

After-the-Fact Investigations of a Utility Trench, Intersection of South Flores Street and West Sheridan Street, San Antonio, Bexar County, Texas

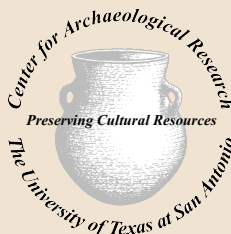


by
Clinton M. M. McKenzie

Principal Investigator
Raymond P. Mauldin

Texas Antiquities Permit No. 6999

Prepared for:
AT&T
2803 Montrose Street
San Antonio, Texas 78701



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Archaeological Report, No. 441

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Abstract:

In August 2014, the Center for Archaeological Research (CAR) at the University of Texas at San Antonio (UTSA) conducted after-the-fact archaeological investigations of a utility trench located within the City of San Antonio right-of-way at the southeast corner of the intersection of South Flores Street and West Sheridan Street. The work was funded by AT&T at the mandate of the City of San Antonio Office of Historic Preservation (COSA-OHP). The work was conducted pursuant to Texas Antiquities Permit No. 6999, with Dr. Raymond P. Mauldin serving as Principal Investigator and Clinton M. M. McKenzie as Project Archaeologist. The work included the plan-mapping of the excavation trenches, profiling of one wall, conducting magnetic soil susceptibility testing, and screening of 350 liters of back dirt. The work identified a new prehistoric archaeological site, 41BX2057. The prehistoric archaeological site exhibited lithic debitage, burned rock, charcoal, a core, and informal tools. The depth and persistence of the deposit from 40 cm below the datum (cmbd) to the maximum depth tested of 120 cmbd, suggests the site possesses potential for future research. Therefore, the CAR recommends the site be listed as having “unknown eligibility” with research potential on the National Register of Historic Places (NRHP). As the investigation was conducted after-the-fact and reached the maximum depth of impact, CAR recommended to the COSA-OHP and the Texas Historical Commission (THC) that AT&T be allowed to backfill the excavation. Artifacts collected and records generated during the project were prepared for curation according to THC guidelines. They are permanently curated at CAR at UTSA.

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Acknowledgements:

The archaeological investigations undertaken in this report were carried out by Alex McBride and Clinton M. M. McKenzie, both of the Center for Archaeological Research at The University of Texas at San Antonio. Clinton M. M. McKenzie directed the fieldwork as Project Archaeologist, Alex McBride acted as field crew, and Dr. Raymond P. Mauldin served as Principal Investigator. Thanks are extended to Laura Carbajal and Rick Young for their drafting assistance, Kelly Harris for her manuscript editing skills, and Melissa Eiring for assistance with the MSS samples and artifact preparation and curation. Thanks is also given to Melanie Heinz of AT&T who helped facilitate coordination and access. A special thanks to Matthew Elverson, Assistant City Archaeologist, for his help with the project.

Chapter 1: Introduction and Project Summary

The Center for Archaeological Research (CAR) was contracted by AT&T in August of 2014 to provide archaeological services to the City of San Antonio (COSA) to document and mitigate the unmonitored excavation of a utility trench within the COSA right-of-way. The project was on the southeast side of the intersection of South Flores Street and West Sheridan Street in downtown San Antonio, Bexar County, Texas (Figures 1-1 and 1-2). The project is located on the San Antonio East 7.5-minute series USGS quadrangle map (Figure 1-3). The CAR conducted visual inspection of the AT&T excavation, plan mapping of the disturbance, profiling of the main trench wall, magnetic soil susceptibility testing, and screening of a random sample of 350 liters of back dirt through ¼-inch mesh screen.

The land is owned by the COSA, a political subdivision of the State of Texas. As a subordinate and constituent unit of government, the COSA is required to comply with State Historic Preservation laws, statutes, and mandates as codified

in the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191). The work reported herein was coordinated by and through the COSA Office of Historic Preservation (OHP) in compliance with COSA Unified Development Code Chapter 35. The archaeological services were performed under Texas Antiquities Permit No. 6999 with Dr. Raymond P. Mauldin, CAR Acting Director, serving as Principal Investigator and Clinton M. M. McKenzie serving as Project Archaeologist.

This document presents the results of the investigations. An overview of the work conducted immediately follows this introduction. Chapter 2 provides an overview of the environmental and cultural setting of the project to include archival survey and reviews of previous archaeological investigations in the area. Chapter 3 discusses the methods employed by CAR during field research and subsequent laboratory analysis. Chapter 4 addresses the results of the field investigations and includes a project summary and recommendations.



Figure 1-1. *Photo of AT&T excavation (facing west).*

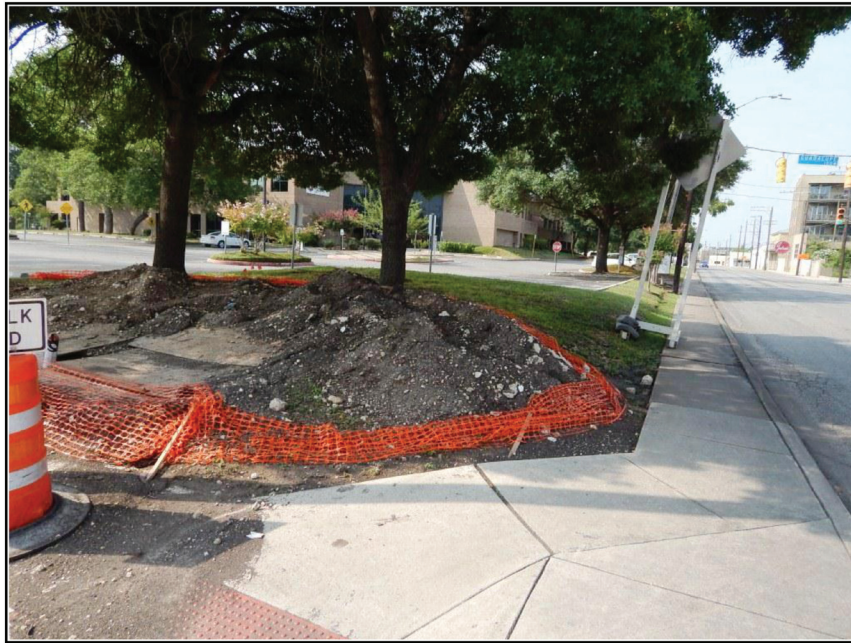


Figure 1-2. Photo of AT&T excavation (facing south).

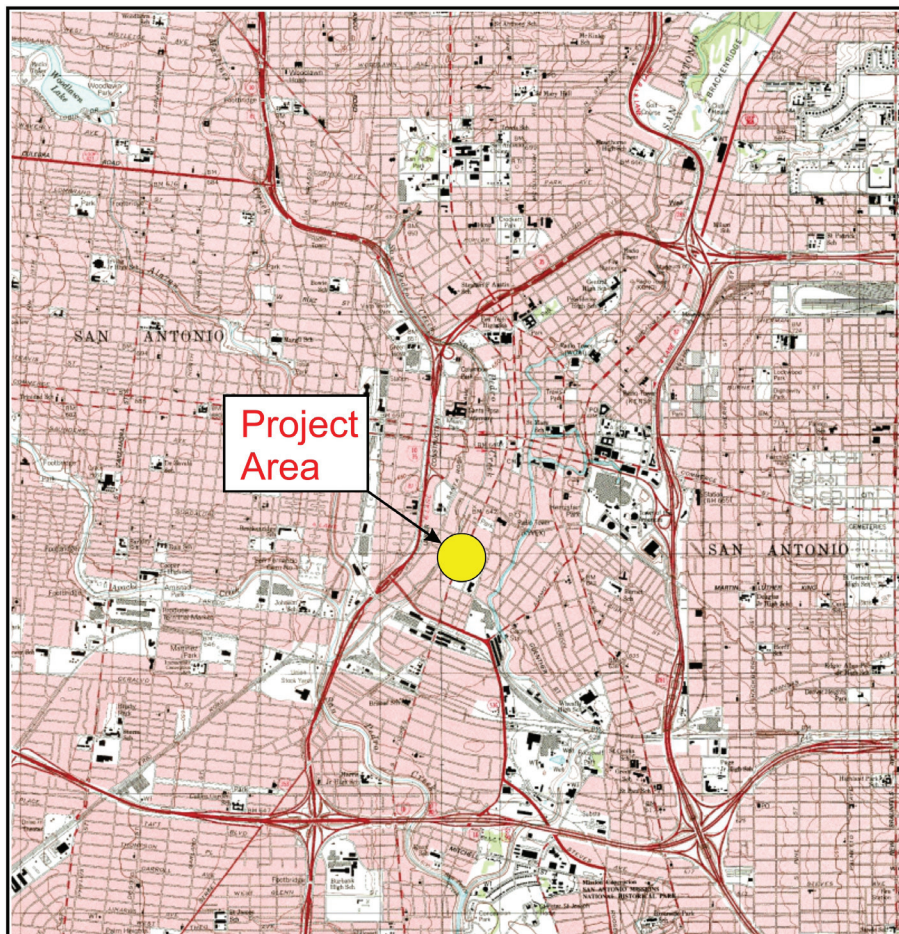


Figure 1-3. Location of project area on the San Antonio East 7.5-minute series USGS quadrangle map.

Project Overview

The CAR plan-mapped the disturbance, profiled the longest wall of the excavation, conducted magnetic soil susceptibility sampling (count, 24), and screened a random sample of 350 liters of backdirt. Both historic and prehistoric cultural material were present in the backdirt. Moreover, a buried paleosol, containing exclusively prehistoric cultural material, was identified in the trench profile wall. The

prehistoric material warranted designation as a site and was recorded and given the trinomial of 41BX2057. The historic materials were in secondary context and highly disturbed with no definable attribution. Considering that the impacts to 41BX2057 had already occurred and that AT&T had no further excavation planned, the CAR recommended that no further archaeological work was warranted and that the trenches could be back-filled. Both the THC and the COSA-OHP agreed with these recommendations.

Chapter 2: Project Setting

This chapter presents the environmental, cultural, and archival history relevant to the project area. The chapter concludes with a summary of previous archaeological work in the immediate vicinity of the project.

The Project Area

The project area is located just south of the downtown core, two blocks south of the intersection of Cesar Chavez Boulevard and South Flores Street, and on the southeast side of the intersection of South Flores and West Sheridan (see Figure 2-1). The Area of Potential Effect (APE) is 3-x-4 meters (m) in size. The APE is located between the San Antonio River and San Pedro Creek, and it abuts the now defunct Spanish Colonial *Acequia de San Pedro*. The area between these two major water sources represents a highly probable location for archaeological materials. Both the San Antonio River and San Pedro Creek arise from eponymous artesian springs north of downtown San Antonio (6.5 kilometers [km] and 3.2 km, respectively). The displacement of rocks through the geologic process of faulting results in the escape of water within the Edwards Limestone underground aquifer reservoir due to artesian pressure (Brune 1975; Wigley et al. 2014). The San Antonio River and San Pedro Creek erupt from the Balcones Fault Zone that produces

some of the largest springs in Texas, including the Comal and San Marcos Rivers, Barton Springs in Austin, as well as numerous creeks such as Salado, Cibolo, and Helotes Creeks.

Climate in Bexar County is defined as “subtropical-subhumid, with mild winters and hot summers. Temperatures in January range from an average low of 39°F to an average high of 62° and in July from 73° to 96°. The average annual rainfall is roughly thirty-one inches. The growing season averages 265 days a year, with the last freeze in early March and the first freeze in late November” (Long, C. 2010). The distribution of precipitation is bimodal, with peaks in May and September (Bomar 1983:222).

The topography near the APE is flat and alluvial with slopes of less than 5 percent. Houston Black Clays make up the majority of the project area although the APE itself lies within Lewisville Silty Clays (Figure 2-2). Houston Black Clays are described as “deep, slowly permeable, calcareous, gray to dark gray clays,” while Lewisville is described as “... moderately deep, dark-brown to grayish-brown, calcareous... silty clay loams...of 1 to 3% slopes” (Taylor et al. 1966:59). The National Cooperative Soil Survey (NCSS) further describes the Lewisville series as “very deep, well drained, moderately permeable soils that formed in ancient loamy and calcareous sediments” (NCSS 2014).



Figure 2-1. Aerial map showing location of APE.

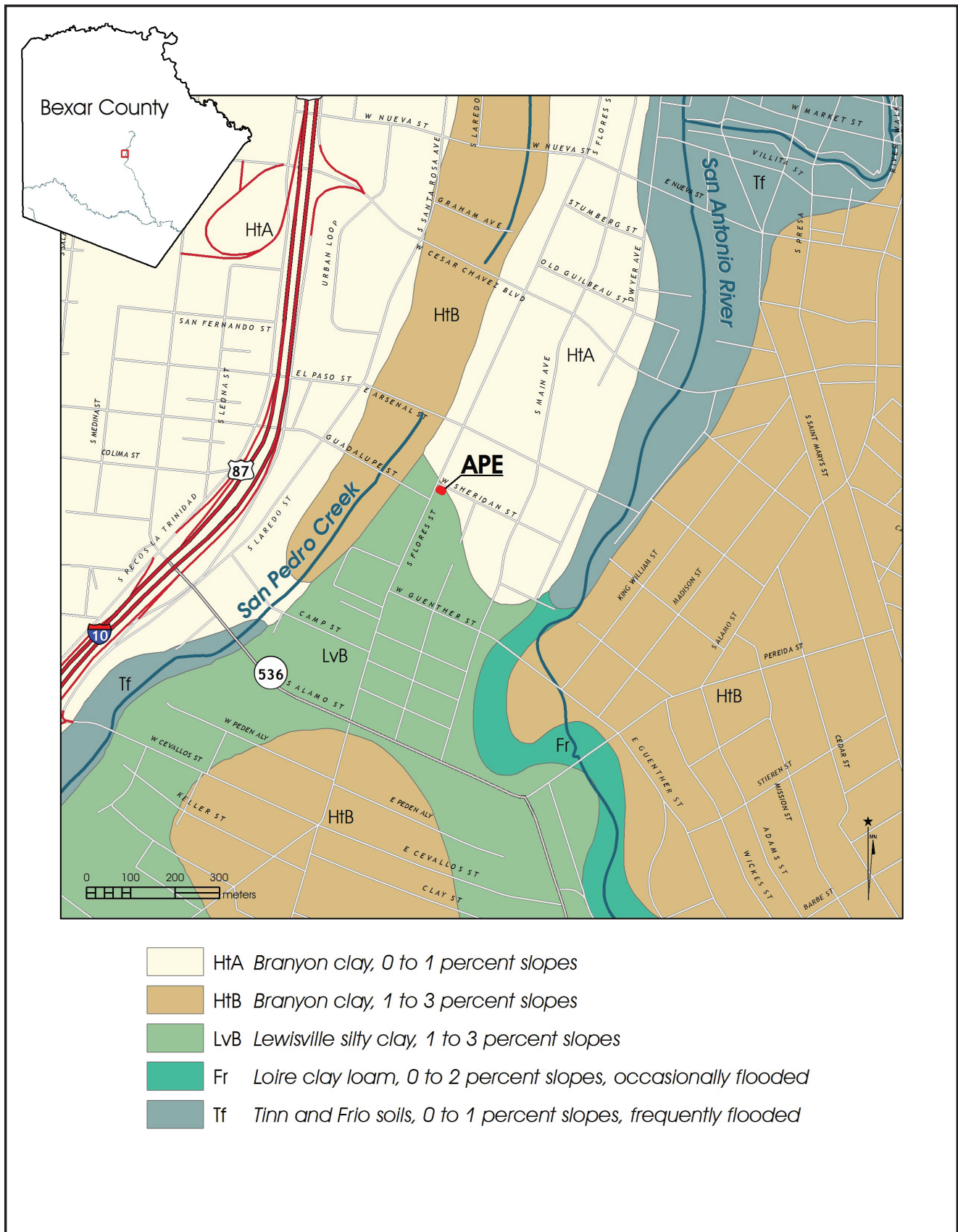


Figure 2-2. Soil series in the project area.

Culture History

The archaeological sequence in prehistoric Texas is divided into three broad periods: Paleo-Indian, Archaic, and Late Prehistoric. These three periods are further divided temporally based on point typology/morphology and radiocarbon dating (Bousman et al. 2004; Hester et al., 2011:44-49). Collins (2004:124) notes that "...culture is likely to have comparatively low visibility except when non-perishable commodities are exchanged or knowledge is transmitted that is reflected in durable items of material culture." For these reasons, cultural materials from prehistoric contexts are difficult to locate due to their ephemeral nature (Collins 2004; Hester 2004; Wigley et al. 2014). Additionally, impacts to the landscape from both natural factors, such as fluvial action, or from cultural impacts, such as farming or land clearance and leveling, also adversely impact these deposits (Collins 2004). The San Antonio area has been inhabited for at least eleven-thousand years and exhibits sites from all three prehistoric periods (Collins 2004:124). The Proto-historic period bridges the time between European arrival in the late fifteenth century through the formal Spanish *entradas* and subsequent colonization of Texas in the late eighteenth century. The Historic period in San Antonio begins in 1718. The current APE lies within the irrigable lands used by the Canary Islanders beginning in 1731, and agricultural use of the area continued through the late nineteenth century.

Paleo-Indian Period

The earliest period is referred to as the Paleo-Indian period and dates from 11,500 to 8800 BP. This period is bracketed by the end of the Pleistocene and beginning of the Holocene. Late Pleistocene mega fauna, such as Mastodon and *Bison antiquus*, may have constituted a portion of the Paleo-Indian diet; however, they undoubtedly acted as generalized hunters-gatherers, exploiting an array of plants and animals (Bousman et al. 2004; Collins 2004; Nickels 2000). Projectiles points from this time period are characterized by their lanceolate shapes. Point types of this period, in chronological order of oldest to youngest, are Clovis, Folsom, Plainview, St. Mary's Hall, Midland, and Angostura (Bousman et al. 2004). Numerous sites within Bexar County have evidence of Paleo-Indian occupation, including Pavo Real (41BX452), Brackenridge Park (41BX1396), and St. Mary's Hall (41BX229).

Archaic Period

The Archaic period dates from 8800 to 1200 BP and is further subdivided into four main periods: Early, Middle, Late, and Transitional Archaic. Increasing population densities and changes in resource abundance increased the localized

utilization of hunter-gatherer strategies. The period is characterized by an increased diversity in projectile points and tool types (Collins 2004; Hester 2004). Another feature of the Archaic period was the intensive utilization of burned rock earth ovens, frequently referred to as burned rock middens, for the cooking and processing of foods for human consumption. Several cemetery sites appear during the Archaic period and include the major Archaic cemetery uncovered at 41BX1 in 1979, as well as Loma Sandia (41LK28) in Live Oak County and Buckeye Knoll (41VT98) in Victoria County (Lukowski 1988; Ricklis 2009, 2012; Taylor and Highley 1995). There are specific diagnostic point and tool types of the four periods. Predominant types of the Early Archaic (8800 to 5500 BP) include Martindale, Early Triangular, Andice, and Uvalde projectiles points and Guadalupe tools, as well as Clear Fork unifaces and bannerstones (Hester et al. 2011). Predominant types of the Middle Archaic (5500 to 3000 BP) include Pedernales, Langtry, Marshall, and Tortugas projectile points along with Nueces and Clear Fork tools (Hester et al. 2011). The Late Archaic (3000 to 2300 BP) is characterized by Montell, Marcos, Castroville projectile points and the appearance of Kerrville bifaces and corner-tang knives (Hester et al. 2011). Ensor, Frio, and Fairland projectile points and tools, such as Olmos and Bristol bifaces (Hester et al. 2011), typify the Transitional Archaic (2300 to 1300 BP).

Late Prehistoric Period

The Late Prehistoric dates from approximately 1300 to 400 BP and is divided into two main periods: Late Prehistoric I and Late Prehistoric II. The Late Prehistoric period is characterized by a paradigm shift from throwing spears, often referred to as atlatls, to the use of the bow and arrow as the primary hunting and offensive/defensive weapon. Ceramic use also appears during this period. The Late Prehistoric I period (1300 to 800 BP) is associated with Scallorn and Edwards arrow points and tools, such as Pipe Creek bifaces (Hester et al. 2011). Perdiz, Cuney, and Fresno arrow points and formal tools, such as end scrapers, beveled knives, and Gahagan bifaces (Hester et al. 2011), typifies the Late Prehistoric II.

Proto-historic and Historic Periods

The Proto-historic period is antecedent to the formal Historic period in Texas. Essentially, it represents the period from first European contact to formal exploration and/or colonization (circa 500 to 300 BP for Texas and the San Antonio area). The Proto-historic period is not static and varies temporally across the state based on when interactions between Native Americans and Europeans actually occurred. For example, in west Texas and the Texas Panhandle the dates range from 1541 to 1581 bracketing the Coronado *entrada* of 1540-

1542 that includes the area around modern Pecos, Texas, and north through the *Llano Estacado* to the Arkansas River, and the Chamuscado-Rodriguez *entrada* of 1581 into the El Paso area (Bolton 1916). For San Antonio, the Proto-historic ends around 1700. The first formal *entrada* into the valley of San Antonio was that by Domingo Teran de los Rios in June of 1691 (Foster 1995). The expedition of Isidro Félix de Espinosa, Antonio de San Buenaventura y Olivares, and Pedro de Aguirre of 1709 passed through San Antonio on their way to visit the Tejas on the Colorado River (Chipman 1992).

A significant source of information for the early Proto-historic period comes from the *La Relacion* of Alvar Nuñez Cabeza de Vaca. Cabeza de Vaca was part of the failed Panfilo de Narvaiz expedition to Florida and was shipwrecked on the Texas coast in 1528, most likely on Galveston Island, which the Spaniards named *Isla de Malhado* – the Island of Doom. *La Relacion* is Cabeza de Vaca's firsthand account of his experiences arising from his captivity with the Karankawa in Texas during the years 1528-1536. It is probable that Cabeza de Vaca passed through the San Antonio area multiple times during his captivity and at his subsequent escape. Cabeza de Vaca's account provides archaeologists and anthropologists with information on the cultural practices and life ways of Native Americans during the Proto-historic period in Texas and the desert southwest.

The Historic period in Texas essentially begins around 400 BP (1600 A.D.). The two earliest formal *entradas* were those of Coronado and Luis de Moscoso Alvarado in 1541-1542, and the explorations in the area of modern day El Paso with the Chamuscado-Rodriguez *entrada* of 1581 (Bolton 1916). Following the de los Rios *entrada* of 1691 and the Espinosa, Olivares, Aguirre expedition of 1709, the formal decision to found a mission and presidio was made. The Spanish subsequently created the civil settlement of *San Fernando de Bexar* and the religious settlement of *San Antonio de Valero* in June of 1718. These settlements grew to become the modern metropolis of San Antonio, Texas.

During the period from 1718 to 1790, the five Spanish Missions located in San Antonio took in numerous Native American tribes and dramatically altered their culture and way of life through assimilation and domination (Cargill 1996). The Spanish modified the San Antonio landscape by the construction of irrigation canals and diversion dams. The canals, known as *acequias*, expanded the arable land and provided drinking water for the inhabitants (Cox 2005). The *suertes* of land (so named because they were drawn by lottery or "luck") surrounded the town with cropland to support both the civil and religious settlements.

Following the period of Spanish control (1690-1821) there was a brief period of Mexican control (1821-1835) that ended with the creation of the Republic of Texas in 1836. Texas subsequently joined the United States in 1842 (Richardson et al. 1981 [1943]).

Previous Archaeological Investigations

Five projects have taken place in the immediate vicinity of the APE (Figure 2-3). Four of these investigations (Cox 1991; Frkuskas 1981; Nickels et al. 1996; Valdez and Eaton 1979) focused primarily on the documentation of the alignment and subsurface investigation of the *Acequia de San Pedro* (also referred to as the *San Pedro Acequia*).

The first of these excavations took place in June of 1979 (Valdez and Eaton 1979) on property then owned by the General Services Administration (GSA). The GSA was performing land assembly prefatory to conveying the property to the San Antonio Housing Authority (SAHA). As part of the process and to meet the requirements of the Federal Section 106 law, GSA retained the CAR to document the alignment, presence, and condition of the *Acequia de San Pedro* as it traversed the property. Excavations consisted of 13 backhoe trenches crossing the expected route of the *acequia* (see Figure 2-3). Eight of the 13 trenches had negative results; however, five of the trenches did exhibit remains of the *acequia*. These remains took the form of cross sections of the earthen-lined *acequia* channel, but in two instances, the *acequia* channel had been lined with stone. The excavations demonstrated that the *acequia* was still extant within the project area, though not precisely where indicated on the Sanborn Fire Insurance Company maps.

The second investigation in November of 1979 (Frkuskas 1981) was designed to more clearly document the actual route of the *acequia* based on the locations positively identified by Valdez and Eaton in 1979. To that end, Frkuskas excavated an additional 18 backhoe trenches (see Figure 2-3). Sixteen of the 18 trenches excavated exhibited remains of the *Acequia de San Pedro*.

The third set of excavations focused on the *acequia* were carried out in March of 1990, and the findings were published as an appendix in *Excavations at the McDonald Site, 41BX794, San Antonio, Bexar County, Texas* (Cox 1991:Appendix:20-21). These investigations were intended to be in advance of the SAHA expanding their campus. Prior to the CAR being on-site, the SAHA contractor initiated excavation work that damaged and destroyed sections of the *Acequia de San Pedro*. The COSA-OHP stopped work on the site, and CAR

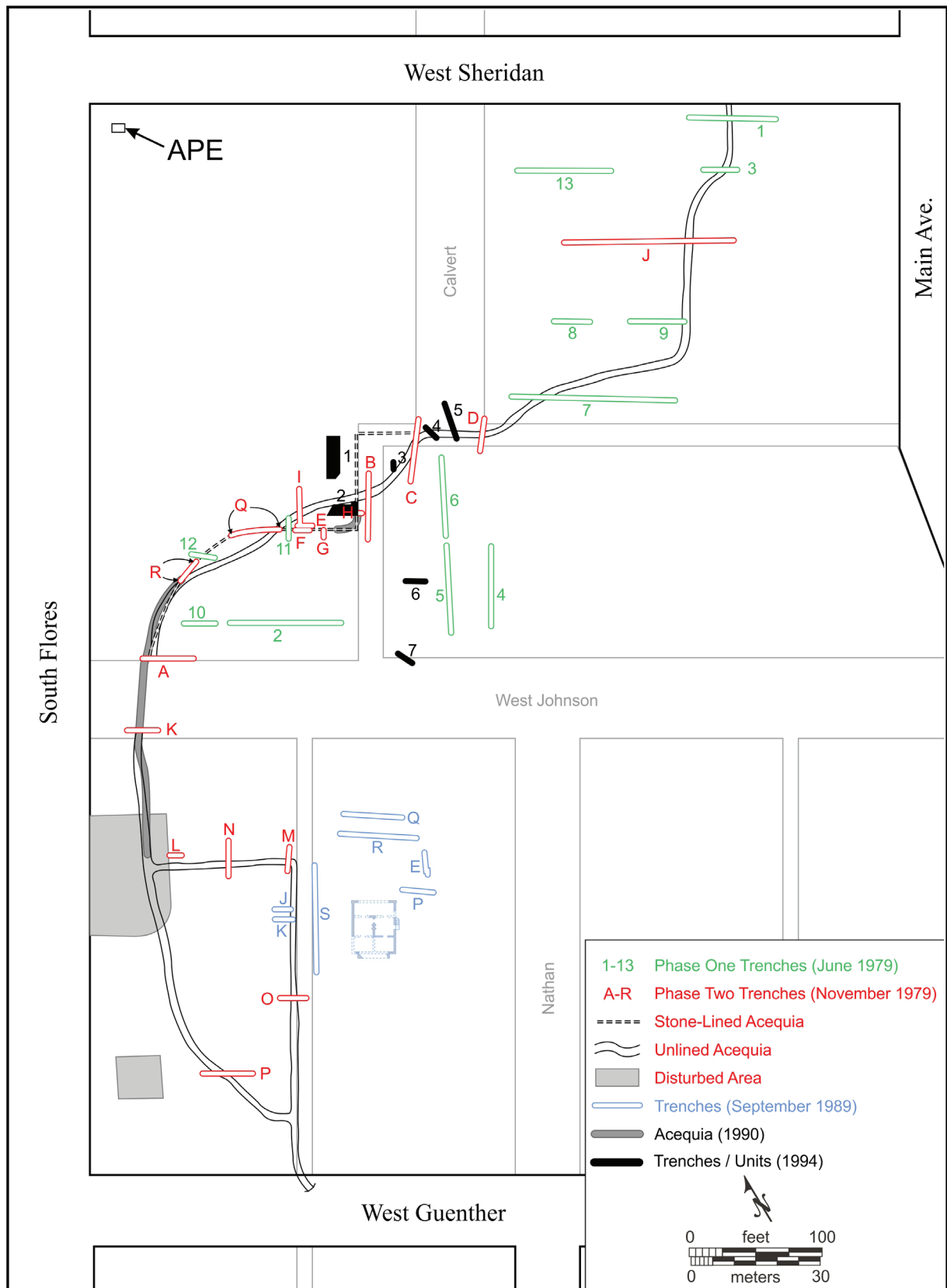


Figure 2-3. Previous excavations within the project area. The light gray streets are no longer extant, as the entire parcel was re-platted to accommodate the SAHA Campus.

staff subsequently were able to investigate and document the condition and location of the *acequia* (see Figure 2-3). CAR recommended that the SAHA rebury the *acequia*, as it was in such fragile condition, and that any subsequent interpretive features overlaid the historic original (Cox 1991).

The fourth project to occur in the project area as the excavations on the site of the John Stewart McDonald House (41BX794). McDonald served as Mayor of San Antonio from 1851-1852. McDonald was killed in an altercation with then Mayor James M. Devine in 1856 (Cox 1991:4-6). The house was located one block east and one block south of the APE between West Johnson and West Guenther Streets, bounded by South Flores and Nathan Streets, and fronting on Guenther Street (see Figure 2-3). These excavations were performed in advance of the SAHA making additions to their existing physical plant. The excavations focused on documenting the subsurface remains of the McDonald House and identifying the location of the *Acequia de San Pedro* as it passed through the block. Results clearly demonstrated that a significant portion of the McDonald House foundations were still intact and verified the location of *Acequia de San Pedro* as it crossed west of the McDonald House.

The fifth project occurred in July and August of 1994 when CAR was contracted to document the *Acequia de San Pedro* in advance of construction undertakings by SAHA (see Figure 2-3). These investigations resulted in accurate mapping of the route of the *acequia* as well as determining that the section investigated was lined with cedar planks (Nickels et al. 1996:20). No further investigations of the McDonald House or *Acequia de San Pedro* have occurred in the project area since 1994.

Archival Summary

The lot history for the parcel containing the APE extends back to the Spanish Colonial period. The parcel was part of the *suertes* assigned by lottery in 1731 to the newly arrived Canary Islanders (Chabot 1937). The lots were laid out between the San Antonio River and San Pedro Creek. The *Acequia de San Pedro* bisected the lots along its meandering southward progress before bifurcating, and then joining the San Pedro Creek on the west and the San Antonio River on the east. The parcel under investigation was in agricultural use throughout the eighteenth and the majority of the nineteenth centuries. Both the 1873 and 1886 Augustus Koch Bird's Eye View maps clearly show the APE as an orchard (Figures 2-4 and 2-5).

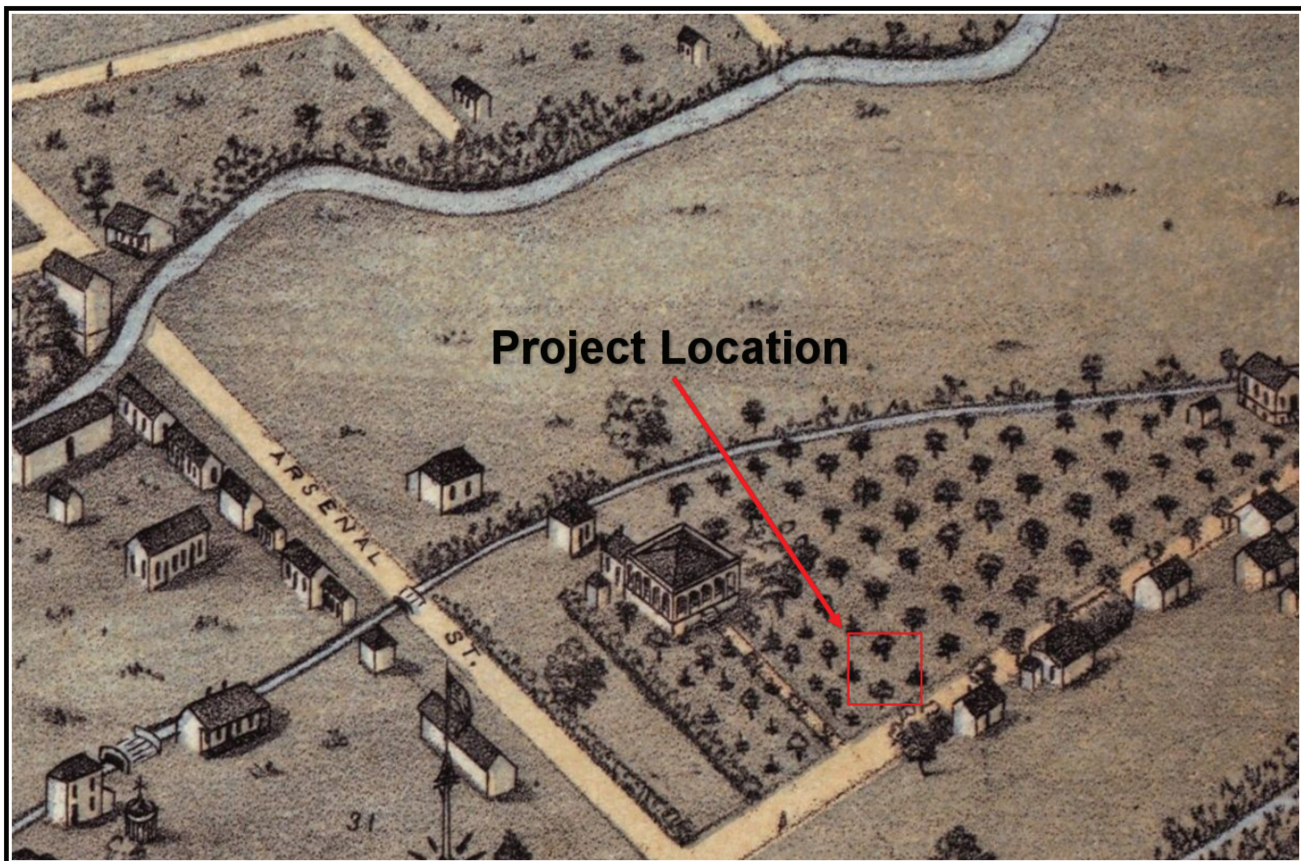


Figure 2-4. Close-up of APE on Augustus Koch Bird's Eye View Map of San Antonio in 1873 viewed from the northwest looking southeast. Arsenal Street runs east-west.

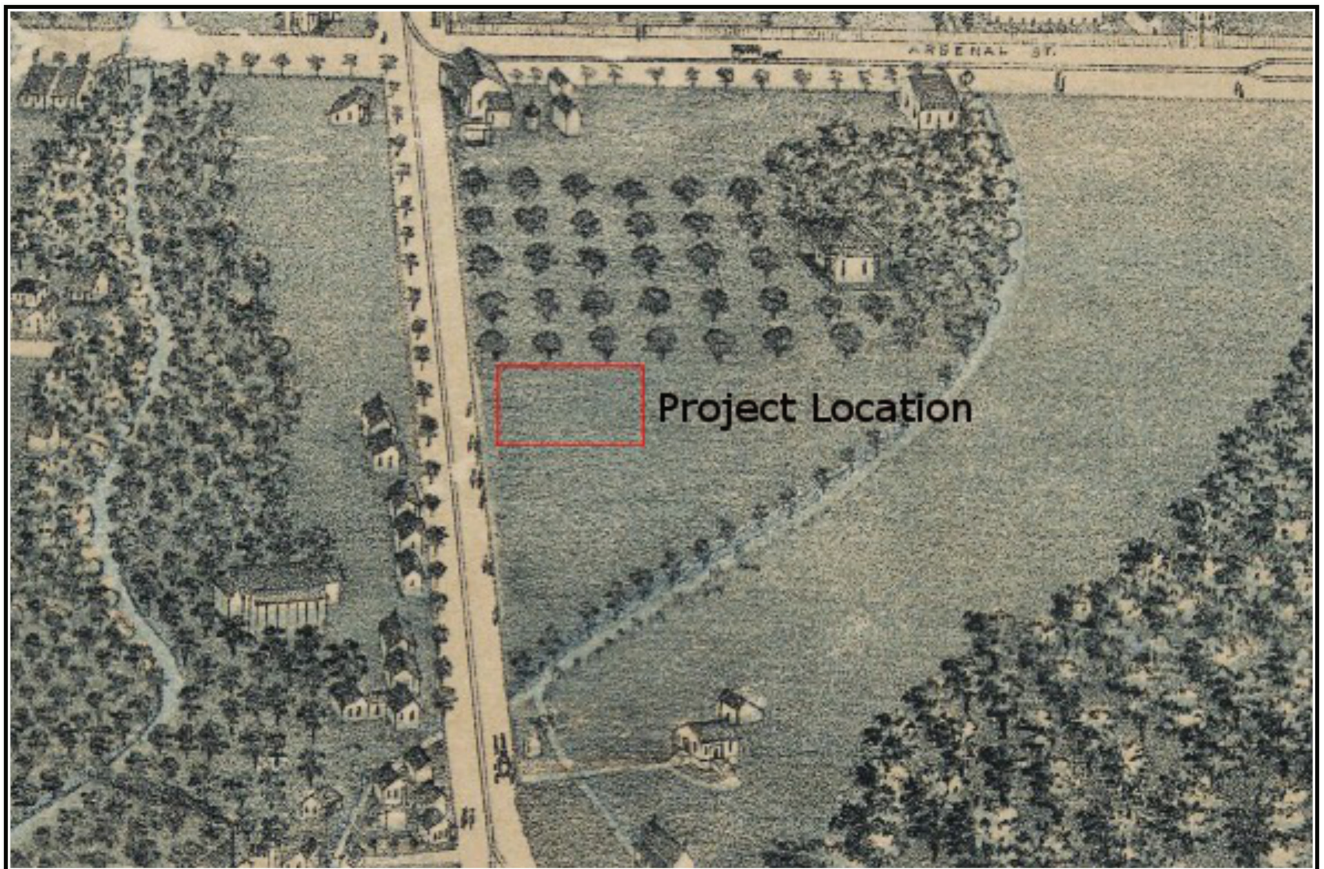


Figure 2-5. Close-up of APE on Augustus Koch Bird's Eye View Map of San Antonio in 1886 viewed from the south looking north. Arsenal Street is at the top of the frame, and Flores Street runs north-south.

The South Flores corridor saw heavy development in the last decade of the nineteenth century. The street grid from the west side of the river was extended to the east, and Sheridan, Johnson, and Guenther Streets were laid out at this time. In addition, new lots were created from the old Spanish *suertes*. The parcel under investigation, New City Block 2547, Lot 1 was created at this time. In February of 1890, Thomas J. Devine, brother of Mayor James Devine who had killed former Mayor McDonald, sold Lots 1 and 2 to P. F. Doyle (Bexar County Deed Records [BCDR] 63:612-613) who sold both lots in 1891 to Charles Graebner (BCDR 87:292-293). Graebner owned property up and down Flores Street and rented numerous business properties. The 1904 Sanborn Fire Insurance Map shows that a two-story, wood-framed bakery was operating on the site with two bake-houses and a shed to the rear (Figure 2-6). Graebner held title to the property until January of 1920 when he sold it to another speculator, Joseph A. Murphy of Multnomah County, Oregon (BCDR 588:403-404). The property and liens passed from Murphy to W. H. Stevenson in 1925 (BCDR 842:494-495). Stevenson

held the property during the Great Depression and was forced by court order to have the property sold on the Bexar County Court House steps in March of 1935 (BCDR 1483:470-471). Following World War II, then-owner Estelle Lewright conveyed the property in January of 1946 to the Cowan Family (BCDR 2193:511-512) who operated the site and adjacent Lots 2 and 3 as the Cowan Furniture Company. The Sanborn Fire Insurance Map of 1951 clearly shows that the original bakery building is still extant and that a single story addition was made to the side and a single story warehouse to the rear (Figure 2-7). Cowan Furniture subsequently sold the lots in 1967 to the GSA (BCDR 5871:919-920), and the GSA sold the lots to SAHA in 1981 (BCDR 2428:785-786).

The archival survey documented the use of the property during the historic period and the phases of construction on the site. The original two-story bakery and ovens and all subsequent constructions clearly indicated that no cellars or basements were constructed on the property.

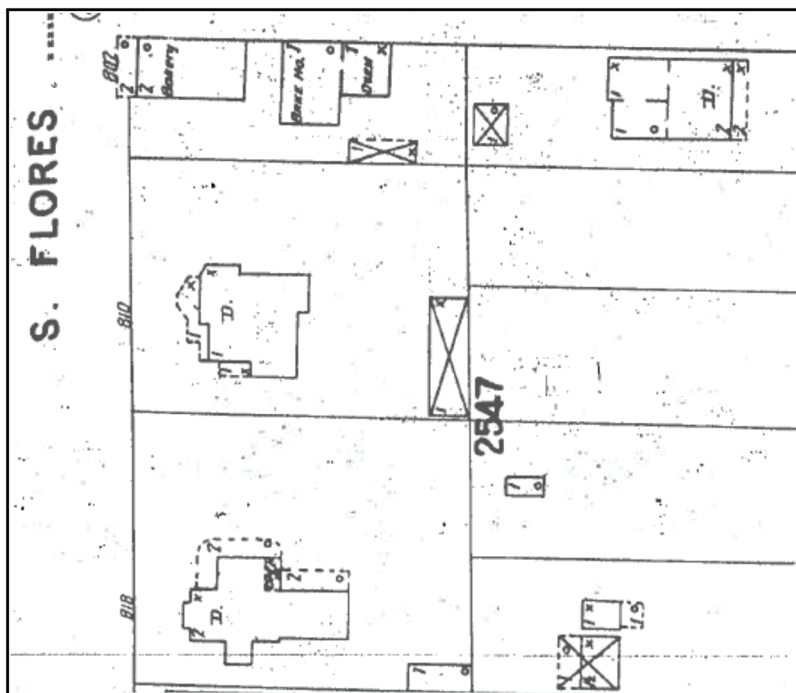


Figure 2-6. Sanborn Fire Insurance Map of 1904 showing New City Block 2547 Lot 1 with bakery and ovens noted (upper left corner of block at the corner of South Flores and West Sheridan). Note additional residential development to the south and west.

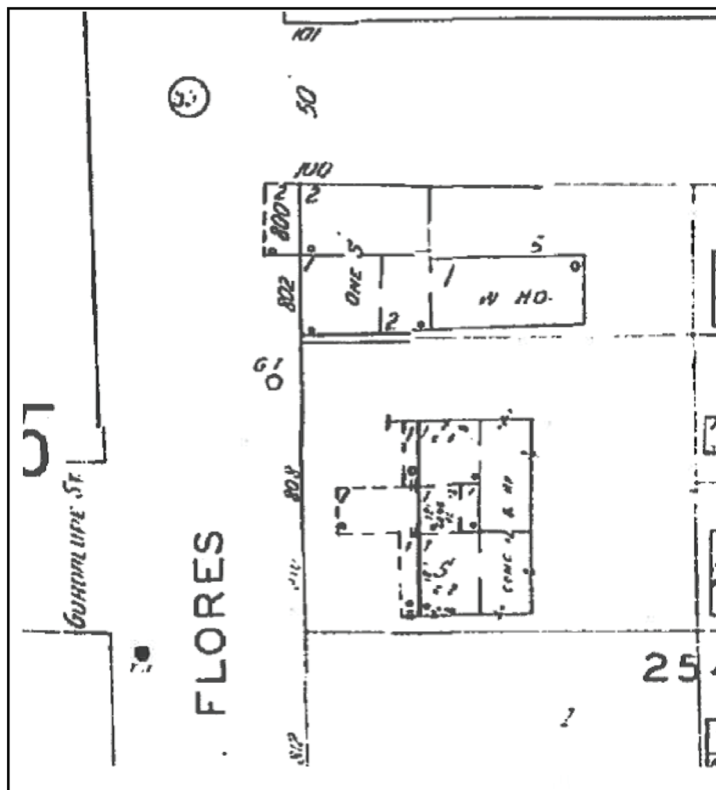


Figure 2-7. Sanborn Fire Insurance Map of 1951 showing New City Block 2547 Lot 1 (upper left corner of block at the corner of South Flores and West Sheridan).

Chapter 3: Field and Laboratory Methods

Field Methods

The Scope of Work (SOW) prepared for the THC proposed that the CAR would take photographs of the disturbance, produce a plan map of the same, and provide a profile of an undisturbed section of the trench wall. Additional samples from intact deposits were taken for use in soil magnetic susceptibility analysis, and a sample of trench spoil was screened for artifacts using ¼-inch mesh. CAR staff established a primary datum on an existing creosoted pine light pole in the sidewalk right-of-way along West Sheridan and used this datum to plan-map the disturbance and provide relative elevations.

CAR staff then selected the longest exposed wall (running southwest along the west side of the disturbance) to trim and profile to 120 cmbd (the maximum depth of disturbance).

A total of 350 random liters of spoil from the AT&T excavation was screened through ¼-inch mesh, and all artifacts were retained for analysis and curation. A standard five-gallon bucket with a ten-liter capacity line was used. These buckets were sequentially counted until 30 buckets (350 liters) of spoil were screened. Additionally, 50 liters of soil from clearly defined undisturbed deposits (Layers 3 and 4, hereinafter discussed in Chapter 4) were also separately screened and artifacts retained. CAR staff obtained 24 magnetic soil susceptibility samples in 5-cm intervals from the profiled wall (noted on Figure 4-2).

Laboratory Methods

All records obtained and/or generated during the portion of the project that occurred on public property have been 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. Artifacts brought to the CAR laboratory were washed, air-dried, and stored in 4-mil zip-locking archival-quality bags. Any materials needing extra support were double-bagged, and acid-free labels were placed in all artifact bags. These labels were printed using a laser printer and contain provenience information and lot numbers. If necessary, artifacts were separated by class and stored in acid-free boxes and labeled with standard tags. Project documentation, such as field notes, forms, photographs, drawings, and objects obtained from the public park, were placed in labeled archival folders. Digital photographs were printed on acid-free paper and placed in archival-quality page protectors to prevent accidental smearing due to moisture.

In consultation with THC, and subsequent to proper analyses and/or quantification, artifacts recovered from the APE possessing little scientific value were discarded pursuant to Chapter 26.27(g)(2) of the Antiquities Code of Texas. Artifact classes discarded specific to this project may include, but were not limited to, burned rock, snail shell, unidentifiable metal, soil samples, and recent (post-1950) materials. In the case of prehistoric materials (e.g., burned rock), items recovered from in situ feature contexts were sub-sampled prior to disposal. In all instances, however, discarded materials were documented, and their counts were included in the final report and curation documentation.

Chapter 4: Results of Field Investigations

On August 18, 2014, staff from the CAR accessed the site to execute the THC approved SOW. The after-the-fact investigations documented the presence of a prehistoric archaeological site that was assigned the trinomial of 41BX2057. Both historic and prehistoric materials were recovered from the trench spoil.

A plan-map of the AT&T excavation (Figure 4-1) demonstrates that there are essentially two trenches crossing each other and forming a T-shaped excavation. The north-south trench had been excavated along the alignment of a previous utility trench and exposed a concrete-cased PVC pipe. This new trench was excavated wider than the original trench and had exposed a lateral profile along the west-southwest wall that clearly exhibited a buried paleosol. The profile of this wall (Figure 4-2) showed three distinct soil horizons labeled as Layers 1, 2, and 3. Layer 1 (average of 0 to 40 cm below the surface [cmbd]) was a heavily disturbed and mixed horizon of soil and base material with numerous nineteenth- and twentieth-century artifacts spread throughout the deposit. Munsell

colors ranged from 10YR8/1 to 10YR6/6. Layer 2 (average of 40-45 cmbd) was a small lens or pocket of caliche and gravel most likely associated with the deposition of Layer 1. The Munsell color for this lens/pocket was 2.5YR8/1. Layers 1 and 2 overlay Layer 3 (average of 40 to 110 cmbd), a dark gray humic soil (10YR4/1) that exhibited both charcoal and lithic debitage in the profile. Layer 4 underlay Layer 3 and was identical in color to Layer 3, except that a slight mottling of the soil was present (10YR4/1 mottled with 10YR5/2).

Artifacts were collected both from the trench spoil and the screened soil from the profiling of the west wall. Three-hundred liters of trench spoil and 50 liters of profile soil from Layers 3 and 4 were screened (Table 4-1). The artifact assemblage from Layers 1 and 2 were a mixture of nineteenth- and twentieth-century items. None of these artifacts were in primary context. These layers form a landscaping berm, overlying the buried paleosol that comprises Layers 3 and 4. It should be noted that a significant number of lithic artifacts, including a core and bifacial tool, were recovered

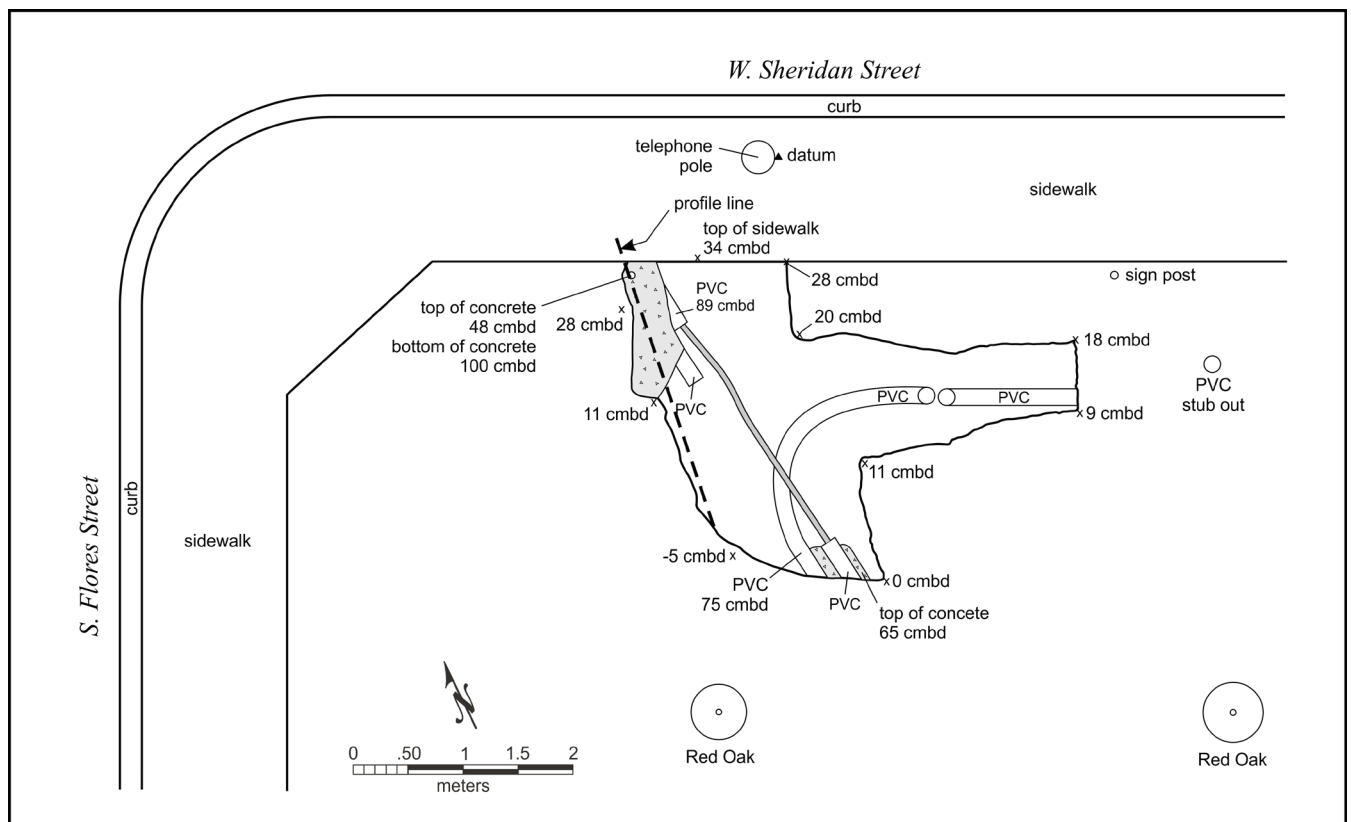


Figure 4-1. Plan map of AT&T excavation.

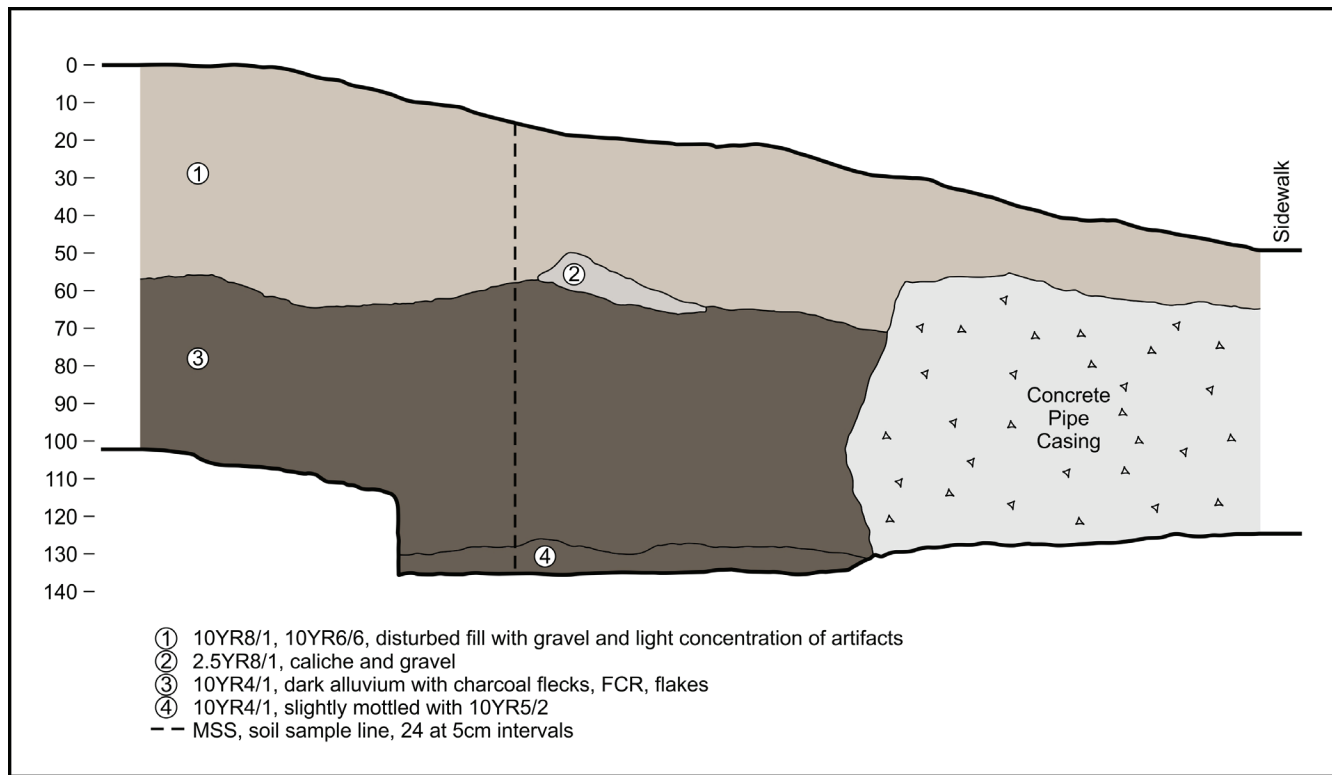


Figure 4-2. Profile of west wall of AT&T excavation.

in the trench spoil. The distinct soil color difference between Layers 1 and 2 versus Layers 3 and 4 indicates that the larger flakes, the core and bifacial tool, are associated with Layers 3 and 4 because darker soil adhered to these artifacts.

During wall-skimming of the west profile, CAR staff set-aside all soil from Layers 3 and 4 to be screened separately. The artifacts from this small sample were all prehistoric. No historic items were recovered from the screening of Layers 3 and 4.

Site 41BX2057 was designated because multiple pieces of debitage, burned rock, a core, and a bifacial tool were recovered with clear association to the deposits represented by Layers 3 and 4. It was not possible under the circumstances to determine the boundaries of the site as investigations were limited to the AT&T excavation area. Considering that the site lies between the San Antonio River and San Pedro Creek, it is probable that the majority of the terrace exhibits some trace prehistoric occupation or use.

Magnetic Soil Susceptibility Testing

Twenty-four soil samples were collected for magnetic soil susceptibility testing from the west profile from the surface

to the termination of the excavation at 120 cmbs (see Figure 4-2). These samples were collected using a clean and non-oxidized stainless steel scoop and placed into plastic bags. These bags were returned to the CAR laboratory where they were air-dried and subsequently crushed to a powder consistency utilizing a laboratory grade ceramic mortar and pestle. The sediment was then passed through a 2-mm sieve with the sieved product packed into plastic pots of 10 cm³. The mass of the sample was then derived by subtracting the mass of the pot. Low frequency volume susceptibility (κ) was measured using a Barrington MS2 meter with a MS2b sensor. The mass corrected magnetic susceptibility (χ) values were calculated using the sample mass (see Dearing 1999).

The purpose of magnetic soil susceptibility testing has been to facilitate the identification of buried soils associated with human occupation (Takac and Gose 1998). It can also be utilized as an aid in identifying sediment (Bellomo 1983; Dalan and Banerjee 1998) or rocks associated with hearths (Mauldin and Figueroa 2006). In simplistic terms, magnetic susceptibility can be viewed as a measure of how easily a given sample can be magnetized (Dearing 1999). There are naturally occurring sources of iron, and these concentrations may vary from sediment to sediment. Nevertheless, these are essentially background signatures of the inherent magnetism

Table 4-1. Artifacts Collected

Provenience	Superclass	Class	Type	Count
Trench Spoil	Organics	Mussel Shell		1
	Building Materials	Wood	Cypress Shingle Fragment	1
	Organics	Bone	Saw Cut Beef	1
	Brick	Red	Unidentified	2
	European Ceramics	Stoneware	Salt Glazed	1
	Hard Rubber	Other Items	Pedal	1
	Metal	Tools/Fasteners	Saw Blade	1
	Brick	Yellow	Laredo	1
	Brick	Buff exterior	Unidentified	1
	Metal	Other	Unidentified	1
	Metal	Tools/Fasteners	Washer	1
	Metal	Other	Unidentified	5
	Metal	Other	Cap/knob	1
	Metal	Nails	Wire	14
	Metal	Nails	Square - Cut	1
	Manufactured	Synthetic Items	Aluminum	1
	Personal Items	Jewelry	Earring	1
	Samples	Burned rock	Mixed	4
	Chipped Stone	Debitage	Mixed	11
	Chipped Stone	Misc. Bifaces/Unifaces	Biface	1
	Chipped Stone	Misc. Bifaces/Unifaces	Biface	1
	Glass	Container/Vessel	Amber	2
	Glass	Container/Vessel	7-Up Green	3
	Glass	Container/Vessel	Brown	11
	Glass	Container/Vessel	Aqua	3
	Glass	Container/Vessel	Clear	11
	Glass	Flat	Clear	31
Provenience	Superclass	Class	Type	Count
Layer 3 - 4	Samples	Burned rock	Mixed	3
	Chipped Stone	Debitage	Mixed	5
	Samples	Radiocarbon		1
	Samples	Radiocarbon		1

of a given sample. In addition to this natural and variable level of ferrous and ferromagnetic minerals, other processes can contribute to the magnetic load of a given sample. A major driver of increase is the presence of organics in a given sediment sample (see Collins et al. 1994; McClean and Kean 1993; Singer and Fine 1989). As a rule, sediments with a higher organic content have a correspondingly higher magnetic susceptibility value. It is posited that this is the result

of the production of maghemite iron oxide during the organic decay process (Reynolds and King 1995). Another causal factor in the increase of magnetism are pedogenic processes, such as soil formation and weathering. These processes can facilitate the concentration of organic material and potentially alter the mineralogy of a zone. Cultural processes, such as the concentration of ash, charcoal, and organic refuse, would also produce higher MSS readings (Mauldin 2003).

No discrete features were identified in the AT&T excavations or in the profile. However, the presence of burned rock, charcoal, lithic debitage, and tools in the back dirt and profile are a clear indication of the habitation and utilization of the area by prehistoric Native Americans. The four distinct layers of the profile were sampled, and Figure 4-3 presents a plot of the MSS values relative to the profile. The plot shows two distinct peaks. The upper peak undoubtedly is reflective of the high organic decomposition in the landscape berm (Layers 1 and 2) that surmounts the buried paleosol (Layers 3 and 4). The second peak, which corresponds directly with the surface of the buried paleosol, is reflective of the long-term stability of that surface over time. The lack of additional peaks below

this level may be indicative of the relatively rapid build-up of alluvium prior to the stable surface that allowed the formation of the second peak.

Summary and Recommendations

Following the conclusion of fieldwork, the CAR staff reviewed the findings and recommended the assignment of a site trinomial for the buried prehistoric component. As AT&T had completed their excavations, CAR recommended to the THC and the COSA-OHP that no further archaeological investigations were needed. The THC and the COSA-OHP concurred with the recommendation.

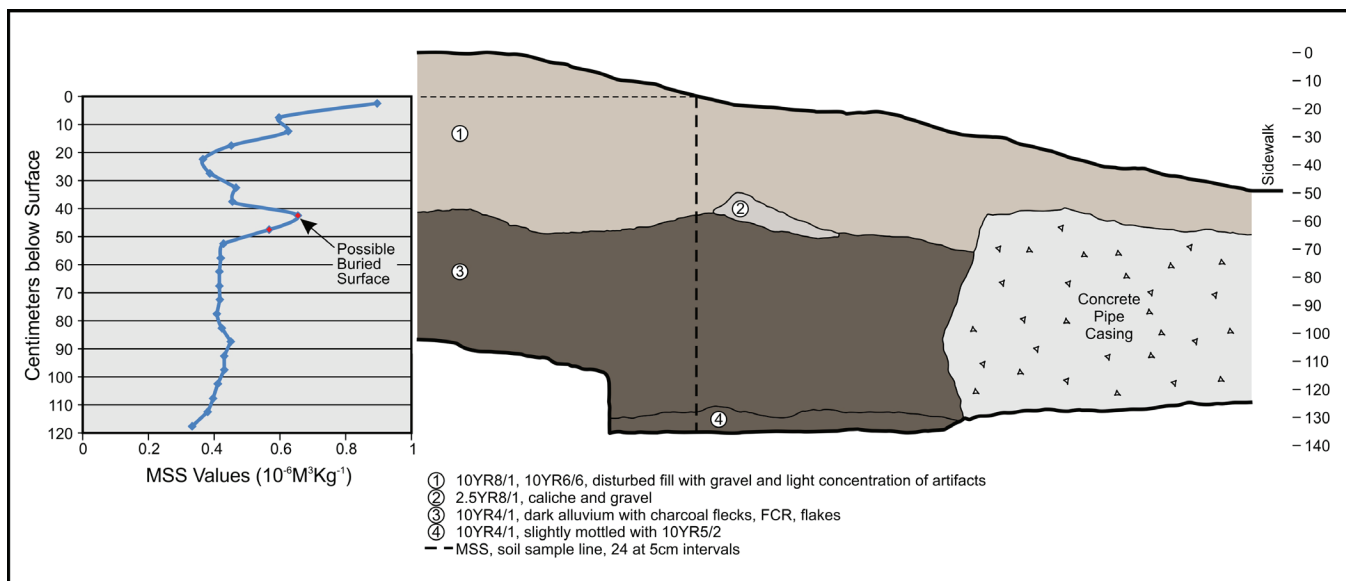


Figure 4-3. Magnetic soil susceptibility plot indexed to profile.

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