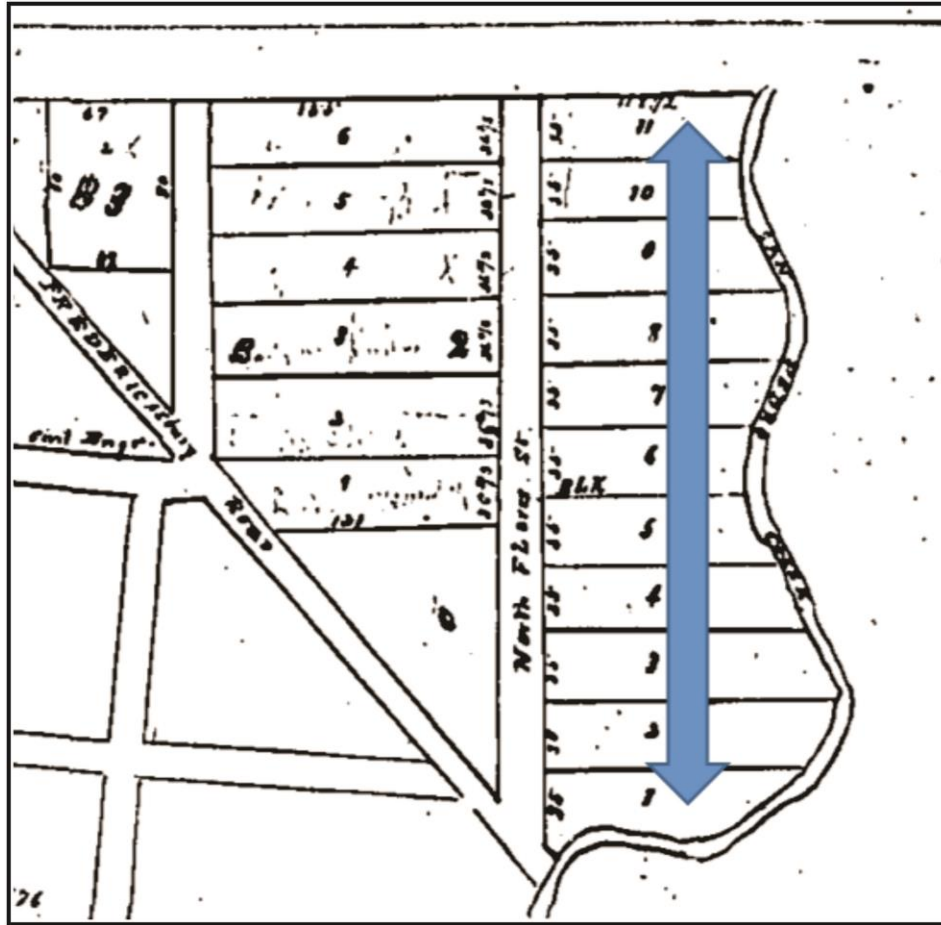


Figure 2-2. The Meüinch Plat of 1872 (BCDR 7:16). Blue arrow indicates Lots 1 through 11.

Following Meüinch's replatting, he began selling the lots, and this initiated a period of somewhat restrained residential growth within NCB 1917 and the blocks west of Flores Street. Various modest homes were built on the smaller lots between 1885 and 1890. The Sanborn Fire Insurance Map of 1904 clearly demonstrates the residential infill as well as the fact that NCB 345 remained predominantly vacant with the exception of a bath house (Figure 2-3). Cox's report (1986:10) and McKenzie's report (2015:11-17) discuss in detail the lot histories for NCB 1917 Lots 1-12 (the western half of Meüinch's Lots 1-3). The brief lot histories for the current report focus on Lots 13-17 in NCB 1917 (the eastern third of Meüinch's Lots 1-3) and all of NCB 345 (formerly Meüinch's Lots 4-11).

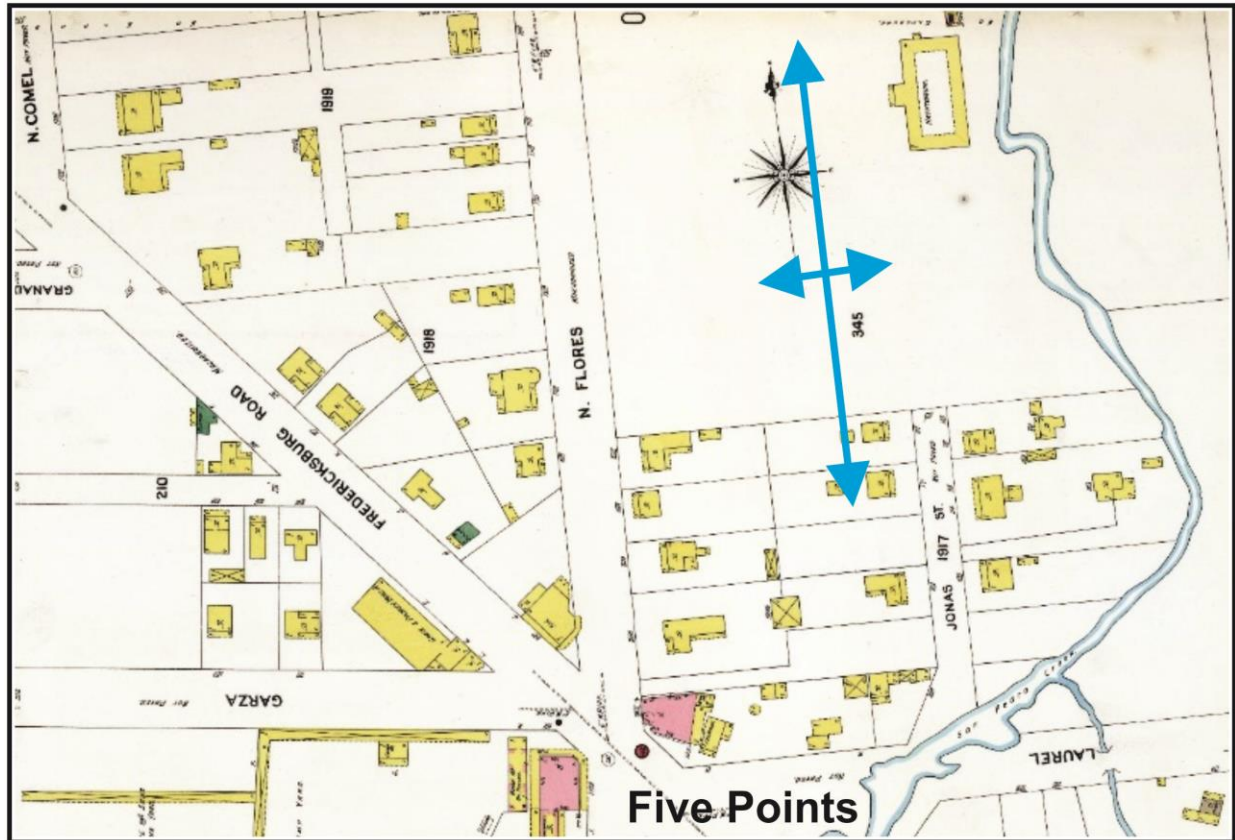


Figure 2-3. 1904 Sanborn Fire Insurance Map of NCBs 1917 and 345. NCBs and 1917 and 345 indicated by blue directional arrows.

Lots 13 through 17, NCB 1917

The residences along the east side of Jonas Street (subsequently renamed La Harpe) comprise Lots 13 to 17 of NCB 1917. These lots along with Lots 1-12 on the west side of Jonas Street were what previously comprised Meinch's Lots 1-3 and were sold by him to Peter Jonas in 1876 (BCDR 7:16). Jonas replatted the lots into 17 smaller residential tracts in 1884 and then sold them over the course of the next 15 years.

Jonas sold Lot 13 to F. Kaupert in January of 1890 (BCDR 77:125), and Kaupert built the wood frame house shown on the 1904 Sanborn map. This lot was next sold to the Electric Park Chute Company in 1907 (BCDR 265:87-89) that only retained title for two years before selling it to E. A. De Valle in 1909 (BCDR 322:287). The property remained in the De Valle family until 1978 when it was sold to VIA MTA (BCDR 1062:48-55) who then demolished the house.

Jonas sold Lots 14, 15, and 16 to members of the Luna family (BCDR 70:378-379; BCDR 194:49-50; BCDR 70:378-379) in 1890-1891. Like the Kaupert family on Lot 13, the Luna family built modest wood frame residences on the subject lots. Lots 14 and 15 stayed in the Luna family until February of 1919

(BCDR 551:279) when they were sold to F. Kaupert's son W. A. Kaupert who had married the Luna's daughter. The Kaupert-Luna family resided in one house and rented the others on the property. The Kaupert family conveyed Lot 14 in February of 1945 to F. P. Villalobos (BCDR 2107:486-488). Villalobos sold the property to R. V. Trimble in August of 1971 (BCDR 6589:489-490) who in turn sold the property to VIA MTA in August of 1979 who then had the building demolished. The Kaupert family had previously sold Lot 15 to the Geo. M. Homes Company in November of 1939 (BCDR 1731:105). Lot 15 passed through three additional transactions when it was sold in 1944 to A. Navarro (BCDR 2057:487-488) who retained title until it was sold to VIA MTA in January of 1980 (BCDR 1835:69). Like the other properties obtained by VIA MTA, the home was demolished. Lot 16 appears to have been originally a rental property for the Luna family and continued through numerous transactions to remain a rental property. Lot 16 and Lot 17 were both acquired in the late 1960s/early 1970s by D. Alonzo (BCDR 5544:936-939; BCDR 6851:766-767). VIA MTA obtained Lot 16 in May of 1984 (BCDR 3097:345-347) after which they demolished the structure.

Lot 17 was sold by Jonas to J. B. Maltsberger in August of 1885 (BCDR 42:396-398). While it was the first of the lots Jonas sold, the lot remained vacant throughout its long transactional history until it was sold by D. Alonzo to VIA MTA in May of 1984 at the same time as Lot 16 (BCDR 3097:345-347).

Lots within NCB 345

The precise lot histories for NCB 345 are not clearly discernable within the archival record. It appears that Meünch sold Lots 9, 10, and 11, as they are clearly delineated on the 1911 Sanborn Fire Insurance Map (Figure 2-4) where all three are shown having multiple wood frame dwellings. These lots are on the corner at North Flores and Myrtle streets and bounded on the east by San Pedro Creek. Meünch's Lots 4 through 8 appear to have remained as a single large block of land that essentially was undeveloped at least through 1904 as the Sanborn map of that year (see Figure 2-3) shows the property vacant with the exception of a pool.

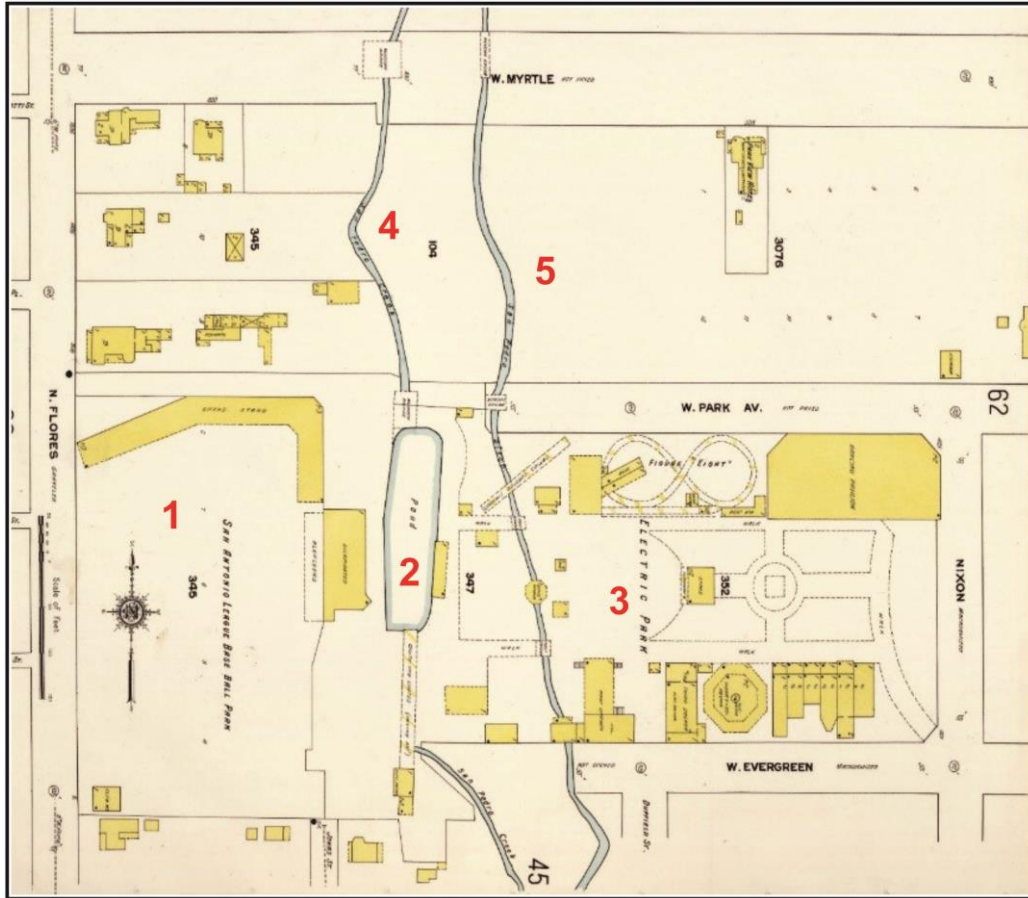


Figure 2-4. 1911 Sanborn Fire Insurance Map.

Even a cursory glance at the 1911 Sanborn Map indicates that two large parcels make up the center of the map—the parcel that contains more than 50 percent of NCB 345 and the entirety of the next NCB to the east, NCB 347. The large lot in NCB 345 is covered with the San Antonio League Base Ball Park (1) while NCB 347 contains the numerous buildings and attractions of the Electric Park (3). Also clearly notable are the parallel San Pedro Creek (4) and San Pedro *Acequia* (5), which is still extant in 1911. A portion of San Pedro Creek has been widened into a pool (2) that acted as a catchment basin for a Shoot the Chutes ride associated with the Electric Park franchise. These five numbered items will be discussed in order.

The San Antonio League Base Ball Park and Electric Park (Numbers 1, 2, and 3)

Texas League franchise baseball commenced in San Antonio in 1907 with the club housed and playing at the San Antonio League Base Ball Park adjacent to the Electric Park, which also opened in that year. During this period (1907-1918), the team was known as the San Antonio Bronchos (*sic*), and the team played at this stadium until the closure of the Electric Park in 1918 (King 2004).

Opened in 1906, the Electric Park was part of a phenomena of electrified amusement parks that sprang up across America that were inspired initially by the White City Exhibition – World’s Columbian Exposition held in Chicago in 1893. The financial success of such ventures as Coney Island also helped drive the creation of new parks in imitation (Samuelson and Yegoiants 2001:1-2). San Antonio’s Electric Park occupied all of the middle of NCB 345 and all of the adjacent NCB 347 that lay across San Pedro Creek (Figure 2-5). David King, the author of *San Antonio at Bat*, noted that “...[T]he amusement park, which also opened for the season on April 18, [1908], was a major attraction with its Ferris wheel, roller coaster, merry-go-round, and boat rides, not to mention its shooting gallery, pool hall, and assortment of restaurants, all illuminated for nighttime visitors” (King 2004:30-31). Figure 2-6 is a period post card of Electric Park published by George M. Bearce of San Antonio. The post card gives some idea of the numerous buildings, rides, and attractions found in the park.

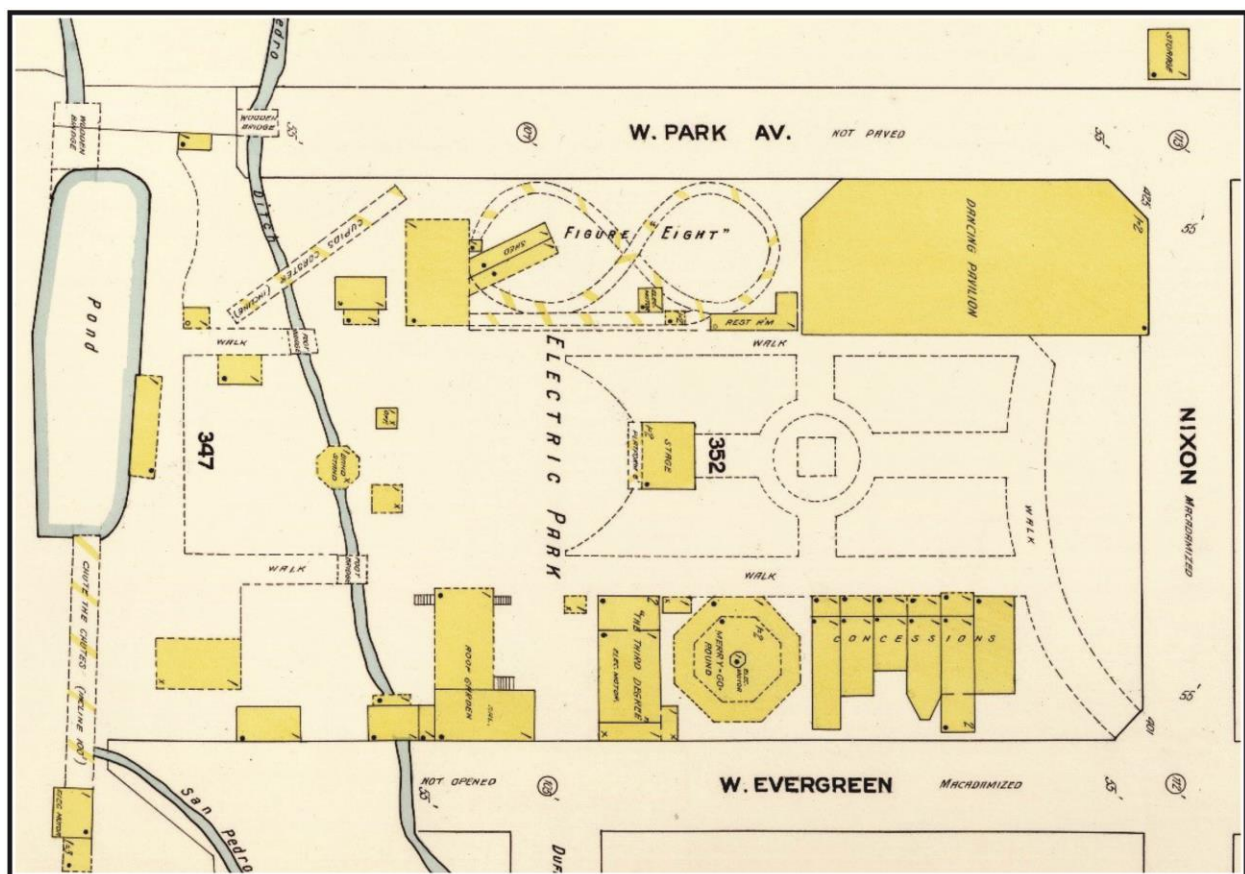


Figure 2-5. 1911 Sanborn Fire Insurance Map.



Figure 2-6. *Electric Park San Antonio, Texas, post card (Geo. M. Bearce, San Antonio, Tex.).*

Relative to the current project, the Shoot the Chutes attraction shown on the left of the post card was the only portion of the Electric Park infrastructure within the current APE. This is the same pool feature numbered “2” on the 1911 Sanborn Map found in Figure 2-4 and shown in Figure 2-5. The Shoot the Chutes ride consisted of a wooden boat for customers that was winched up an inclined ramp and then allowed to rapidly slide down into a pool of water below, creating a splash wave as the boat encountered the pool surface. The ride and pool at San Antonio Electric Park utilized the existing San Pedro Creek, and it was essentially an enlarged pool integral to the creek itself. Water simply flowed down from San Pedro Springs Park, filled the pool, and then exited the pool on the southern side and continued down the creek channel proper. Current excavations within the former pool area were too shallow to encounter the now buried pool.

San Pedro Creek and the San Pedro Acequia (Numbers 4 and 5)

The 1911 Sanborn map (Figure 2-5) clearly shows both water features extant and traversing the subject properties north-to-south. The creek is still extant though its exact alignment is modified from the 1911 course as it is not channelized and buried in this section of NCB 345s and 347. As noted below, the San Pedro Acequia is no longer operational, but extant portions of the channel are still found buried within the area. No portion of the San Pedro Acequia was encountered during the current excavations.

Previous Archaeology

This section discusses earlier archaeological work performed adjacent to and within 1 km (0.62 miles) of the current APE. The review, focused only on historic resources, includes discussion of prior investigations of the Five Points area, in particular the adjacent Lots 1 through 12 in NCB 1917 and on the eastern side of San Pedro Creek. The discussion also includes historic San Pedro Springs Park and its related resources. Table 2-1 lists recorded historical archaeological sites within 1 km (0.62 miles) of the APE.

Table 2-1. List of Recorded Trinomial Sites Area

Trinomial	Date	Area	Site Name or Description	Designation, Eligibility Status, Notes*
41BX19	1966	San Pedro Park	San Pedro Springs Park	NRHP, RTHL, SAL
41BX337	1979	Linear	San Pedro <i>Acequia</i>	NRHP eligible, SAL
41BX514	1980	Near Westside	Chapel of Miracles	
41BX620	1983	Linear	Alazán Ditch	
41BX2043	2012	Linear	Upper Labor <i>Acequia</i>	

*National Register of Historic Places (NRHP); Registered Texas Historic Landmark (RTHL); State Antiquities Landmark (SAL)

The Five Points Area

Three previous archaeological projects have been undertaken either within or immediately adjacent to the current project APE within NCB 1917 (Cox 1986; McKenzie 2015; Uecker 1991). Figure 2-7 delineates the current APE in red and the nearby past APE investigations in light blue. In the figure, each previous APE also has the CAR Archaeological Survey Report number and the date of fieldwork.

In addition, there are two recorded historic archaeological sites within the immediate Five Points area. Both sites are Spanish Colonial acequias, 41BX337 (*Acequia de San Pedro* or St. Peter's Canal, commonly referred to as the San Pedro Ditch) and 41BX2043 (*Acequia de los Labores de Arriba de Nuestra Senora de Los Dolores* or Canal of the Upper Farmlands of Our Lady of Sorrows, commonly known as the Upper Labor Ditch).

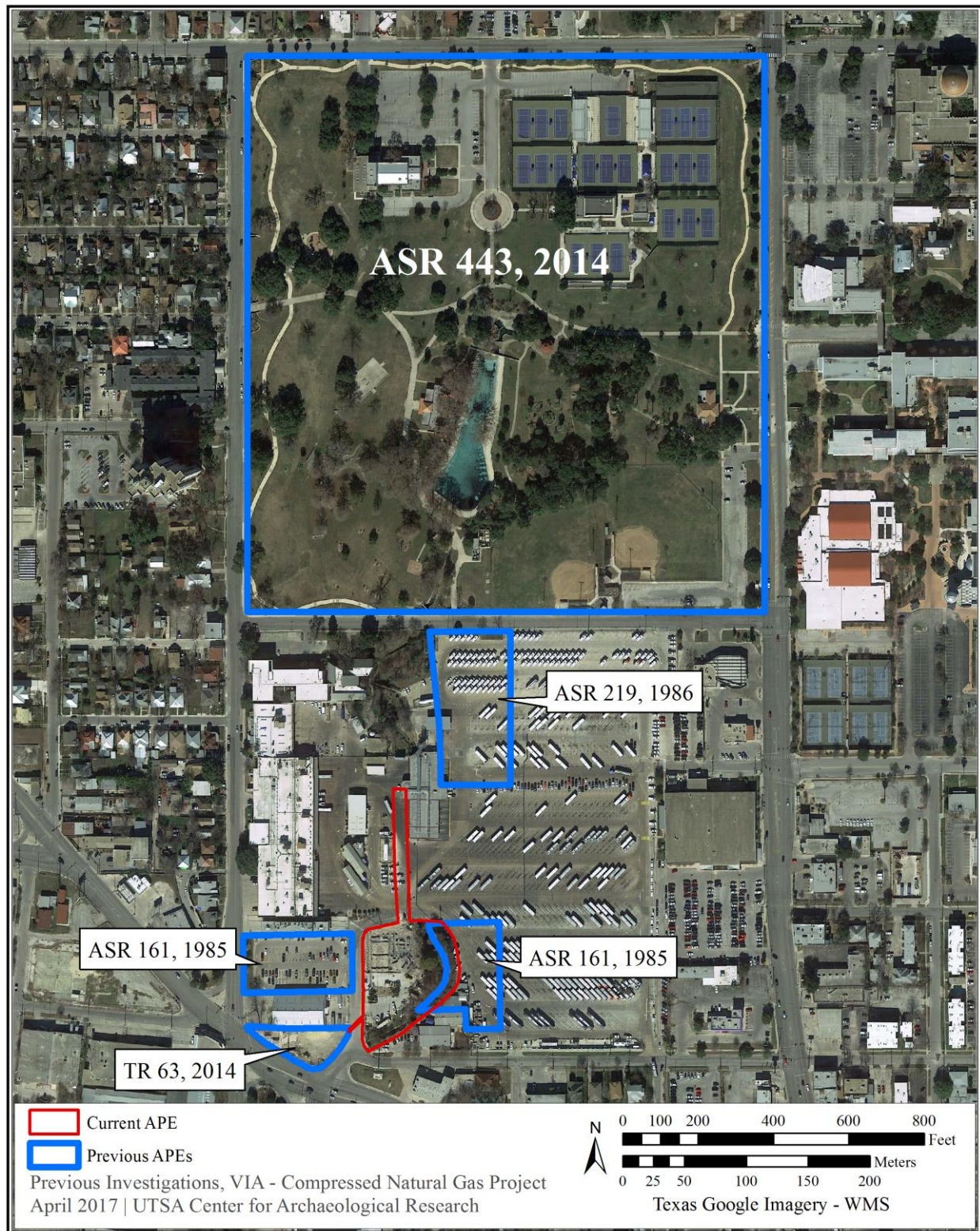


Figure 2-7. Previous investigations near the current APE (ASR: Archaeological Survey Report; TR: Technical Report).

The VIA MTA supported investigations within NCB 1917 in advance of planned improvements to VIA MTA facilities. Figure 2-8 graphically delineates the locations of the previous investigations within the APE or adjacent thereto. The current APE boundary is in red with the current trench work in purple. The previous APEs are again shown in light blue with previous trench work shown in bright green. These investigations focused on Lots 1, 2, 3, 7, 8, and 9 with a goal of identifying a third Spanish Colonial acequia, the Arocha, which was a private system that watered the lands of Francisco Arocha (Cox 1986:10; McKenzie 2015:19-24).

A second VIA MTA project was undertaken in the fall of 2014 investigating Lots 6 and 12, at the southern end of the block and fronting on the northern side of the Five Points intersection (McKenzie 2015). The 2014 investigations examined the area for traces of the Arocha *Acequia*, remnants of Wohlfarth's Mercantile and Yard, and potential buried prehistoric deposits. A third investigation took place in 1989 in support of a San Antonio River Authority (SARA) archival review in advance of proposed channel improvements. The archival report (Uecker 1991) included a review of the lot histories of Lots 1 through 12 of NCB 1917. No excavations were undertaken within NCB 1917 in conjunction with the archival report. None of the three projects documented the exact location of the Arocha *Acequia*. While occasional evidence of prehistoric occupation was encountered in both the 1986 and 2014 excavations, they represent scattered finds not otherwise in primary context. The 2014 excavations were able to clearly identify the remains of Wohlfarth's Store and camp yard (McKenzie 2015:35-36).

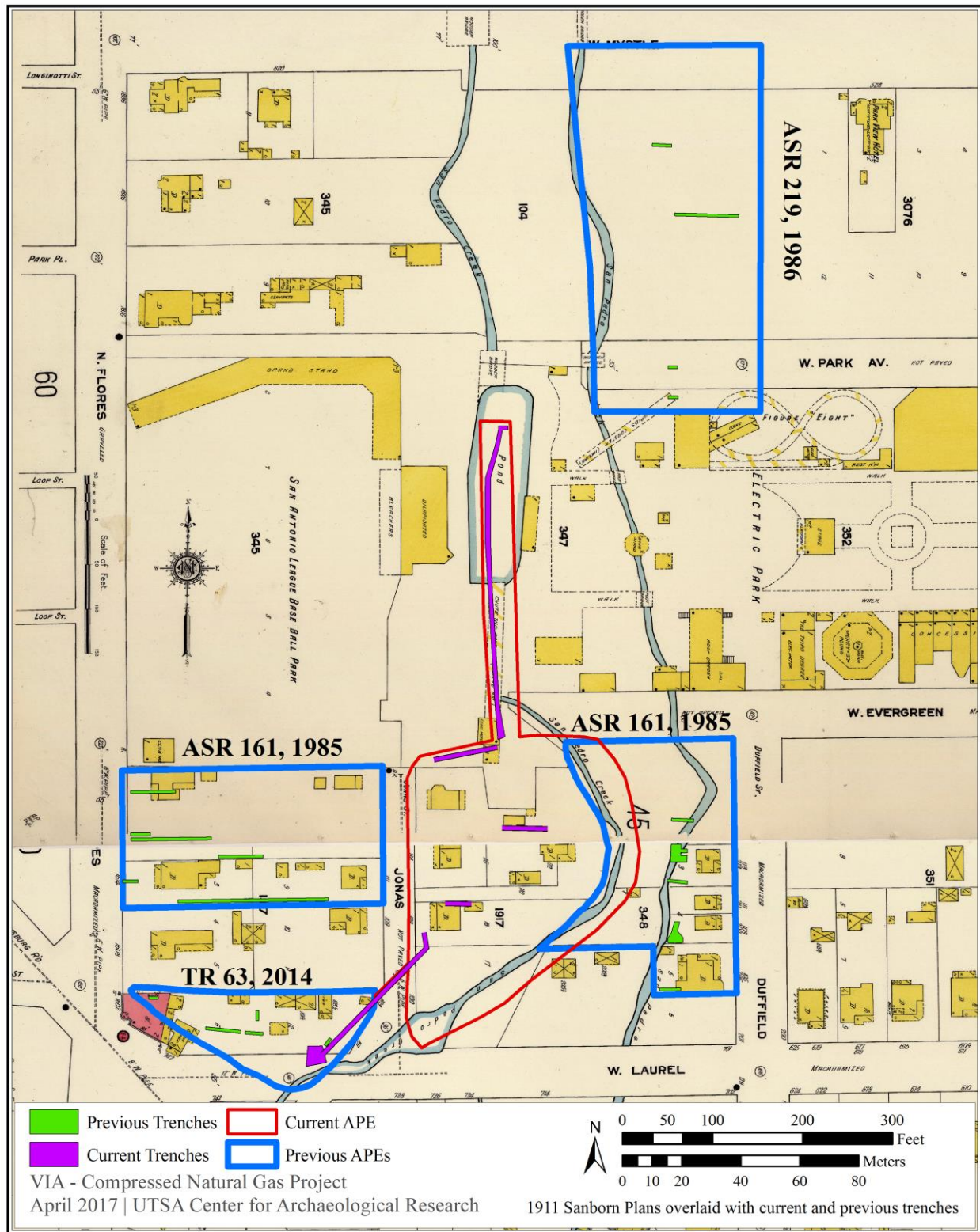


Figure 2-8. Previous investigations (ASR: Archaeological Survey Report; TR: Technical Report).

Acequia de San Pedro (41BX337)

The San Pedro *Acequia*, or San Pedro Ditch, runs parallel to the east bank of the San Pedro Creek, immediately adjacent to the project APE. The *presa*, or dam, together with the head works of the acequia were within San Pedro Springs Park where it drew its water from the copious *ojo de agua* (main spring) and associated smaller springs. The acequia runs south from San Pedro Springs, down the alignment of South Flores Street into downtown San Antonio. From there, it moves slightly east and then south again along the west side of Main Avenue, then through the Plaza de las Islas, underneath the Cadena Reeves Justice Center, and tracks slightly south and west between Main Avenue and South Flores Street to its outfall into the San Antonio River just north of San Pedro Creek's confluence with the San Antonio River. This acequia system was begun in 1738 to provide irrigation water to the Canary Islanders who had arrived in 1731 (Cox 2005:34-36; Nickels et al. 1996:2). The system was slightly to the west of the smaller, earlier system, the *Acequia Principal*, which was begun in January of 1719 on the orders of Governor Alarcon (Hoffman 1935:86). The *Principal* was a short acequia and ran a little less than 2 km (1.2 miles) from San Pedro Springs to the bend of the San Antonio River where the Tobin Center now stands. It supplied irrigation to some 121.41 hectares (300 acres) of farm fields for the *Presidio de Bejar* and *Villa de Bejar*, which originally were located within what is now San Pedro Springs in May of 1718 (Cox 2005:18-19).

While no less than nine projects have documented portions of the San Pedro *Acequia* (Cox 1985:4-6, 1986:4-6, 1993:3-5, 1995:5-6; Fox 1978:2-11; Fox et al. 1989:25-28; Frkuska 1981:7-28; Nickels et al. 1996:12-29), the only archaeological investigation in close proximity was I. Wayne Cox's excavations in the fall of 1986 across San Pedro Creek from the current APE, below Myrtle Street and above Laurel Avenue (Cox 1993). The 1986 investigations clearly documented the course of the San Pedro *Acequia* as it crossed north-to-south through the lots bounded by Myrtle and Laurel streets. The acequia was encountered at 0.4 m (1.31 ft.) below the modern surface and 175.3 m (575 ft.) west of the intersection of North Flores and West Myrtle streets, and the acequia was 1.98-m (6.5-ft.) wide by 1.07-m (3.5-ft.) deep and was unlined (Cox 1993:3).

The Upper Labor Acequia (41BX2048)

The Upper Labor dam and headworks are located on the northern end of Brackenridge Park, just south of Hildebrand Avenue. This was a civilian system necessitated by the arrival of the settlers from Los Adaes, who were relocated to San Antonio from northeast Texas/northwest Louisiana following abandonment of that presidio and settlement in 1773. Plans for additional irrigable lands and a new acequia had been envisioned as early as a decade prior to 1773 when then Governor Angel Martos y Navarette initiated a site selection process for the construction of a new dam and acequia in 1762. This project was put into

action in 1776 by Governor Juan Maria Vicencio Baron de Ripperda to accommodate both *Adaseños* as well as *Isleños* (Wright 1916:117). Begun in 1776, the Upper Labor Dam and its adjoining acequia was the last Spanish Colonial acequia irrigation system, and it was completed by March of 1778 when 52 tracts, or *suertes* (chances), were allotted by lottery. The 52 tracts comprised 242.81 hectares (600 acres) of irrigable land beginning in Brackenridge Park and running along the west bank of the San Antonio River from below Hildebrand Avenue to right above the intersection of Ashby Place with South St. Mary's Street (Arneson 1921:124-125).

The Upper Labor *Acequia* carried water from the San Antonio River's west branch springs, irrigating the adjoining land along its route before returning its excess water into the San Pedro Creek immediately below and adjacent to the current project APE. The Upper Labor *Acequia* passed along the west side of Brackenridge Park, partially through the San Antonio Zoo, and then along the alignment of North St. Mary's Street as it sweeps west from beneath U.S. Highway 281/37 to its junction with Ashby Street. At Ashby Street, the acequia began to head west-southwest following the contour line around the east and south side of the *Loma de Vieja*, now called Tobin Hill. It then travelled to a point just south of San Pedro Springs near the current intersection of North Flores Street and Fredericksburg Road, crossed the San Pedro *Acequia* via a wooden *canoa*, and returned its surplus water to the San Pedro Creek (Cox et al. 1999:5-6).

Previous archaeological investigations of the Upper Labor system have primarily focused on the headworks within Brackenridge Park (Cox et al. 1999; Hester and Shafer 2012; McKenzie 2017; Shafer and Hester 2010). Two projects have identified portions of the Upper Labor outside of the Brackenridge Park boundaries. The first investigation took place along North St. Mary's Street in 1988 when a segment was documented running between Ashby Place and East Myrtle Street as the acequia began its traverse of the lower slope of Tobin Hill. Fox and Cox described it as "...a broad sloping ditch [seen in profile]...dropped to a depth of approximately five feet and a width of about 20 feet" (Fox and Cox 1988:5). The second encounter is a small section of the Upper Labor documented by SWCA in 2014 approximately a 0.5 km (0.31 miles) east-southeast of the current APE (Acuña 2014). This is the only documented portion of the Upper Labor along the western half of its route.

San Pedro Springs Park

San Pedro Springs is one of two major spring outfalls along the apron of the Balcones Escarpment, the second being the San Antonio Spring, or “Blue Hole,” on the campus of the University of the Incarnate Word. The sizable flow from these springs creates the headwaters of the San Pedro Creek and San Antonio River, respectively. As a constant and reliable source of water, the springs have attracted humans for over 10,000 years. These two springs were the primary motivating factor for the Spanish to locate a presidio, villa, and mission in the valley in 1718.

Fourteen archaeological investigations have taken place within or abutting San Pedro Springs Park in the past four decades, the earliest in 1977 and the most recent in 2014 (Cox 1986; Fox 1978; Frkuska 1981; Houk 1999; Houk et al., 2000; Labadie 1987; Mauldin et al. 2015; Meissner 2000a, 2000b; Nickels and Cox 1996; Uecker 1991, 2004; Wadley and Tomka 2013; Zapata and Meissner 2003). These investigations are more thoroughly discussed by Mauldin et al. (2015:39-42). Investigations have documented the broad scope of human use within the park in both the prehistoric and historic periods. The close association of such a major and important site to the current APE increases the likelihood of encountering cultural materials associated with long-term use of the springs and surrounding area.

Summary

Early archival records clearly indicate that the headwaters of both the San Antonio River and San Pedro Creek were fundamental to choosing to settle the San Antonio River Valley in 1718. At the time of first exploration in 1690 and until approximately 1718, the Spanish documented the presence of populous *rancherias* of Native Americans both around the springs and within the river valley itself (Barr 2007:122-123). Specific archival information provides the opportunity to identify buried portions the San Pedro and Upper Labor *Acequias*, the Arocha *Acequia*, prehistoric Native American sites, and nineteenth-century sites within the project APE or immediately adjacent. Previous archaeological and archival work has documented numerous sites and features related to these categories and permitted a greater understanding of these sites and their supporting infrastructure to the Spanish Colonial enterprise and the use of the area in prehistoric times by Native Americans. These previous investigations demonstrate that monitoring and testing of sites such as the current APE are warranted to document the prehistoric and historic uses of the area.

This page intentionally left blank.

Chapter 3: Preliminary Research, Field Methods, and Laboratory Procedures

Preliminary Research

CAR archaeologists reviewed extant primary and secondary sources and other relevant archival documents related to the project area. Historical research consisted of reviewing the abstracts of titles for all lots within subject property, with greater emphasis on any resources that pre-date 1870. Relevant historic maps included the 1875 Gustave Freisleben Map of San Pedro Springs Reserve as well as Sanborn Fire Insurance Maps of 1896, 1904, 1911, 1924, and 1952.

Overlays of the historic maps were produced on current aerial photographs and correlated to the proposed development impacts. These maps were used to target high priority areas with the greatest possibility to contain intact archaeological deposits. CAR staff reviewed City Directories for the property, all previous archaeological investigations within 1 km (0.62 miles), and any historical books, reports, and monographs related to this part of San Antonio during the Spanish Colonial period through the close of the nineteenth century. Results of the archival and historical research, in conjunction with construction plans, were helpful in determining the placement of the backhoe trenches during Phase 2.

Field Methods

Phase 1 fieldwork involved monitoring 60.96 m (200 ft.) of trench excavations for the installation of a 30.48-cm (12-in.) compressed natural gas (CNG) line through NCB 1917, Lot 12. Plans for the Phase 2 fieldwork included backhoe trenching at the proposed CNG facility location and monitoring of utility line trenching crossing through Lots 13, 14, and 15 of NCB 1917 and a portion of NCB 345. The area was tested by means of three backhoe trenches within the core of the APE. This area had been developed by the VIA MTA as a staff parking lot and, to the east, featured some green space and picnic tables along San Pedro Creek.

Monitoring activities were alternately completed by the Project Archaeologist and Field Technician. During both phases, a lab-based GIS/Illustrator downloaded and managed Trimble GPS data as well as photographic data collected by the monitor. Daily logs were maintained and filed using standard monitoring forms. All activities observed were documented in this log and supported by digital data, including GPS observations and photographs, when appropriate. A photographic log was maintained in addition to the daily monitoring logs.

Laboratory Procedures

Throughout the project, the analysis and organization of records, artifacts, and daily logs were ongoing. All records generated during the project were prepared in accordance with 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 taken to the CAR laboratory, washed, air-dried, and stored in 4 mil zip-lock, archival-quality bags. Any materials needing extra support were double-bagged, and acid-free labels were placed in all artifact bags. Labels were generated by a laser printer, and each label contains provenience information and a corresponding lot number. Artifacts were separated by class, labeled with standard tags, and stored in acid-free boxes.

All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper, labeled, and placed in archival-quality page protectors to prevent accidental smearing due to moisture. Finally, all recovered artifacts and project-related materials, including the final report, were permanently stored at the CAR's curation facility.

Chapter 4: Results of the Fieldwork

The Trillium CNG project area and trenching activities are shown in Figure 4-1. Phase 1 involved monitoring a 60.96-m (200-ft.) trench at the south end. Phase 2 involved three exploratory backhoe trenches, monitoring of the CNG station development, and monitoring of a 91.44-m (300-ft.) trench at the north end.



Figure 4-1. Project area, backhoe trench locations, and associated finds.

Phase 1 (November 2016)

Phase 1 of this project involved the installation of approximately 60.96 m (200 ft.) of 30.48-cm (12-in.) CNG line. This CNG line tied into an existing CNG line located at the southwest corner of Lot 12, NCB 1917, off Fredericksburg Road and La Harpe Street. The line was then directed to the northeast, crossed La Harpe Street, and continued north and parallel to La Harpe Street. This work began in early November 2016 and continued intermittently over a period of three weeks.

Numerous delays were caused by unmarked utilities, a waterline break, equipment breakdowns, and the rising water table. Additional delays resulted from having to cut and break through asphalt and concrete along La Harpe Street and in the parking lot while maintaining traffic flow.

The starting point for excavations was near the location of the existing CNG line, at Fredericksburg Road and La Harpe Street. The southern end of these excavations was within the same area previously monitored in 2014 and corresponded with BHT 3 of that report (McKenzie 2015:30). A 3.05-x-3.05 m (10-x-10 ft.) access pit was excavated to a depth of 3.66 m (12 ft.) with additional trenching limited to a width of 60.96 cm (24 in.) and depth of 2.29 m (7.5 ft.), at least a foot below the water table. A section of an abandoned asphalt road was encountered along the south end of this pit at about 0.91 m (3 ft.) below the surface. Alternating layers of construction fill and caliche were observed in this pit (Figure 4-2). The soils were disturbed to at least 0.91 m (3 ft.) below the surface along the entire length of the excavated trench (Figure 4-3). Austin silty clay and a greenish/gray marl were evident throughout the length of the trench, matching the soil profile previously recorded in this area (McKenzie 2015).

Construction debris, such as a few nails and bricks, were observed in the excavated soils, but nothing significant was noted. Bottle glass shards, flat glass, whiteware, and a digital watch (c. 1980) were observed in the excavated soils. With the exception of one lithic flake and one retouched uniface recovered from the excavated soil, none of the artifacts were collected. Considering that the area through which the pit and subsequent backhoe trench (BHT 1) were excavated consisted historically of residential activities the recovery of intermittent nineteenth- and twentieth-century artifacts was expected. Likewise, considering the known prehistoric use of the area around San Pedro Springs, the recovery of occasional prehistoric artifacts is also not surprising. The circa 1980s digital watch may be associated with the demolition phase of the properties in the surrounding area when they were acquired by the VIA MTA in the 1980s. Monitoring of this area was completed at the end of November 2016.



Figure 4-2. Large access pit excavated at south end of CNG line install, view to the southwest; existing CNG line exposed at approximately 3.66 m (12 ft.) below the surface.



Figure 4-3. CNG trench at south end, view to the northeast; heavily disturbed strata.

Phase 2 (October 2016 through January 2017)

As noted, plans for the Phase 2 fieldwork included backhoe trenching at the proposed CNG facility location and the monitoring of utility line trenches crossing through NCB 1917 and extending north from the facility into NCB 345. Backhoe trenching was a proactive testing methodology utilized prior to project commencement. The backhoe trenching began on October 31, 2016, and was completed on November 1, 2016.

The first backhoe trench (BHT 1) was excavated at the far north end of NCB 1917. The trench was approximately 1.19-m (3.9-ft.) wide, 1.49-m (4.9-ft.) deep, and 19.51-m (64-ft.) long. A little over 50.29 cm (19.8 in.) of asphalt, concrete, and caliche base overlay a 40.13-cm (15.8-in.) layer of construction fill (Figure 4-4). This fill was followed by a layer of Austin silty clay, over a hard, blocky gray marl. Much like the pit at the southern end, a few late nineteenth- to mid-twentieth-century artifacts were observed in the layer of construction fill of BHT 1, but none were collected. As the area through which BHT 1 was placed was formerly residential, the presence of these artifacts is concomitant with that use. The profile clearly demonstrates that VIA MTA built up the surface of the area by some 90 cm (35.43 in.) or more following their acquisition of the properties.

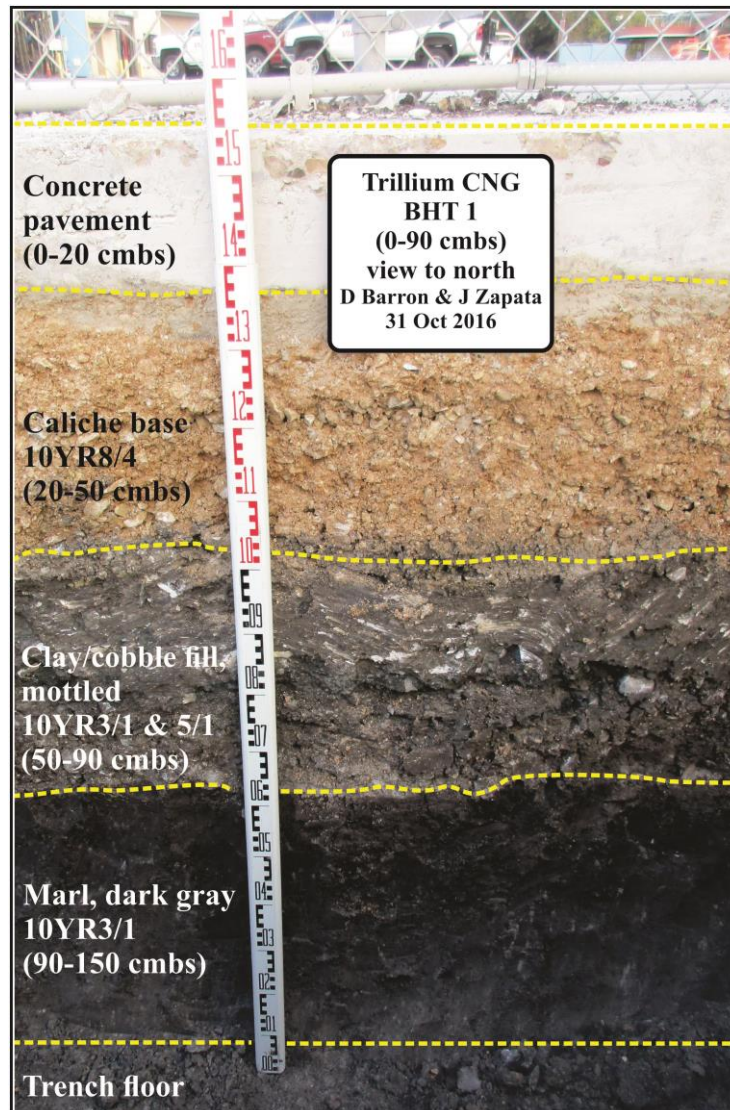


Figure 4-4. BHT 1 trench profile, area impacted to 90 cm below the surface (cmbs; 35.4 in.).

The second trench (BHT 2) was located in the middle of the parking lot (Figure 4-5). BHT 2 was 1.19-m (3.9-ft.) wide, 1.49-m (4.9-ft.) deep, and 18.44-m (60.5-ft.) long. This area was capped by a little over 50.29 cm (19.8 in.) of asphalt, concrete, and caliche base. A light brown clay was encountered between 49.78-69.85 cm (19.6-27.5 in.) below the surface, and this was followed by an uneven 10.16-cm (4-in.) layer of light brown silty clay. Houston black clay was encountered at 69.85-149.86 cm (27.5-59 in.) below the surface. As in the initial pit and BHT 1, a small number of late nineteenth- to mid-twentieth-century artifacts were observed, but none were collected.



Figure 4-5. BHT 2 with BHT 1 in background, facing northwest (Oct. 31, 2016).

The third and final backhoe trench (BHT 3) was located in the parking lot island at the south end of the site that was bounded to the east and west by two palm trees (Figure 4-6). The trench was 0.70-m (2.3-ft.) wide, 1.98-m (6.5-ft.) deep, and 8.99-m (29.5-ft.) long. This trench was located within 21.34 m (70 ft.) of San Pedro Creek and was planned to have been excavated to 2.44 m (8 ft.) below the surface. However, trenching stopped at 1.98 m (6.5 ft.) due to the shallow water table. Note that BHT 1 and BHT 2 were only excavated to 1.49 m (4.9 ft.) below the surface, at which point the trench floors were very moist owing to the shallow water table.



Figure 4-6. BHT 3, trenching in progress, facing northeast (Nov. 1, 2016).

A light brown silty clay loam was encountered in BHT 3 at 44.96 cm (17.7 in.) below the surface, followed by a layer of silty clay with pebbles from 44.96-58.86 cm (17.7-21.6 in.; Figure 4-7). A dark brown silty clay was encountered between 53.34 cm (21 in.) and 80.01-95 cm (31.5-37.4 in.), followed by gray clay from 80.01-95 cm (31.5-37.4 in.) and 149.86-160.02 cm (59-63 in.). No artifacts were observed in the trench walls or excavated soils.

Backhoe trench testing in the core of the APE and the part of the site to be impacted by a natural gas compressor station and related utility trenches did not identify any culturally significant artifacts or features. In mid-December 2016, CAR staff monitored the utility trenching in the CNG facility footprint. This activity failed to locate any intact cultural features, although some diagnostic cultural material was collected.

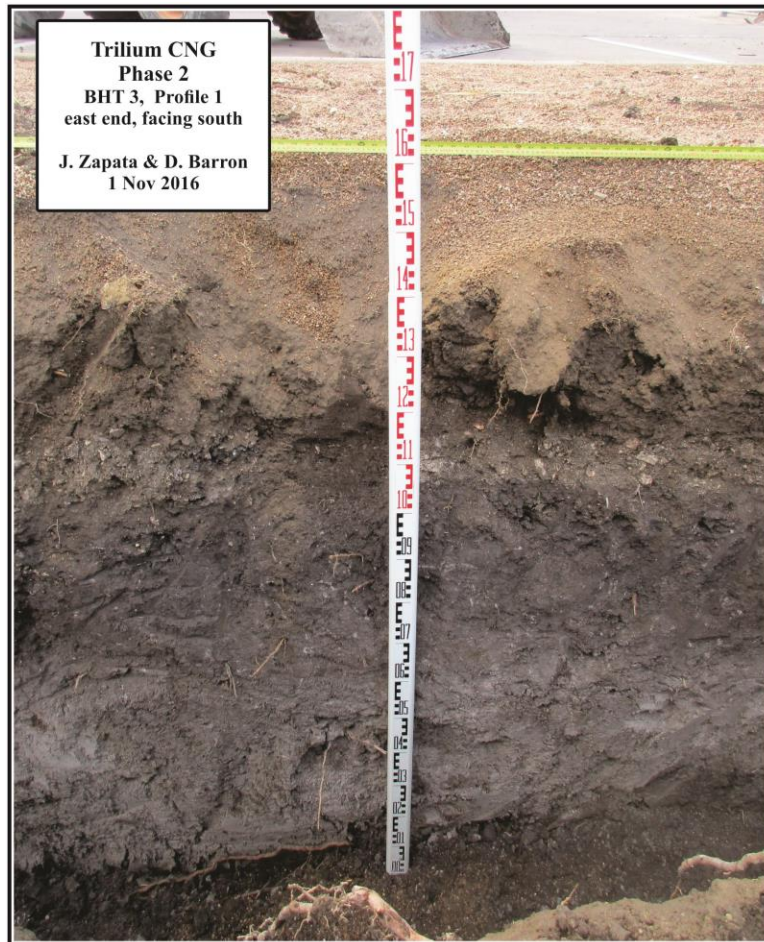


Figure 4-7. BHT 3, Trench Profile 1 at east end, facing south (Nov. 1, 2016).

The last task related to the Phase 2 construction was monitoring of a 91.44-m (300-ft.) trench for the CNG line that extended from the east end of BHT 1 (monitored Oct. 31, 2016) and continued north to the VIA MTA service facility (see Figure 4-1). The trench was 1.22-m (4-ft.) wide by 0.91-m (3-ft.) deep, except for the first 9.14 m (30 ft.), which transitioned from 1.83-m (6-ft.) deep to 0.91-m (3-ft.) deep from south-to-north. At the deep end, the trench walls exhibited a thick layer of dark clay/cobble fill above a layer of mottled dark gray-brown clay. At the shallow end, the trench walls exhibited a 20-cm (7.87-in.) concrete pavement cap above a 20-cm (7.87-in.) layer of caliche base, and a dark clay/cobble fill from 40-100 cm (15.75-39.37 in.). Figure 4-8 represents a typical profile along this 91.44-m (300-ft.) trench. Aside from errant fragments of red brick and unidentifiable metal, there were no signs of intact cultural material or features. The majority of the alignment of the CNG line trench was formerly the catchment pool for the Electric Park Shoot the Chutes attraction, and the profile appears to catch the upper portion of the former pool in the lower stratum of the profile. The upper meter of deposits appear to post-date the infilling of the pool with the upper 75 cm (29.53 in.) representative of VIA MTA's leveling and filling of the lots.

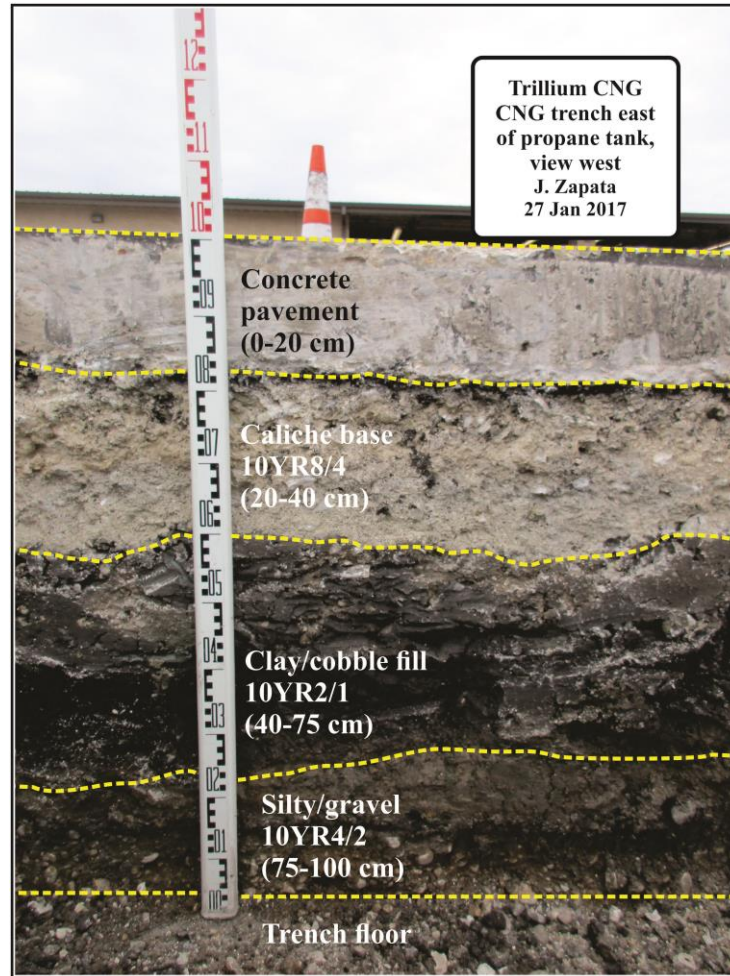


Figure 4-8. Typical trench profile, east of propane tank.

Recovered Artifacts

Phase 1 monitoring recovered two lithic fragments: a 2-cm (0.79-in.) flake and a 5-cm (1.97-in.) long retouched uniface (Field Sack [FS] 1). Monitoring in the Phase 2 area located some ceramic and lithic material (FS 2) from the north end of the APE within the CNG facility footprint. This included two undecorated whiteware sherds (medium-size ironstone plate), three lead-glazed sherds (shallow bowl), and a Late Archaic (3000-6000 BP) Langtry projectile point. The sherds from the plate and bowl appear to date to the late nineteenth century. A sample of the recovered lithic material is presented in Figure 4-9, and a list of the artifacts recovered during the monitoring is provided in Table 4-1.

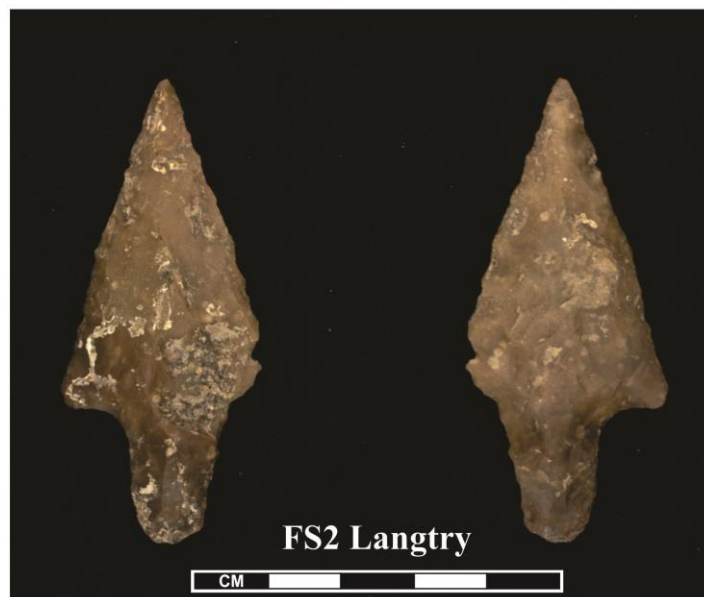


Figure 4-9. Lithic artifacts recovered during monitoring; the flake and retouched uniface are from the southwest end of the APE, and the Langtry was located at the north end of the APE.

Table 4-1. Artifacts Recovered from Phase 1 and Phase 2 Monitoring

FS	Provenience	Level	Superclass	Description	Count
1	CNG line at south end (corner of La Harpe and W. Laurel)	back dirt	Lithics	retouched uniface	1
1	CNG line at south end (corner of La Harpe and W. Laurel)	back dirt	Lithics	flake	1
2	Utility trench (north end of CNG facility footprint)	back dirt	Lithics	debitage	1
2	Utility trench (north end of CNG facility footprint)	back dirt	Lithics	Langtry Point	1
2	Utility trench (north end of CNG facility footprint)	back dirt	Ceramics	glazed, white surface, unpainted	3
2	Utility trench (north end of CNG facility footprint)	back dirt	Ceramics	glazed, nonwhite surface, painted	3

This page intentionally left blank.

Chapter 5: Summary and Recommendations

As described in Chapter 2, the project area is rich in cultural history. There is archaeological and cultural material evidence that the San Pedro Springs and Creek areas were frequented by Native Americans for the past 10,000 years. The project area was also used during the Spanish Colonial period and into the twentieth century. Previous research of nearby sites suggested potential for buried cultural deposits from those periods in the current APE, but this was not the case.

A considerable amount of testing and monitoring was completed within the Trillium CNG APE. Three exploratory backhoe trenches were strategically located and excavated, and over 152.4 m (500 ft.) of CNG line trenching were monitored. These efforts failed to locate any intact cultural features or deposits.

It was evident that the strata have been disturbed to at least 0.91 m (3 ft.) below the surface and that any cultural material within this disturbance zone is not in primary context. The nineteenth- to late twentieth-century artifacts as well as the much earlier Langtry point and the retouched uniface are temporally diagnostic but are not in primary context. The relatively shallow depth of the excavated trenches, coupled with the approximately 1-m (3.28-ft.) zone of disturbance, necessarily means that any intact deposits within the APE have either been disturbed or that they lie buried at depths greater than those investigated in this report.

Though no intact cultural features were identified in these investigations, the rich cultural history of the San Pedro Springs environs advances the view that intact cultural resources likely exist in some of the yet unexplored areas of the VIA MTA property. The CAR recommends the project proceed as planned but that monitoring and/or testing take place in advance of any additional excavations in areas not yet tested.

This page intentionally left blank.

References Cited:

- Acuña, L.I.
2014 Site Update Form, Upper Labor Ditch, Texas Sites Atlas, Electronic document, accessed February 18, 2017.
- Arneson, E.P.
1921 Early Irrigation in Texas. *Southwestern Historical Quarterly* 25(2):121-130.
- Barr, J.
2007 *Peace Came in the Form of a Woman – Indians and Spaniards in the Texas Borderlands*. UNC Press, Chapel Hill, North Carolina.
- Bearce, G.M. Publishing Company
1908 Postcard View of Electric Park, San Antonio, Texas. Card No. 145, Germany.
- Bexar County Archives, Land Grant Sales
1743 Minutes of the Cabildo, April 1743.
- Bexar County Deed Records (BCDR)
- | | | | | | |
|------|------|------|-------|--------|-------------------|
| 1850 | Book | I2 | Page | 119 | December 12, 1850 |
| 1852 | Book | L1 | Page | 93 | November 30, 1852 |
| 1865 | Book | T1 | Page | 326 | January 23, 1865 |
| 1872 | Book | W2 | Page | 295 | February 28, 1872 |
| 1876 | Book | 7 | Page | 16 | December 28, 1876 |
| 1885 | Book | 42 | Pages | 396-98 | August 1, 1885 |
| 1890 | Book | 77 | Page | 125 | January 6, 1890 |
| 1890 | Book | 70 | Page | 378-79 | May 10, 1890 |
| 1901 | Book | 194 | Page | 49-50 | March 5, 1901 |
| 1907 | Book | 265 | Page | 87-89 | February 4, 1907 |
| 1909 | Book | 322 | Page | 287 | November 2, 1909 |
| 1919 | Book | 551 | Page | 279 | February 4, 1919 |
| 1939 | Book | 1731 | Page | 105 | November 3, 1939 |
| 1940 | Book | 1759 | Page | 265 | April 20, 1940 |
| 1944 | Book | 2057 | Page | 487-88 | June 15, 1944 |
| 1945 | Book | 2107 | Page | 486-88 | February 27, 1945 |
| 1966 | Book | 5544 | Page | 936-39 | April 13, 1966 |
| 1971 | Book | 6589 | Page | 489-90 | July 15, 1971 |
| 1972 | Book | 6851 | Page | 766-67 | July 20, 1972 |
| 1978 | Book | 1062 | Page | 48-55 | March 6, 1978 |
| 1980 | Book | 1835 | Page | 69 | January 30, 1980 |
| 1984 | Book | 3097 | Page | 345-47 | May 3, 1984 |
- Corner, W.
1890 *San Antonio de Bexar; A Guide and History*. Published by Bainbridge and Corner, San Antonio.
- Cox, I.W.
1985 *10th Street Substation Excavation of the Acequia Madre (41BX8), San Antonio, Bexar County, Texas*. Archaeological Survey Report No. 153. Center for Archaeological Research, The University of Texas at San Antonio.

- 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, Texas*. Archaeological Survey Report, No. 219. Center for Archaeological Research, The University of Texas at San Antonio.
- 1995 *Documentation of the San Pedro Acequia (41BX337) at Treviño Street, San Antonio, Texas*. Archaeological Survey Report, No. 230. 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, Texas*. Archaeological Survey Report, No. 268. Center for Archaeological Research, The University of Texas at San Antonio.
- Crook, C.E.
- 1967 *San Pedro Springs Park*. Privately published, San Antonio.
- Fox, A.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.
- Fox, A.A., and I.W. Cox
- 1988 *Archaeological Monitoring of the Ashby Street Drainage Project*. Archaeological Survey Report, No. 176. Center for Archaeological Research, The University of Texas at San Antonio.
- Fox, A.A., I.W. Cox, L. Highley, and D. Hafernik
- 1989 *Archaeological and Historical Investigations at the Site of the New Bexar County Justice Center in Downtown, San Antonio, Texas*. Archaeological Survey Report, No. 184. Center for Archaeological Research, The University of Texas at San Antonio.
- Frkuska, A.J.
- 1981 *Archaeological Investigations at the San Pedro Acequia, San Antonio, Texas*. Archaeological Survey Report, No. 103. Center for Archaeological Research, The University of Texas at San Antonio.
- Hoffman, F.L.
- 1935 *Diary of the Alarcón Expedition into Texas, 1718-1719 by Francisco Céliz*. Vol. 5. Quivira Society Publications. Los Angeles, California.
- 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., D.L. Nickels, and B.A. Meissner

- 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.

King, D.

- 2004 *San Antonio at Bat: Professional Baseball in the Alamo City*. TexasA&M University Press, College Station.

Labadie, J.H.

- 1987 *An Archaeological and Historical Assessment of Vista Verde South Project, San Antonio, Texas*. Archaeological Survey Report, No. 156. Center for Archaeological Research, The University of Texas at San Antonio.

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

- 2015 *Archaeological Investigation 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.

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 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.

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.

Nickels, D.L., and I.W. Cox

- 1996 *An Archaeological Assessment of the Alazán Acequia (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.

Nickels, D.L., I.W. Cox, and C. Gibson

- 1996 *Excavation of the San Pedro Acequia on the Grounds of the San Antonio Housing Authority*. Archaeological Survey Report No. 243. Center for Archaeological Research, The University of Texas at San Antonio.

Samuelson, D., and W. Yegoiants

- 2001 *The American Amusement Park*. MBI Publishing, St. Paul, Minnesota.

Sanborn Fire Insurance Company

- 1904 *Sanborn's Fire Insurance Map, City of San Antonio, Texas*.
1911 *Sanborn's Fire Insurance Map Book – City of San Antonio, Texas*.

Shafer, H.J., and T.R. Hester

- 2010 *Archaeological Monitoring of the Upper Labor Acequia Clean-up Project, Brackenridge Park, San Antonio, Bexar County, Texas*. Report No. 92, Abasolo Consultants, San Antonio.

Texas State Supreme Court

- 1851 *Lewis et al. v. San Antonio*

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.
- 2004 *Archeological Monitoring of Tree Plantings for the City of San Antonio Arborist, San Pedro Springs Park, San Antonio, Bexar County, Texas*. South Texas Archeological Research Services. Report of Investigations No. 8. Bulverde, Texas.

Wadley, A.N., and S.A. Tomka

- 2013 *Archaeological Monitor ring of Drainage Pipe Trenching in the Vicinity of the San Pedro Playhouse, San Pedro Springs Park, San Antonio, Bexar County, Texas*. Technical Report, No. 52. Center for Archaeological Research, The University of Texas at San Antonio.

Wright, J.S.

- 1916 *San Antonio de Bexar: Historical, Traditional, Legendary. An Epitome of Early Texas History*. Morgan Printing Company, San Antonio.

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

- 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.