Volume 2018 Article 61

2018

Archaeological Investigations for the Proposed Mission County Park Tree Planting Project, San Antonio, Bexar County, Texas

Antonio E. Padilla

Archaeological Investigations for the Proposed Mission County Park Tree Planting Project, San Antonio, Bexar County, Texas

ARCHAEOLOGICAL INVESTIGATIONS FOR THE PROPOSED MISSION COUNTY PARK TREE PLANTING PROJECT, SAN ANTONIO, BEXAR COUNTY, TEXAS

FINAL (Redacted)

Prepared for:
Bexar Heritage Program
100 Dolorosa, Suite 311
San Antonio, Texas 78205

Prepared by:
Chris Matthews and Antonio E. Padilla

RABA-KISTNER ENVIRONMENTAL, INC.
12821 West Golden Lane
San Antonio, Texas 78249

Principal Investigator
Antonio E. Padilla

Texas Antiquities Committee Permit Number 8619

Cultural Resources Report No. 18-020

December 14, 2018

MANAGEMENT SUMMARY

Raba Kistner Environmental, Inc. (**RKEI**), was contracted by the Bexar Heritage Program (CLIENT) to conduct archaeological investigations of two areas of Mission County Park in anticipation of the planting of 22 trees. The Mission County Park Tree Planting Project will be funded and managed by Bexar County, an entity of the State of Texas. As such, the project falls under the jurisdiction of Chapter 35 of the City of San Antonio Unified Development Code, as well as the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191), by virtue of it representing a public undertaking.

The investigations included a background review and a pedestrian survey augmented by shovel testing. The background review revealed that two previously recorded sites were within the Area of Potential Effect (APE): 41BX1919 and 41BX1920. Site 41BX1919 was located in the northern portion of the APE and is listed as not eligible for listing in the NHRP. As such, shovel testing was placed in the area. Site 41BX1920 had previously been listed as eligible in the NHRP and was, therefore, avoided during survey. Antonio E. Padilla served as the Principal Investigator while Staff Archaeologist Chris Matthews conducted the field investigations on November 1, 2018. All work was conducted in accordance with the Archeological Survey Standards for Texas as set forth by the Council of Texas Archeologists and the Texas Historical Commission under Texas Antiquities Committee Permit Number 8301.

During the investigations it was observed that the majority of the APE had been impacted by construction and improvement activities along the existing sidewalk. Disturbances included grading of the soil on the western side of the APE, and the recent installation of five wooden poles. Thirteen shovel tests (CM1-CM13) were excavated within the APE, all of which were negative for cultural material with only one shovel test (CM8) having charcoal present in the soils. This shovel test was placed near the southern boundary of 41BX1920 and may show an extension of the previously recorded site.

RKEI made a good faith effort in identifying cultural resources within the APE. No significant cultural deposits or features were encountered during the intensive pedestrian survey; however, it is recommended that the existing boundaries of previously recorded site 41BX1920 be extended to include the southern boundary of the APE. **RKEI** recommends no further archaeological investigations for the current. Should changes be made to the extent of the project APE, further work may be required.

TABLE OF CONTENTS

CHAPTER 1. INTRODUCTION 5
Project Description and Area of Potential Effects 5
CHAPTER 2. ENVIRONMENTAL SETTING 9
Geology 9
Soils 9
Flora and Fauna 9
Climate 11
CHAPTER 3. CULTURAL CHRONOLOGY AND PREVIOUS ARCHAEOLOGY 12
Paleoindian Period 12
Archaic Period 13
Early Archaic 14
Middle Archaic 14
Late Archaic 15
Late Prehistoric Period 15
Protohistoric Period 17
Historic Period 17
Previous Archaeological Investigations 19
CHAPTER 4. METHOD OF INVESTIGATIONS 22
Laboratory Methods 22
CHAPTER 5. RESULTS OF INVESTIGATIONS 24
CHAPTER 6. SUMMARY AND RECOMMENDATIONS 30
REFERENCES CITED 31
APPENDIX A: SHOVEL TEST LOG A-1

LIST OF FIGURES

Figure 1-1. Project location map. 6
Figure 1-2. Area Overview of APE for the Mission County Tree Planting Project. 8
Figure 2-1. Soils within the APE. 10
Figure 3-1. Archaeological surveys and known archaeological sites within 0.6 mile (1-km) of the APE. 20
Figure 5-1. Results of the investigations. 25
Figure 5-2. Overview of the APE vegetation and topography, facing northeast. 26
Figure 5-3. Example of gravels as ground surface in northern portion of the APE. 26
Figure 5-4. Example of five pole installation which have recently disturbed the APE, facing northeast. 27
Figure 5-5. Shovel test CM2, showing average soil profile within the APE, facing east. 28
Figure 5-6. Shovel test CM4 showing fill material in profile, facing south. 28
Figure 5-7. Shovel test CM8, showing profile that contained charcoal, facing east. 29

CHAPTER 1. INTRODUCTION

Raba Kistner Environmental, Inc. (**RKEI**), was contracted Bexar Heritage Program (CLIENT) to conduct archaeological investigations within Mission County Park, where the planting of 22 trees will occur (**Figure 1-1**). The Mission County Park Tree Planting Project will be funded and managed by Bexar County, an entity of the State of Texas. As such, the project falls under the jurisdiction of Chapter 35 of the City of San Antonio (COSA) Unified Development Code (UDC), as well as the Antiquities Code of Texas (ACT) (Texas Natural Resource Code, Title 9, Chapter 191), by virtue of it representing a public undertaking.

Investigations consisted of an intensive pedestrian survey coupled with shovel testing. Cultural resources investigations were conducted on behalf of the CLIENT to satisfy the requirements of the ACT and the UDC. The purpose of the investigations were to identify any surface-exposed or buried cultural deposits within the limits of the proposed undertaking and, if possible, assess their significance and eligibility for inclusion in the National Register of Historic Places (NRHP) and for formal designation as State Antiquities Landmarks (SAL). All work was conducted in accordance with the Archeological Survey Standards for Texas as set forth by the Council of Texas Archeologists (CTA) and the Texas Historical Commission (THC) under Texas Antiquities Committee Permit Number 8619. The cultural resources investigations were conducted on November 1, 2018. Antonio E. Padilla served as the Principal Investigator while Staff Archaeologist Chris Matthews conducted the field investigations.

Project Description and Area of Potential Effects

The proposed project area is located within the boundaries of Mission County Park in southern San Antonio, Bexar County, Texas. Mission County Park is located on the eastern terrace of the San Antonio River, within a residential setting. The CLIENT is proposing to plant up to 22 trees on either side of a 650-foot (199 meter [m])-long cement walkway within the park. The trees will be placed within the 20 foot (6 m) wide grassy area on either side of the cement sidewalk. For archaeological purposes the Area of Potential Effect (APE) is defined as the two 20 foot (6 m)-wide areas along the 650 foot (199 m) long walkway, which encompasses less than 1 acre of disturbance. Depth of the proposed impacts will reach 24 inches (61 centimeters [m]) below surface.

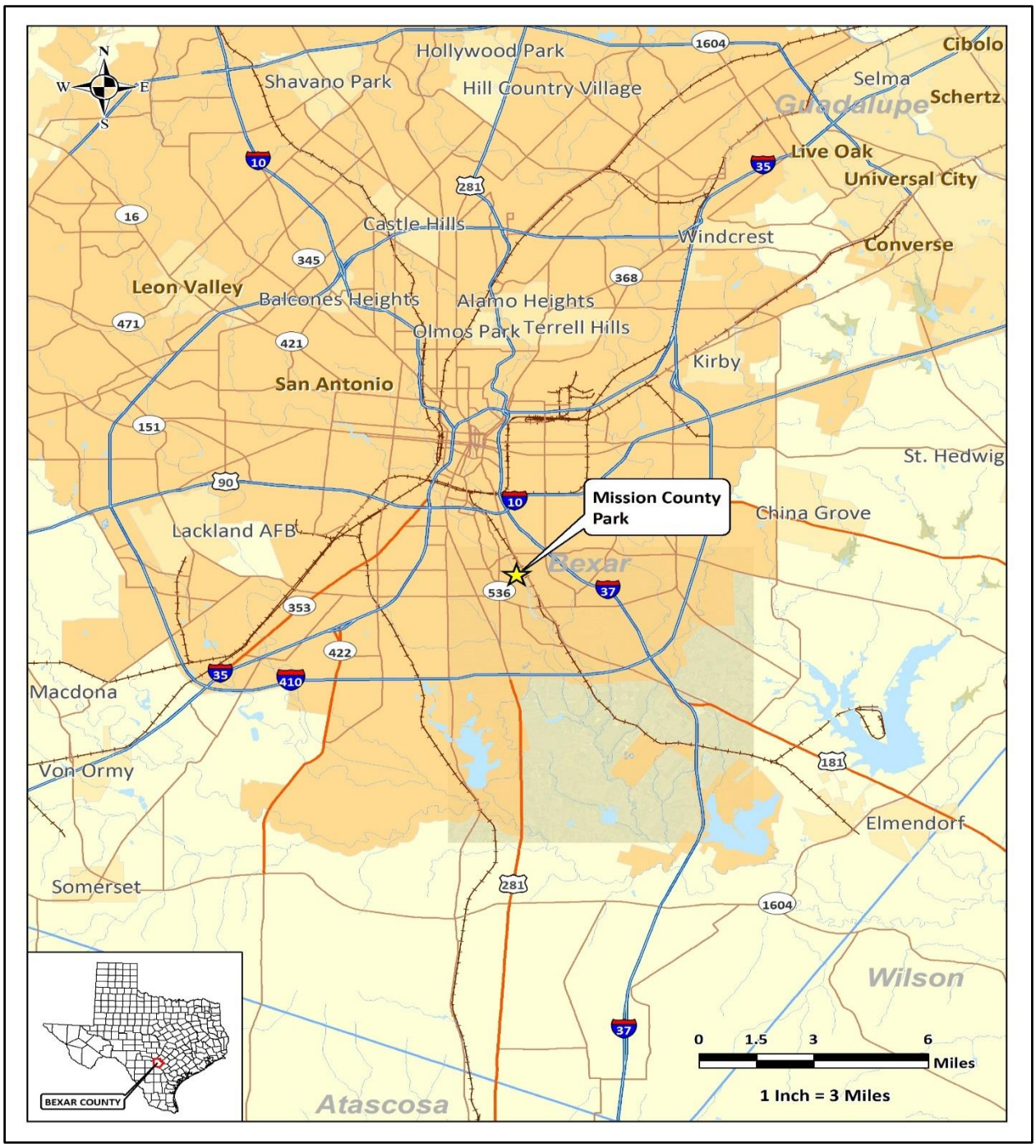

Figure 1-1. Project location map.

Prior to field investigations, a preliminary desktop review determined that two previously recorded archaeological sites—41BX1919 and 41BX1920—were located within the APE. The review also determined that the prehistoric component of site 41BX1920 is listed as eligible for NRHP designation. Consultation with the THC determined that any negative impacts to 41BX1920 should be avoided. As such, no trees will be planted within the boundaries of 41BX1920, and no subsurface cultural investigations would be required for the avoidance area. The avoidance of the site reduced the survey portion of the APE to 508 feet (155 m) long (**Figure 1-2**).

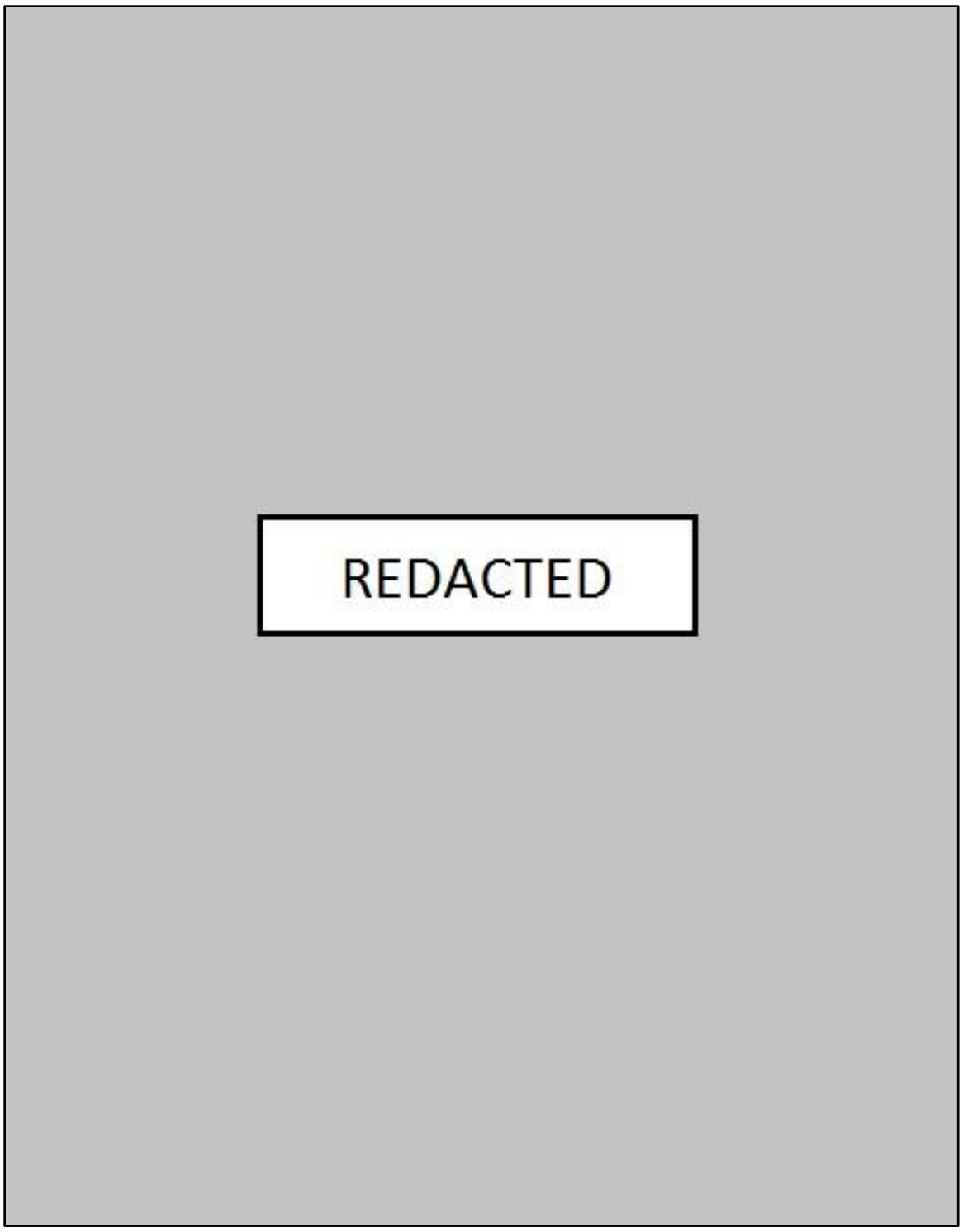

Figure 1-2. Area Overview of APE for the Mission County Tree Planting Project.

CHAPTER 2. ENVIRONMENTAL SETTING

The project area is located in the south-central Texas geographic region within the Blackland Prairie ecoregion. The Blackland Prairie is an area of low topographic relief and poor drainage, prone to frequent flooding (Collins 1995). The Blackland Prairie physiographic region is characterized by gently undulating topography and is generally defined as grasslands punctuated by riparian bands along creeks, rivers, and other drainages. Creation of the Blackland Prairies occurred during the late Tertiary, with the erosions of soils on the Edwards Plateau. These soils were deposited by eolian and colluvial processes across an existing, eroded parent material of the Gulf Coastal Plain, creating a mix of deep Tertiary and Quaternary calcareous clay soils (Black 1989).

Geology

The project area is underlain by Terrace deposits (Qt) that consist of late Quaternary sands, silts, clays, and gravels that comprise terraces inset to upper Cretaceous clays and mudstones of the Navarro Group and Marlbrook Marl (Knb) (Bureau of Economic Geology 1983). Gravel percentages within the terrace deposits vary with higher terraces containing more gravels than the lower terraces, which are typically capped with clayey silts and sands that are 6.5 to 13 feet (2 to 4 m) thick. The terrace deposits are locally indurated with calcium carbonate, which illustrates their great antiquity.

Soils

Soils mapped within the APE consist Sunev clay loam (VcA) (National Resources Conservation Service [NRCS] 2018) (**Figure 2-1**). Sunev clay loam consist of very deep, well drained soils that are derived from loamy alluvium. These soils typically occur on stream terraces or foot slopes of valley and ridges.

Flora and Fauna

The project area is also located near the juncture of the Balconian and Texan biotic provinces (Blair 1950). The Balconian Biotic Province is associated with the Edwards Plateau, which is typically characterized by open savannah rangeland interspersed with live oak-ash juniper woodlands and small brush (Griffith and Omernik 2018). The Texan Biotic Province, associated with the Northern Blackland Prairie ecoregion, is characterized by gently undulating topography and generally defined as tall grasslands punctuated by riparian bands along creeks, rivers, and other drainages (Griffith and Omernik 2018).

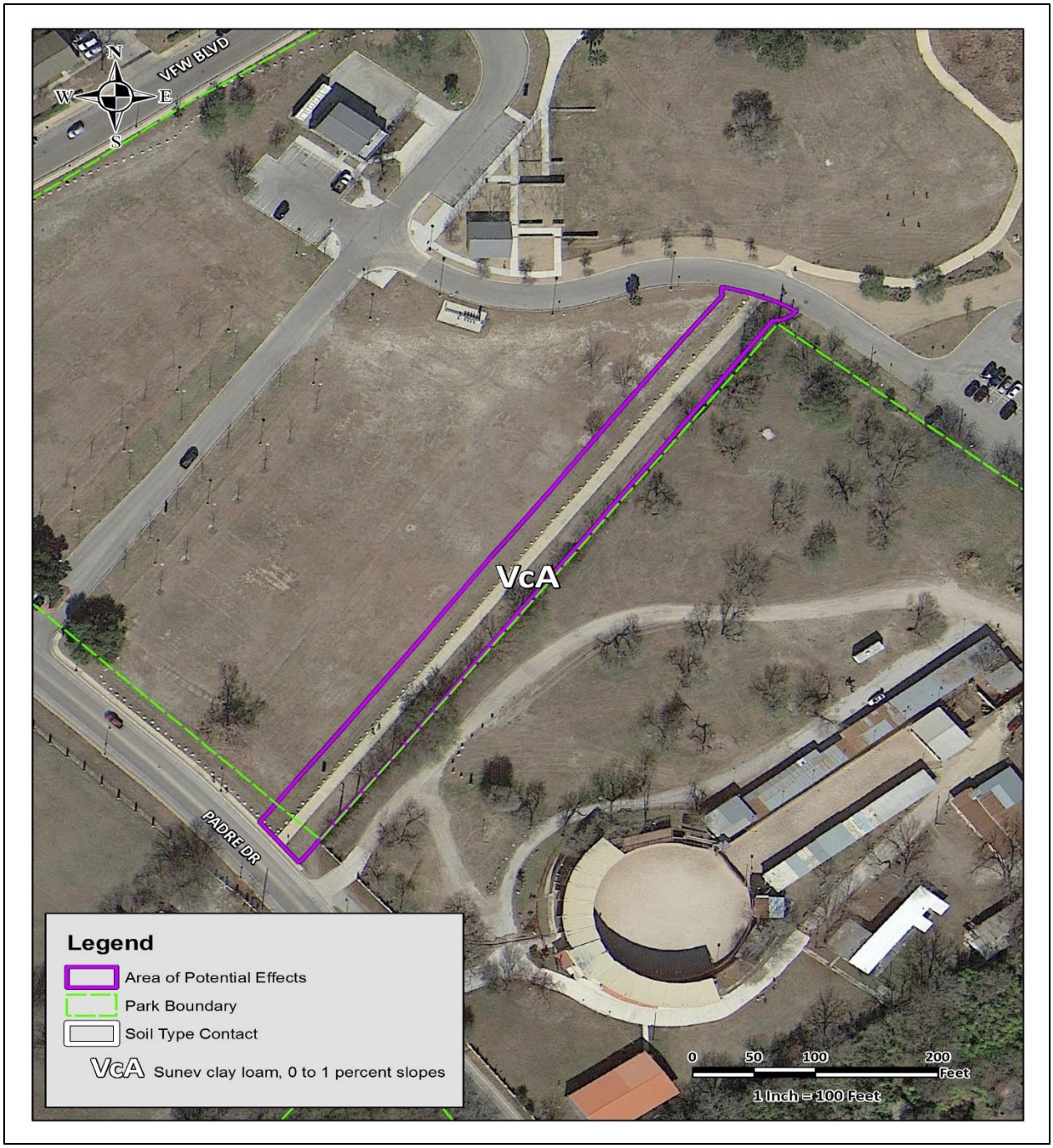

Figure 2-1. Soils within the APE.

Due to the location of the project area, floral and faunal resources consist of a mix of the two provinces. Common vegetation types of the area include post oak (*Quercus stellate*), live oak (*Quercus virginiana*), bald cypress (*Taxodium distichum*), pecan trees (*Carya illinoinensis*), cedar (*Juniperus ashei*), Texas mountain laurel (*Sophora secundiflora*), mesquite (*Prosopis glandulosa*), prickly pear (*Optunia sp.*), agarita (*Berberis trifoliolata*), cat claw (*Smilax bona-nox*), mustang grape (*Vitis mustangensis*), sotol (*Dasylirion texanum*), and Spanish dagger (*Yucca sp.*). A brief list of some of the animal species found in Bexar County includes includes the eastern cottontail (*Sylvilagus floridianus*), nine-banded armadillo (*Dasypus novemcincus*), white-tailed deer (*Odocoileus virginianus*), Virginia opossum (*Didelphis virginiana*), common raccoon (*Procyon lotor*), fox squirrel (*Sciurus niger*), striped skunk (*Mephitis mephitis*), Carolina chickadee (*Poecile carolinensis*), northern cardinal (*Cardinalis cardinalis*), great horned owl (*Bubo virginianus*), mourning dove (*Zenaida macroura*), red-shouldered hawk (*Buteo jamaicensis*), northern mockingbird (*Mimus polyglottos*), Texas rat snake (*Elaphe obsoleta lindheimeri*), western coachwhip (*Masticophis flagellum*), Texas toad (*Bufo speciosus*), Texas spiny lizard (*Sceloporus olivaceus*), and the western diamondback rattlesnake (*Crotalus atrox*) (Blair 1950).

Climate

The climate in San Antonio, Texas, is classified as humid subtropical with hot and humid summers. From May through September, hot weather dominates with the cool season beginning around the first of November and extending through March. Winters are typically short and mild with little precipitation. San Antonio averages only 33 inches (in) of rain per year (Southern Regional Climate Center 2018); based on monthly averages from 1980 to 2010. Monthly temperature averages range between 52°F in January to 85°F in August.

CHAPTER 3. CULTURAL CHRONOLOGY AND PREVIOUS ARCHAEOLOGY

The cultural history of South-Central Texas spans approximately 11,500 years. Archaeologists have divided the occupation of the region into four principal periods and several sub-periods: Paleoindian, Archaic, Late Prehistoric, and Historic. The periods are characterized by changes in climatic conditions, distinct vegetation types and structure, and concomitant adaptive changes by human populations in hunting and gathering technologies and strategies, general material culture, and at the tail end of the cultural sequence, the arrival of non-indigenous populations. Collins (1995, 2004) and Prewitt (1981) produced the standard summaries of the culture chronologies of Central Texas accepted by many of the regional archaeologists. Below is a brief summary of the cultural sequence that has been reconstructed by archaeologists for the south-central part of the State.

Paleoindian Period

The oldest cultural materials found in the region date to the Paleoindian period. The period spans roughly from 11,500–8800 B.P. (Collins 1995, 2004). The Aubrey site in Denton County has one of the earliest occupations, with radiocarbon assays dating to between 11,542 ± 11 B.P. and 11,590 ± 93 B.P. (Bousman et al. 2004:48). Paleoclimatic proxy measures suggest that a cooler climate with increased precipitation was predominant during the Late Pleistocene (Mauldin and Nickels 2001), the later portion of the period.

Initial reconstructions of Paleoindian adaptations typically viewed these hunter-gatherers as traversing extreme distances in pursuit of now extinct mega-fauna such as mammoth and mastodon. While these Paleoindian populations did exploit the Late Pleistocene mega-fauna when it was accessible, a number of faunal assemblages from an increasingly larger number of sites indicate that the Paleoindian diet was more varied and consisted of a wide range of resources, including small game and plants. The Lewisville (Winkler 1982) and the Aubrey sites (Ferring 2001) produced faunal assemblages that represented a wide range of taxa, including large, medium, and small species. Information on the consumption of plant resources during the Paleoindian period is lacking. Bousman et al. (2004) reported that the late Paleoindian component at the Wilson-Leonard site reflected the exploitation of riparian, forest, and grassland species. Analysis of Paleoindian skeletal remains indicates that the diets of the Paleoindian populations may have been similar to Archaic period hunter-gatherer populations (Bousman et al. 2004; Powell and Steele 1994).

The early portion of the Paleoindian period was characterized by the appearance of Clovis and Folsom fluted projectile points that were used for hunting mega-fauna. Typical projectile points produced at sites with occupations dating to the later portion of the Paleoindian period included the Plainview, Dalton, Angostura, Golandrina, Meserve, and Scottsbluff types. Meltzer and Bever (1995) have identified 406 Clovis sites in Texas. One of the earliest, 41RB1, yielded radiocarbon assays that put the maximum age for the Paleoindian component at 11,415 ± 125 B.P. (Bousman et al. 2004:47).

Sites in Bexar County that contain Paleoindian components include St. Mary's Hall (Hester 1978, 1990), Pavo Real (Collins et al. 2003), the Richard Beene site (Thoms et al. 1996; Thoms and Mandel 2006) and 41BX1396 (Tomka 2012). St. Mary's Hall, 41BX229, was first encountered in 1972 during the construction of a house just outside the school's property. The Pavo Real site, 41BX52, is located along Leon Creek in northwest Bexar County. The site was first documented in 1970 and has been investigated several times over the past 40 years (Collins et al. 2003). The Richard Beene site, 41BX831, is located along the Medina River in southern Bexar County (Thoms et al. 1996). Site 41BX1396 is located in Brackenridge Park in San Antonio, Texas, and was encountered during installations for lighting in 2010. Dating of organic samples indicated that occupation at the site occurred as early as 10,490–10,230 B.P.

Archaic Period

The Archaic period dates between ca. 8800 to 1200 B.P. It is divided into three sub-periods: Early, Middle, and Late. During the Archaic, mobility strategies may have shifted to more frequent short distance movements that allowed the exploitation of seasonal resource patches. The intermittent presence of bison in parts of Texas, combined with changes in climatic conditions and the primary productivity of the plant resources may have contributed to shifts in subsistence strategies and associated technological repertoire. When bison were not present in the region, hunting strategies focused on medium to small game along with continued foraging for plant resources. When bison were available, hunter-gatherers targeted the larger-bodied prey on a regular basis.

Early Archaic

Collins (1995, 2004) suggests that the Early Archaic spans from 8800 to 6000 B.P. Projectile point styles characteristic of the Early Archaic include Angostura, Early Split Stem, Martindale, and Uvalde (Collins 1995, 2004). The Early Archaic climate was drier than the Paleoindian period and witnessed a return to grasslands (Bousman 1998). Mega-fauna of the Paleoindian period could not survive the new climate and ecosystems, therefore eventually dying out. Early Archaic exploitation of medium to small fauna intensified.

The Wilson-Leonard excavation produced a wealth of cultural materials representative of a lengthy period in regional prehistory. The projectile point assemblages from the site indicate that the lanceolate Paleoindian point forms, such as Angostura, continue from the Paleoindian into the Early Archaic. However, these forms are replaced by corner- and basally-notched and shouldered forms (Early Triangular, Andice, Bell), and these quickly become the dominant points tipping the atlatl-thrown darts. In addition, the uses of small to medium hearths similar to the previous period were noted too. The appearance of earth ovens suggests a shift in subsistence strategies. The earth ovens encountered at the Wilson-Leonard site were used to cook wild hyacinth along with aquatic and terrestrial resources (Collins et al. 1998). Analyses of Early Archaic human remains encountered in Kerr County (Bement 1991) reveal diets low in carbohydrates in comparison to the Early Archaic populations found in the Lower Pecos region.

Within Bexar County, the excavations at 41BX1396 revealed an Early Archaic component that was radiocarbon dated using charcoal to cal. B.P. 8390 to 8180 (Tomka 2012).

Middle Archaic

The Middle Archaic sub-period spans from 6000 to 4000 B.P. (Collins 1995, 2004; Weir 1976). Archaeological data indicates that populations may have increased during this time. Climate was gradually drying leading to the onset of a long drought period. Changes to the demographics and cultural characteristics were likely in response to the warmer and increasingly arid conditions. Projectile point styles included in this sub-period include Bell, Andice, Calf Creek, Taylor, Nolan, and Travis.

Subsistence during the Middle Archaic includes an increased reliance on nuts and other products of riverine environments (Black 1989). The upsurge of burned rock middens during the Middle Archaic represented the increased focus on the use of plant resources (Black 1989; Johnson and Goode 1994). Little is known about burial practices during the Middle Archaic, however an excavation of an Uvalde County sinkhole (41UV4) contained 25–50 individuals (Johnson and Goode 1994:28).

Late Archaic

The Late Archaic spans from 4000 to 1200 B.P. (Collins 1995, 2004). It is represented by the Bulverde, Pedernales, Kinney, Lange, Marshall, Williams, Marcos, Montell, Castroville, Ensor, Frio, Fairland, and Darl projectile points. The early part of the Late Archaic exhibited fluctuations in the temperature and rainfall. There appears to have been an increase in population at this time (Nickels et al. 1998).

While some researchers believe that the use of burned rock middens decreased during the Late Archaic, recent research has challenged this notion (Black and Creel 1997; Mauldin et al. 2003). Johnson and Goode (1994) discuss the role of burned rock middens in relation to acorn processing.

Burials related to the Late Archaic in Central and South Texas suggests the region saw an increase in population. This increase may have prompted the establishment of territorial boundaries which resulted in boundary disputes (Story 1985). Human remains dating to this sub-period have been encountered near the Edwards Plateau.

Late Prehistoric Period

The Late Prehistoric period begins ca. 1200 B.P. (Collins 1995, 2004), and appears to continue until the Protohistoric period (ca. A.D. 1700). A series of traits characterize the shift from the Archaic to the Late Prehistoric period. The main technological changes were the adoption of the bow and arrow and the introduction of pottery. The period is divided into two phases: The Austin phase and the Toyah phase.
At the beginning of this period, environmental conditions were warmer and dryer. However, moister conditions appear after 1000 B.P. (Mauldin and Nickels 2001). Plant and faunal remains at Late Prehistoric sites indicate that subsistence practices are similar to that of the Late Archaic. Projectile points associated with the Austin phase include the Scallorn and Edwards types. The Toyah phase is characterized by the prominence of the Perdiz point (Collins 1995, 2004).

Most researchers concur that the early portion of the Late Prehistoric period saw a decrease in population density (Black 1989:32). Radiocarbon dates from some sites have indicated that the middens were utilized during the Late Prehistoric. Some archaeologists feel the peak of midden use was after A.D. 1 and into the Late Prehistoric (Black and Creel 1997:273). Radiocarbon dates from Camp Bowie middens provide evidence that supports Black and Creel's arguments that burned rock middens were a primarily Late Prehistoric occurrence (Mauldin et al. 2003).

Beginning rather abruptly at about 650 B.P., a shift in technology occurred. This shift is characterized by the introduction of blade technology, the first ceramics in Central Texas (bone-tempered plainwares), the appearance of Perdiz arrow points, and alternately beveled bifaces (Black 1989:32; Huebner 1991:346). Prewitt (1981) suggests this technology originated in north-central Texas. Patterson (1988), however, notes that the Perdiz point was first seen in southeast Texas by about 1350 B.P., and was introduced to west Texas some 600 to 700 years later.

Early ceramics in Central Texas (ca. A.D. 1250 to 1300) are associated with the Toyah phase of the Late Prehistoric and are referred to as Leon Plain ware. The Leon Plain ceramic types are undecorated, bone-tempered bowls, jars, and ollas with oxidized, burnished and floated exterior surfaces (Ricklis 1995). There is notable variation within the type (Black 1986; Johnson 1994; Kalter et al. 2005). This variation can be attributed to differences in manufacturing techniques and cultural affiliation. Analysis of residues on ceramic sherds suggests that vessels were used to process bison bone grease/fat, mesquite bean/bison bone grease and deer/bison bone grease (Quigg et al. 1993).

The return of bison to South and Central Texas during the Late Prehistoric resulted from a drier climate in the plains located to the north of Texas and increased grasses in the Cross-Timbers and Post Oak Savannah in north-central Texas (Huebner 1991). The increased grasses in the two biotas formed the "bison corridor" along the eastern edge of the Edwards Plateau and into the South Texas Plain (Huebner 1991:354–355). Rock shelter sites, such as Scorpion Cave in Medina County (Highley et al. 1978) and Classen Rock Shelter in northern Bexar County (Fox and Fox 1967), have indicated a shift in settlement strategies (Skinner 1981). Burials encountered that dated to this period often reveal evidence of conflict (Black 1989:32).

Protohistoric Period

The Protohistoric (ca. A.D. 1528–1700) is ushered by the venture into south and southeast Texas by Spanish explorer Cabeza de Vaca in 1528. Hester (2004) generally considers the period prior to 1700 as Protohistoric in the San Antonio area. Archeological sites dated to this substage contain a mix of both European (e.g., metal and glass arrow points, trade beads, and wheel-made or glazed ceramics) and traditional Native American artifacts (e.g., manufactured stone tools). The effect the Spanish presence in Mexico had on Indians in Texas prior to about 1700 is not well-understood. What is known is that the initial arrival of Spanish missionaries and explorers spread severe diseases that killed, displaced, and fragmented a huge percentage of the population. As colonization spread from Mexico, many of the Coahuiltecan groups moved northward to avoid the Spanish. At the same time, invading Indian groups from the north put pressure on Native American groups in North Texas (Nickels et al. 1998). Historians believe that these pressures led to intense territorial disputes, further destabilizing Native American populations.

Historic Period

The beginnings of San Antonio came about with the establishment of Mission San Antonio de Valero in 1718. Fray Antonio de San Buenaventura y Olivares briefly visited the site several years prior, and petitioned to set up a mission at the headwaters of the San Antonio River to act as a waypoint in the journey to East Texas. The Marques de Valero, Viceroy of New Spain, granted Olivares' request (de la Teja 1995). The mission, presidio, and villa were first established on the San Pedro Creek, the "first spring" of the San Antonio River. Mission Valero occupied at least one other location on the east side of the San Antonio River before it was moved in 1724 to its final location.

Four days after Mission Valero was founded, Presidio de Bexar was established on May 5, 1718. The presidio was to house the Spanish soldiers who had come along with the expedition to found the Mission. Typically, the families that followed the soldiers lived just outside the presidio.

Two years later, in 1720, Mission San José y San Miguel de Aguayo was established on the opposite bank of the San Antonio River, and to the south of Mission Valero and Presidio San Antonio de Bexar. This mission was established to help serve native groups that did not want to reside at Mission Valero because

they were not on friendly terms with groups already living there. The original location of Mission San José was along the east bank of the San Antonio River, approximately three leagues from Mission Valero. The mission was then moved to the opposite bank sometime between 1724 and 1729, and relocated to its present site during the 1740s due to an epidemic (Scurlock et al. 1976:222).

In 1722, just two years after Mission San José was founded, Mission San Francisco Xavier de Nàjera was established. The mission was to serve a group of 50 Ervipiami families that came from the Brazos River area (Schuetz 1968:11). Mission San Francisco Xavier de Nàjera was located on or near the present site of Mission Concepción. The mission was unsuccessful due to a lack of funding. An attempt was made to make the mission a sub-mission of Valero, but this failed as well (Habig 1968:78-81). Its doors closed in 1726 (Schuetz 1968:11). Ivey (1984:13) argued that the closure of the mission was due to the natives' lack of interest in entering mission life.

Within the next few years, three other missions were established within the San Antonio area. The remaining three missions were established in San Antonio within weeks of each other in 1731. These three missions, Mission Nuestra Señora de la Purisima Concepción, Mission San Juan de Capistrano, and Mission San Francisco de la Espada, were originally missions established in east Texas. When each failed along the eastern border, they were moved to San Antonio.

In 1731, in addition to the five missions, Villa San Fernando de Bexar was established by the Canary Islanders. Prior to the establishment of Villa San Fernando, Villa de Bexar had been settled by 30 presidial soldiers, seven of whom were married and brought their families. Archival research indicates that upon arrival, the Canary Islanders immediately took over the land surrounding the garrison. This land was used as pasture and was originally property of Mission Valero. There had been a lack of cleared agricultural land at the time, leading Captain Juan Antonio Pérez de Almazán to allow the Canary Islanders use of the property (de la Teja 1995). The initial plan was for additional Canary Island settlers to be sent to San Antonio after the first group was established. Due to high costs to the Spanish Crown, no more groups were brought to Texas. The Canary Islanders launched a formal complaint against Mission Valero. In 1731, the Canary Islanders established their own villa, named San Fernando de Bexar, with their own church. The arrival of the *Isleños* resulted in the first clearly defined civilian settlement in San Antonio.

With the establishment of the San Antonio Missions, the Spanish constructed a system of *acequias* (irrigation ditches) utilizing local springs, streams, and the San Antonio River to supply water for the agricultural fields of the missions, personal use, and house hold purposes (Cox 2005; Porter 2009). The first *acequias* were simple, soil-lined, gravity-flow canals whose depressions can still be seen today in certain areas around central San Antonio (Cox et al. 1999). This system allowed the Spanish to sustain the large population of the Native Americans, settlers, and soldiers that occupied the area.

Previous Archaeological Investigations

RKEI conducted a desktop review to determine if any previously conducted archaeological investigations or any cultural resources have been documented within the APE. Review of the Texas Archaeological Site Atlas (Atlas), an online data base maintained by the THC, revealed that the entire APE has been previously investigated for cultural resources, and that two known archaeological sites—41BX1919 and 41BX1920—are located within the APE. The review also identified numerous archaeological investigations within a 0.6- mile (1-kilometer [km]) area of the APE, as well as 16 known archaeological sites (**Figure 3-1**).

In 2011, the University of Texas at San Antonio-Center for Archaeological Research (UTSA-CAR) conducted survey and cultural resources monitoring investigations for planned improvements to the Bexar County Mission Park (DiVito and Oksanen 2012). Investigations consisted of mechanical auger boring, backhoe trenching, and hand-excavated test units that resulted in the documentation of four new archaeological sites: 41BX1917, 41BX1918, 41BX1919, and 41BX1920. Of the four sites, only site 41BX1920 was recommended as eligible for designation as an NRHP (DiVito and Oksanen 2012).

Site 41BX1919 was recorded in 2011 by UTSA-CAR as a multiple component site consisting of a prehistoric lithic scatter and a historic scatter of domestic artifacts. The site measures approximately 230-x-164 feet (70-x-50 m) in size. The prehistoric component of the site consists of a buried, lithic scatter, identified during backhoe trench investigations between 0-47 inches (0-120 cm) below surface. The historical component of the site consists of nineteenth to early twentieth century ceramic and metal cultural materials encountered on the ground surface. The site had been originally impacted by leveling and filling activities. Due to the previous impacts to the site, UTSA-CAR recommended the site as not eligible for listing on the NRHP. In 2012, the THC determined site 41BX1919 as ineligible (THC 2018).

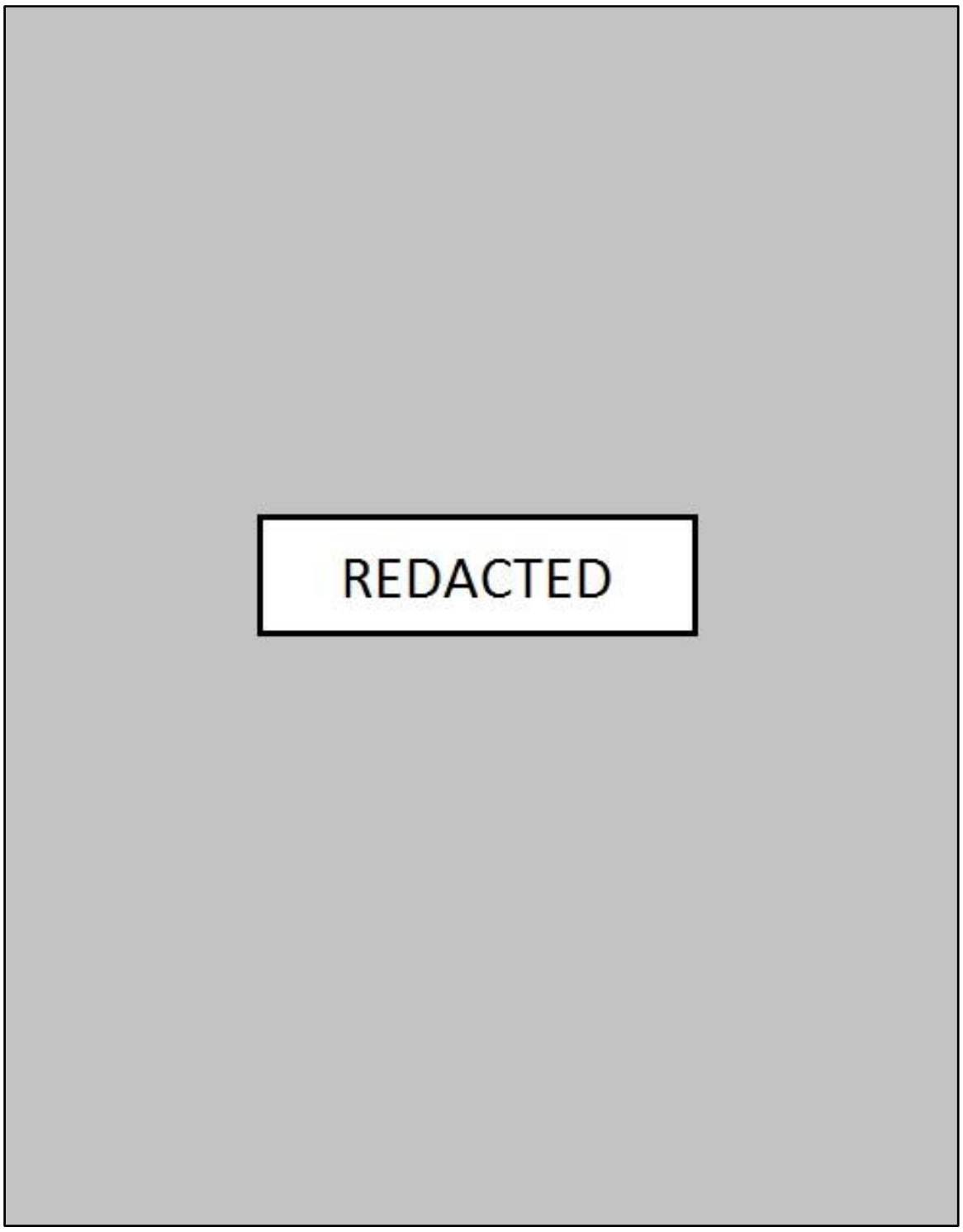

Figure 3-1. Archaeological surveys and known archaeological sites within 0.6 mile (1-km) of the APE.

Site 41BX1920 was recorded in 2012, by UTSA-CAR as a multiple component site measuring 164-x-82 feet (50-x-25 m). The prehistoric component of the site consists of a 33-x-33 foot (10-x-10 m) area of burned daub with stick impressions, a burned pit, a burned rock cluster, lithic debitage, and mussel shell. The prehistoric components was encountered at a depth of 16 inches (40 cm) below surface, extending to a depth of 31 inches (80 cm) below surface. The historic component consisted of an engineered feature/structure that was thought to be a portion of the San Jose Acequia. The engineered feature/structure reached a depth of 47 inches (120 cm) below surface. Based on the cultural materials encountered at the site, UTSA-CAR recommended the site as eligible for listing on the NRHP, and the THC determined that the prehistoric component of the site as eligible for listing on the NRHP (THC 2018).

CHAPTER 4. METHOD OF INVESTIGATIONS

RKEI conducted a cultural resources survey comprised of a visual inspection of the ground surface augmented by shovel testing within the APE. Shovel testing was employed to assess surface and shallowly buried archaeological deposits. Shovel tests were conducted in areas judged to have high probabilities for cultural deposits and/or when surface visibility was below 30 percent. All work complied with the THC and CTA survey standards for Texas.

The ground surface inspection along the APE was accompanied by the excavation of shovel tests staggered along two transects at intervals of 98 feet (30 m). Per requirements of THC's minimum standards for projects measuring 0 to 3 acres in size, three shovel tests are required per acre. Although the APE measured less than 1 acre in size, the presence of the two known sites within the APE increased the need for additional shovel testing. Therefore, **RKEI** excavated a total of 13 shovel tests, exceeding the minimum standard. All shovel tests were approximately 13-14 inches (32-35 cm) in diameter and, unless prevented by obstacles or buried features, extended to a depth of 24 inches (60 cm) below surface. Each shovel test was excavated in 4-inch (10-cm) levels. All soil from each level was screened through ¼-inch hardware cloth. A shovel test form was completed for each excavated shovel test. Data collected from the shovel tests included the final excavation depth, a tally of all materials observed from each 4-inch (10-cm) level, and a brief soil description (texture, consistency, Munsell color, inclusions). The location was recorded using a Garmin, hand-held, GPS unit. Shovel test locations were sketched onto a current aerial photograph of the APE as a backup to the GPS information. Any additional observation considered pertinent was included as comments on the standard shovel test excavation form.

Laboratory Methods

The project adhered to a temporally diagnostic-only collection policy. As no diagnostic materials were encountered, nothing was collected, thus no artifacts will be curated. However, all field forms and photographs will be curated at the UTSA-CAR. All project-related documentation produced during the survey was prepared in accordance with federal regulation 36 CFR Part 79, and THC requirements for State Held-in-Trust collections. Field notes, field forms, photographs, and field drawings were placed into labeled archival folders and converted into electronic files. Digital photographs were printed on acid-free paper, labeled with archivally appropriate materials, and were placed in archival-quality plastic sleeves

when needed. All field forms were completed with pencil. Ink-jet produced maps and illustrations were placed in archival quality plastic page protectors to prevent against accidental smearing due to moisture. A copy of the report and all digital materials were saved onto a CD and stored with field notes and documents.

CHAPTER 5. RESULTS OF INVESTIGATIONS

On November1, 2018, **RKEI** conducted an intensive archaeological survey of the Mission County Park Tree Planting Project. Archaeological investigations were comprised of a pedestrian survey augmented by the excavation of shovel tests within the APE. As a result of the investigations, 13 shovel tests (CM01–CM13) were excavated, with six on the west side of the APE and seven on the east side (**Figure 5-1, Appendix A**). No significant cultural materials were encountered during investigations; however, the observation of charcoal within shovel test CM8 suggests an extension of the site boundaries of 41BX1920.

The APE was situated in the boundaries of Mission County Park, located within a residential area. The project area was located between Padre Drive and Mission Parkway with an existing sidewalk running through the APE. Vegetation across the APE consisted mostly of short, manicured grasses with a tree line of hardwood trees along the east side of the APE (**Figures 5-2**). Ground surface visibility through the majority of the APE was less than 30-percent, though greater visibility was present in a couple small patches in the north side of the APE.

During the pedestrian survey, disturbances associated with leveling the field to the west of the APE were documented. The ground surface had been previously graded, evidenced by gravels at the ground surface along the northern portion of the APE (**Figure 5-3**). Other disturbances to the APE included five wooden overhead utility poles that had been installed along the eastern side of the APE earlier in the week (**Figure 5-4**). The poles extend to an unknown depth with the southernmost pole placed within the boundary of 41BX1920, and another pole within the boundary of 41BX1919. Communication with on-site contractors indicated that spoils from the pole installations had been removed by the park crew; however, it is not clear if the pole installation was monitored for cultural resources. As such, no information on the pole installations and their potential impacts to the two known archaeological sites is known at present.

RKEI excavated 13 shovel tests within the APE. Shovel tests were placed on two transects with intervals no more than 98 feet (30 m) apart (see **Figure 5-1**). Of the 13 shovel tests, 12 were excavated to a depth of 24 inches (60 cm) below surface. One shovel test—CM1—was terminated at 4-inches (12 cm) below surface due to concrete. It is unclear if the concrete was associated with an existing utility, or was a fragment representing fill material.

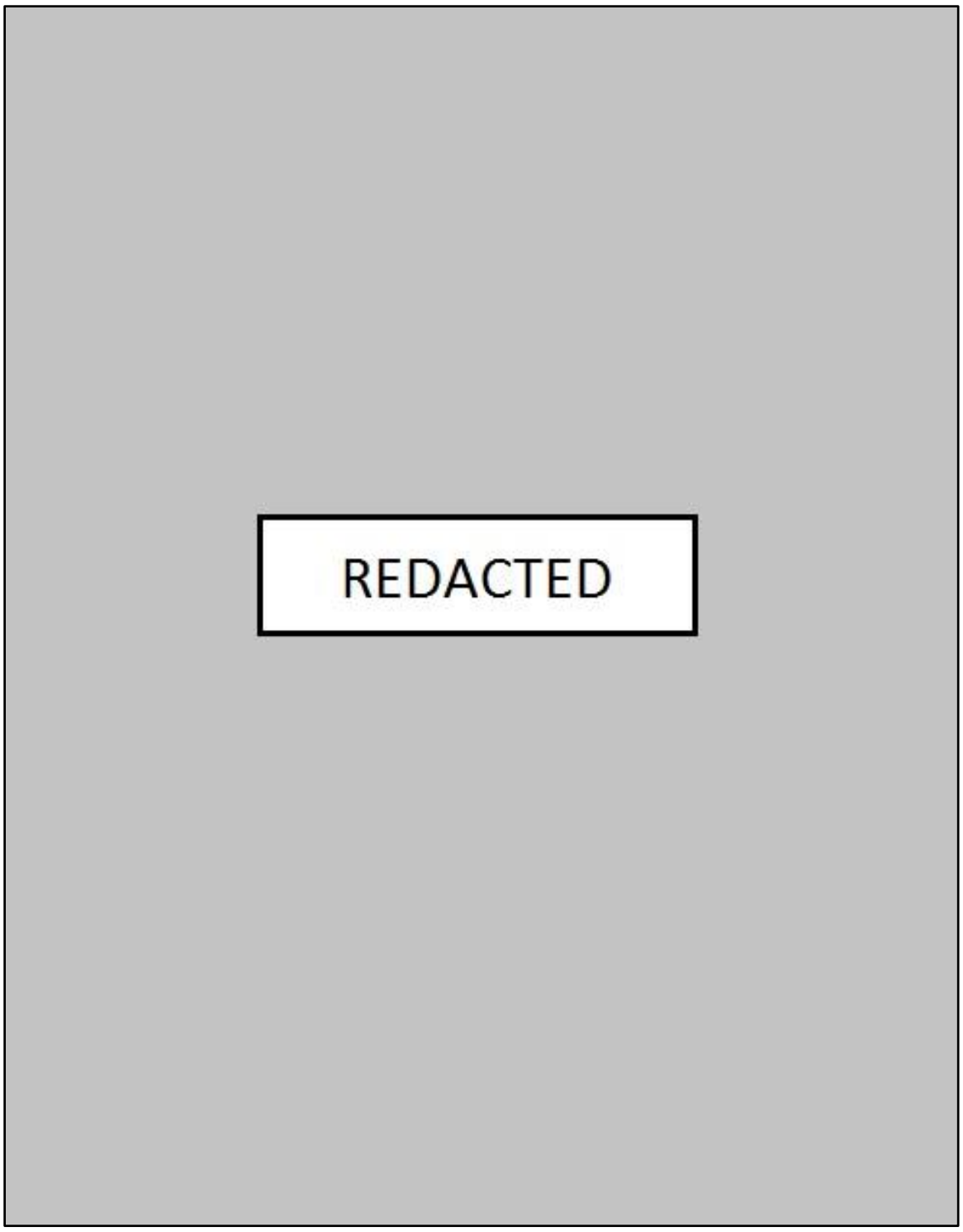

Figure 5-1. Results of the investigations.

Figure 5-2. Overview of the APE vegetation and topography, facing northeast.

Figure 5-3. Example of gravels as ground surface in northern portion of the APE.

Figure 5-4. Example of five pole installation which have recently disturbed the APE, facing northeast.

Soils encountered during shovel testing were predominantly compact clays over compact sandy loams. The average shovel test exhibited a profile of very dark grayish-brown (10YR 3/2) sandy clays overlaying dark grayish-brown (10YR 4/2) sandy clays underlain by brown (10YR 5/3) sandy loams (**Figure 5-5**). Fill material was encountered in three shovel tests: CM4, CM5, and CM13. The fill material appears to have been deposited during previous construction events that may have included grading of the soil in the APE (**Figure 5-6**). All shovel tests were negative for prehistoric and historic cultural materials; however, one shovel test (CM8) had charcoal present at 16-20 (40-50 cm) below surface (**Figure 5-7**). The shovel test was positioned immediately adjacent to the southern boundary of 41BX1920 and may represent an extension of the site.

Figure 5-5. Shovel test CM2, showing average soil profile within the APE, facing east.

Figure 5-6. Shovel test CM4 showing fill material in profile, facing south.

Figure 5-7. Shovel test CM8, showing profile that contained charcoal, facing east.

CHAPTER 6. SUMMARY AND RECOMMENDATIONS

RKEI was contracted by the CLIENT to conduct archaeological investigations of the Mission County Park Tree Planting Project in San Antonio, Bexar County, Texas. The project will be funded and managed by Bexar County, an entity of the State of Texas. As such, the project falls under the jurisdiction of the COSA UDC, as well as the ACT, by virtue of it representing a public undertaking. All work was conducted in accordance with the Archeological Survey Standards for Texas as set forth by the CTA and the THC under Texas Antiquities Committee Permit Number 8619.

Investigations included a background review and pedestrian survey augmented by shovel testing. A preliminary background review revealed that two previously recorded sites—41BX1919 and 41BX1920—were located within the APE, one of which (41BX1920) is recommended as eligible for listing on the NRHP. Agency consultation determined that negative impacts to the known boundaries of 41BX1920 should be avoided, and that the remaining portion of the APE would be subjected to an intensive pedestrian survey augmented with shovel testing.

Field investigations for the APE were conducted on November 1, 2018. The survey documented disturbances associated with previous construction, including grading of the western side of the APE. Other disturbances included the recent installation of five overhead utility poles along the eastern side of the APE. No information for the pole installation was available at the time of investigations. **RKEI** excavated 13 shovel tests within the 650-foot (199 m) APE, none of which tested positive for prehistoric or historic cultural materials; however, one shovel tests encountered charcoal between 16-20 inches (40-50 cm) below surface. The presence of the charcoal deposit possibly represents the extension of previously recorded site 41BX1920.

RKEI made a good faith effort in identifying cultural resources within the APE. No significant cultural deposits or features were encountered during the intensive pedestrian survey; however, it is recommended that the existing boundaries of previously recorded site 41BX1920 be extended to include the southern boundary of the APE. **RKEI** recommends no further archaeological investigations for the current project. Should changes be made to the extent of the project APE, further work may be required.

REFERENCES CITED

Bement, L.C

1991 The Thunder Valley Burial Cache: Group Investment in a Central Texas Sinkhole Cemetery. *Plains Anthropologist* 36(135):97–109.

Black, S. L.

1989 Environmental Setting. In *From the Gulf to the Rio Grande: Human Adaptation in Central, South, and Lower Pecos Texas*, by Thomas R. Hester, Stephen L. Black, D. Gentry Steele, Ben W. Olive, Anne A. Fox, Karl J. Reinhard, and Leland C. Bement, pp. 5–16. Research Series No. 33. Arkansas Archeological Survey, Fayetteville.

Black, S.L., and D.G. Creel

1997 The Central Texas Burned Rock Midden Reconsidered. In *Hot Rock Cooking on the Greater Edwards Plateau: Four Burned Rock Midden Sites in West Central Texas,* by Steve Black, Linda W. Ellis, Darrell G. Creel and Glenn T. Goode, pp.269–305. Studies in Archeology 2. Texas Archeological Research Laboratory, the University of Texas at Austin.

Blair, F.

1950 The Biotic Provinces of Texas. *Texas Journal of Science* 2(1):93–117.

Bousman, C.B

1998 Paleoenvironmental Change in Central Texas: The Palynological Evidence. *Plains Anthropologist* 43 (164):201–219.

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

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

Bureau of Economic Geology

1983 Geologic Atlas of Texas—San Antonio Sheet. Bureau of Economic Geology, The University of Texas at Austin.

Collins, M.B.

1995 Forty Years of Archeology in Central Texas. *Bulletin of the Texas Archeological Society* 66:361–400.

2004 Archeology in Central Texas. In *Prehistory of Texas*, edited by Timothy K. Perttula, pp.101–126. Texas A&M University Press. College Station, Texas.

Collins, M.B., J. Guy, and S.W. Dial

1998 The Archaic Period, 8800 to1300 BP. In *Wilson-Leonard: An 11,000-year Archaeological Record of Hunter-Gatherers on Central Texas*. Volume I: Introduction, Background, and Syntheses. Edited by Michael B. Collins. Studies in Archaeology 31. Texas Archaeological Research Laboratory, The University of Texas at Austin.

Collins, M.B., D.B. Hudler, and S.L. Black

2003 *Pavo Real (41BX52): A Paleoindian and Archaic Camp and Workshop on the Balcones Escarpment, South-Central, Texas*. Studies in Archeology 41, Texas Archeological Research Laboratory, The University of Texas at Austin. Archeological Studies Program, Report 50, Environmental Affairs Division, Texas Department of Transportation, Austin.

Cox, I. Wayne

2005 Spanish Acequias of San Antonio. Maverick Publishing Company, San Antonio.

Cox, I. Wayne, Edgar D. Johnson, and C. Britt Bousman

1999 Excavations for the Upper Labor Dam Site, Brackenridge Park, San Antonio, Bexar County, Texas. Archaeological Survey Report, No. 268. Center for Archaeological Research at the University of Texas at San Antonio, San Antonio.

de la Teja, J. F.

1995 San Antonio de Bexar: A Community on the New Spain's Northern Frontier. The University of New Mexico Press, Albuquerque.

DiVito, N. and E. Oksanen

2012 *Intensive Pedestrian Survey of Mission County Park in San Antonio, Bexar County, Texas*. Archaeological Survey Report, No. 421. Center for Archaeological Research, The University of Texas at San Antonio.

Ferring, C.R.

2001 *The Archaeology and Paleoecology of the Aubrey Clovis Site (41DN479) Denton County, Texas*. Center for Environmental Archaeology. Department of Geography, University of North Texas.

Fox, A.A., and D.E. Fox

1967 The Classen Rock Shelter, 41BX23. Manuscript on File at the Center for Archaeological Research, The University of Texas at San Antonio.

Griffin, G. E., and J. M. Omernik

2018 Ecoregions of Texas (EPA). U.S. Environmental Protection Agency. Available at: http:/www.ecoearth.ort/article/Ecoregions_of_Texas (EPA). Accessed February 6, 2018.

Habig, M. A.

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

Hester, T.R.

1978 Early Human Occupation in South Central and Southwestern Texas; Preliminary Papers on the Baker Cave and St. Mary's Hall Sites. Manuscript on File. Center for Archaeological Research, The University of Texas at San Antonio.

1990 Plainview Artifacts at the St. Mary's Hall Site, South Central Texas. *Current Research in the Pleistocene* 7:14–17.

2004 The Prehistory of South Texas. In *Prehistory of Texas*, edited by Timothy K. Perttula, pp.127–151. Texas A&M University Press. College Station, Texas.

Highley, C.L., C. Graves, C. Land, and G. Judson

1978 Archeological Investigations at Scorpion Cave (41ME7) Medina County, Texas. *Bulletin of the Texas Archeological Society* 49:139–194.

Huebner, J.A.

1991 Late Prehistoric Bison Populations in Central and Southern Texas. *Plains Anthropologist* 36(137):343–358.

Ivey, J. E.

1984 The San Antonio Missions. Unpublished manuscript on file at the Center for Archaeological Research, The University of Texas at San Antonio.

Johnson, L.

1994 *The Life and Times of Toyah-Culture Folk: The Buckhollow Encampment Site 41KM16, Kimble County, Texas*. Report No. 38. Office of the State Archeologist, Austin.

Johnson, L., and G.T. Goode

1994 A New Try at Dating and Characterizing Holocene Climates, as well as Archaeological Periods, on Eastern Edwards Plateau. *Bulletin of the Texas Archaeological Society* 65:1–51.

Kalter, A.J., R.M. Rogers, and M.N. Smith

2005 *Analysis and Reporting for 41FY135, the Sandbur Site, Fayette County, Texas*. PBS&J, Document No. 020388. Archeological Studies Program Report No. 73. Texas Department of Transportation. Austin.

Mauldin, R.P., and D.L. Nickels

2001 *An Archaeological Survey of Twin Buttes Reservoir, Tom Green County, Texas.* Archaeological Survey Report, No. 300. Center for Archaeological Research, The University of Texas at San Antonio.

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

2003 *Archaeological Testing at Determine the National Register Eligibility Status of 18 Prehistoric Sites on Camp Bowie, Brown County, Texas (Volume 1 and Volume 2*). Archaeological Survey Report, No. 334. Center for Archaeological Research, The University of Texas at San Antonio.

Meltzer, D.J., and M.R. Bever
1995 Paleoindians of Texas: An Update on the Texas Clovis Fluted Point Survey. *Bulletin of the Texas Archeological Society* 66:47–81.

Natural Resources Conservation Service (NRCS)
2018 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. *Web Soil Survey of Bexar County*. Available at http://websoilsurvey.nrcs.usda.gov/. Accessed February 6, 2018.

Nickels, D.L., C.B. Bousman, J.D. Leach, and D.A. Cargill
1998 *Test Excavations at the Culebra Creek Site, 41BX126, Bexar County, Texas*. Archaeological Survey Report, No. 265. Center for Archaeological Research, The University of Texas at San Antonio.

Patterson, L.W.
1988 Chronology of Arrow Point Types in South Texas. *La Tierra* 15(4):29–33.

Powell, J.F., and D.G. Steele
1994 Diet and Health of Paleoindians: An Examination of Early Holocene Human Dental Remains. In *Paleonutrition: The Diet and Health of Prehistoric Americans*. Edited by K.D. Sobolik, pp. 176–192. Occasional Paper No. 22. Carbondale: Center for Archaeological Investigations, Southern Illinois University, Carbondale.

Porter, C. R.
2009 Spanish Water, Anglo Water: Early Development in San Antonio. Texas A&M University Press, College Station.

Prewitt, E.R.
1981 Cultural Chronology in Central Texas. *Bulletin of the Texas Archaeological Society*. 52:65–89.

Quigg, J.M., C. Lintz, F.M. Oglesby, A.C. Earls, C.D. Frederick, W.N. Trierweiler, D. Owsley, and K.W. Kibler
1993 *Historic and Prehistoric Data Recovery at Palo Duro Reservoir, Hansford County, Texas*. Technical Report 485. Mariah Associates, Inc., Austin.

Ricklis, R.A.
1995 Prehistoric Occupation of the Central and Lower Texas Coast: A Regional Overview. *Bulletin of the Texas Archeological Society* 66:265–300.

Schuetz, M.K.
1968 *The History and Archaeology of Mission San Juan Capistrano, San Antonio, Texas.* Volume 1. Archeology Program Report Number 10. State Building Commission, Austin.

Scurlock, D., A. Benavides, Jr., D. Isham, and J. Clark, Jr.
1976 *An Archeological and Historical Survey of the Proposed Mission Parkway, San Antonio, Texas*. Archeology Survey Report No. 17, Texas Historical Commission, Austin.

Skinner, S.A.
1981 Aboriginal Demographic Changes in Central Texas. *Plains Anthropologist* 26(92):111–118.

Southern Regional Climate Center
2018 Monthly Climate Summary. Available at www.srcc.lsu.edu/. Accessed February 6, 2018.

Story, D. A.
1985 Adaptive Strategies of Archaic Cultures of the West Gulf Coastal Plain. In *Prehistoric Food Production in North America*, edited by R. I. Ford, pp. 19–56. Anthropological Papers 75. Museum of Anthropology, University of Michigan, Ann Arbor.

Texas Historical Commission (THC)
2018 Texas Archeological Sites Atlas. http://nueces.thc.state.tx.us/. Accessed February 6, 2018.

Thoms, A.V., D.D. Keuhn, B.W. Olive, J.E. Dockall, P.A. Clabaugh an R.D. Mandel
1996 Early and Middle Holocene Occupations at the Richard Beene Site: The 1995 Southern Texas Archaeological Society Association Field School Project. *La Tierra* (23) 4:1–36.

Thoms, A.V., and R.D. Mandel
2006 *Archaeological and Paleoecological Investigations at the Richard Beene Site 41BX831: South Central Texas.* Reports of Investigations, No. 8. Center for Ecological Archaeology, Texas A&M University, College Station.

Tomka, S.A.
2012 Archaeology Along The Upper San Antonio River. Paper presented at the Southern Texas Archaeological Association Spring Quarterly Meeting.

Weir, F. A.
1976 The Central Texas Archaic. Ph.D. dissertation, Department of Anthropology, Washington State University, Pullman.

Winkler, B.A.
1982 Wild Plant Foods of the Desert Gatherers of West Texas, New Mexico, and Northern Mexico: Some Nutritional Values. Unpublished Master's Thesis, Department of Anthropology, The University of Texas at Austin.

Appendix A
Shovel Test Log

Shovel Test No.	Site Trinomial	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/ Negative	Cultural Materials	Comments/Reason for Termination
CM01	NA	0-10	10YR 4/3	brown	sandy loam	over 10% gravels	Negative	-	-
		10-20	10YR 4/3	brown	sandy loam	over 10% gravels	Negative	-	Termination due to concrete at 12 cmbs.
CM02	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		10-20	10YR 3/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		20-30	10YR 3/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		30-40	10YR 5/3	brown	clay loam	over 10% gravels	Negative	-	-
		40-50	10YR 5/3	brown	clay loam	5 % gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	5 % gravels	Negative	-	Termination due to depth.
CM03	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	Less than 10% gravels	Negative	-	-
		10-20	10YR 3/2	very dark grayish brown	sandy clay	Less than 10% gravels	Negative	-	-
		20-30	10YR 3/2	very dark grayish brown	sandy clay	Less than 10% gravels	Negative	-	-
		30-40	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	-
		40-50	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM04	NA	0-10	Fill	Fill Material	sandy loam	over 50 gravels and cobbles	Negative	-	-
		10-20	10YR 3/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		20-30	10YR 3/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-

Shovel Test No.	Site Trinomial	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/ Negative	Cultural Materials	Comments/Reason for Termination
CM04	NA	30-40	10YR 4/2	dark grayish brown	sandy clay	Less than 5% gravels	Negative	-	-
		40-50	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	-
		50-60	10YR 4/2	dark grayish brown	sandy clay	Less than 5% gravels	Negative	-	Termination due to depth
CM05	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		10-20	Fill	Fill Material	sandy clay	Over 50% gravels and cobbles	Negative	-	-
		20-30	10YR 3/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		30-40	10YR 4/2	dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		40-50	10YR 4/2	dark grayish brown	sandy clay	Less than 5% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM06	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 15% gravels	Negative	-	-
		10-20	10YR 3/2	very dark grayish brown	sandy clay	over 15% gravels	Negative	-	-
		20-30	10YR 3/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		30-40	10YR 4/2	dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		40-50	10YR 4/2	dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM07		0-10	10YR 3/2	very dark grayish brown	sandy clay	over 25% gravels	Negative	-	-
		10-20	10YR 3/2	very dark grayish brown	sandy clay	over 25% gravels	Negative	-	-

Shovel Test No.	Site Trinomial	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/ Negative	Cultural Materials	Comments/Reason for Termination
CM07	NA	20-30	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		30-40	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		40-50	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM08	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 25% gravels	Negative	-	-
		10-20	10YR 4/2	very dark grayish brown	sandy clay	over 25% gravels	Negative	-	-
		20-30	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		30-40	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	-
		40-50	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	Charcoal present	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM09	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 25% gravels	Negative	-	-
		10-20	10YR 3/2	very dark grayish brown	sandy clay	over 25% gravels	Negative	-	-
		20-30	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		30-40	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		40-50	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth

Shovel Test No.	Site Trinomial	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/ Negative	Cultural Materials	Comments/Reason for Termination
CM10	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 20% gravels	Negative	-	-
		10-20	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		20-30	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		30-40	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		40-50	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM11	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 20% gravels	Negative	-	-
		10-20	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		20-30	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		30-40	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		40-50	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM12	41BX1919	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 20% gravels	Negative	-	-
		10-20	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		20-30	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-

Shovel Test No.	Site Trinomial	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/ Negative	Cultural Materials	Comments/Reason for Termination
CM12	41BX1919	30-40	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		40-50	10YR 4/2	very dark grayish brown	sandy clay	less than 10% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth
CM13	NA	0-10	10YR 3/2	very dark grayish brown	sandy clay	over 25% gravels	Negative	-	-
		10-20	Fill	Fill Material	sandy loam	over 50% gravels and cobbles	Negative	-	-
		20-30	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		30-40	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		40-50	10YR 4/2	very dark grayish brown	sandy clay	over 10% gravels	Negative	-	-
		50-60	10YR 5/3	brown	clay loam	Less than 5% gravels	Negative	-	Termination due to depth.