Archaeological Monitoring along South Colorado Street near Downtown San Antonio, Bexar County, Texas



by Leonard Kemp

with contributions by Raymond Mauldin

Texas Antiquities Permit No. 8726

REDACTED

Principal Investigator José E. Zapata

Original Principal Investigator Paul Shawn Marceaux

Prepared for: Zayo Group, LLC 2818 Nacogdoches Road San Antonio, Texas 78217



Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249
Archaeological Report, No. 472

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Abstract:

The University of Texas at San Antonio's (UTSA) Center for Archaeological Research (CAR), in response to a request from Phaselink Utilities for Zayo Group, LLC (Zayo), monitored excavations associated with the installation of fiber optic conduit southeast of downtown San Antonio, Bexar County, Texas. The monitoring occurred between January 22 and February 4, 2019. This project is located on City of San Antonio (COSA) property and is subject to regulatory review under COSA's Unified Development Code (Article 6 35-630 to 35-634) as ground-disturbing activities might affect archaeological or historical sites. The project also required review by the Texas Historical Commission (THC) under the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191) because the COSA is a political subdivision of the Texas and the work was conducted on publicly owned lands. The THC granted Texas Antiquities Permit No. 8726 to Dr. Paul Shawn Marceaux, CAR Director, who served as the Principal Investigator during the fieldwork portion of the project, and José E. Zapata served as the Principal Investigator for the report production as well as the remaining tasks associated with the permit. Leonard Kemp served as the Project Archaeologist and conducted the archaeological investigation.

The 0.15 hectare (0.36 acre) Area of Potential Effect (APE) encompassed two locations, each with different impacts. APE Location 1 (0.14 hectare; 0.35 acre) runs along the east and west sides of S. Colorado Street from just north of Guadalupe Street to north of Chihuahua Street. This portion of the APE was thought to be in the vicinity of the Battle of Alazán Creek, fought in 1813 during the Mexican War of Independence (Marshall 2015). The possibility existed that artifacts from the battle would be encountered. In addition, a section of this APE location is adjacent to San Fernando Cemetery No. 1, established sometime in the 1860s (Kirkpatrick and Moreno 2008). Consequently, interments could have been encountered along this section of the APE. Finally, the location of the Alazán-Apache Courts, constructed in the early 1940s and one of the earliest public housing projects in the nation (Zelman 1983), is adjacent to the project area.

The ground-disturbing activities in the first APE location consisted of a series of nine borehole pits that facilitated directional boring for the installation of fiber optic cables. CAR monitored the excavations of the borehole pits. No artifacts or archaeological features were found in APE Location 1.

APE Location 2 (0.004 hectare; 0.01 acre), at the intersection of San Marcos and Tampico streets, involved the installation of a conduit to a communication hub. The excavation of this trench revealed a late nineteenth-century trash midden as confirmed by diagnostic glass and ceramics. The feature fulfills the definition of an archaeological site, and the midden and immediate surroundings were designated as 41BX2276. Given that an unknown portion of the midden still exists and the lack of understanding regarding the history of this area of San Antonio, CAR suggests there is insufficient data to make a determination regarding eligibility of 41BX2276 for possible inclusion to the National Register of Historic Places (NRHP). Based upon these findings, CAR suggests any future ground-disturbing activities near the communication hub take into account the presence of the site and, at a minimum, such activity should be monitored. The THC concurs that an eligibility determination cannot be made and that any future ground-disturbing activities near the site should be monitored by a professional archaeologist. No further review of potential effects to above-ground historic resources is required under the Antiquities Code of Texas. However, should this project ultimately include any federal involvement, additional consultation with THC/State Historic Preservation Officer under Section 106 of the National Historic Preservation Act will be required.

Artifacts collected from the project, as well as all project related documents and a copy of this report, are curated at the CAR facility. The facility is a state certified repository on the UTSA campus.



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Chapter 1: Introduction

The University of Texas at San Antonio's (UTSA) Center for Archaeological Research (CAR), in response to a request from Phaselink Utilities for Zayo Group, LLC (Zayo), monitored excavations associated with the installation of conduit for fiber optic cables southeast of downtown San Antonio, Bexar County, Texas. This monitoring occurred between January 22 and February 4, 2019. This project is designed to improve wireless communication delivering "high capacity connectivity to businesses, hospitals, universities, and government entities" (Zayo 2016). The project is located on City of San Antonio (COSA) property. As such, it is subject to regulatory review under COSA's Unified Development Code (Article 6 35-630 to 35-634) as ground-disturbing activities might affect archaeological sites. In addition, because the COSA is a political subdivision of the state of Texas and the work was conducted on publicly owned lands, the project falls under the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191). In response to a scope of work developed by CAR in consultation with the COSA Office of Historic Preservation (OHP), the Texas Historical Commission (THC) granted Texas Antiquities Permit No. 8527 to Dr. Paul Shawn Marceaux, CAR Director, who served as the Principal Investigator during the fieldwork portion of the project, and José E. Zapata served as the Principal Investigator for the report production as well as the remaining tasks associated with the permit. Leonard Kemp served as the Project Archaeologist and conducted the archaeological investigation.

Area of Potential Effect

The 0.15 hectare (0.36 acre) Area of Potential Effect (APE) encompasses two locations (Figure 1-1). APE Location 1 (0.14 hectare; 0.35 acre) runs along the east and west sides of South Colorado Street from just north of Guadalupe Street to north of Chihuahua Street. The ground-disturbing activities in the first APE location consists of a series of nine borehole pits that facilitated directional boring for the installation of conduit for fiber optic cables. APE Location 2 (0.004 hectare; 0.01 acre) is on the corner of San Marcos and Tampico streets adjacent to a communication hub. Here, a trench was excavated to tie the conduit from a utility pole into the communication hub. All work at both APE locations occurred within COSA-owned right-of-way.

The APE is a mixture of residential, public, and commercial buildings with the channelized Alazán Creek to the south of it (Figure 1-2). APE Location 1 may contain a portion or be

within the vicinity of the Battle of Alazán Creek that was fought in 1813 during the Mexican War of Independence (for an opposing view on the location, see Marshal 2015). The OHP suggested that artifacts from the battle might be encountered (personal communication the Matthew Elverson of OHP). In addition, a section of the APE is adjacent to San Fernando Cemetery No. 1, which was established sometime in the 1860s (Kirkpatrick and Moreno 2008). Human remains have been located outside of the cemetery's current fence line (San Antonio Express, 8 March 1931:14). Consequently, there was a possibility of encountering human interments along this section of the APE. In addition, the former footprint of Alazán-Apache Courts encloses APE Location 1. The courts were constructed in the early 1940s and represent one of the earliest public housing projects in the nation (see Garrison 2018; Guerra 2016; Zelman 1983).

Results

CAR monitored the excavations of the borehole pits. No evidence of the Battle of Alazán Creek was observed, and no burials were encountered. In fact, no artifacts or archaeological features were found in APE Location 1. However, the excavation of a backhoe trench at APE Location 2 revealed a trash midden. The feature fulfills the definition of an archaeological site, and the midden and immediate surroundings were designated as 41BX2276. Collected artifacts, including temporally diagnostic glass and ceramics, suggest that 41BX2276 dates to the late nineteenth or early twentieth century. Given that an unknown portion of the midden still exists and the lack of understanding regarding the history of this area of San Antonio, CAR suggests there is insufficient data to make a determination regarding eligibility of 41BX2276 for possible inclusion to the National Register of Historic Places (NRHP). Based upon these findings, CAR suggests any future ground-disturbing activities near the communication hub take into account the presence of the midden and, at the minimum, that such activity should be monitored. The THC concurs that the NRHP eligibility of the site cannot be determined and that any ground-disturbing activities within the vicinity of the site should be monitored by a professional archaeologist. No further review of potential effects to above-ground historic resources is required under the Antiquities Code of Texas. However, should this project ultimately include any federal involvement, additional consultation with THC/State Historic Preservation Officer under Section 106 of the National Historic Preservation Act will be required.



Figure 1-1. APE Locations 1 and 2 shown (red) on an Esri topographic map.



Figure 1-2. Project views (prior to excavation) of APE Location 1.

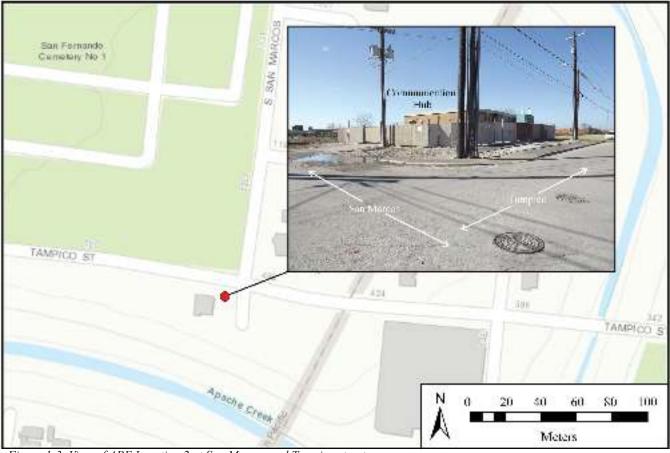


Figure 1-3. View of APE Location 2 at San Marcos and Tampico streets.

Report Organization

This report contains seven chapters. Following this introduction, Chapter 2 provides a brief summary of the environmental setting of the project. As no prehistoric material was uncovered during this investigation, Chapter 3 presents a cultural summary focused on the history of Texas and San

Antonio. Chapter 4 reviews aspects of the project area history, while Chapter 5 discusses previous archaeology work near the APE locations. Chapter 6 discusses the field and laboratory methods used during the project. Chapter 7 summarizes the results of this investigation and discusses the findings from the newly discovered site, 41BX2766. Chapter 8 concludes with a project summary and recommendations for any future work.

Chapter 2: Environmental Setting

Raymond Mauldin and Leonard Kemp

This chapter summarizes the Bexar County/San Antonio environment. Included is a brief, county-level overview of the regional landscapes, as well as the climate. Prehistoric climate variables are not discussed since prehistoric material was not recovered in the project area. More extensive treatments of climate, as well as information on the geology, hydrology, and floral and faunal resources of the region, can be found in a variety of sources. These include Abbott and Woodruff (1986), Amos and Gehlbach, eds. (1988), Barnes (1983), Eckhardt (2019), Griffith et al. (2004), Kutac and Caran (1994), Metz (1931), Sellards (1919), Smith et al. (2015), and Weniger (1988, 1997). The last section of the chapter focuses specifically on the project area.

Bexar County is at the intersection of several geographic regions (Figure 2-1). The Edwards Plateau, an extension of

the Great Plains (Riskind and Diamond 1988), dominates the north and northwest portions of the county. The plateau is a southeastern sloping region created by tectonic uplift (Maclay 1995). Thin soils over a limestone base support grasslands interspersed with juniper (Juniperus sp.), oak (Quercus sp.), and mesquite (Prosopis glandulosa) woodlands (Amos and Gehlbach, eds. 1988). Underlying the southeastern edge of the plateau is the Edwards Aquifer, a source of numerous springs, creeks, and rivers that flow to the south and southeast, with many ultimately emptying into the Gulf of Mexico (Donecker 2010; Eckhardt 2019; Swanson 1995:129-132). The south and southwest portion of the county is the South Texas Plains. This hot, dry area is currently composed of brush and scrub plants, including mesquite, acacia (Senegalia greggii), and prickly pear cactus (Opuntia sp.) growing on clay and clay loam soils (Alvarez, ed. 2018; Johnson 2019).

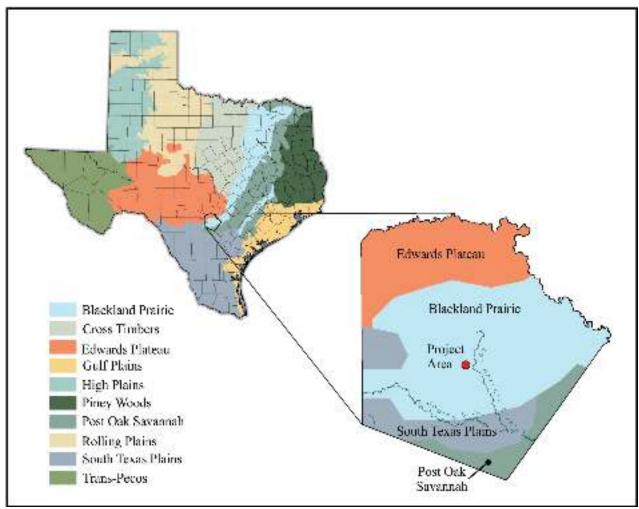


Figure 2-1. Ecoregions of Texas with a focus on Bexar County (after Smith et al. 2015; see also Gould et al. 1960). The location of the project area is symbolized by the red circle.

The Blackland Prairie, an area of deep clay soils that has supported a variety of agricultural crops (Alvarez, ed. 2018), dominates the central portion of the county. The Post Oak Savannah is in the southern portion of the county. The area is often described as consisting of low hills with a dominance of post oak (*Quercus stellata*) and patches of grassland (Kutac and Caran 1994).

Climate

The climate of Bexar County is described as humid subtropical (Taylor et al. 1991). Summers are humid and hot while winters are cool and dry. Figure 2-2 presents the average monthly temperature between 1971 and 2000 (CAR 2019). The warmest months during this period are July (29.1°C; 84.3°F;) and August (29°C; 84.2°F) with the coolest months being January (10.2°C; 50.3°F;) and December (11.3°C; 52.4°F). The average annual temperature for San Antonio during this period was 20.4°C (68.7°F). The growing season between 1961 and 1990 averaged roughly 267 days a year (Bomar 1999:214).

Figure 2-3 presents the average annual temperature for San Antonio between 1895 and 2018 (National Oceanic and Atmospheric Association [NOAA] 2019a). The figure clearly shows that since the mid-1970s the average annual temperature in San Antonio has increased. The highest average annual temperature of 22.2°C (71.9°F) was recorded in 2006. Over the 124-year sequence shown in Figure 2-3, the four highest yearly temperatures have been recorded between

2006 and 2017, while the lowest annual average temperature recorded in 1903, at 18.6°C (65.5°F). The average for the 124-year sequence is 20.4°C (68.8°F). Note, also, that the trend line for the sequence is increasing, suggesting that, overall, temperatures are rising.

The trend line for the twentieth-century and early twentyfirst-century temperatures shown in Figure 2-3 can likely be projected back in time as temperatures in the 1700s and 1800s were probably lower than those presented in Figure 2-3. The eighteenth and nineteenth centuries were impacted by the Little Ice Age, a period of global cooling between roughly AD 1400 and 1900 (see Ljungqvist 2010; Mann and Jones 2003; Mann et al. 2008; Moberg et al. 2005). Figure 2-4 presents a simulation of temperatures for South Texas, including San Antonio, for the period from AD 1705 through 1985. The simulation uses PaleoView (Fordham et al. 2017), a software developed for ecological modeling that provides high temporal and spatial resolution for a variety of climate variables. The simulation suggests that during the eighteenth and nineteenth centuries temperatures in the region were, on average, roughly 0.28-1.0°C (0.5-1.8°F) cooler than the AD 1985 reference. This certainly would have shortened the growing season, likely reducing the productivity of agriculture and affecting other food resources.

The other major climate variable that has impacted both modern and historic period activities in the San Antonio area is precipitation. The average yearly precipitation from 1971 through 2000 was 83.6 cm (32.92 in.; CAR 2019). As will be discussed subsequently, this average is somewhat

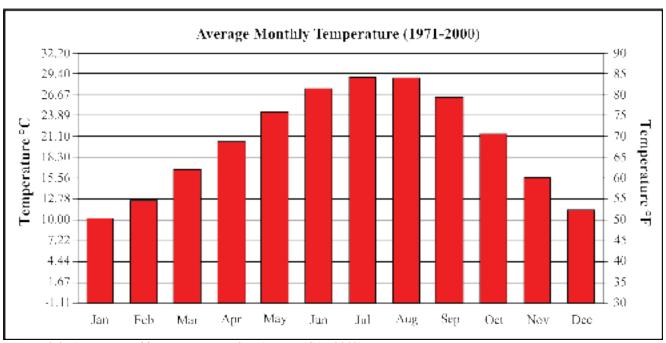


Figure 2-2. Average monthly temperature in San Antonio (CAR 2019).

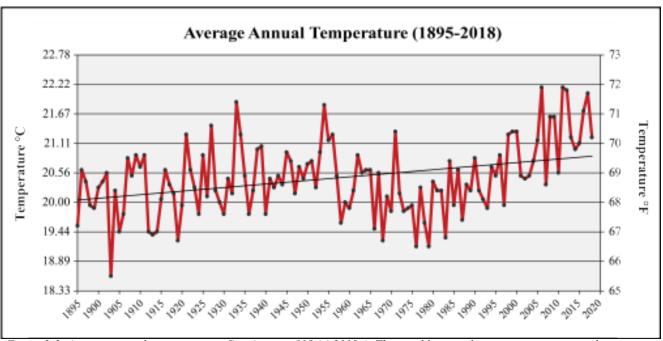


Figure 2-3. Average annual temperature in San Antonio (NOAA 2019a). The trend line is a least squares regression line.

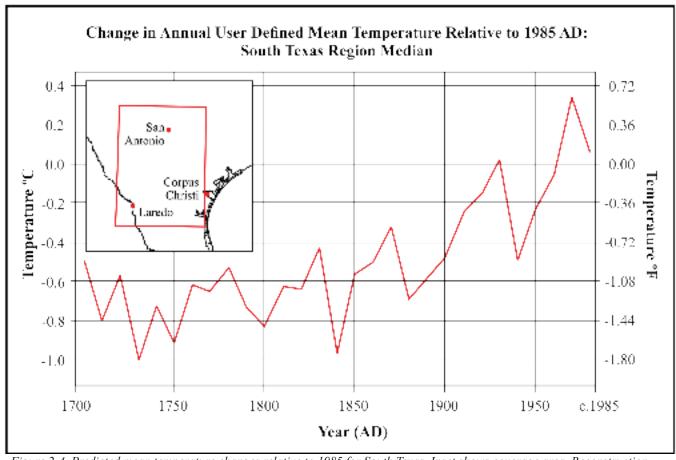


Figure 2-4. Predicted mean temperature changes relative to 1985 for South Texas. Inset shows coverage area. Reconstruction created in PaleoView version 1.1 (Fordham et al. 2017), with 10-year intervals and plotted at 10-year points.

misleading as precipitation is highly variable from year to year. Nevertheless, Figure 2-5 shows that San Antonio precipitation tends to be bimodal, with peaks in May (11.99 cm; 4.72 in.) and October (9.8 cm; 3.86 in.). The driest period is over the winter, with December (4.98 cm; 1.96 in.) and January (4.22 cm; 1.66 in.) having the lowest totals (CAR 2019). This precipitation falls primarily as rain, and snowfall is uncommon.

Figure 2-6 shows the annual rainfall from 1895 through 2018 (NOAA 2019b). The average rainfall over the 124-year sequence is 74.4 cm (29.30 in.), and the trend line suggests that an overall increase in rainfall. Note, however, that there is also substantial variability. The wettest years over this period were 1973 (132.9 cm; 52.31 in.), 1919 (127.8 cm; 50.3 in.), and 1957 (124.1 cm; 48.86 in.). The driest year was 1917 (25.68 cm; 10.11 in.), as well as several years associated with the early 1950s. This variability is likely related to the location of San Antonio. Wallen (1966:31-33) suggests that global circulation patterns result in frequent high-pressure weather systems at latitudes of roughly 30°. These systems often block or deflect storms, producing dry conditions, with deserts often forming at these latitudes in both the northern and southern hemispheres. San Antonio is located at 29.5° north latitude, a location that may account for long periods of low rainfall amounts. However, the Gulf of Mexico is located only 225 km (140 mi.) away, and tropical storms, originating in the Gulf, can quickly travel inland depositing substantial quantities of rain (e.g., Ellsworth 1923). Flooding is common under these conditions.

The variability seen in Figure 2-6 is also reflected in the historic period. This is clear in Figure 2-7 that presents a tree-ring based Palmer Drought Severity Index (PDSI) for the San Antonio region from 1700 through 1899. The PDSI is a relative measure of soil moisture. Developed in the early 1960s, the index commonly ranges from a value of 4, indicating a severe wet spell, to a -4, indicating a severe drought. Normal moisture levels range between 1 and -1 (Alley 1984; Karl 1986). Figure 2-7, using data developed and presented by Cook and colleagues (1999), shows periods of frequent drought, such as in the early 1750s, 1771 through 1792, and between 1853 and 1863. Periods with excessive precipitation are also present, especially in the early 1700s and between 1864 and 1884. Note also that there is significant variability in the San Antonio PDSI values, variability broadly similar to that seen in Figure 2-6.

Cleaveland and colleagues (2011), using a different set of tree-ring PDSI data and working at a larger scale, provide reconstructions for several climate divisions within Texas back to AD 1500. They suggest that droughts were more severe and more common, in the past. Focusing on the severity of the top 20 droughts on the Edwards Plateau over a given 5-year period, Cleveland and colleagues (2011:66) suggest that seven of the 20 occurred during the 1700s, with four present in both the 1800s and the 1500s. In contrast, the 1900s experienced only three of the 20 most extreme 5-year droughts. Climate during the historic period, then, appears to have been cooler and possibly drier when compared to the modern period. This may especially be the case in the 1700s.

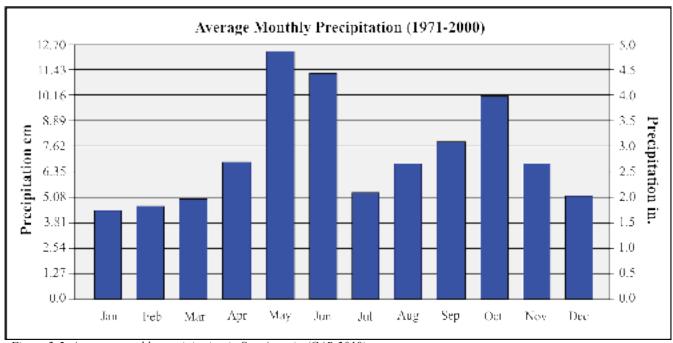


Figure 2-5. Average monthly precipitation in San Antonio (CAR 2019).

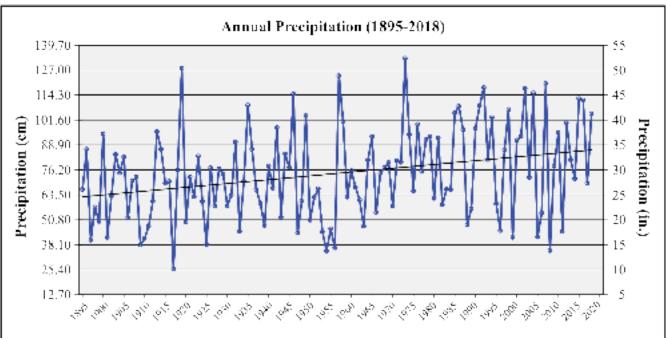


Figure 2-6. Annual precipitation at San Antonio (NOAA 2019b). The trend line is a least squares regression line.

Area of Potential Effect

The following section discusses the cultural environment specific to the location of the APE. The project is located on the west side of San Antonio, approximately 2 km (1.26 mi.) southwest of downtown. This area of San Antonio is generally referred to as the West Side. Figure 2-8 is an aerial image from the 1970s that shows APE Location 2. The area surrounding the APE today is quite similar to this 1970s view. The area is still primarily residential, with houses surrounded by small businesses, warehouses, and light industry. Prior to urbanization that began in the late ninetieth and early twentieth century, the area of the APE was rural and used for grazing livestock (Labadie 1987).

Soils and Hydrology

Two soils are found within the APE (Figure 2-9), Lewisville silty clay, 0 to 1 percent slope (LvA), and Tinn-Frio, which are frequently flooded (Tf). Both soils are associated with stream terraces and flood plains. The LvA soil is dark grayish silty clay over brown silty clay. The LvA series is considered one the most agriculturally productive soil for cotton, corn, sorghum, small grains, flax, and hay (Taylor et al. 1991). The Tf soil is a clay loam to gravelly clay over generally clay or loam that floods at least once a year (Taylor et al. 1991).

The project area is located near the confluences of several creeks (Figure 2-9). The confluence of Martinez and Alazán

creeks is 2.5 km (1.6 mi.) to the north of the APE. Directly south of the APE, Apache Creek flows east, entering Alazán Creek just to the southeast of the APE. Alazán Creek then flows south and enters San Pedro Creek (Figure 2-9).

Historically, the area has been subject to damaging floods such as the 1921 flood in which 30 of the 52 lives lost were within this portion of San Antonio (see Ellsworth 1923:20). Following the Floods of 1946, the U.S. Army Corps of Engineers began an intensive program in which these creeks were straightened and channelized in the 1950s and 1960s (Figure 2-10; San Antonio River Authority [SARA] 2011). Despite local flooding events, both the Alazán and Apache creeks were never a source for irrigated water due to their low flow and deep channel.

Flora and Fauna

The APE lies within the Blackland Prairie ecoregion of Texas, although this classification is no longer applicable due to development in the area. However, historically the area was dominated by grasses including little bluestem (Schizachyrium scoparium), big bluestem (Andropogon gerardii), Indian grass (Sorghastrum nutans), tall dropseed (Sporobolus asper), buffalograss (Bouteloua dactyloides), and hairy grama (B. hirsuta) with areas of scattered trees and shrubs or motes of woody vegetation (Diamond 2010). The vegetation of riparian environment, such as that would be found along Alazán or Apache creeks, would include

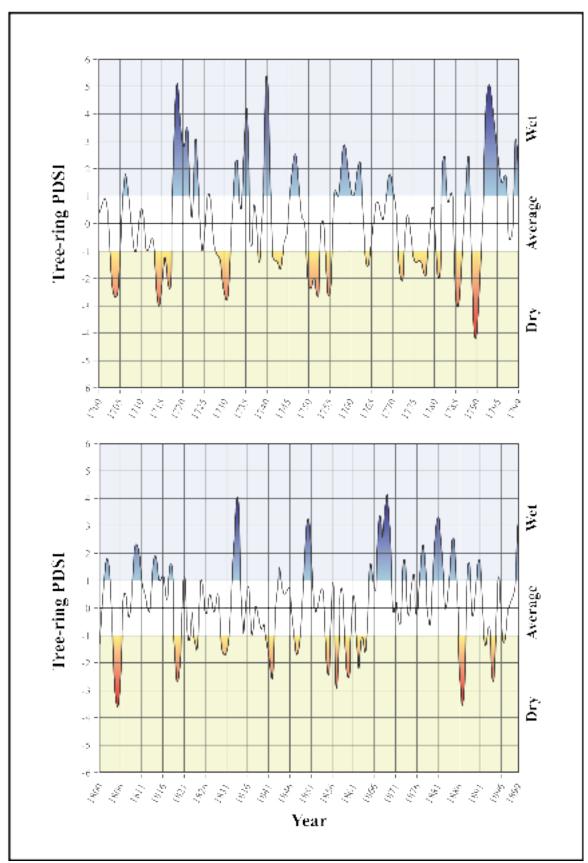


Figure 2-7. Tree-ring based PDSI values for San Antonio region (1700-1899), after Mauldin (2003).

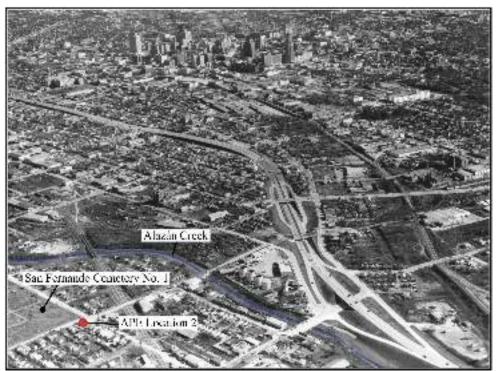


Figure 2-8. Aerial image dating to the 1970s showing APE Location 2, San Fernando Cemetery No. 1, and Alazán Creek. The view is to the northeast with downtown San Antonio in the upper portion of the photograph (UTSA Institute of Texan Cultures: Zintgraff Collection, Z-2132-H-01).

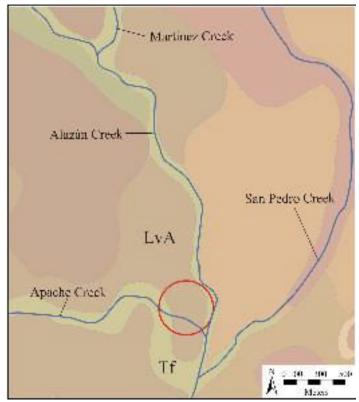


Figure 2-9. Location of the APE (in red) on a U.S. Geographic Service soils map with nearby creeks.



Figure 2-10. Aerial photograph (dating to the 1970s) that shows the channelized Alazán Creek (SARA 2011:9).

large pecans (*Carya illinoinensis*) and cottonwoods (*Populus deltoides*) with brushy vegetation, including mesquite (*Prosopis glandulosa*) and huisache (*Acacia farnesiana*; Havard 1885).

Fauna, like the flora, is no longer representative of past conditions. Historical accounts of early travelers, including accounts of early Spanish explorers (Foster 1995; Wade 2003) and settlers, report a diverse and abundant animal population (Doughty 1983; Weniger 1997). This fauna included bison (*Bison bison*), bear (*Ursidae* sp.), white-tailed deer (*Odocoileus virgininus*), cottontail rabbit (*Sylvilagus* sp.), jackrabbit (*Lepus californicus*), and squirrel (*Sciuridae*; Davis and Schmidly 1997). In addition, various species of bird, fish, reptile, amphibian, and mollusk were available to settlers and travelers.

Chapter 3: Cultural History Background

Raymond Mauldin and Leonard Kemp

As noted previously, no prehistoric archaeological material was encountered on the project. As such, this chapter begins with a brief overview of the historic period, defined here as being between AD 1700 and 1900. General reviews and data on earlier periods in the region, including the Proto-Historic (AD 1528-1700), can be found in a variety of sources (see Bousman and Oksanen 2012; Bousman et al. 2004; Carpenter 2017; Chipman 1994; Dozier 2018; Favata and Fernandez 1993; Foster 1995; Hester 2005; Houk et al. 2009; Kenmotsu and Boyd, eds. 2012; McKenzie et al. 2016; Ricklis 1996; Wade 2003).

The earliest contact between Europeans and Native Americans in what becomes Texas predates AD 1700 (see Chipman 1994:22-104; Favata and Fernandez 1993). However, the focus in this chapter is on a 200-year period that begins with the Spanish founding of Mission San Juan Bautista near present day Piedras Negras along the Rio Grande in AD 1700 (Weddle 1968a, 1968b) to the beginning of the twentieth century. Three broad periods are discussed. These are the Colonial/Mission Period (AD 1700-1820), the Mexican Period (AD 1821-1835), and the Republic of Texas/ Early Texas State Period (AD 1836-1900). This chapter closes with a short note on Texas in the twentieth and twenty-first centuries.

Colonial/Mission Period (AD 1700-1820)

The initial portion of the period in this region of Texas can best be understood as responses by the Spanish to real or imagined threats of French expansion into the region in the late 1600s. These Spanish concerns had roots in La Salle's illfated attempt to establish a permanent settlement, now known as Fort St. Louis, near Matagorda Bay on the Texas Coast, in 1684 (Foster 1997, 1998), as well as the French interests in Louisiana. The Spanish launched several expeditions into Texas in the late 1680s focused on assessing the strength of and threats from the French (Chipman 1994:63-85). Ultimately, a focus on East Texas, led to the establishment of Missions San Fernando de los Tejas and Santísimo Nombre de María in 1690, as well as plans for the construction of several others. However, by early 1694, these missions were abandoned, along with plans for additional construction (Chipman 1994:96-99).

For the purposes of this report, the establishment of Mission San Juan Bautista just south of the Rio Grande in January of 1700 (Weddle 1968a, 1968b) ushers in the Colonial/ Mission Period. While a successful mission had been

established earlier in far West Texas, San Juan Bautista was the first mission in the region that had long-term success. The mission served as the base for numerous expeditions into South, Central, and East Texas, especially in the early 1700s (Weddle 1968a, 1968b).

Expeditions launched from San Juan Bautista included that of Father Olivares, Father Isidro Felix de Espinosa, and Pedro de Aguirre in early April of 1709. That expedition traveled into South-Central Texas, including what would soon become San Antonio (Tous, trans. 1930:5). The Domingo Ramón expedition, which left San Juan Bautista in 1716, ventured into East Texas and reestablished Spanish missions in that region (Chipman 1994). In addition, the Martín Alarcón expedition of 1718-1719 (Hoffman, trans. 1935) resulted in the founding of Mission San Antonio de Valero, the Presidio San Antonio de Bexar, and the Villa de Béxar (Cox 1997, 2005; de la Teja 1995; Habig 1968; McKenzie et al. 2016). While these efforts effectively solidified Spanish presence in Central and South Texas, new conflicts with France eventually resulted in French forces marching on the Spanish East Texas missions, which were quickly abandoned by the Spanish who retreated to San Antonio de Béxar (Chipman 1994:118-119). In 1721, a large expedition under the command of the Marqués de San Miguel de Aguayo, the newly appointed governor of Coahuila and Texas, moved to reestablish the Spanish presence in East Texas. By the close of 1721, this had been accomplished, and leaving forces in place at several newly established presidios effectively neutralized the French threat to Spanish Texas (Buckley 1911; Hackett 2018).

The continued Spanish presence thwarted French interests. However, Spanish officials found it increasingly difficult to maintain that presence, especially in East Texas. While facilities at San Antonio eased this burden, East Texas missions and associated presidios were located at a significant distance from San Juan Bautista, making resupply costly (Jackson, ed. 1995:7-10). In addition, the missions were having limited success in attracting Native America converts (Chipman 1994:128-129; Habig 1968). With peace in Europe and given the significant costs, the strategy of maintaining the East Texas missions, a string of presidios, and troops was reconsidered. As part of the reconsideration, Pedro de Rivera Villalón, a brigadier general, was dispatched by the king to conduct an inspection of the presidios. The inspection tour, initiated in 1724 and completed in 1727, produced a report that recommended closures and significant reduction in forces (Jackson, ed. 1995:61-67). As these recommendations were implemented, three of the essentially unprotected East Texas missions were moved to San Antonio and established along the San Antonio River in 1731 (Chipman 1994:129-133; Habig 1968; Jackson, ed. 1995).

In that same year (1731), 15 families from the Spanish Canary Islands arrived at the Villa de Béxar. This resettlement, paid for by the Spanish Crown, was part of an effort to recruit civilian settlers to the region with the hope it would also reduce the need and associated expense for garrisoned troops (Chipman 1994; Poyo 1991). The Canary Islanders, though small in population, dominated many aspects of cultural, economic, and political life in the Villa throughout the 1700s (Chipman 1994:135-146; Poyo 1991; see also de la Teja 1995:18-21).

The 1730s, 1740s, and 1750s evidenced a number of changes on the northern frontier of New Spain and proved to be especially trying for Villa de Béxar. There was constant tension between the original settlers of the Villa, the newly arrived Canary Islanders, and inhabitants of the missions (see de la Teja 1995; Poyo 1991). These tensions were exacerbated by Apache raids, which were common during this period, often resulting in loss of life, as well as livestock (de la Teja 1995). Military efforts to punish the Apache were, in some sense, at odds with missionary efforts to Christianize the Native Americans.

The missions faced additional hardships related to disease. For example, Chipman (1994:143) reports that in 1739 epidemics of small pox and measles swept the Native American populations in the missions. The number of Native Americans associated with the missions fluctuated, probably seasonally as well as from year to year. As Native American labor was the major source for a variety of tasks, including planting and harvesting activities, these fluctuations were problematic (Chipman 1994). Census data for Native Americans at the five San Antonio missions are spotty. Schuetz (1980:128) has compiled data from a variety of sources for 19 different years between 1720 and 1815. Not all missions have data for all years, and not all Missions were in existence for the pre-1740 census or the post-1794 census. Figure 3-1, then, uses the total number of Native Americans listed as present for a given census year in all missions and divides that by the number of missions represented in that census. The resulting figure is, in effect, an average population level for a mission during a given census. While fluctuations are present, following the mid-1750s these data suggest that Native American populations in the missions were declining and that by the close of the century the San Antonio missions were, in several cases, virtually abandoned (Habig 1968). In 1794, a decree was issued that called for the secularization of the San Antonio missions, as well as other missions in Texas. All missions were secularized by 1824 in Texas (see Carlson 1994; Cox 1997; Habig 1968).

By the initial portion of the nineteenth century, the mission system as a governmental component of Spanish Texas no longer existed. Spanish Texas itself would soon follow. As a result of conflicts in Europe, Spain made increasingly harsh demands on its colonies, including Mexico, primarily for economic support. Following increasing tensions between Mexico and Spain, a declaration of rebellion was issued by Father Hidalgo on September 16, 1810 (Marley 2014:180). The Mexican War of independence would last until 1821 (Henderson 2009).

Several battles between rebels and loyalists occurred in the San Antonio area. In January of 1811, Juan Bautista de las Casas, a retired captain, arrested the Governor, Manuel María de Salcedo, and assumed command of the San Antonio garrison (Caldwell 2010). At his direction, all Spanishborn individuals were removed from power, and their lands were confiscated. The revolt lasted until early March, when local counterrevolutionaries, under the command of Juan Manuel Zambrano, captured and arrested Casas. Casas was subsequently tried, shot, and beheaded, with his head returned to San Antonio by loyalist forces and placed on a pole in the Main Plaza for display (Caldwell 2010; White 2017). Following the revolt, Governor Salcedo was restored to power, and seized property was returned.

In August of 1812, a group of American and Mexican recruits, organized in the United States by José Bernardo Gutiérrez de Lara and commanded by Augustus W. Magee, crossed into Spanish Texas and captured several towns, including La Bahia. Governor Salcedo pursued the Gutiérrez/Magee expedition forces, but after several defeats, he returned to San Antonio (Warren 2010). In March of 1813, expedition forces, now under the command of Samuel Kemper, soundly defeated the loyalist forces at the Battle of Rosillo Creek (Campbell 2003; Thonhoff 2010). Governor Salcedo surrendered San Antonio on April 1, and he and up to 14 loyalist officers were executed outside of San Antonio on April 3 (Campbell 2003; Warren 2010). Increasingly disillusioned with the enterprise, Kemper and a contingent of volunteers returned to Louisiana, leaving Gutiérrez in command (Campbell 2003).

In June of 1813, a loyalist army from Mexico City, led by Colonel Ignacio Elizondo, attempted to restore Spanish authority in Texas. Advancing to the outskirts of San Antonio, Elizondo's forces, numbering just over 1,000 soldiers and volunteers, were soundly defeated by rebel force at the Battle of Alazán Creek (Marshall 2015:53-54). In a two-hour battle, loyalist losses were estimated at 274 killed and 130 captured, while republican losses were 22 killed and 42 wounded (Marshall 2015:53-54). The victory, however, was short-lived. In August, the loyalist army under the direction of Joaquín de Arredondo defeated the rebel army at the Battle

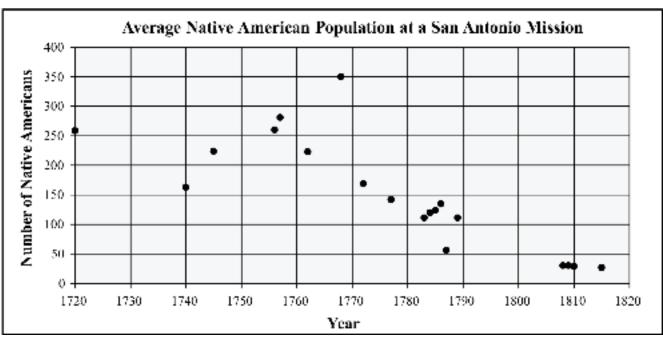


Figure 3-1. Average number of Native Americans in a San Antonio missions, 1720-1815 (data from Schuetz 1980:128).

of Medina (Chipman 1994:237; Thonhoff 2018). This victory effectively ended rebellion in Spanish Texas. Nevertheless, in August of 1821, with much of the government and most of the territory in rebel hands, Spain agreed to an independent Mexico (Campbell 2003; Chipman 1994).

Mexican Period (AD 1821-1835)

By 1821, the population of the entire province of Texas was estimated to be only 2,000 residents (de la Teja 1997). This low figure was understandable in light of the neglect by the Spanish authorities, years of internal strife, rebellion, and recrimination, and the frequent harassment by the Apache. Adopted in 1824, one component of the Mexican Constitution allowed heads of households to claim land in Mexico. Soon, a significant number of immigrants, primarily from the southern portion of the United States, responding to the offer of free land, flooded into Texas (Cox 1997). By 1830, these laws were changed including a prohibition of slavery, a provision that was unlikely to be popular with Texas landholders. Immigration from the United States was outlawed, and Mexico City established tariffs in an effort to increase revenue (Henson 1982). New presidios, part of an effort to enforce the new regulations and assert control, were established in the region (see Campbell 2003; Cox 1997; Fehrenbach 1983; Weber 1982).

Over the next few years, tensions increased between Texas residents and the central government. Much of the unrest centered on increasing demands for a return to provisions

of the 1824 Constitution (Cox 1997). Several skirmishes, including a brief rebel takeover in 1832 of Fort Velasco along the Brazos River, occurred (see Cox 1997). In 1834, Antonio López de Santa Anna assumed the presidency of Mexico. He soon rescinded many of the remaining elements of the Constitution of 1824 and initiated a variety of actions designed to strengthen the federal government. These actions were actively resisted by several states on the northern frontier, including the state of Coahuila, which included Texas (Binkley 1979). Forces under the command of General Martin Perfecto de Cos were sent by Santa Anna to deal with this unrest on the northern frontier. In October of 1835, Mexican forces arrived in San Antonio and quickly occupied the town. Soon surrounded and under siege by a rebel army, Cos surrendered in early December and withdrew back across the Rio Grande (Cox 1997; Marley 2014).

In early 1836, Santa Anna, at the head of a large Mexican army, moved into Texas to reestablish governmental control. Delayed by snow outside of Monclova in northern Mexico in early February (de la Peña 1975:26-30), his army arrived in San Antonio, surrounding rebel forces that had retreated to the Alamo, Mission Valero. Soon thereafter, in early March, the Alamo fell to Santa Anna's army (Fehrenbach 1983:211-215; Nofi 1992). Santa Anna dispatched forces to crush any additional resistance, a move that resulted in the capture and execution of over 300 rebels later that month in Goliad (Davenport and Roell 2010; de la Peña 1975). Santa Anna then pursued the heart of the Texas forces, which were retreating under the direction of Sam Houston. In late April, Houston's troops turned and surprised the Mexican forces

at San Jacinto, winning a decisive victory. Mexican forces soon began a withdrawal from Texas (Cox 1997; Davis 2004; Marley 2014). In May, a captured Santa Anna signed the Treaty of Velasco (Long 1990) that was designed to end the conflict. However, the treaty was soon violated and disavowed by both governments (Fehrenbach 1983:234-246).

Republic of Texas/Early Texas State Period (AD 1836-1900)

The new Republic of Texas, established in 1836, was not recognized by Mexico. Disputes, many of which centered on the southern boundary, continued throughout the 1830s and into the 1840s (Fehrenbach 1983). Mexican soldiers briefly occupied San Antonio in March and again in September of 1842 (Cox 1997). An armistice, agreed on in June of 1843, reduced hostilities, but since neither government ratified a peace treaty, a state of war continued between Mexico and the Texas Republic (Cox 1997).

There were significant retaliations against Mexican and Tejanos (a Texan of Mexican descent) by Anglo Texans during this period, and "a spirit of revenge...prevailed in the young republic" (Montejano 1987:26). Entire communities were destroyed, property was seized, and prominent individuals who had been leading figures in the fight for Texas independence against Mexico were forced to flee to Mexico or risk death (see Alonzo 1998; de la Teja 1991; Montejano 1987). These retaliations and those that followed the war between Mexico and the United States (1846-1848) would shape economic, social, and political events in Texas through the present day (e.g., Booth and Johnson 1983).

The United States recognized Texas as a Republic soon after it was established. Texas, in turn, again encouraged immigration from the United States. Available, inexpensive land resulted in an influx of people, especially from the southern states of the United States, as well as from several European countries, including a large influx of Germans into the Republic (Meinig 1969). Discussions regarding the annexation of Texas into the United States occurred soon after this influx, and late in 1845, Texas was admitted as the 28th state (Fehrenbach 1983; Neu 2010).

Disputes regarding the southern border of Texas were now between Mexico and the United States. In 1846, several incidences occurred, including disturbances between Anglo settlers and established Tejano ranchers (see Alonzo 1998:132-143). In March of 1846, the United States moved troops to the disputed border. When negotiations between

the two governments failed, the United States declared war on Mexico in May of 1846 (Marley 2014). The war, fought mostly in Mexico, lasted through most of 1847 (Marley 2014). In February of 1848, the Treaty of Guadalupe-Hidalgo ended the war. The treaty established the Rio Grande River as the southern international boundary, and, in exchange for 15 million dollars, Mexico ceded claims to Texas, as well as territories that would form parts of Arizona, California, New Mexico, Nevada, Colorado, and Utah (Campbell 2003; Wallace 1965).

In 1847, the population of Texas was estimated at 142,000 individuals. Following the war with Mexico, Texas experienced an influx of population. As before, much of this influx was from southern states as well as Europe, including immigrants from Germany, Poland, and Czechoslovakia (Campbell 2003). By 1860, the state had more than 600,000 inhabitants (Campbell 2003).

Given the historical connections to the southern United States and the dependence on slavery for cotton economy, it is not surprising that Texas seceded from the United States and joined the Confederate States of America early in 1861. However, there were few major battles in the state during the Civil War, and consequently Texas suffered little damage. After the close of the war in 1865, Texas sought to be readmitted to the United States (see Moneyhon 2017), which occurred in 1870 (Campbell 2003, 2010).

Over the next 30 years, the population and associated infrastructure of Texas continued to grow. By 1900, over 3 million inhabitants were present in the state (Meinig 1969). An extensive network of rail lines had been established (Reed 1941), integrating a variety of farming, ranching, and commercial activities across the state (Moneyhon 2017).

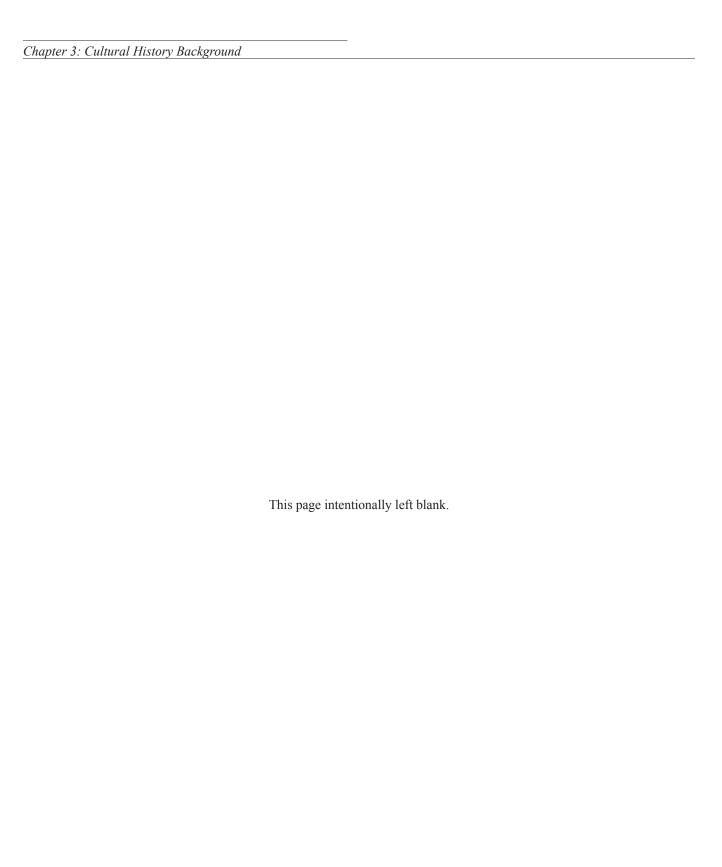
Texas in the Twentieth and Twenty-First Centuries

Texas in the twentieth century and into the initial decade of the twenty-first century would see significant developments. These would be driven to a large degree by the discovery and exploitation of significant petroleum and natural gas deposits (see Warner 1939), agricultural production, including ranching, and the growing size and number of the military installations (see Alcott 2010; Alvarez, ed. 2018; Wooster 2008). Populations continued to increase with the 3 million inhabitants in 1900 increasing to 5.8 million by 1930. This figure grew to 9.5 million by 1960, 16.9 million by 1990, and over 27 million inhabitants by 2016 (Alvarez, ed. 2018). In 2015, Texas contained two of the top five most populous

metropolitan areas, and three of the ten largest cities in the United States (Alvarez, ed. 2018). In 2015, only 17 percent of the population resided in rural areas (Alvarez, ed. 2018). Medicine, science, and technology are now leading sectors in the Texas economy (see Alvarez, ed. 2018; Hendrickson and Sanford 2008).

Perhaps no other city represents the changes in Texas better than San Antonio. Founded 300 years ago by Spanish missionaries and soldiers, it is now the seventh largest city in the nation with over 1.5 million people (World Atlas 2019). The population is racially diverse, with Hispanic numbers growing. In 1950, Hispanics comprised roughly 34 percent of the population in the city. By 1970, Hispanics accounted for 36.3 percent, and by 1990, this figure had increased to around 47.6 percent (Sandefur et al. 2001). Hispanics currently account for 63 percent of the population, with Anglos accounting for 25.5 percent, and African-Americans accounting for 7.1 percent (Statistical Atlas 2019).

Hispanic political and economic influence, however, are not commensurate with their demographic strength, a pattern that has long historical roots (see Johnson et al. 1983; Montejano 1987). The development of racially segregated neighborhoods in San Antonio, and their maintenance, in part thorough deed restrictions (see Brischetto et al. 1983; Worthington 2017), allowed the neglect of some of these neighborhoods, including the Hispanic dominated West Side (see Walter et al. 2017; Zelman 1983) where the current project is located. Overcrowding, coupled with a lack of housing, medical facilities, sanitation, and other basic city services, produced staggeringly high rates of disease and death. For example, Worthington (2017) notes that in 1939-1941, death rates from tuberculosis in the San Antonio population (151.7 per 100,000 deaths) were the highest among the 92 largest cities in the United States. These high rates were driven almost entirely by tuberculosis deaths among Hispanics (302 per 100,000 deaths). As noted in the next chapter, one response to these conditions was the development of public housing, such as the Alazán-Apache Courts.



Chapter 4: History of the Project Area

While the previous chapter reviewed the general history of Texas, this chapter provides a brief review of the project area history. The review begins with selected details of the project area beginning in the 1800s and ending in the 1940s. This includes a focus on two prominent locations that are near the APE locations, San Fernando Cemetery No. 1 and the Alazán-Apache Courts housing project. As noted in Chapter 1, CAR's initial review of the locations of the APE suggested an additional area of concern, the 1813 Battle of Alazán Creek. The battle, as discussed in the previous chapter, was a victory over Spanish Government forces during the initial stages of revolt associated with the Mexican War of Independence. The exact location of the battle is contested. Originally, a Texas Historic marker was placed on the 2300 Block of Commerce Street (Marshall 2015), roughly 1 km (0.62 mi.) to the northwest of the project area. However, Kirkpatrick and Moreno (2008) cite a San Antonio Express News article stating that the battle may have been fought within the boundary of San Fernando Cemetery No. 1, which is adjacent to APE Location 1. Recently Marshall (2015:54-56) has convincingly argued, based on contemporary accounts of the battle, that it was likely fought southeast of Woodlawn Lake, at a location roughly 2.75 km (1.71 mi.) to the north/ northeast of the APE Location 1 and well beyond the current project boundaries.

History of the Project APE

Prior to the mid-nineteenth century, the area surrounding the APE was probably not inhabited and was likely used as a common grazing land (Labadie 1987). However, in 1842, San Antonio was incorporated by legislative act of the new Republic of Texas (Heusinger 1951). This designation allowed the City to sell unimproved lands within its boundaries. Beginning in 1849, City Engineer Francois Giraud began to plat these lands (Gentilz and Giraud 1852). Figure 4-1 shows a portion of one of the plat maps, and Lots 130, 202, and 207 that encompass the APE locations are outlined in red.

In the 1850s, the population of San Antonio had begun to segregate into areas with common language and ethnic backgrounds (Córdoba et al. 2018; Garcia 1991; Márquez et al. 2007; Johnson 1990). Anglos tended to congregate in the city center and northern portion, and Germans were grouped in the eastern and southern parts (Córdoba et al. 2018; Garcia 1991). The area west of San Pedro Creek, including the project area, was where many Tejanos and Mexicans lived. It was known historically as the Barrio de Laredo, or Laredito, and the Latin or Mexican Quarter (Córdoba et al. 2018; Garcia

1991; Labadie 1987). Although, this ethnic characterization of San Antonio's diversity is oversimplified at least within the project area in which German-origin, Tejanos, Mexicans, and others are known to have lived and worked (further discussed in Chapter 7).

A central element of the Latin Quarter, and adjacent to APE Location 1, is San Fernando Cemetery No. 1 (Garcia 1991:16). Burials first began at this location in the 1860s (Kirkpatrick and Moreno 2008) and continue to the present day. The cemetery was and is an important component of the community. For example, in the 1930s, it was reported that up to 25,000 people would visit to honor their dead on November 1, All Saint's Day, and November 2, All Soul's Day (The Southern Messenger, 22 February 1934). In addition to these Catholic observances, Kirkpatrick and Moreno (2008) report that the Yumas, Mojaves, Cocopas, Dieguinos, Maricopas, and other Native groups celebrated La Fiesta de Recuerdo (the Feast of Remembrance) over a five-day period in the cemetery. The cemetery contains the remains of noted individuals that contributed to the history of Texas and San Antonio, including José Antonio Navarro and José Francisco Ruiz, signers of the Texas Declaration of Independence, and José Antonio Menchaca, who fought at the Battle of San Jacinto and served as alderman and mayor protem of San Antonio. Others include François Giraud, Mayor of San Antonio and City Engineer, and Andrea Castañón Villanueva (Madame Candaleria), a Battle of the Alamo civilian survivor (see Kirkpatrick and Moreno 2008; Kemp, personal observations, 2019). Kirkpatrick and Moreno (2008) estimate 21,000 people may be buried at the cemetery. San Fernando Cemetery No. 1 is not designated as a Historic Texas Cemetery nor is it listed on the NRHP. However, Texas Historic Marker No. 11741 is located on the cemetery. It marks the grave of Alejo de la Encarnación Pérez, the youngest survivor of the Battle of the Alamo (THC 2019).

August Koch's Bird's Eye View of San Antonio shows the development surrounding the West Side of San Antonio around 1886 (Figure 4-2, top; Koch 1886). This image should be taken with some skepticism because its purpose is to portray an idealized image of San Antonio. Nevertheless, the image does show businesses and residences infilling blocks east of Alazán Creek. Both streetcar (1) and rail lines (2), as well as the Alazán Ditch (3), are shown with the deeply incised Alazán Creek (4) on Koch's map. Labadie (1987) cites the proliferation of business, including Guenther's Grain Warehouse, the Martinez Tamalina Milling Company,



Figure 4-1. A copy of Giraud's 1852 plat map for San Antonio de Béxar. Plats that contains the current APE locations are highlighted in red (Gentilz and Giraud 1952).

and Ed Steves Lumberyard, as well as churches that included La Trinidad United Methodist, the German Methodist Church, and Missionary Baptist Church as evidence for the development of this part of town. However, Figure 4-2 (bottom) suggests that the area west of Alazán Creek, which includes APE Location 1, was sparsely settled at this date. San Fernando Cemetery No. 1 (5) is shown to the southeast of the APE.

In the 25-year period between Koch's 1886 map and the 1912 Sanborn Fire Insurance Map (Figure 4-3; Sanborn Map Company [Sanborn] 1912), development increased around the APE locations. While the streets are not paved, there is City water service, a public school, two churches, and a police substation (all highlighted in blue) within a few blocks of the APE locations. In addition, there are nine identified stores

and one business (highlighted in green). The map shows three identified tenement structures that would become known as *corrales* (due to their configurations that resembled a corral) with an individual living space of less than 18.5 m² (200 ft.²; highlighted in black). The map shows an abundance of freestanding structures identified as dwellings that are similar in size.

The growth of the area reflects a trend of increased immigration from Mexico to Texas and, specifically, in San Antonio to the West Side. According to Garcia (1991), the growth was the result of three waves of immigration from Mexico primarily between 1900 and 1930. The first (1900-1910) and second wave (1911-1920) of immigrants are described as belonging to the elite, professional, and merchant classes who quickly settled on the city's West Side (Garcia 1991). The last wave

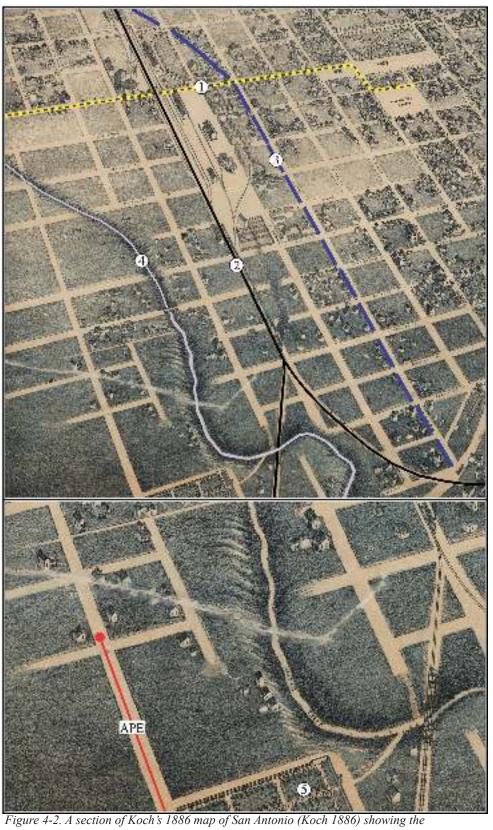


Figure 4-2. A section of Koch's 1886 map of San Antonio (Koch 1886) showing the development on the Westside of San Antonio (top): 1) streetcar lines, 2) rail lines, 3) Alazán Ditch, and 4) Alazán Creek. The bottom shows APE Location 1 (in red) and 5) the northeast portion of San Fernando Cemetery No. 1.



Figure 4-3. The APE locations are highlighted in red, public buildings are in blue, businesses (primarily grocers) are in green, and the identified tenements are in black on the 1912 Sanborn map.

(1921-1929) of Mexican immigration into the West Side was primarily laborers and agricultural workers (Garcia 1991). Initially, this last group of immigrants found low-wage work in the city's rail yards, packing plants, garment factories, and service industries, and some were migrant agricultural workers who used San Antonio as a home base (Garcia 1991:29).

The Great Depression (1929-1942) ended further immigration from Mexico. It also resulted in the introduction of deportation programs for many immigrants. The return of migrant agricultural workers to their San Antonio home base only added to the ranks of the unemployed (Garcia 1991). Zelman (1983:124) states that in 1938 "over one quarter of San Antonio population was living at or below a bare subsistence level, and 85 percent of those at the bottom were Mexican." In addition, the West Side's low tax revenue led to limited city services, such as clean water, sanitation, and pest control (Zelman 1983). The limited services coupled with high population density resulted in rates of tuberculous, intestinal disease, measles, typhoid fever, pneumonia, and whooping cough that were amongst the highest in the state (Zelman 1983:129).

The inauguration of Franklin Roosevelt in 1933 and the implementation of his New Deal brought attention and funding to impoverished communities throughout the United States. The West Side benefitted from this largesse with national relief programs. Works Progress Administration program investigator Selden C. Menefee stated that

... at least half of San Antonio's approximately 20,000 Mexican families were dependent, wholly or in part, upon government aid for their subsistence at the end of 1938. Without that aid, malnutrition and actual starvation would undoubtedly have taken a heavy toll in the Mexican community during the depression [Zelman 1983:131-132].

The Alazán-Apache Courts development, which, at one time, surrounded much of APE Location 1 (Figure 4-4), represented a partial response to these issues. The project, championed by local priest and activist Father Carmelo Tranchese and First Lady Eleanor Roosevelt (Zelman 1983), was created to mitigate decades of City neglect that led to the creation of substandard housing and increased mortality among residents of the West Side. Opened in 1940 and 1941, the Alazán-Apache Courts project was one of the first public housing projects in the United States (Zelman 1983). The project was a result of the U.S. Congress passing the Wagner-Steagal Act creating the U.S. Housing Authority in 1937 and Texas passing the Carssow Slum Clearance (1937) allowing local governments to create housing authorities (Garrison 2018; Zelman 1983). San Antonio's Housing Authority was created in the same year. It immediately began to implement plans for the purchase of private properties, the clearance of substandard housing, and the creation of low rent housing on the West Side (Garrison 2018; Zelman 1983). Public housing was segregated so that the Alazán-Apache Courts were exclusive for Mexicans and people of Mexican descent. Other housing projects completed in San Antonio were the Lincoln Heights Courts (1940) for African Americans and Victoria Courts (1940) for whites (Garrison 2018; Zelman 1983). The project had immediate effects beyond providing adequate housing including improved health statistics and the fostering of a new community spirit (Zelman 1983).

The housing project was designed in the International Style (Figure 4-5), a mid-twentieth century architectural movement that emphasized open space, function over adornment, and the use of concrete and steel to create cost-effective structures (Garrison 2018; Zelman 1983). In the 1990s, portions of Alazán-Apache Courts were renovated with the remaining portion replaced with single-family bungalow-style homes (Fisher and Pfeiffer 2007).



Figure 4-4. Late 1940s map showing location of the Alazán-Apache Courts (lined in black) and the APE locations (in red; City of San Antonio Street Map circa 1940s on file at CAR).



Figure 4-5. Photograph of an Alazán-Apache Courts housing in 1942 (UTSA Special Collections: San Antonio Light Photograph Collections, MS 359).

Chapter 5: Previous Archaeological Investigations near the APE

Archaeological projects on the West Side of San Antonio have been limited. As a consequence, only a few archaeological sites have been recorded. There have been three major surveys near the APE locations. These are the Avenida Guadalupe Project (Snavely and Fox 1983), the Vista Vera South Project (Labadie 1987), and the Apache Creek and San Pedro Creek phase of the Westside Creeks Improvement Project (Haefner et al. 2014). An additional project for the Alazán Creek hike and bike trail is in progress under CAR (Zapata 2018). The three completed projects resulted in the documentation of four sites. This chapter discusses these sites.

Avenida Guadalupe Project: 41BX511

The Avenida Guadalupe Project was a survey conducted by the CAR in 1983 (Snavely and Fox 1983). It consisted of a surface survey and 48 subsurface augers within the western three-quarters of New City Block 2437, which is also the boundary of 41BX511. Snavely and Fox (1983) date occupation of the site beginning in the 1890s to the mid-1980s. CAR recommended that the site was not eligible to the NRHP.

Martinez Tamalina Milling Company: 41BX607

The Martinez Tamalina Milling Company (41BX607) was located at 1000 S. Medina Street, along the southwest corner of S. Medina Street and El Paso Street, and it was the second location of B. Martinez Sons Company. This building was constructed by Leo Dielman in 1912 for José Bartolome Martinez (Labadie 1987:32). Martinez patented the "tamalina" process for making corn tortillas in 1908 by dehydrating corn meal into a flour consistency (Labadie 1987:32; B. Martinez and Sons, Inc. Collection, MS 395, UTSA Libraries Special Collections). Martinez is also credited for the invention of

the corn chips known as tostadas (B. Martinez and Sons, Inc. Collection 1908-1932, MS 395, UTSA Libraries Special Collections). The building was recommended eligible to the NRHP. However, the building was demolished prior to any decision (see Labadie 1987).

Alazán Ditch: 41BX620

CAR (Fox 1978) first recorded the Alazán Ditch. The historic period ditch was constructed by the City as an effort to provide irrigable lands to the west of San Pedro Creek and to mitigate the effects of flooding. It was completed in 1875 (Thomas and McKenzie 2018:39). However, poor construction required additional efforts to maintain the ditch. The ditch was closed by the beginning of the twentieth century. Since 1978, several portions of the ditch have been documented (see Iruegas and Iruegas 2016; Labadie 1987; Stotts et al. 2014; Ward 2014). CAR also documented a portion of the ditch during the Frio Street monitoring in 2017 (Thomas and McKenzie 2018). The Alazán Ditch is listed as eligible for the NRHP.

41BX2055

Site 41BX2055 is a historic period trash dump, situated on the left bank of the Apache Creek (Haefner et al. 2014:77). Hicks and Company recorded the site during the Apache Creek and San Pedro Creek phase of the San Antonio River Authority's Westside Creeks Improvement Project (Haefner et al. 2014). It is located approximately 130 m (427 ft.) northwest of Colorado and Tampico streets. Artifacts included glass, ceramics, and brick with diagnostics dating to the late nineteenth and early twentieth century (Haefner et al. 2014:77). The site was recommended as not eligible for listing as a State Antiquities Landmark or for the NRHP (Haefner et al. 2014:89).

Chapter 5: Previous Archaeological Investigations near the APE					
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Chapter 6: Archaeological Field and Laboratory Methods

This chapter outlines field and laboratory methods that CAR developed to investigate the two APE locations. It provides information concerning the final deposition of artifacts and records generated by the project. Additional information is available in the project scope of work that is on file at CAR (CAR 2018).

Field Methods

The Project Archaeologist monitored the excavation of nine bore trenches along S. Colorado Street (APE Location 1). A trench was also excavated at Tampico and S. San Marcos streets (APE Location 2). Fieldwork consisted of archaeological monitoring for archaeological features and artifacts. An archaeologist was present on site to monitor any ground-disturbing activities. The archaeologist maintained a standard monitoring form containing descriptions of the activities. These observations were supported by digital data, including GPS locations and photographs. A lab-based GIS technician supported the project by creating a shapefile of the project area and by managing GPS data and photographic data collected by the monitor. The Project Archaeologist maintained a photographic log in addition to the daily monitoring forms.

Site Recording

For the purposes of this project, an archaeological site was defined as containing cultural materials that dated before 1955. To qualify as a site, a location must have one of the following: (1) five or more surface artifacts within a 15 m (ca. 49.2 ft.) radius; (2) a single cultural feature, such as a hearth, observed on the surface or exposed in a trench; (3) at least three artifacts within a given 10 cm (ca. 4 in) level exposed in a trench; or (4) a trench containing five or more artifacts.

As noted previously, and discussed in the next chapter, archaeological material identified in an APE Location 2 trench met the definition of a site in that it contained an archaeological feature. CAR informed the COSA-OHP archaeologist, Matthew Elverson, of the find. Mr. Elverson requested that the features be documented and diagnostic

artifacts be collected from the feature. All collected artifacts were given provenience information and transported to the CAR laboratory for processing, analysis, and curation.

Artifact Analysis and Curation

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. Artifacts collected during the investigations and monitoring were brought to the CAR laboratory, washed, air-dried, and stored in 4 mil zip-lock, archival-quality bags. Materials needing extra support were double-bagged, and acid-free labels were placed in all artifact bags. Labels were generated by laser printer, and each label contains provenience information and a corresponding lot number. If necessary, these artifacts were separated by class and stored in acid-free boxes, which were labeled with standard tags.

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

Reporting Requirements

Following completion of the investigations, CAR prepared a draft report of the investigations and provided documentation summarizing the activities and results of the project. The report included recommendations regarding the significance of any archaeological discoveries and suggestions for additional research. CAR submitted the draft report to PhaseLink Utilities for Zayo, COSA-OHP, and the THC for comments. The review comments were incorporated into the final document, which was printed and distributed to Zayo, the COSA, THC, other state repositories, and libraries.

Chapter 6: Archaeological Field and Laboratory Methods				
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Chapter 7: Results of the Archaeological Investigation

CAR monitored two APE locations that involved subsurface excavation. APE Location 1 was along S. Colorado Street and involved the excavation of nine borehole trenches. APE Location 2 was at a communication hub at San Marcos and Tampico streets and consisted of the excavation a trench. Because of this work, CAR recorded one new site, 41BX2766, in APE Location 2. This chapter presents a summary of the monitoring followed by a discussion of site 41BX766.

APE Location 1: Borehole Pits

Archaeological monitoring began on the southern portion of the APE at Vera Cruz and Colorado streets on January 22, 2019. CAR monitored the excavations of nine borehole pits moving north on S. Colorado Street, from the Chihuahua Street intersection to the Guadalupe Street crossing, on January 24, 2019. The pits served as entry and exit for the directional bore. Figure 7-1 shows the locations of the pits. The pits measured approximately 1.2-1.5 m (4-5 ft.) in length, 1-1.2 m (3.5-4 ft.) in width, and ranged from 99-111 cm (39-44 in.) below the surface. Soils were a black to very dark brown (10YR 2/1 to 2/2) silty clay designated by the Web Soil Survey (2019) as Lewisville silty clay. No artifacts or archaeological features were found in these pits.

Three borehole pits were excavated from Vera Cruz to Chihuahua streets in late January 2019. The excavation of these pits allowed a tie-in to a cable carried on utility poles on the west and south side of San Fernando Cemetery No. 1. These cables ultimately led to a Sprint communication hub at San Marcos and Tampico streets (APE Location 2). The pits measured approximately 1.2-1.5 m (4-5 ft.) in length, 1-1.2 m (3.5-4 ft.) in width, and ranged from 99-111 cm (39-44 in.) below the surface. Soils were a black to very dark brown (10YR 2/1 to 2/2) silty clay. The pit on Chihuahua Street had been impacted by previous excavation for a water line and gas line (Figure 7-2, right). The pit located within the right-of-way adjacent to San Fernando Cemetery No. 1 was also impacted by past construction (a telephone pole). No artifacts or archaeological features were found in the three pits.

APE Location 2: Communication Hub

The trench for the fiber optic (conduit) tie-in was to a communication hub at San Marcos and Tampico streets was excavated on February 4, 2019. The trench was 5.7 m (18.7 ft.) in length, 60 cm (23.6 in.) in width, and 111.7 cm (44 in.) in depth. A charcoal stain with artifacts was initially identified

as Feature 1 in the east wall of the trench. Matthew Elverson of COSA-OHP was informed of the finding on February 4, 2019, and recommended documentation of the feature. Diagnostic artifacts were collected to date and characterize the feature. Based upon site criteria provided in Chapter 6, the feature fulfilled the definition of an archaeological site.

41BX2276

Site 41BX2276 is a late nineteenth midden that lies within the profile and footprint of the trench excavated at the communication hub on San Marcos and Tampico streets within New City Block (NCB) 2899. The lot falls within location 207 in Giraud's plat map of 1852 (see Figure 4-1), which is now NCB 2899. Figure 7-3 shows the site location of the midden feature. The midden is 60 cm (23.6 in.) below the surface, approximately 2.7 m (8.8 ft.) in length, and ranges from 5-20 cm (1.9-7.87 in.) in thickness (Figure 7-4). The feature continues into and beyond the east wall of the trench excavation for an unknown distance. Consequently, a 15 m (49.2 ft.) buffer was placed around the feature and serves as the site boundary. The west trench wall contains a modern water line and communication hub that had previously removed a portion of the midden in that location. Below the top grade of asphalt and road base, there is an intact homogeneous soil of very dark brown (10YR 2/2) silty clay. The following sections present a history of NCB 2899 and a summary of artifacts recovered from site 41BX2276.

History of NCB 2899

The following is a lot history of NCB 2899, a portion of Original City Lot 207. The section includes a discussion of how that lot history reflects the development of the area beginning in the mid-ninetieth century and extending to the mid-twentieth century.

Originally, Lot 207 was surveyed and platted in 1849 and 1850 (see Figure 4-1). Shortly thereafter, José Cassiano bought the property (Bexar County Deed Records [BCDR] 1853:L1:580-581). Cassiano, an Italian immigrant, moved to San Antonio in 1820 (Strong 2010). He provided financial support to Texas during the war with Mexico (1835-1836) and subsequently served as an alderman in San Antonio (Strong 2010). His purchase of Lot 207 is consistent with the land speculation boom (see Pitts 1966) that began under the Republic of Texas (1836-1846) and continued as Texas became part of the United States.

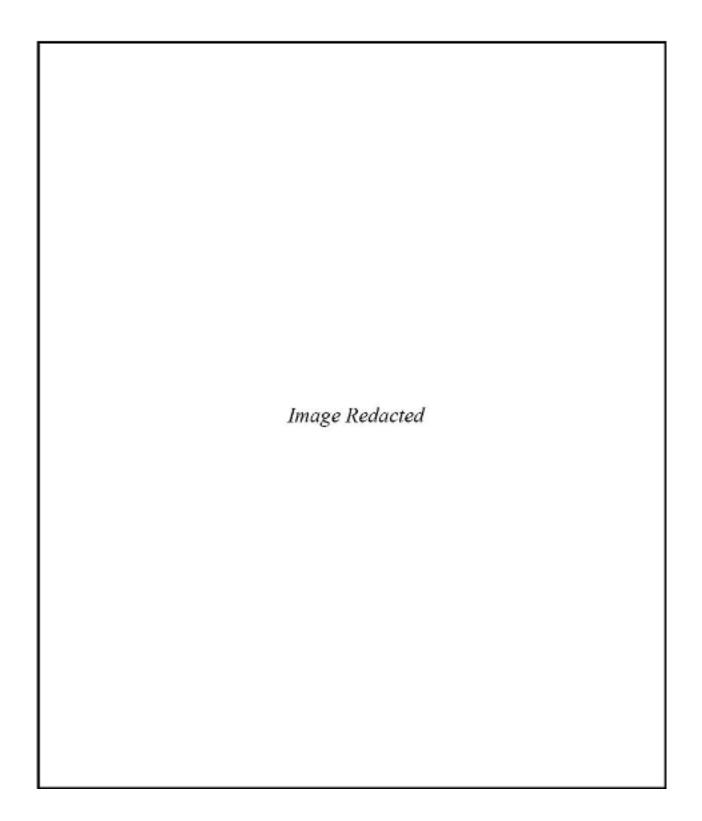


Figure 7-1. Location of boreholes along APE Location 1 on S. Colorado Street.



Figure 7-2. Image on the right shows the machine boring in to the test pit at Chihuahua and S. Colorado streets. The image on the right shows disturbance from past utility construction. The bore is below an existing gas line and to the right of a trench for a water line. The fiber optic conduits are in the upper left.

Heinrich and Sophia Ellermann bought the land from Cassiano in 1853 (BCDR 1853:L1:580-581). According to U.S. Census data (United States Census Bureau [USCB] 1853), Heinrich was born in 1813 while Sophia was born around 1832, both in Germany. The Ellermanns appear to have come to the United States in the 1840s and 1850s. The Ellermanns sold a portion of Lot 207 to Dora and Adolph Würz in 1884 (BCDR 1884:38:326-328). Dora, the daughter of Heinrich and Sophia Ellermann, had married Würz in 1881 (St. John's Lutheran Church 2016). Adolph was born in 1839 in Germany and immigrated into the United States in 1857 (USCB 1866). German immigration into Texas was a common occurrence in the 1840s and 1850s. In the 1840s, Europe suffered a series of crop failures resulting in the emigration of large numbers of individuals to the United States in general, and Texas in particular (Jordan 1966). As noted in Chapter 4, this was a period when immigration was encouraged first by the Republic and then as a state, and Germany migrants were well-represented (Jordan 1966; Meinig 1969).

The Würzs built their house on the property on the corner of Tampico and San Marcos streets, adjacent to APE Location 2, with a loan from International Building and Loan Association (1301 S. San Marcos Street; BCDR 1885:36:619-620). Following the death of Dora, Würz defaulted on the loan, and the property was sold back to Sophia Ellermann (BCDR 1888:57:436-437; *San Antonio Daily Light*, 26 April 1888:4; San Antonio Municipal Records [SAMR] 1887). Following Sophia's death in 1891, the property was divided among her

descendants, including her grandson, Karl Würz, the son of Adolph and Dora, and a Wilhelmina Würz Moegelin (BCDR 1904:228:37-41; SAMR 1891), who was possibly the daughter of Dora. A lawsuit between Karl and Wilhelmina in 1906 divided the property, with Wilhelmina Würz Moegelin and her husband Albert Moegelin awarded the northern portion of the property, which included the house and shed at 1301 S. San Marcos Street (Figure 7-5, left), and Karl Würz given the southern portion of the property (BCDR 1906:248:584-585; Figure 7-5, left). In 1906, Würz divided his portion of the award into four lots, which he sold (BCDR 1906:251:112-113, 1906:253:12, 1906:253:259-260, 1906:260:103-104). The four lots are shown on the 1912 Sanborn map (Figure 7-5, right). APE Location 2 and 41BX2276 are adjacent to the property awarded to Albert Moegelin and Wilhelmina Würz Moegelin (Figure 7-5, right).

The Moegelins sold the property and house to Louis and Edwijen (Aduvijen) Rittimann in 1907 (Appler 1907; BCDR 1907:266:159-160). They, in turn, sold the property to Fanny Moke in 1913, who then transferred it to her daughter, Myrtle (BCDR 1913:416:27-28, 1933:1367:117; *San Antonio Light*, 25 July 1933:20). During this period, the house was used as a rental property. Myrtle Moke subsequently sold portions of the property to Juan and María Tabares in transactions from 1928 to 1938 (BCDR 1929:1101:182-183, 1938:1661:552-553). They had emigrated from Mexico in 1919 (USCB 1921) and were the first Hispanic owners of the property. The Tabares family would own the lot until the 1960s. Tabares sold a portion of their property adjacent to Apache Creek to

Figure 7-3. Site Map showing APE Location 2 and the new site 41BX2766 on an Esri topographic map.

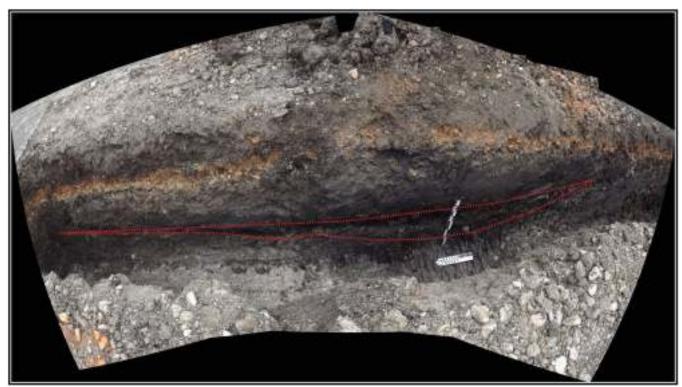


Figure 7-4. The east wall of trench with the dashed red line highlighting the bottom of the midden.

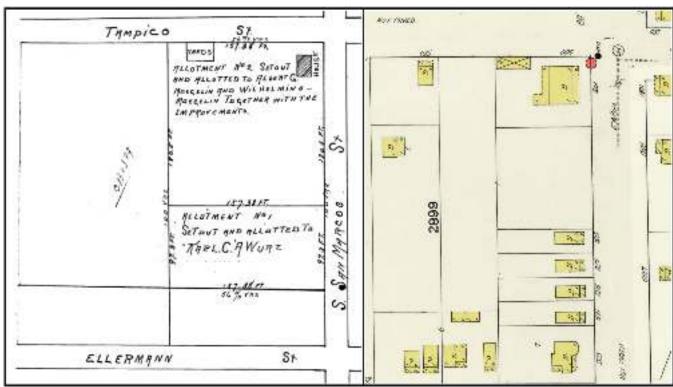


Figure 7-5. The image on the left shows a schematic of the 1906 decree (BCDR 1906:248-584). The image on the right is a detail of the 1912 Sanborn map showing the showing the Würz house. The approximate location of the feature that forms site 41BX2766 is indicated by the red circle.

the SARA in 1960 (BDCR 1960:4431:587-588), with the remaining portion of NCB 2899 sold to Manuel and Carmen Maldonado (BDCR 1968:6001:392). They subsequently sold the property to U.S. Telecom in 1986 (BDCR 1986:3706:1935-1937). In 1987, U.S. Telecom sold the property to Sprint, the current landowner (BDCR 1987:4409:180-181).

The division of a property into smaller lots, such as was done by Karl Würz, and absentee landowners, who used houses as rental income, was a common pattern on the West Side of San Antonio. Larger lots were often divided, and several homes were constructed and then rented out (Zelman 1983). This would eventually lead to the decline of housing values as rental units dominated the area (Zelman 1983). The 1912 Sanborn map for the area shows that the streets at that date were not paved. However, Figure 7-5 (right) shows a water line, as well as a fire hydrant, at the corner of Tampico and San Marcos streets. The lack of paving suggests little investment in infrastructure in this portion of the city. While both the water service and the fire hydrant are public utility improvements, this infrastructure essentially protected the landowner's interests by reducing the risks of fire of rental properties (Zelman 1983).

Artifact Analysis

Artifacts found in association with 41BX2766 include diagnostic glass bottles and ceramic fragments (white ware, porcelain, and stoneware) that form the temporal diagnostics used to date the feature and characterize the midden assemblage. Figures 7-6 and 7-7 show examples from the collected artifacts.

The tableware (Figure 7-6) includes a fragment of a cut and pressed glass vessel, a decorated (decal and gold leaf) porcelain teacup fragment, a stoneware plate fragment, and a decorated ceramic piece associated with the Aesthetic Movement of the mid-to-late nineteenth century (see Burke 1987; George 2019; Birks 2019). Glass artifacts (Figure 7-7) include whole and fragments of imported Cantrell &

Cochrane torpedo soda (soda water) bottles (Kovels 2019). In addition, a large number of medicine bottles were recovered, with one from a local pharmacy of L. Orynski Druggist San Antonio, Tex. (*San Antonio Daily Express*, 1 September 1890) and a second of the national brand of Sharpe & Dohme of Baltimore, Maryland (Hutchinson Bottle Directory 2019).

In addition to glass and ceramics, there were metal objects including fragments of a knife and a spoon, a hook, and a hand-forged spike. The collection also includes a small amount of butchered faunal bone from large mammals (bovine). Overall, the artifacts date to the late nineteenth early and early twentieth century based on the diagnostic glass and ceramics. Based on the temporal period of the artifacts, the collected items are likely associated with the Ellermann or Würz households.

Summary

CAR monitored the excavation of borehole pits along Colorado Street, from Vera Cruz Street to just north of Guadalupe Street. In addition, CAR monitored the excavation for a trench at a communication hub at the intersection of S. San Marcos and Tampico streets. No artifacts were found in the pits dug along Colorado Street. A late nineteenth-century midden was found at the communication hub. The midden, designated site 41BX2766, contained glass bottles and dinnerware, ceramics, metal artifacts, and faunal bone. The midden likely extends further east beyond the trench, but on the west, it likely has been removed by previous construction. Given that an unknown portion of the midden may still exist, as well as the lack of study in this area of San Antonio, CAR suggests that there is insufficient data to determine the NRHP eligibility status of 41BX2766. Based upon the findings, CAR suggests that any future ground-disturbing activities near the communication hub take into account 41BX2766 and, at a minimum, monitor the ground-disturbing activities. The THC concurs that an eligibility determination cannot be made and that any future ground-disturbing activities near the site should be monitored by a professional archaeologist.



Figure 7-6. Examples of tableware collected from 41BX2766: a.) cut and pressed glass cup fragment; b.) decal porcelain tea cup; European earthenware with a maker's mark "ROYAL PATENT IRONSTONE BURGESS & GODDARD," (ca. 1870s-1885); and d.) plate rim decorated with aesthetic-style floral pattern (ca. late 1800s). See Burke (1987), Birks (2019), and George (2019).



Figure 7-7. Examples of glassware collected from 41BX2766: a.) Cantrell & Cochrane torpedo bottle (1869-early 1900s); b.) L. Orynski medicine bottle (late 1800s-early 1900s); c.) Sharpe & Dohme medicine bottle (ca. late 1800s); and d.) dip molded unidentified medicine bottle (ca. late 1800s-early 1900s). See Hutchinson Bottle Directory (2019), Kovels (2019), and San Antonio Daily Express (September 1, 1890).

Chapter 8: Summary and Recommendations

CAR was contracted by Zayo Group, LLC to perform archaeological services for the installation of a fiber optic cable southeast of downtown San Antonio from January 22 to February 4, 2019. The project was located on COSA property and was subject to regulatory review under COSA's Unified Development Code as the activities had the potential affect archaeological or historical sites. The project required review by the THC under the Antiquities Code of Texas because COSA is a political subdivision of the state and the project was conducted on publicly owned lands.

The 0.15 hectare (0.36 acre) APE consisted of two locations. APE Location 1 (0.14 hectare; 0.35 acre) ran along the east and west sides of S. Colorado Street from just north of Guadalupe Street to just north of Chihuahua Street. APE Location 2 (0.004 hectare; 0.01 acre) consisted of a communication hub at San Marcos and Tampico streets. The installation of fiber optic cable involved ground-disturbing activities that included the excavation of borehole pits and a trench at the communication hub.

CAR monitored the excavations of nine borehole pits on S. Colorado Street from Chihuahua Street to just north of Guadalupe Street (APE Location 1) from January 24 through January 29, 2019. The pits served as entry and exit for a directional bore. No artifacts or archaeological features

were found in these pits. The excavation of a trench at the communication hub on San Marcos Street (APE Location 2) on February 4, 2019, revealed a late nineteenth-century midden. The feature met the criteria for an archaeological site and was designated 41BX2276. Based on available historical records and artifact analysis, the midden is likely associated with families of German immigrants and their descendants. Diagnostic glass and ceramic artifacts suggest the artifacts collected from the site date to the late nineteenth century.

Based upon the findings, CAR suggests that future grounddisturbing activities near the communication hub take into account site 41BX2766 and, at a minimum, monitor grounddisturbing activities. Given that an unknown portion of the midden still exists, as well as the lack of study in this area of San Antonio, CAR suggests that there is insufficient data to determine the NRHP eligibility status of 41BX2766. The THC concurs that an eligibility determination cannot be made and that any future ground-disturbing activities near the site should be monitored by a professional archaeologist. No further review of potential effects to above-ground historic resources is required under the Antiquities Code of Texas. However, should this project ultimately include any federal involvement, additional consultation with THC/ State Historic Preservation Officer under Section 106 of the National Historic Preservation Act will be required.



References Cited:

Abbott, P.L., and C.M. Woodruff

1986 The Balcones Escarpment. Geological Society of America, San Antonio.

Alcott, E.B.

2010 Brooks Air Force Base. Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/qbb05, accessed August 2019.

Alley, W.M.

1984 The Palmer Drought Severity Index: Limitations and Applications. *Journal of Climate and Applied Meteorology* 23:1100-1109

Alonzo, A.C.

1998 Tejano Legacy: Rancheros and Settlers in South Texas, 1734-1900. University of New Mexico Press, Albuquerque.

Alvarez, E.C. (editor)

2018 Texas Almanac 2018-2019. Texas State Historical Association, Austin.

Amos, B.B., and F.R. Gehlbach (editors)

1988 Edwards Plateau Vegetation: Plant Ecological Studies in Central Texas. Baylor University Press, Waco.

Appler, J.A. (compiler)

1907 Jules A. Appler's Street and Avenue Guide of Greater, San Antonio. San Antonio.

Barnes, V.E.

1983 *Geological Atlas of Texas*. San Antonio Sheet. Robert Hamilton Cuyler Memorial ed. Bureau of Economic Geology, The University of Texas at Austin.

Bexar County Deed Record (BCDR)

Year	Date	Vol.:Page(s)	Instrument	Grantor	Grantee
1853	8 Nov.	L1:580-581	Deed	J. Cassiano	H. and S. Ellermann
1884	1 Oct.	38:326-328	Deed	H. and S. Ellermann	A. and D. Würz
1885	21 May	36:619-620	Deed of Trust	A. and D. Würz	International Building and Loan Association
1888	3 Jan.	57:436-437	Deed	A. and D. Würz	S. Ellermann
1904	28 Mar.	228:37-41	Deed	S. Ellermann Estate	G.H.Ellermann, G.R Ellermann, S. Faulkner, E. Skirving, J. Skirving, M. Skirving, K. Würz, and W. Würz
1906	28 Mar.	253:12-13	Deed	K. Würz	F. Garcia
1906	30 Mar.	251:112	Deed	K. Würz	F. Gonzales
1906	6 Jul.	253:259-260	Deed	K. Würz	T.M. Guiterrez
1906	11 Dec.	248:584-585	Decree	A. and W.W. Moegelin	K. Würz
1906	24 Dec.	260:103-104	Deed	K. Würz	R. Sulaicia
1907	23 Mar.	266:159-160	Deed	A. and W.W. Moegelin	L. and E.(A.) Rittimann
1913	20 Mar.	416:27-28	Deed	L. and E.(A.) Rittimann	F. Moke

1929	27 Mar.	1101:182-183	Deed	F. and M. Moke	J. and M. Tabares
1933	22 Jul.	1367:117-118	Deed	F. Moke	M. Moke
1938	5 Dec.	1661:552-553	Deed	M. Moke	J. and M. Tabares
1960	23 Mar.	4431:587-588	Deed	R. and J. Tabares	San Antonio River Authority
1968	1 Aug.	6001:392	Deed	R. and J. Tabares	M. and C. Maldonado
1986	30 May	3706:1935-1937	Deed	M. and C. Maldonado	U.S. Telecommunication
1987	28 Apr.	4009:180-181	Deed	U.S. Telecommunication	Sprint

Binkley, W.C.

1979 The Texas Revolution. Louisiana State University Press, Baton Rouge.

Birks, S.

2019 Burgess & Goddard. A-Z of Stoke-on-Trent Potters. The Potteries.com. Electronic document, http://www.thepotteries.org/allpotters/205a.htm, accessed August 2019.

Bomar, G.W.

1999 Texas Weather. University of Texas Press, Austin.

Booth, J.A., and D.R. Johnson

1983 Power and Progress in San Antonio Politics, 1836-1970. In *The Politics of San Antonio*, edited by D.R. Johnson, J.A. Booth, and R.J. Harris, pp. 3-27. University of Nebraska Press, Lincoln.

Bousman, C.B., B.W. Baker, and A.C. Kerr

2004 Paleoindian Archeology in Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp. 15-97. Texas A&M University Press, College Station.

Bousman, C.B., and E. Oksanen

2012 The Protoarchaic in Central Texas and Surrounding Areas. In *From the Pleistocene to the Holocene: Human Organization and Cultural Transformations in Prehistoric North America*, edited by C.B. Bousman and B. Vierra, pp. 197-232. Texas A&M University Press, College Station.

Brischetto, R., C.L. Cotrell, and R.M. Stevens

1983 Conflict and Change in the Political Culture of San Antonio in the 1970. In *The Politics of San Antonio*, edited by D.R. Johnson, J.A. Booth, and R.J. Harris, pp. 75-94. University of Nebraska Press, Lincoln.

Buckley, E.C.

1911 The Aguayo Expedition into Texas and Louisiana, 1719-1722. Quarterly of the Texas State Historical Association 15(1):1-65.

Burke, D.B.

1987 In Pursuit of Beauty: Americans and the Aesthetic Movement. Electronic document https://books.google.com/books?id =56F8Qv96FzwC&lpg=PP1&pg=PP1#v=onepage&q&f=false, accessed August 2019.

Caldwell, L.

- 2010 Casas Revolt. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/jcc02, accessed August 2019.
- 2003 Gone to Texas: A History of the Lone Star State. Oxford University Press, New York.
- 2010 Antebellum Texas. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/npa01, accessed June 2019.

Carlson, S.B.

1994 Texas beyond the Periphery: An Archaeological Study of the Spanish Missions during the Eighteenth Century. Ph.D. dissertation, Department of Anthropology, Texas A&M University, College Station.

Carpenter, S.M.

2017 The Toyah Complex of South and Central Texas: Long-range Mobility and the Emergence of Dual Economies. *Plains Anthropologist* 62:133-156.

Center for Archaeological Research (CAR)

- 2018 Scope of Work for Archaeological Monitoring Associated with Installation of Fiber Optic Cable along S. Colorado Street near Downtown San Antonio, Bexar County, Texas. On file, Center for Archaeological Research, The University of Texas at San Antonio.
- 2019 Monthly Temperature and Precipitation Data for San Antonio (1971-2000). Data on file, Center for Archaeological Research, The University of Texas at San Antonio.

Chipman, D.E.

1994 Spanish Texas, 1519-1821. Second ed. University of Texas Press, Austin.

Cleaveland, M.K., T.H. Votteler, D.K. Stahle, R.C. Casteel, and J.L. Banner

2011 Extended Chronology of Drought in South Central, Southeastern and West Texas. Texas Water Journal 2(1):54-96.

Cook, E.R., D.M. Meko, D.W. Stahle, and M.K. Cleaveland

1999 Drought Reconstruction for the Continental United States. Journal of Climate 12:1145-1162.

Córdoba, H.A., R.J. Walter, and N.S. Foote

2018 The Residential Segregation of San Antonio, Texas, in 1910: An Analysis of Ethno-Racial Occupational Spatial Patterns with the Colocation Quotient. *Urban Geography* 39(7):988-1017.

Cox, I.W.

- 1997 The Growth of San Antonio. In *Archaeology at the Alamodome: Investigations of a San Antonio Neighborhood in Transition. Volume 1, Historical, Architectural, and Oral History Research*, edited by A.A. Fox, M. Renner, and R.J. Hard, pp. 8-44. Archaeological Survey Report, No. 236. Center for Archaeological Research, The University of Texas at San Antonio.
- 2005 History of the "Priest's House" on Military Plaza. In *Test Excavations and Monitoring at 41BX1598*, by A.L. Figueroa and R.P. Mauldin, pp. 125-130. Archaeological Survey Report, No. 360. Center for Archaeological Research, The University of Texas at San Antonio.

Davenport, H., and C.H. Roell

2010 Goliad Massacre. Handbook of Texas Online. Texas State Historical Association. Electronic document, https://tshaonline.org/handbook/online/articles/qeg02, accessed August 2019.

Davis, W.B., and D.J. Schmidly

1997 The Mammals of Texas. Texas Tech University and Texas Parks and Wildlife Department. Nongame and Urban Program, Austin. Electronic database, http://www.nsrl.ttu.edu/tmot1/Default.htm, accessed August 2019.

Davis, W.C.

2004 Lone Star Rising. Free Press, London.

de la Teja, J.F.

- 1991 A Revolution Remembered: The Memoirs and Selected Correspondence of Juan N. Seguin. State House Press, Austin.
- 1995 San Antonio de Bexar: A Community on New Spain's Northern Frontier. University of New Mexico Press, Albuquerque.
- 1997 The Colonization and Independence of Texas: A Tejano Perspective. In *Myths, Misdeeds, and Misunderstandings*, edited by J.E. Rodriguez and K. Vincent, pp. 79-95. Scholarly Resources Inc., Wilmington, Delaware.

de la Peña, J.E.

1975 With Santa Anna in Texas: A Personal Narrative of the Revolution. Translated and edited by Carmen Perry. Texas A &M University Press, College Station.

Diamond, D.D.

2010 Grasslands. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/gqg01, accessed August 2019.

Donecker, F.

2010 San Antonio River. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/rnso6, accessed August 2019.

Doughty, R.W.

1983 Wildlife and Man in Texas. Texas A&M University Press, College Station.

Dozier, C.

2018 Evidence of Feasting in the Southern Plains: Maintenance and Reinforcement of the Toyah Social Field, 1250-1650 AD. *Plains Anthropologist* 63:1-25.

Eckhardt, G.

2019 The Edwards Aquifer Website. Electronic document, http://www.edwardsaquifer.net, accessed August 2019.

Ellsworth, C.E.

1923 *The Floods in Central Texas in September 1921*. U.S. Geological Survey, Water-Supply Paper 488. Government Printing Office, Washington, D.C.

Favata, M.A., and J.B. Fernandez

1993 The Account: Nunez Cabeza de Vaca's Relacion. Arte Publico Press, Houston.

Fehrenbach, T.R.

1983 Lone Star: A History of Texas and the Texans. Da Capo Press, Boston.

Fisher, L.F., and M.W. Pfieffer

2007 San Antonio Architecture: Traditions and Visions. American Institute of Architecture, San Antonio.

Fordham, D.A., F. Saltré, S. Haythorne, T.M.L. Wigley, B.L. Otto-Bliesner, K.C. Chan, and B.W. Brook

2017 PaleoView: A Tool for Generating Continuous Climate Projections Spanning the Last 21,000 Years at Regional and Global Scales. *Ecography* 40(11):1348-1358.

Foster, W.C.

1995 Spanish Expeditions into Texas, 1689-1768. University of Texas Press, Austin.

1997 Texas and Northeastern Mexico, 1630-1690. University of Texas Press, Austin.

1998 The La Salle Expedition to Texas: The Journal of Henri Joutel 1664-1687. Texas State Historical Association, Austin.

Fox A.A.

1978 Archaeological Investigations of Portions of the San Pedro and Alazán Acequias in San Antonio. Archaeological Survey Report, No. 49. Center for Archaeological Research, The University of Texas at San Antonio.

Galveston Daily News

1886 Skeleton Found in Pasture. 26 August.

Garcia, R.A.

1991 Rise of the Mexican American Middle Class, San Antonio, 1929-1941. Texas A&M University, College Station.

Garrison, L.M.

2018 Preserving the Project: An Approach to Reclaiming Mid-Century Public Housing. Master's thesis, The University of Texas at San Antonio.

Gentilz, J., and F. Giraud

1852 Plat of the City Tract of San Antonio de Bexar, 1852. Portal to Texas History. Electronic document, https://texashistory.unt.edu/ark:/67531/metapth493728, accessed August 2019.

George, S.

2019 A Brief History of Antique Pressed Glass. Electronic document, http://www.pressedglassandgoblets.com/articles/history.shtml, accessed August 2019.

Giraud, F.

1852 Giraud's Plat Map of 1852. Copy on file, Center for Archaeological Research, The University of Texas at San Antonio.

Gould, F.W., G.O. Hoffman, and C.A. Rechenthin

1960 Vegetation Areas of Texas. Texas Agricultural Experimental Station, Leaflet 492. Texas A&M University, College Station.

Griffith, G.E., S.A. Bryce, J.M. Omernik, J.A. Comstock, A.C. Rogers, B. Harrison, S.L. Hatch, and D. Bezanson 2004 *Ecoregions of Texas*. Reston, Virginia, U.S. Geological Survey (map scale 1:2,500,000).

Guerra, Donna Morales

2016 The Westside of San Antonio 1930s-1950s: A Glimpse into Catholic Social Action and Community. *La Voz de Esperanza* 26(6):7-10.

Habig, M.A.

1968 The Alamo Chain of Missions: A History of San Antonio's Five Old Missions. Franciscan Herald Press, Chicago.

Hackett, C.W.

2018 Aguayo Expedition. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/upa01, accessed August 2019.

Haefner, J., V. Galan, and G. Cestaro

2014 Intensive Archaeological Survey of the San Antonio River Authority's Westside Creeks Improvement Project: Apache Creek and San Pedro Creek Phase, Bexar County, Texas. Archeology Series No. 261. Hicks and Company, Austin.

Havard, V.

1885 Report on the Flora of Western and Southern Texas. Proceedings of the United States National Museum 8(29):449-533.

Henderson, T.J.

2009 The Mexican Wars for Independence. Hill and Wang Publishing, New York.

Hendrickson, K.E., and G.M. Sanford

2008 The Second Texas Revolution: From Cotton to Genetics and the Information Age. In *Twentieth-Century Texas*, edited by J.B. Storey and M.L. Kelley, pp. 417-442. University of North Texas Press, Denton.

Henson, M.S.

1982 Juan Davis Bradburn: A Reappraisal of the Mexican Commander of Anahuac. Texas A&M University Press, College Station.

Hester, T.R.

2005 An Overview of the Late Archaic in Southern Texas. In *The Late Archaic Across the Borderlands: From Foraging to Farming*, edited by B.J. Vierra, pp. 259-278. University of Texas Press, Austin.

Heusinger, E.W.

1951 A Chronology of Events in San Antonio. Standard Printing Company, San Antonio.

Hoffman, F.L. (translator)

1935 Diary of the Alarcón Expedition into Texas, 1718-1719 by Fray Francisco. The Quivira Society, Los Angeles.

Houk, B.A., K.A. Miller, and E.R. Oksanen

2009 The Gatlin Site and Early-to-Middle Archaic Chronology of the Southern Edwards Plateau, Texas. *Bulletin of the Texas Archeological Society* 80:51-75.

Hutchinson Bottle Directory

2019 Sunset Bottling Works, San Antonio, Texas. Electronic document http://www.hutchbook.com/Bottle%20Directory/HutchSearchResults.aspx?Find Hutches=Find+Hutchinsons&Source=Attributes&City=San+Antonio, accessed August 2019.

Iruegas, S.A., and M.T. Iruegas

2016 An Intensive Archaeological Survey & Historic Building Information: The Terrace at Haven for Hope Project, City of San Antonio, Bexar County, Texas. GTI Environmental, LLC, San Antonio.

Jackson, J., and W. Foster (editors)

1995 *Imaginary Kingdom, Texas as Seen by the Rivera and Rubi Military Expeditions, 1727 and 1767.* Texas State Historical Association, Austin.

Johnson, D.R.

1990 Frugal and Sparing: Interest Groups, Politics, and City Building in San Antonio, 1870-85. In *Urban Texas: Politics and Development*, edited by C. Miller and H.T. Sanders, pp. 33-52. Texas A&M University, College Station.

Johnson, D.R., J.A. Booth, and R.J. Harris

1983 The Politics of San Antonio. University of Nebraska Press, Lincoln.

Johnson, E.H.

2019 South Texas Plains. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/ryslr, accessed August 2019.

Jordan, T.G.

1966 German Seed in Texas Soil: Immigrant Farmers in Nineteenth-Century Texas. University of Texas Press, Austin.

Karl, T.R.

1986 The Sensitivity of the Palmer Drought Severity Index and Palmer's Z-Index to Their Calibration Coefficients Including Potential Evapotranspiration. *Journal of Climate and Applied Meteorology* 25:77-86.

Kenmotsu, N.A., and D.K. Boyd (editors)

2012 The Toyah Phase of Central Texas: Late Prehistoric Economic and Social Processes. Texas A&M University, College Station.

Kirkpatrick, L., and D. Moreno

2008 Tombstone Inscriptions of San Fernando Cemetery No. 1 Located in San Antonio, Texas. Volumes 1 and 2 (reprinted), Los Bexarenos Genealogical Society, San Antonio.

Koch, A.

1886 Bird's Eye View of San Antonio, Bexar County, Texas 1886 Looking East. Texas Bird's-Eye Views. Amon Carter Museum. Electronic document, http://www.birdseyeviews.org/zoom.php?city=San%20Antonio&year=1886&extra_info, accessed August 2019.

Kovels

2019 Cantrell & Cochrane Bottle. Electronic documen, https://www.kovels.com/collectors-concerns/cantrell-a-cochrane-bottle.html, accessed August 2019.

Kutac, E.A., and S.C. Caran

1994 Birds and Other Wildlife of South Central Texas. University of Texas Press, Austin.

Labadie J.H.

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

Ljungqvist, F.C.

2010 A New Reconstruction of Temperature Variability in the Extra-Tropical Northern Hemisphere during the Last Two Millennia. *Geografiska Annaler: Series A* 93(3):339-351.

Long, J.

1990 Duel of Eagles: The Mexican and U.S. Fight for the Alamo. Morrow, New York.

Maclay, R.W.

1995 *Geology and Hydrology of the Edwards Aquifer in the San Antonio Area, Texas.* Water-Resources Investigations Report 95-4186. U.S. Geological Survey, Austin.

Mann, M.E., and P.D. Jones

2003 Global Surface Temperatures over the Past Two Millennia. Geophysical Research Letters 30:1820.

Mann, M.E., Z. Zhang, M.K. Hughes, R.S. Bradley, S. K. Miller, S. Rutherford, and F. Ni

2008 Proxy-based Reconstructions of Hemispheric and Global Surface Temperature Variations over the Past Two Millennia. *Proceedings of the National Academy of Sciences, USA* 105:13252-13257.

Marley, D.

2014 Mexico at War: From the Struggle for Independence to the 21st-Century Drug Wars. ABC-CLIO, Santa Barbara, California.

Márquez, R.R., L. Mendoza, and S. Blanchard

2007 Neighborhood Formation on the West Side of San Antonio, Texas. Latino Studies 5:288-316.

Marshall, R.P.

2015 The Battle of the Alazán: First Texas Republic Victorious. Southwestern Historical Quarterly 119(1):44-57.

Mauldin, R.P.

2003 Exploring Drought in the San Antonio Area Between 1700 and 1979. Special Report, No. 29. Center for Archaeological Research, The University of Texas at San Antonio.

Mayer, A.J.

1976 San Antonio, Frontier Entrepot. Ph.D. dissertation, The University of Texas at Austin.

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

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

Meinig, D.W.

1969 Imperial Texas: An Interpretive Essay in Cultural Geography. University of Texas Press, Austin.

Metz, M.C.

1931 A Check List of the Flora of Bexar County, Texas. Master's thesis, Catholic University of America, Washington, D.C.

Moberg, A., D.M. Sonechkln, K. Holmgren, N.M. Datsenko, and W. Karlén

2005 Highly Variable Northern Hemisphere Temperatures Reconstructed from Low- and High-resolution Proxy Data. *Nature* 433:613-617.

Moneyhon, C.H.

2017 Reconstruction. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/mzr01, accessed August 2019.

Montejano, D.

1987 Anglos and Mexicans in the Making of Texas, 1836-1986. University of Texas Press, Austin.

National Oceanic and Atmospheric Administration (NOAA)

- 2019a Climate at a Glance, San Antonio Texas, Annual Temperatures. Electronic document, https://www.ncdc.noaa.gov/cag/city/time-series/USH00417945/tavg/12/12/1895-2019, accessed August 2019.
- 2019b Climate at a Glance, San Antonio Texas, Annual Precipitation. Electronic document, https://www.ncdc.noaa.gov/cag/city/time-series/USH00417945/tavg/12/1895-2019, accessed August 2019.

Neu, C.T.

2010 Annexation. Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/mga02, accessed August, 2019.

Nofi, A.A.

1992 The Alamo and the Texas War for Independence. Combined Books, Conshohocken, Pennsylvania.

Pitts III, J.B.

1966 Speculation in Headright Land Grants in San Antonio from 1837 to 1842. Master's thesis, Trinity University, San Antonio.

Poyo, G.E.

1991 The Canary Islands Immigrants of San Antonio: From Ethnic Exclusivity to Community in Eighteenth-Century Béxar. In *Tejano Origins in Eighteenth-Century San Antonio*, edited by G.R. Poyo and G.M. Hinojosa. pp. 41-60. University of Texas Press, Austin.

Reed, S.G.

1941 A History of the Texas Railroads. St. Clair Publishing Company, Houston.

Ricklis, R.A.

1996 Late Prehistoric Adaptations in Central, Southern and Lower Pecos Texas. Revista de Arquelogia Americana 10:73-99.

Riskind, D.H., and D.D. Diamond

1988 An Introduction to Environments and Vegetation. In *Edwards Plateau Vegetation: Plant Ecological Studies in Central Texas*, edited by B.B. Amos and F.R. Gehlbach, pp. 1-16. Baylor University Press, Waco, Texas.

St. John's Lutheran Church

2019 Marriage Records 1869-1899. Transcribed. Church Archives. Electronic document, https://stjohnssa.org/marriage-records-1869-1899/, accessed August 2019.

San Antonio Daily Express

1890 Advertisement for L. Orynski. September 1.

San Antonio Daily Light

1888 A Peculiar Case. April 26.

San Antonio Express News

1931 Workman Reveal Skeleton in Ditch. 8 March.

San Antonio Light

1933 Deeds Filed. 25 July.

San Antonio Municipal Records (SAMR)

- 1887 Death of Mrs. A. N. Würz. Electronic document, https://webapp9.sanantonio.gov/ArchiveSearch/, accessed August 2019.
- 1891 Death of Sophia Ellermann. Electronic document, https://webapp9.sanantonio.gov/ArchiveSearch/, accessed August 2019.
- 1914 Death of Adolph Würz. Electronic document, https://webapp9.sanantonio.gov/ArchiveSearch/, accessed August 2019.

San Antonio River Authority (SARA)

2011 Westside Creeks Restoration Project: Conceptual Plan. Electronic document, https://www.westsidecreeks.com/westsidecreeks-restoration-project-conceptual-plan/, accessed August 2019.

Sanborn Map Company (Sanborn)

1912 Sanborn Fire Insurance Map-San Antonio, Volume 4. University of Texas at Austin. Electronic document http://legacy. lib.utexas.edu/ maps/sanborn/s.html, accessed August 2019.

Sandefur, G.D., M. Martin, J. Eggerling-Boeck, S.E. Mannon, and A.M. Meier

2001 An Overview of Racial and Ethnic Demographic Trends. In *America Becoming: Racial Trends and Their Consequences: Volume 1*, edited by N.J. Smelser, W.J. Wilson, and F. Mitchell. National Academy Press, Washington, D.C.

Schuetz, M.K.

1980 The Indians of the San Antonio Missions 1718-1821. Ph.D. dissertation, The University of Texas at Austin.

Sellards, E.H.

1919 *The Geology and Mineral Resources of Bexar County*. University of Texas Bulletin No. 1932. Bureau of Economic Geology and Technology, University of Texas, Austin.

Smith, S., C. Munoz, and R. Mauldin

2015 Project Setting. In *Archaeological Investigations within San Pedro Springs Park (41BX19), San Antonio, Bexar County, Texas*, by R. Mauldin, S. Smith, S. Wigley, A. Figueroa, and C. McKenzie, pp. 5-12. Archaeological Report, No. 443. Center for Archaeological Research, The University of Texas at San Antonio.

Snavely, R., and A. Fox.

1983 Archaeological Survey and Testing on the Avenida Duadalupe Project Phase 1, San Antonio, Texas. Unpublished manuscript Reyna and Caragonne Architects. On file, Center for Archaeological Research, The University of Texas at San Antonio.

Southern Messenger, The

1934 Old San Fernando Cemetery Restored. 22 February.

Statistical Atlas

2019 Race and Ethnicity in San Antonio, Texas. Electronic document, https://statisticalatlas.com/place/Texas/San-Antonio/Race-and-Ethnicity, accessed August 2019.

Stotts, M.C., L.I. Acuna, and M. Galindo

2014 Archaeological Monitoring Investigations for the VIA Westside Multimodal Transit Center Project, Bexar County, Texas. SWCA Cultural Resources Report No. 14-202. SWCA Environmental Consultants, Austin.

Strong, B.

2010 José Cassiano. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/fcaan, accessed August 2019.

Swanson, E.R.

1995 Geo-Texas. Texas A&M University Press, College Station.

Taylor, F.B., R.B. Hailey, and D.L. Richmond

1991 Soil Survey of Bexar County, Texas. Soil Conservation Service. United States Department of Agriculture, Washington, D.C.

Texas Historical Commission (THC)

2019 Details for Alejo de la Encarnacion Peres (Atlas Number 5029011741). State Historical Markers. Texas Historical Commission. Electronic document, https://atlas.thc.state.tx.us/Map, accessed August 2019.

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

2018 Archaeological Monitoring for Frio Street Improvements from Houston Street to Cesar Chavez Boulevard, San Antonio, Bexar County, Texas. Archaeological Report, No. 460. Center for Archaeological Research, The University of Texas at San Antonio.

Thonhoff, R.H.

- 2010 Battle of Rosillo. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/qfr02, accessed August 2019.
- 2018 Battle of Medina. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/qfm01, accessed August 2019.

Tous, G. (translator)

1930 The Espinosa-Olivares-Aguire Expedition of 1709. Preliminary Studies of the Texas Catholic Historical Society 1(3):3-14.

United States Census Bureau (USCB)

- 1853 1850 United States Federal Census. Publications. United States Census Bureau. Electronic document, https://www2.census.gov/library/publications/decennial/1850/1850a/1850a-36.pdf?#, accessed August 2019.
- 1866 1860 United States Federal Census. Publications. United States Census Bureau. Electronic document, https://www.census.gov/library/publications/1866/dec/1860d.html, accessed August 2019.
- 1921 1920 United States Federal Census. Publications. United States Census Bureau. Electronic document, https://www.census.gov/library/publications/1921/dec/vol-01-population.html, accessed August 2019.

Wade, M.F.

2003 The Native Americans of the Texas Edwards Plateau, 1582-1799. University of Texas Press, Austin.

Wallace, E.

1965 Texas in Turmoil, 1849-1875. Steck-Vaughn, Austin.

Wallen, C.C.

1966 Arid Zone Meteorology. In Arid Lands, edited by E.S. Hill, pp. 31-51. Methuen and Co. Ltd., London.

Walter, R.J., N. Foote, H.A. Cordoba, and C. Sparks

2017 Historic Roots of Modern Residential Segregation in a Southwestern Metropolis: San Antonio, Texas, in 1910 and 2010. *Urban Science* 1:1-19.

Ward, R.

2014 State of Texas Archaeological Site Form for 41BX620. Recorded by SWCA Environmental Consultants. Held at SWCA Environmental Consultants-San Antonio, San Antonio.

Warner, C.A.

1939 Texas Oil and Gas since 1543. Gulf Publishing Company, Houston.

Warren, H.G.

2010 Gutierrez-Magee Expedition. The Handbook of Texas Online. Texas State Historical Association. Electronic document, http://www.tshaonline.org/handbook/online/articles/qyg01, accessed August 2019.

Web Soil Survey

2019 Web Soil Survey. U.S. Department of Agriculture. Electronic document, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed August 2019.

Weber, D.J.

1982 The Mexican Frontier, 1821-1846: The American Southwest under Mexico. University of New Mexico Press, Albuquerque.

Weddle, R.A.

1968a San Juan Bautista: Gateway to Spanish Texas. University of Texas Press, Austin.

1968b San Juan Bautista: Mother of Texas Missions. Southwestern Historical Quarterly 71:542-563.

Weniger, D.

1988 Vegetation before 1860. In *Edwards Plateau Vegetation: Plant Ecological Studies in Central Texas*, edited by B.B. Amos and F.R. Gehlbach, pp. 17-24. Baylor University Press, Waco, Texas.

1997 The Explorers Texas, Volume 2: The Animals They Found. Eakins Press, Austin.

White, A.

2017 San Antonio in 1811: The Las Casas Revolt. The Alamo. Electronic document, https://medium.com/@OfficialAlamo/san-antonio-in-1811-the-las-casas-revolt-9b4746cb0ab7, accessed August 2019.

Wooster, R.A.

2008 Over Here: Texans on the Home Front. In *Twentieth-Century Texas*, edited by J.B. Storey and M.L. Kelley, pp. 164-195. University of North Texas Press, Denton.

World Atlas

2019 The Largest Cities in the US. Society. World Atlas. Electronic document, https://www.worldatlas.com/articles/largest-cities-in-the-united-states.html, accessed August 2019.

Worthington, M.

2017 How San Antonio Segregated its Schools. Folio Media. Electronic document, https://www.folomedia.org/san-antonio-segregated-schools/, accessed August 2019.

Zapata, J.

2018 Interim Report for Archaeological Investigations for Alazán Creek Trail-Lombrano Street to Apache Creek, San Antonio, Bexar County, Texas. On file, Center for Archaeological Research, The University of Texas at San Antonio.

Zayo Group, LLC (Zayo)

2016 Zayo to Expand Fiber-to-the-Tower Footprint in San Antonio and Austin. News and Events. Electronic document, https://www.zayo.com/news/zayo-to-expand-fiber-to-the-tower-footprint-in-san-antonio-and-austin/, accessed August 2019.

Zelman, D.L.

1983 Alazán-Apache Courts: A New Deal Response to Mexican-American Housing Conditions in San Antonio. *Southwestern Historical Quarterly* 87(2):123-150.