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# Cultural Resources Investigations for the Multiple Sewershed Package 6 Project, San Antonio, Bexar County, Texas

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# CULTURAL RESOURCES INVESTIGATIONS FOR THE MULTIPLE SEWERSHED PACKAGE 6 PROJECT, SAN ANTONIO, BEXAR COUNTY, TEXAS

## FINAL REPORT (Non-Redacted)

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# MANAGEMENT SUMMARY

**Raba Kistner Environmental, Inc.** (**RKEI**), was contracted by K FRIESE + ASSOCIATES (CLIENT), on behalf of San Antonio Water System (SAWS), to perform cultural resources investigations for the SAWS Package 6 Project. The project consists of the replacement and rehabilitation of four distinct locations (Location 1- 3 and Location 10) of existing sewer alignment throughout San Antonio, Bexar County, Texas. SAWS will replace and rehabilitate the existing sewer alignment through a combination of non-ground disturbing robotic machinery and open-cut trenching excavations. Temporary work spaces for the construction include the existing SAWS easement, portions of other existing easements (i.e., overhead utility easements and City of San Antonio [COSA] easements), existing city streets, or new temporary easements partially within private land.

The project is located on both private lands and lands owned by the COSA and maintained by SAWS, both political subdivisions of the state. As such, the project is subject to review under the jurisdiction of the COSA Unified Development Code (Article VI 35-630 to 35-634), as well as the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191).

On April 4, 2018, **RKEI** archaeologists conducted an archival search for the Hunt Lane Cemetery. The search determined that the cemetery was likely dedicated as a private family cemetery in the 1930-1940s for the use of the Hernandez family and their descendants. The review also determined that the cemetery does not likely cross the unnamed tributary of Medio Creek, and therefore does not extend within the boundaries of Location 10. On April 12, 2018, **RKEI** Archaeologists conducted a pedestrian survey augmented with shovel testing for Locations 1-3 and 10. A total of 12 shovel tests was excavated for all four locations, none of which tested positive for cultural deposits. As a result, no new cultural resources were documented during the SAWS Package 6 Project. Antonio E. Padilla, M.A., RPA, served as Principal Investigator for the Project, and Rhiana D. Ward served as Project Archaeologist. Field work was conducted by Chris Matthews and Jason Whitaker. All work complied with Texas Historical Commission and Council of Texas Archeologists guidelines and standards.

In accordance with federal regulation 36 CFR Part 79 and THC requirements for State Held-in-Trust collections, all project related documentation produced during the investigations will be curated at The Center for Archaeological Research at the University of Texas at San Antonio.

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# CHAPTER 1. INTRODUCTION

**Raba Kistner Environmental, Inc.** (**RKEI**), was contracted by K FRIESE + ASSOCIATES (CLIENT), on behalf of San Antonio Water System (SAWS), to perform cultural resources investigations for four sewer replacement and rehabilitation projects in southeastern San Antonio, Bexar County, Texas, collectively known as the SAWS Package 6 Project (**Figure 1-1**). Repairs to the existing sewer alignments will be completed through a combination of non-ground disturbing robotic machinery and open-cut trenching excavations. This report summarizes the results of the archaeological investigations conducted prior to rehabilitation efforts and provides recommendations for project related efforts.

The project is located on both private lands and lands owned by the City of San Antonio (COSA) and maintained by SAWS. Both COSA and SAWS are political subdivisions of the state and are subject to review under the jurisdiction of the COSA Unified Development Code (UDC) (Article VI 35-630 to 35-634), as well as the Antiquities Code of Texas (ACT) (Texas Natural Resource Code, Title 9, Chapter 191). Projects under the UDC are regulated by the COSA Office of Historic Preservation (OHP), and the ACT is regulated by the Texas Historical Commission (THC).

## Area of Potential Effects

The SAWS Package 6 Project consists of the replacement and rehabilitation of four distinct locations (Location 1–3 and Location 10) of existing sewer alignment throughout San Antonio, Bexar County, Texas. Replacement and rehabilitation excavation methods will not be determined until an assessment of utility repairs and field conditions is conducted on site at the time of construction. Temporary work spaces for the construction include the existing SAWS easement, portions of other existing easements (i.e., overhead utility easements and COSA easements), existing city streets, or new temporary easements partially within private land. Together, all four location encompass a total of 1.05 acres.

Location 1 is 0.05 kilometers (km) west of Preston Court Drive and Preston Pass drive in northeastern San Antonio Texas (**Figure 1-2**). The 150 meter (m) long alignment is located within a green space for the Mud Creek drainage, immediately adjacent to the fence line of a residential development, and encompasses approximately 0.34 acre. Temporary work spaces will likely be limited to an existing dirt access road that parallels the residential fence line from Thousand Oaks Drive to the south. Location 1 is located on the *Longhorn (2998-422)* 7.5-minute U.S. Geological Survey (USGS) quadrangle maps.

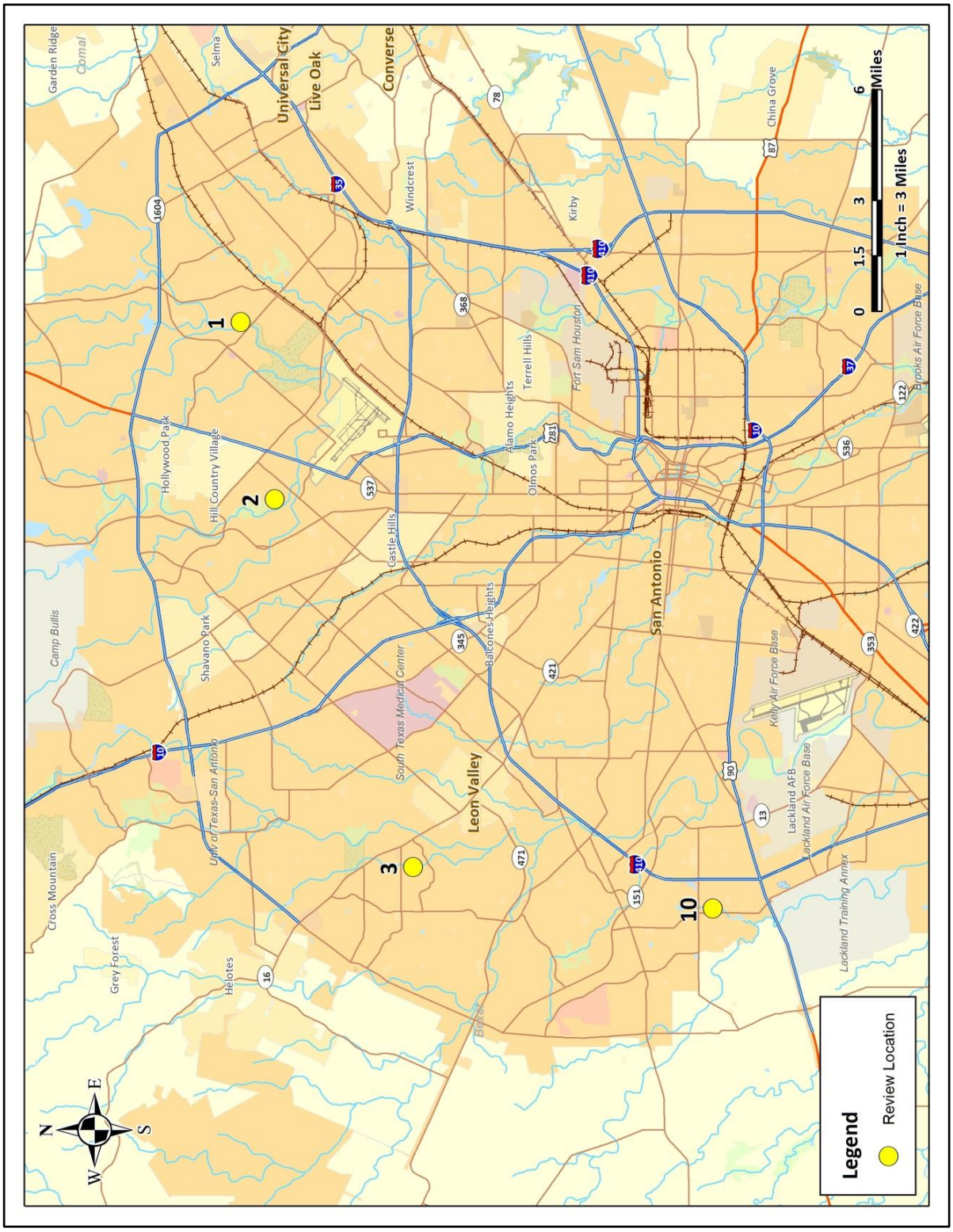


**Figure 1-1. Locations 1-3 and Location 10 within San Antonio, Texas.**

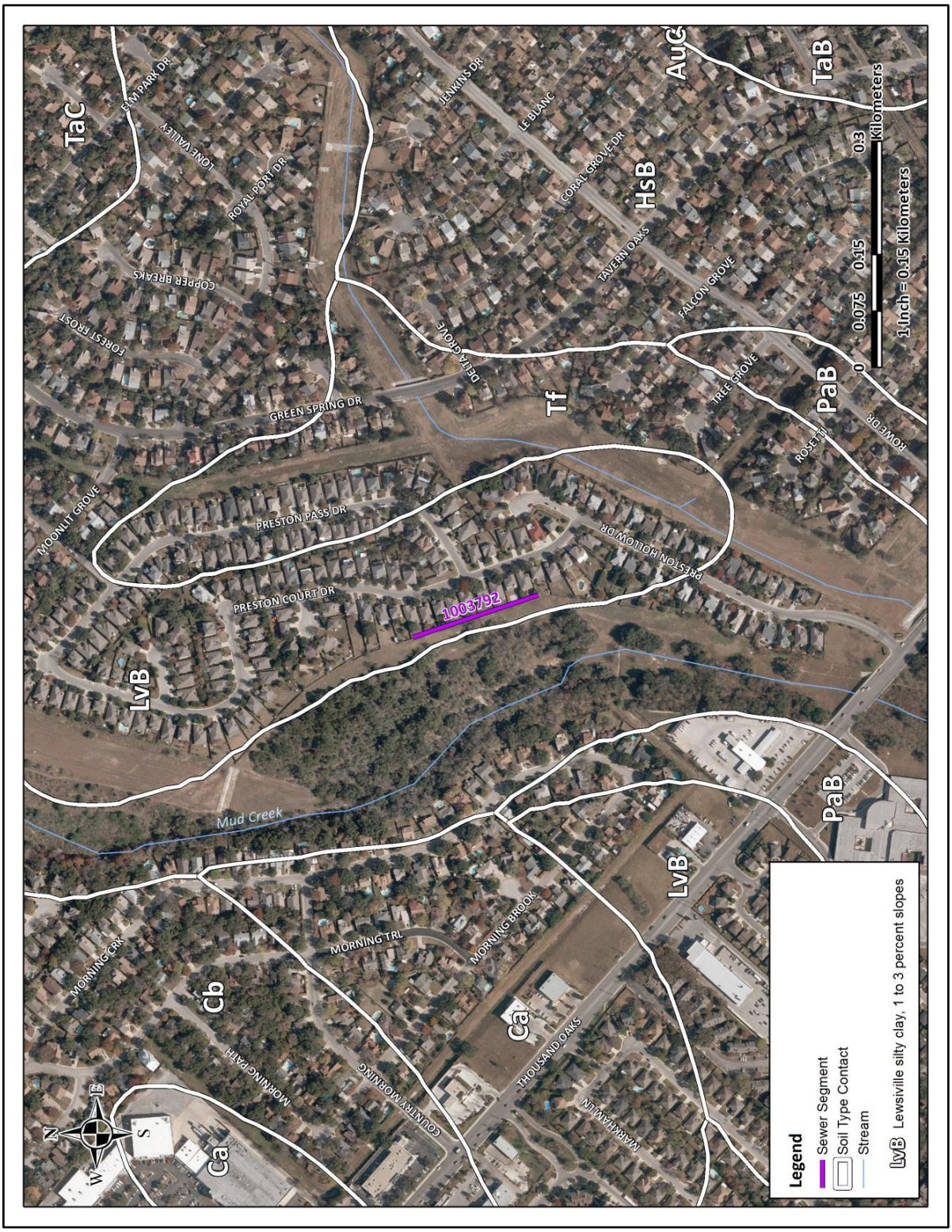


**Figure 1-2. Area overview and soils for Location 1.**

Location 2 is 0.66 km northeast of Wurzbach Parkway at its intersection with West Avenue in northern San Antonio (**Figure 1-3**). The alignment measures 150 m long, encompasses 0.34 acre, and is located within the southern portion of the Silverhorn Golf Course, 356 m east of Panther Springs Creek. A large earthen dam is 70 m south of the alignment within the creek drainage. The dam forms a large stock pond 100 m to the west of Location 2. In addition to the alignment, Location 2 includes a 550-m long temporary access road that skirts along the southern toe of the dam. Temporary work spaces will likely be limited to the temporary access road and golf course paths. Location 2 is located on the *Castle Hills (2998-311)* 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle maps.

Location 3 is 0.10 km west-northwest of Exbourne Drive at its intersection with Bluff Bend Drive in northwestern San Antonio (**Figure 1-4**). The 60-m long alignment encompasses 0.14 acre and is located partially within the Exbourne Street right-of-way and projects to the southwest into a green space for the French Creek drainage. French Creek is 100 m west of the alignment and the general setting consists predominately of residential development. Temporary workspaces will likely be limited to the Exbourne Drive right-of-way. Location 3 is located on the *Helotes (2998-312)* 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle maps.

Location 10 is 0.06 km west of Serene Valley drive at its intersection with Dale Valley Drive in west San Antonio (**Figure 1-5**). The 100-m long alignment encompasses 0.23 acre and parallels an existing CPS Energy overhead utility right-of-way to the east and Medio Creek to the west. Temporary work spaces and access routes will likely be limited to the existing overhead right-of-way and the existing SAWS right-of-way. The general setting for the alignment consists predominately of residential development, the Hunt Cemetery, and local businesses. Location 10 is located on the *Culebra Hill (2998-243)* 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle maps.

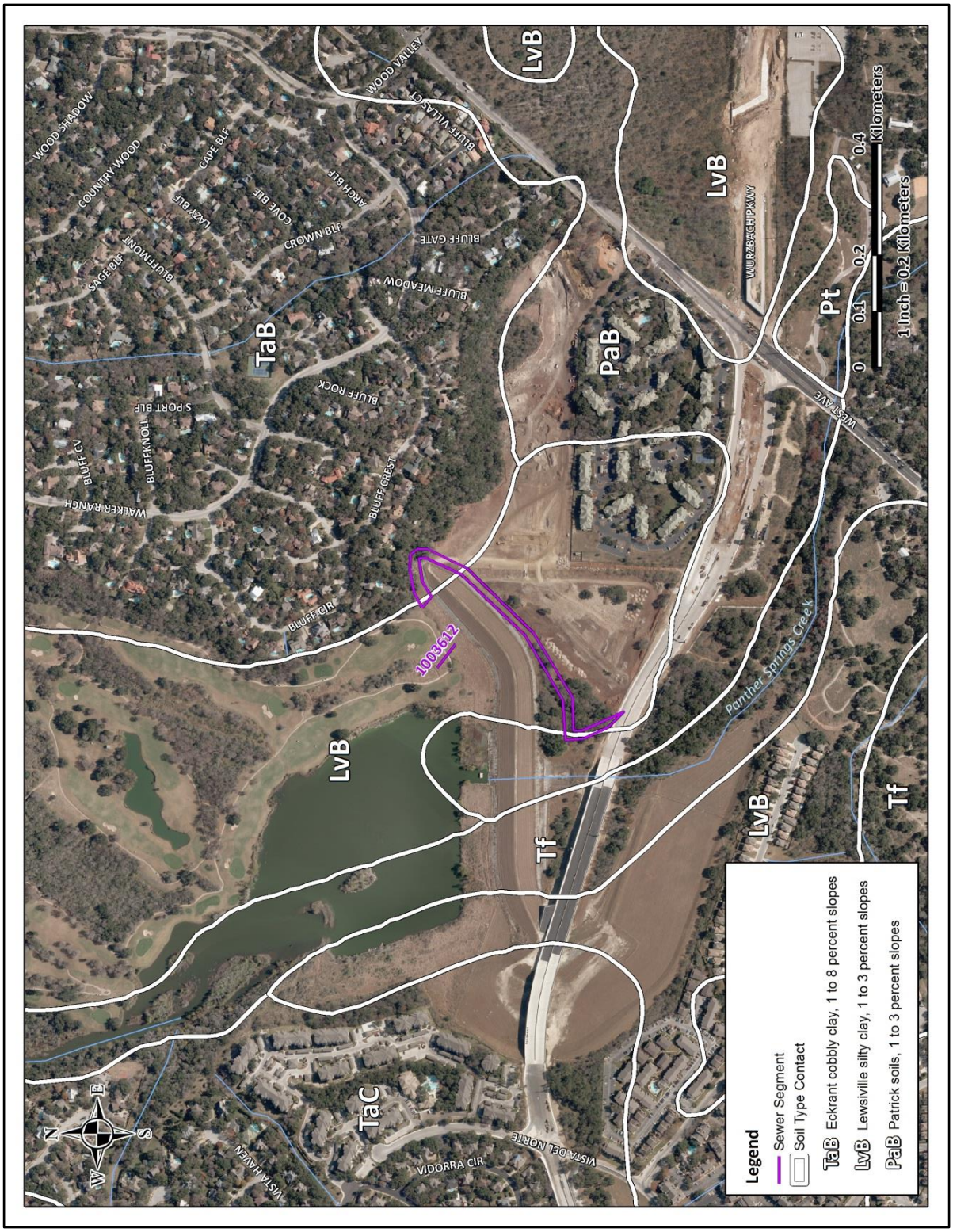


**Figure 1-3. Area overview and soils for Location 2.**


**Figure 1-4. Area overview and soils for Location 3.**

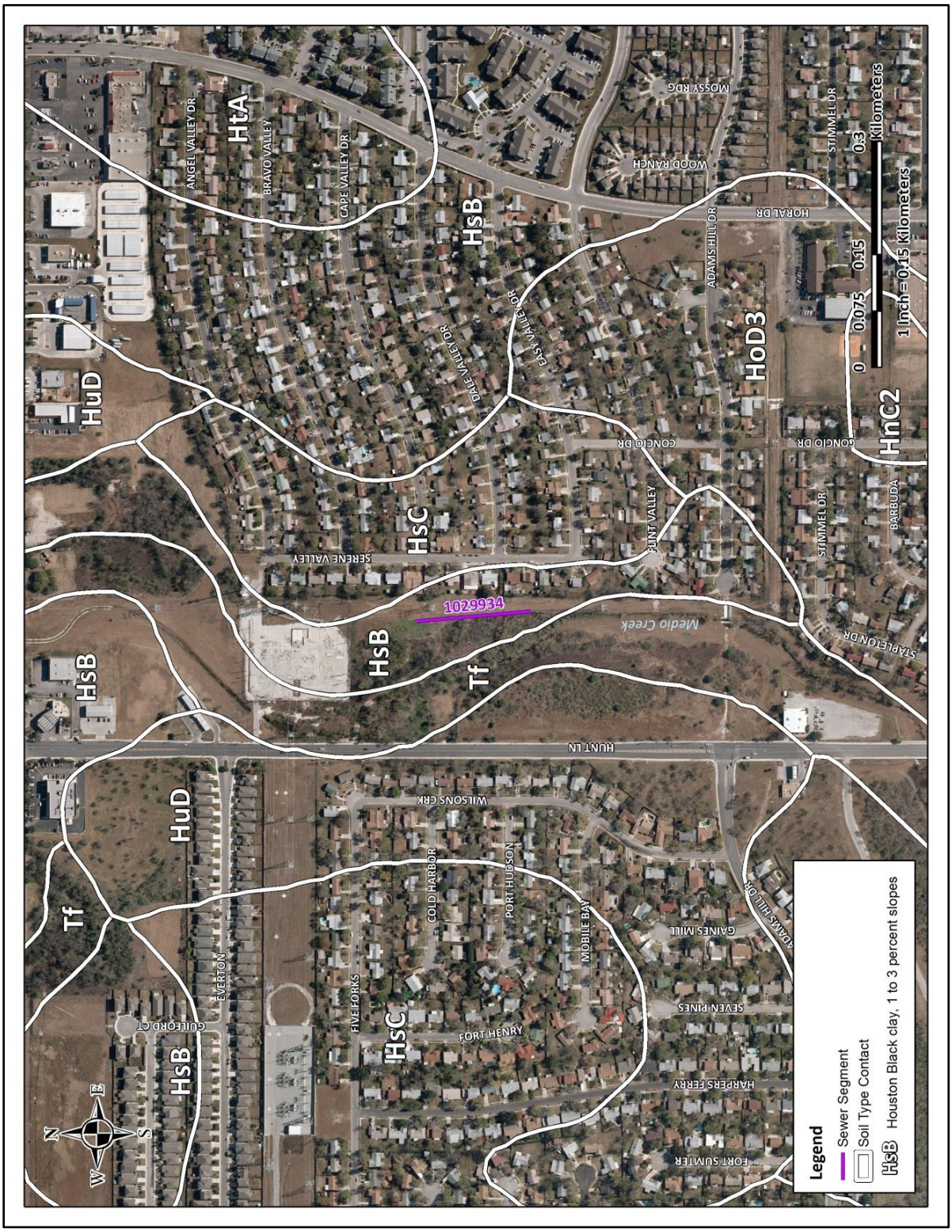


**Figure 1-5. Area overview and soils for Location 10.**

# CHAPTER 2. ENVIRONMENTAL SETTING

The project area is located in the south-central Texas geographic region within the Blackland Prairie eco-region. 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 Prairie 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 underlying geology of Location 1 is mapped as 100 percent Terrace deposits of Pleistocene-Holocene age. Terrace deposits generally consist of sand, silt, clay, and gravel deposits in various proportions, with locally indurated calcium carbonate deposits present in terraces along streams (Barnes 1983). The southwestern majority of Location 2 and is mapped within Terrace deposits; however, the northeastern portion of the temporary access road associated with Location 2 is mapped within the Buda Limestone and Del Rio Clay, undivided geological series. The Buda Limestone and Del Rio Clay, undivided series is characterized by thin to thick beds of limestone with few chert nodules, underlain by gray marl and calcareous shale and limonite nodules. The underlying geology of Location 3 is mapped as 100 percent Austin Chalk of Late Cretaceous-age. Austin Chalk is characterized by massive chalk with some interbeds and parting of light gray, calcareous clay over mostly thin-bedded marl with interbeds of massive chalk, hard lime mudstone and soft chalk. Location 10 is mapped 100 percent within the Navarrow Group and Marlbrook Marl, undivided geological formation. This formation dates to the Late Cretaceous and is characterized by calcareous clay or mudstone with variable amounts of silt and glauconite (Barnes 1983).

## Soils

Location 1 is mapped as 100 percent Lewisville silty clay soils with 1 to 3 percent slopes (Natural Resources Conservation Service [NRCS] 2018) (see **Figure 1-2**). The Lewisville soil series consists of very deep, well drained, moderately permeable soils that formed in ancient loamy and clayey calcareous sediments in upland settings. Soils for Location 2 are mapped as Eckrant cobbly clays and Lewisville silty clays to the northeast, Patrick soils, rarely flooded, near the center of the access road, and Tin and Frio soils, frequently flooded, to the southwest (see **Figure 1-3**). Eckrant soils are well drained, moderately slowly permeable soils that are very shallow to shallow over indurated limestone bedrock. The Patrick series is characterized by moderately deep to gravelly alluvium soils derived from shale, claystone, or siltstone of Cretaceous-age along nearly level to strongly sloping stream terraces on dissected plains. Tinn and Frio soils are described as very deep, moderately well to well drained, very slowly permeable soils that formed in calcareous clayey alluvium in flood plains of dissected plains in the Blackland Prairies. Soils for location 3 are mapped as Patrick soils with 1 to 3 percent slopes, rarely flooded (see **Figure 1-4**). Location 10 is underlain by Houston Black clay with 1 to 3 percent slopes (see **Figure 1-5**). Houston Black soils consist of very deep, moderately well drained, very slowly permeable soils that formed in clayey residuum derived from calcareous mudstone of Cretaceous-age on plains on dissected plains (NCRS 2018).

## Flora and Fauna

The project area is located near the intersection of the Balconian and Taumaulipan biotic provinces (Blair 1950). Floral and faunal resources consist of a mix of species from the Austroriparian, Taumaulipan, Chihuahuan, Kansan, Balconian, and Texan biotic provinces. There are three major geographic regions nearby the project area: the Edwards Plateau, the Blackland Prairie, and the South Texas Plains. Trees, plants and grasses in this region include cedar (*Juniperus ashei*), live oak (*Quercus fusiformis*), 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.).

The fauna that inhabit the south-central Texas region includes at least 95 bird and 29 mammal species. The area also contains a wide array of reptiles, fish, and amphibians. Mammal species that were noted within the APE include white-tailed deer (*Odocoileus virginianus*), nine-banded armadillo (*Dasypus novemcinctus*), Virginia opossum (*Didelphis virgininana*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), cottontail rabbit (*Sylvilagus audubonii*), feral hog, domestic and feral cat, and squirrel.

## South Texas Climate

The climate in south-central Texas is 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 of rain per year (SRCC 2015; 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 CONTEXT

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 structures, 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. The standard summaries of the culture chronologies of central Texas accepted by many of the regional archaeologists were produced by Collins (1995) and Prewitt (1981). Below is a brief summary of the cultural sequence that has been reconstructed by archaeologists for the south-central part of the state.

## Paleoindian

The oldest cultural materials found in the region date to the Paleoindian period. The period spans roughly from 11,500-8,800 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; Toomey et al. 1993), 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 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 and later Archaic hunter-gatherers may have been similar (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 2014). 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 first was 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, 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. 8,800 to 1,200 B.PB.. It is divided into three subperiods: 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 is climatic conditions and the primary productivity of the plant resources may have contributed to shifts in subsistence strategies and associated technological repertoire. When bison was not present in the region, hunting strategies focused on medium to small game along with continued foraging for plant resources. When bison was available, hunter-gatherers targeted the larger-bodied prey on a regular basis.

### *Early Archaic*

Collins (1995) suggests that the Early Archaic spans from 8,800 to 6,000 B.P. Projectile point styles characteristic of the Early Archaic include Angostura, Early Split Stem, Martindale, and Uvalde (Collins 1995). 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 continue from the Paleoindian into the Early Archaic (Angostura). However, relatively quickly during the Early Archaic, they are replaced by corner- and basally-notched and shouldered forms (Early Triangular, Andice, Bell) that 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. The appearance of earth ovens suggests another 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, radiocarbon dated to cal 8,390 to 8,180 B.P. (Tomka 2014).

### *Middle Archaic*

The Middle Archaic subperiod spans from 6,000 to 4,000 B.P. (Collins 1995; Weir 1976). Archaeological data indicates that there appeared to be a population increase 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 more arid conditions. Projectile point styles characteristic of this subperiod include Bell, Andice, Calf Creek, Taylor, Nolan, and Travis.

Subsistence during the Middle Archaic saw an increased reliance on nuts and other products of riverine environments (Black 1989). The increase 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. An excavation in an Uvalde County sinkhole (41UV4) contained 25-50 individuals (Johnson and Goode 1994:28).

### *Late Archaic*

Subsistence during the Middle Archaic saw an increased reliance on nuts and other products of riverine environments (Black 1989). The increase 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. An excavation in an Uvalde County sinkhole (41UV4) contained 25-50 individuals (Johnson and Goode 1994:28).

Some researchers believe that the use of burned rock middens decreased during the Late Archaic. Some 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.

Human remains from burials related to the Late Archaic in Central and South Texas suggest 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 Edward's Plateau.

### Late Prehistoric

The Late Prehistoric period begins ca. 1,200 B.P. (Collins 1995, 2004), and appears to continue until the beginning of the Protohistoric period (ca. A.D. 1700). The term Late Prehistoric is used in central and south Texas to designate the time following the end of the Archaic period. A series of traits characterizes the shift from the Archaic to the Late Prehistoric period. The main technological changes were the shift to the bow and arrow and the introduction of pottery. The Late Prehistoric period is divided into two phases: the Austin phase and the Toyah phase.

At the beginning of this period, environmental conditions were deemed to be warm and dry. Moister conditions appear after 1,000 B.P. (Mauldin and Nickels 2001). Subsistence practices appeared similar to 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).

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 1,350 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 dating to this period often reveal evidence of conflict (Black 1989:32).

## Historic Period

The beginnings of San Antonio came about with the establishment of Mission San Antonio de Valero (Mission Valero) in 1718. Fray Antonio de San Buenaventura y Olivares had 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 San Antonio de Valero was established along the San Pedro Creek on May 1, 1718, by the Alarcon Expedition. Mission Valero occupied at least two locations before it settled into its current spot. The final location was in use by 1724.

On May 5, 1718, five days after Mission Valero was founded, Presidio de Bexar was established. The presidio was to provide military protection from the missionaries and the mission occupants, as well as 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 (Mission San José) 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 a week's walk of each other in 1731. These three missions, Mission Nuestra Señora de la Purisima Concepción (Mission Concepción), Mission San Juan de Capistrano (Mission San Juan), and Mission San Francisco de la Espada (Mission Espada), were originally missions established in east Texas. When each failed along the eastern border, they were moved to San Antonio.

In addition to the five missions, the civilian community outside of the mission and presidio, Villa San Fernando de Bexar was established by the Canary Islanders in 1731. Prior to the establishment of Villa San Fernando, Villa de Bexar had been settled by 30 presidio 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.

## Previous Archaeology

In December 2017, **RKEI** conducted a desktop review of a 0.25-km study area surrounding each of the four SAWS Package 6 Project locations to determine the probability of encountering significant cultural resources. The results of the desktop review are summarized in **Table 3-1** and **Figures 3-1** through **3-4**.

**Table 3-1. Known Cultural Resources and Previous Investigations within 0.25-km of Locations 1-3 and 10**

| Location No. | USGS Quadrangle | Nearest Extant Drainage | Known Investigations Within Alignment | Known Cultural Resources within 0.25-km |
|---|---|---|---|---|
| 1 | Longhorn (2998-422) | Mud Creek, 106 m west | 1977 SAWS Wastewater 201 Survey (Fox 1977). | **41BX354** (0.14 km west): Prehistoric occupation site. No eligibility listing.<br><br>**41BX842** (0.2 km south): Prehistoric open campsite. Portion of site listed as ineligible in 2013. |
| 2 | Castle Hills (2998-311) | Panther Springs Creek, 356 m west | 1973 THC Survey, no further information provided on Atlas (THC 2017). | Within **Walker Ranch National Register District**.<br><br>**41BX180** (0.25 km north-northwest): Historic limestone ruins known as the Walk Ranch Ruins Site. No eligibility listing.<br><br>**41BX199** (0.25 km northwest): Prehistoric lithic scatter. No eligibility listing.<br><br>**41BX228** (0.24 km west): Burned rock midden. Portions of site listed as ineligible in 2009.<br><br>**41BX996** (0.16 km southwest): Prehistoric open campsite. No eligibility listing. |
| 3 | Helotes (2998-312) | French Creek, 100 m west | 1977 SAWS Wastewater 201 Survey (Fox 1977). | None |
| 10 | Culebra Hill (2998-243) | Unnamed tributary of Medio Creek, 60 m west | None | Within **Hunt Lane Cemetery**. |

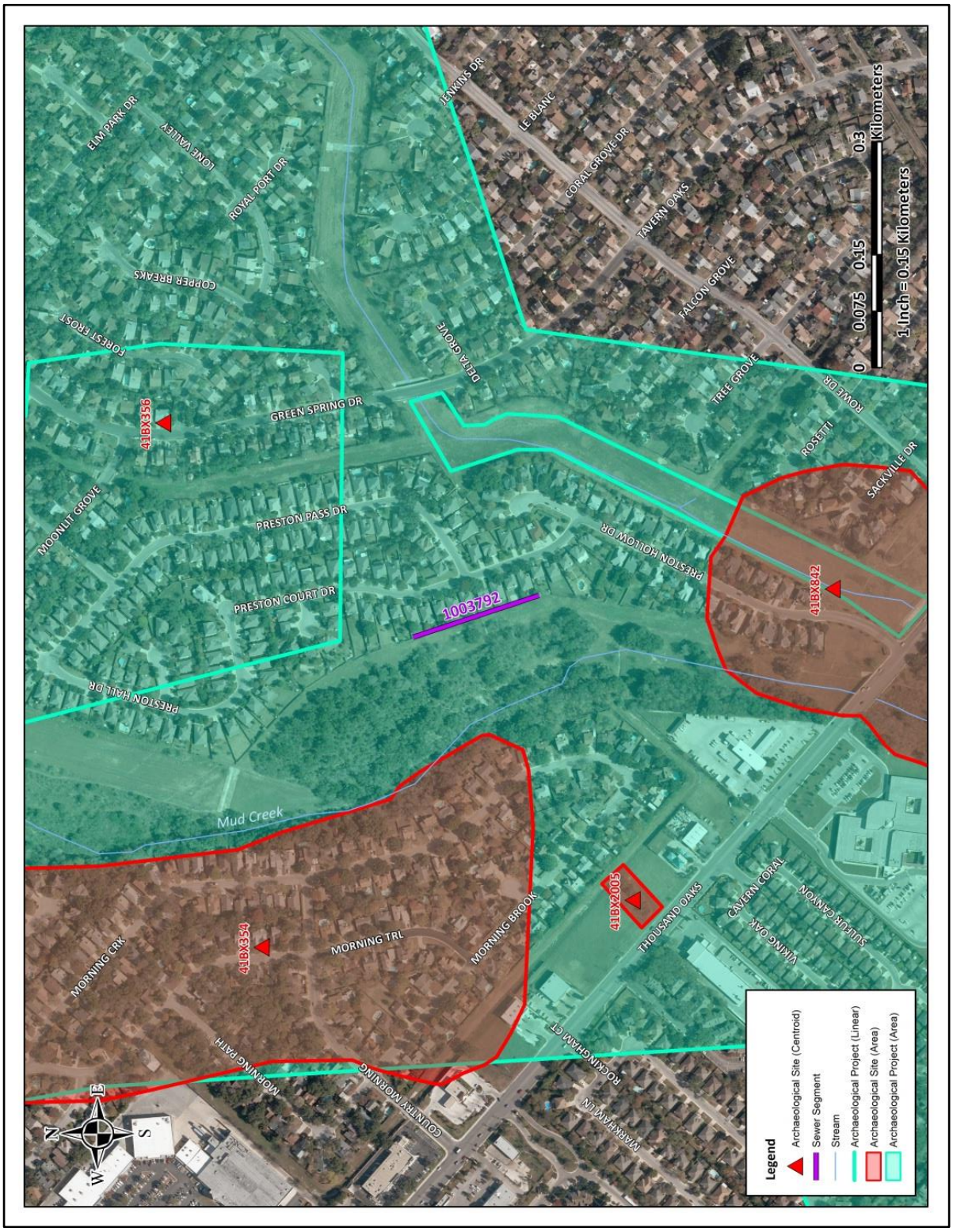


**Figure 3-1. Known cultural resources and previous surveys within a 0.25 km radius of Location 1.**

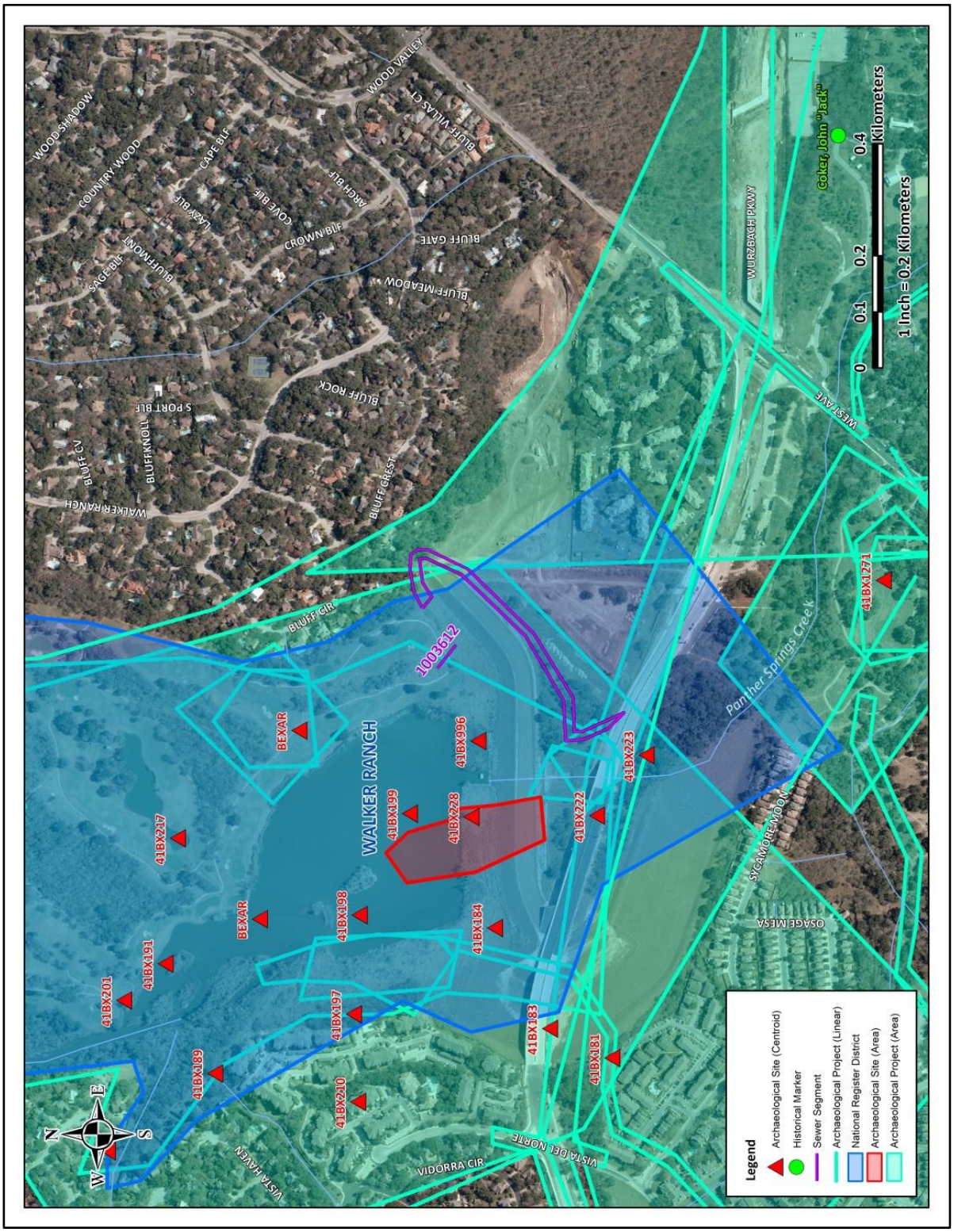


**Figure 3-2. Known cultural resources and previous surveys within a 0.25 km radius of Location 2.**

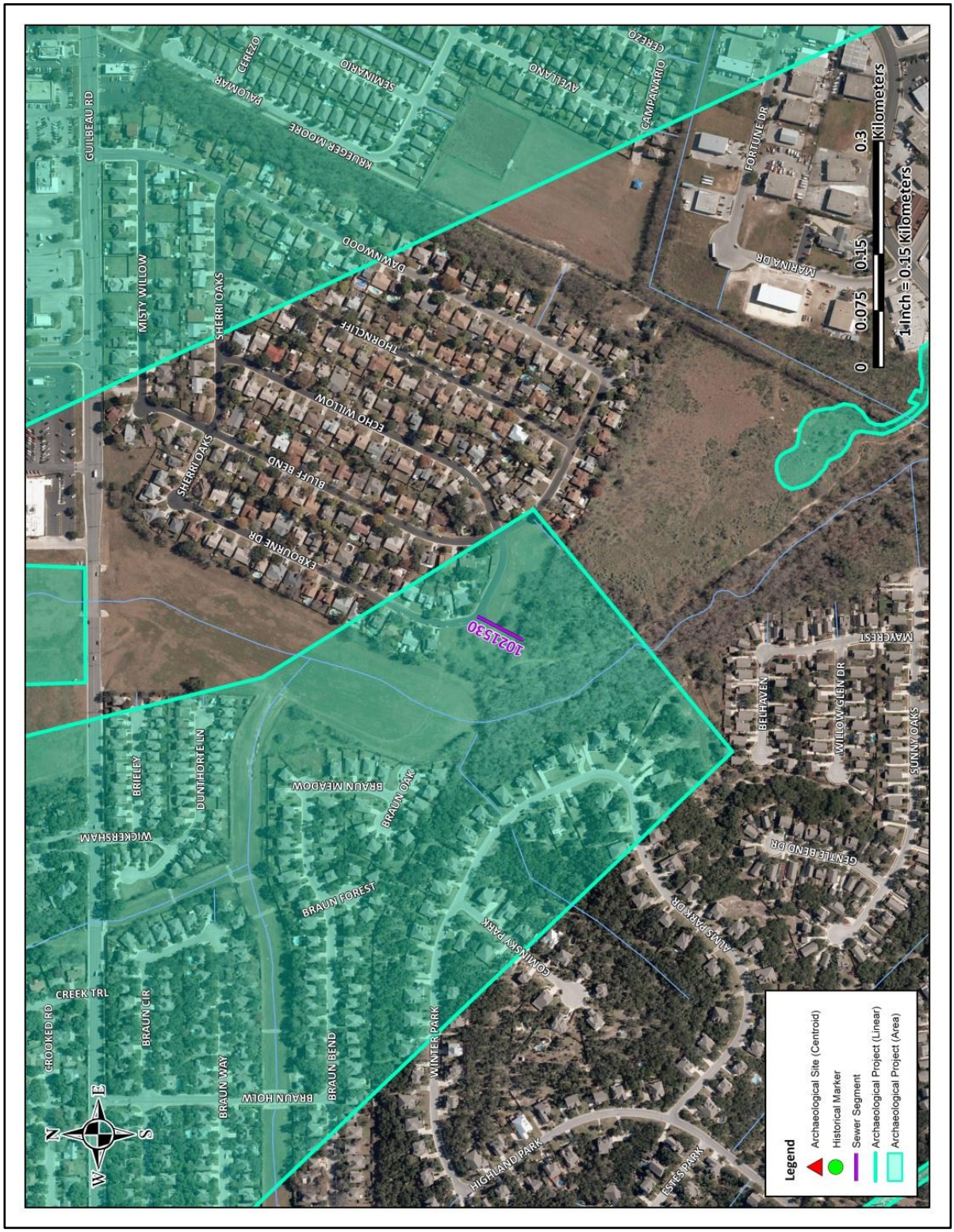


**Figure 3-3. Known cultural resources and previous surveys within a 0.25 km radius of Location 3.**

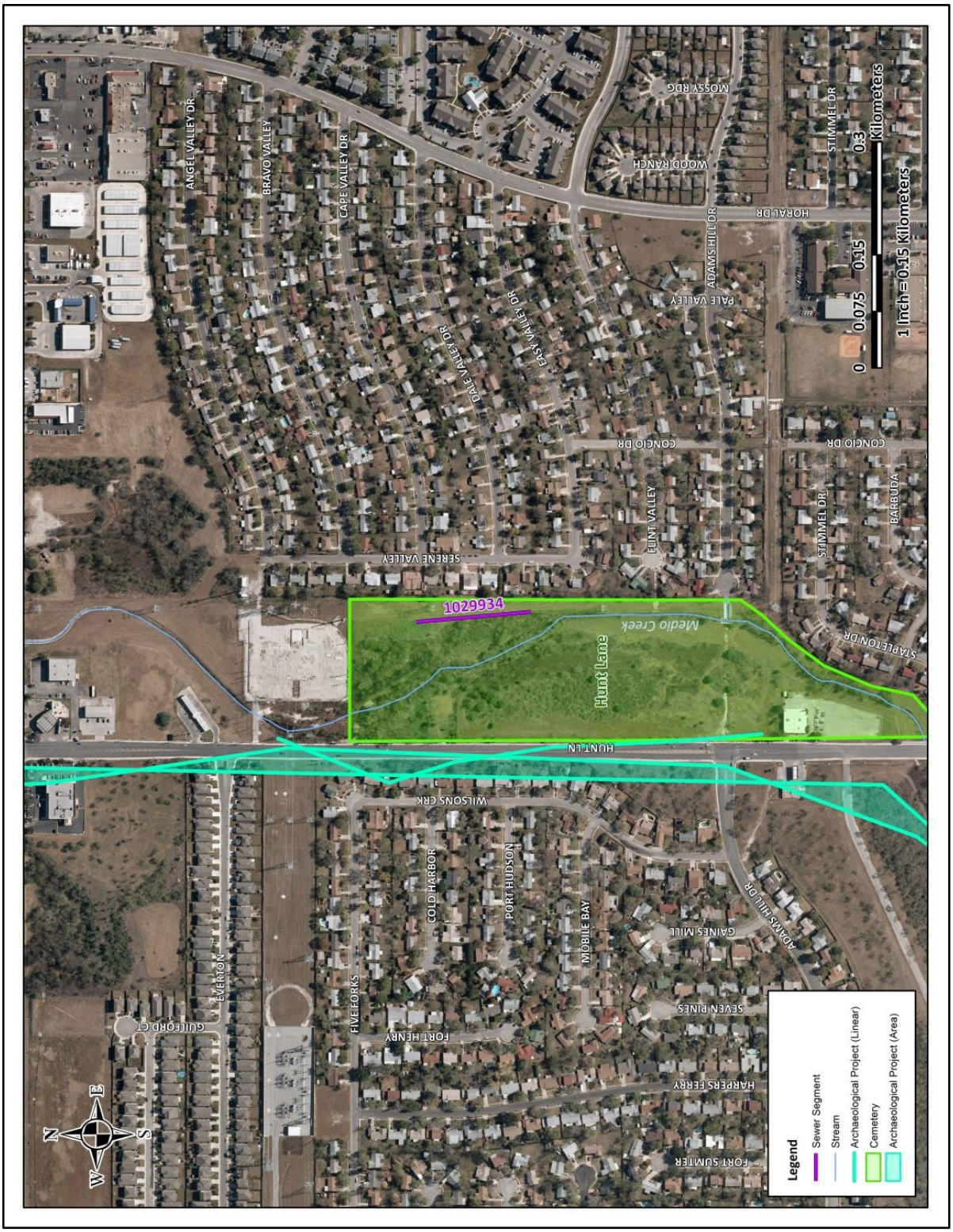


**Figure 3-4. Known cultural resources and previous surveys within a 0.25 km radius of Location 10.**

# CHAPTER 4. METHODS OF INVESTIGATION

To ensure that the project met the requirements of regulating agencies, **RKEI** performed an archival search for the Hunt Lane Cemetery and an intensive archaeological survey augmented with shovel testing for Locations 1-3 and 10. All work complied with THC and Council of Texas Archeologists (CTA) guidelines and standards. Investigations ensured that if historic or prehistoric deposits and/or features were present within the project areas, they were properly recorded and evaluated for their significance prior to negative impacts associated with the project.

## Archival Research

An initial desktop review conducted by **RKEI** in December 2017 and January 2018 determined that Location 10 was located within the mapped boundaries of Hunt Lane Cemetery. Although initial site inspections identified an active, fenced cemetery 85 m west of the alignment, THC records indicated that the cemetery had the potential to extend beyond the boundaries of the posted fencing. To ensure that construction did not impact any unmarked burials, **RKEI** archaeologists conducted archival research prior to field investigations to determine the cemeteries origins, boundaries, and capacity.

For the review, **RKEI** archaeologists consulted historic topographic, aerial, and plat maps, city, county, and state records, and other forms of literature available through local repositories. Repositories included, but were not limited to, the San Antonio Genealogical and Historical Society, FindaGrave.com, San Antonio Public Library, the Bexar County Clerks Records, the San Antonio Municipal Archives, the Library of Congress, the Portal to Texas History, and the Handbook of Texas Online. Results of the Archival Research are detailed in Chapter 5.

## Pedestrian Survey with Shovel Testing

To ensure that construction did not impact significant archaeological resources, **RKEI** archaeologists conducted an intensive pedestrian survey augmented with shovel testing at each of the four locations to determine the location and extent of cultural deposits, if present. Specifically, investigations focused on the temporary work spaces and access roads proposed for each location. No shovel tests or investigations were conducted within the existing SAWS right-of-way due to existing disturbance.

A visual inspection of the ground surface was conducted in areas of high ground surface visibility (greater than 30-percent) in order to locate cultural materials on the ground surface or evidence of cultural features beneath the ground surface. Shovel tests were excavated in areas where surface visibility was below 30 percent. Shovel tests were placed within 4.5 m on either side of the existing SAWS right-of-way, right-of-entry permitting, for a total of 9 m of temporary work space in addition to the existing SAWS ROW (existing SAWS right-of-between 6 to 9 m wide). Dependent upon each location, shovel tests were excavated in 100 m intervals. However, if a segment was less than 100 m in length, a minimum of two shovel tests were excavated.

If a given shovel test was positive for cultural materials, additional units were excavated within 10 m in the four cardinal directions with respect to project boundaries, until two consecutive, negative shovel tests were produced. If cultural materials were judged to form an archaeological site, the original shovel test was used as part of the site boundary definition stage of the investigation. As per the THCs minimum requirements, at least six (6) shovel tests were excavated to define the boundaries of a small site.

Shovel tests were excavated to a maximum depth of 60 cm below surface. They ranged from 32 to 35 cm in maximum diameter and were excavated in 10 cm levels. All soils were screened through a ¼-inch mesh to observe artifacts. A shovel test form was filled out for each excavated unit. The form contained information on the soils encountered, the artifacts (if any) recovered, disturbances noted, and references to samples retained and photographs taken. The project adhered to a temporarily diagnostic artifact collection-only policy; however, no cultural materials were recovered during investigations.

## Laboratory and Curation

By adhering to a temporally diagnostic-only collection policy, **RKEI** limited the cost of such curation needs which are mandated by the COSA-OHP and the THC. Had any artifacts been recovered from the investigations, they would have been assembled and analyzed at the **RKEI** Archaeological Laboratory. Diagnostic artifacts collected from public property would have been prepared for curation at the University of Texas at San Antonio Center for Archaeological Research (CAR-UTSA), while diagnostic artifacts collected from private property would have been returned to the land owner.

In accordance with federal regulation 36 CFR Part 79 and THC requirements for State Held-in-Trust collections, all project related documentation produced during the project was prepared for curation following field investigations. 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. 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. All project related documentation produced during the investigations will be curated at CAR-UTSA. A copy of the report and all digital materials will be saved onto a CD and stored with field notes and documents. All work will comply with THC and CTA standards for the overall project, unless documented field conditions warrant otherwise.

# CHAPTER 5. RESULTS OF INVESTIGATIONS

On April 4, 2018, **RKEI** archaeologists conducted an archival search for the Hunt Lane Cemetery. The search determined that the cemetery was likely dedicated as a private family cemetery during the 1930-1940s for the Hernandez family and their descendants. Base on historic maps and historic aerial photography, it was also determined that the cemetery does not likely cross the unnamed tributary of Medio Creek and therefore does not extend within the boundaries of Location 10. On April 12, 2018, **RKEI** Archaeologists conducted a pedestrian survey augmented with shovel testing for Locations 1-3, and 10. Antonio E. Padilla, M.A., RPA, served as Principal Investigator for the project and Rhiana D. Ward, M.A., served as Project Archaeologist. Field work was conducted by **RKCI** Archaeologists Chris Matthews and Jason Whitaker. A total of 12 shovel tests was excavated for all four locations, none of which tested positive for cultural deposits. As a result, no new cultural resources were documented during the SAWS Package 6 Project.

## Archival Research for the Hunt Lane Cemetery

During a desktop review conducted in December 2017 and January 2018, **RKEI** determined that Location 10 was situated within the mapped boundaries of the Hunt Lane Cemetery, also known as the San Ramon Cemetery or BX-C138 (FindAGrave.com 2018; THC 2018). The mapped boundaries illustrated on the THC's Archaeological Sites Atlas online database (Atlas) encompass roughly 22.6 acres along the eastern side of Hunt Lane, 0.38 km south of its intersection with Marbach Road (see **Figure 3-4**). The mapped boundaries are intersected by Adams Hill Drive near its southern end, and the Fraternal Order of Eagles No. 70 building is also located within the southern portion of the cemetery (located at 2230 Hunt Lane). The mapped cemetery encompasses mostly undeveloped rangeland intersected by an unnamed tributary of Medio Creek.

According to Atlas, the archival source for the Hunt Lane Cemetery is the "RIP Fields Table" (THC 2018). The Record, Investigate, Protect (RIP) Records, acquired from the THC Cemetery Preservation Coordinator, describe the cemetery as a private family cemetery of European Catholic denomination. Two contacts for the cemetery are listed under the name Rodriguez. The "Source of Records" for the RIP Records is listed as the San Antonio Genealogical and Historical Society (SAGHS). It is likely that the RIP Record, and therefore the Atlas boundaries, was generated using the *Cemeteries of Bexar County, Texas, Volume 3*, publication issued by the SAHGS, and that the cemetery has not been field verified by the THC.

A review of historical maps identified the general setting of the Hunt Lane Cemetery as early as 1874. A review of the Texas General Land Office's Land and Leasing Map indicates that the cemetery is located within the Ralph E. Sevy land grant, patented on September 9, 1874 (TxGLO 2018). The 639-acre parcel is listed under Abstract Number A-709 and Patent No. 626 (TxGLO 2018). Review of the 1879 William C. Walsh and the 1887 John D. Rullman Maps of Bexar County continue to depict the general location of Hunt Lane Cemetery within the "R.E. Sevey" (as identified on the 1879 Walsh Map) and "R.E. Serey" (as identified on the 1887 Rullman Map) land parcel. No indication of a cemetery is illustrated or mentioned on the 1874, 1879, or 1887 maps or survey patents.

An 1897 J.D. Rullman Map of Bexar County illustrates a drastically changed division of the general setting of the Hunt Cemetery. By 1897, the Sevy land grant had been consolidated into one large parcel, granted to P.L. Cable and L.C. Castlemen. The nearly 5,000-acre parcel, known as Cable Ranch, encompassed a five-mile stretch between the western edges of the San Antonio city limits to the east and Medio Creek to the west. The Cable family was a wealthy, prominent family from Rock Island, Illinois. Around the mid-1880s Philander L. Cable (identified as P.L. Cable on the 1897 map), president of the Rock Island-Peoria Railroad, sent his daughter, Lucy (identified as L.C. Castleman on the 1897 map) to Texas to begin construction on a mansion 9 miles west of San Antonio (*San Antonio Daily Light* 1886). Although the alignment of Hunt Lane is illustrated on the 1897 map, no indication of a cemetery is depicted.

No maps depicting the vicinity of Hunt Lane Cemetery are available between 1897 and the 1930s. However, the Stoner Systems maps, circa 1930s-1940s, depict the area of Marbach Road and Hunt Lane (identified as Dwyer Road) as agricultural farmland (Stoner Systems Maps, Book 2/1095). The Stoner System plat map depicts the location of the cemetery as within the northwestern corner of a 122-acre parcel listed to Carl Kassaeth; however, no cemetery is illustrated (Lot 38, County Block 4021) (**Figure 5**-1). A 20-acre, square-shaped parcel listed to E. Hernandez is also depicted immediately north of the cemetery's probable location. Two buildings are illustrated on the Hernandez parcel. The aerial photography from the Stoner System maps illustrate the right-of-way of Hunt Lane as bowing west near the location of the Kassaeth-Hernandez property line. It is unclear if the curve in the road is attributed to the presence of an unmarked cemetery or to create distance from the meandering curve of the unnamed tributary that parallels the road.

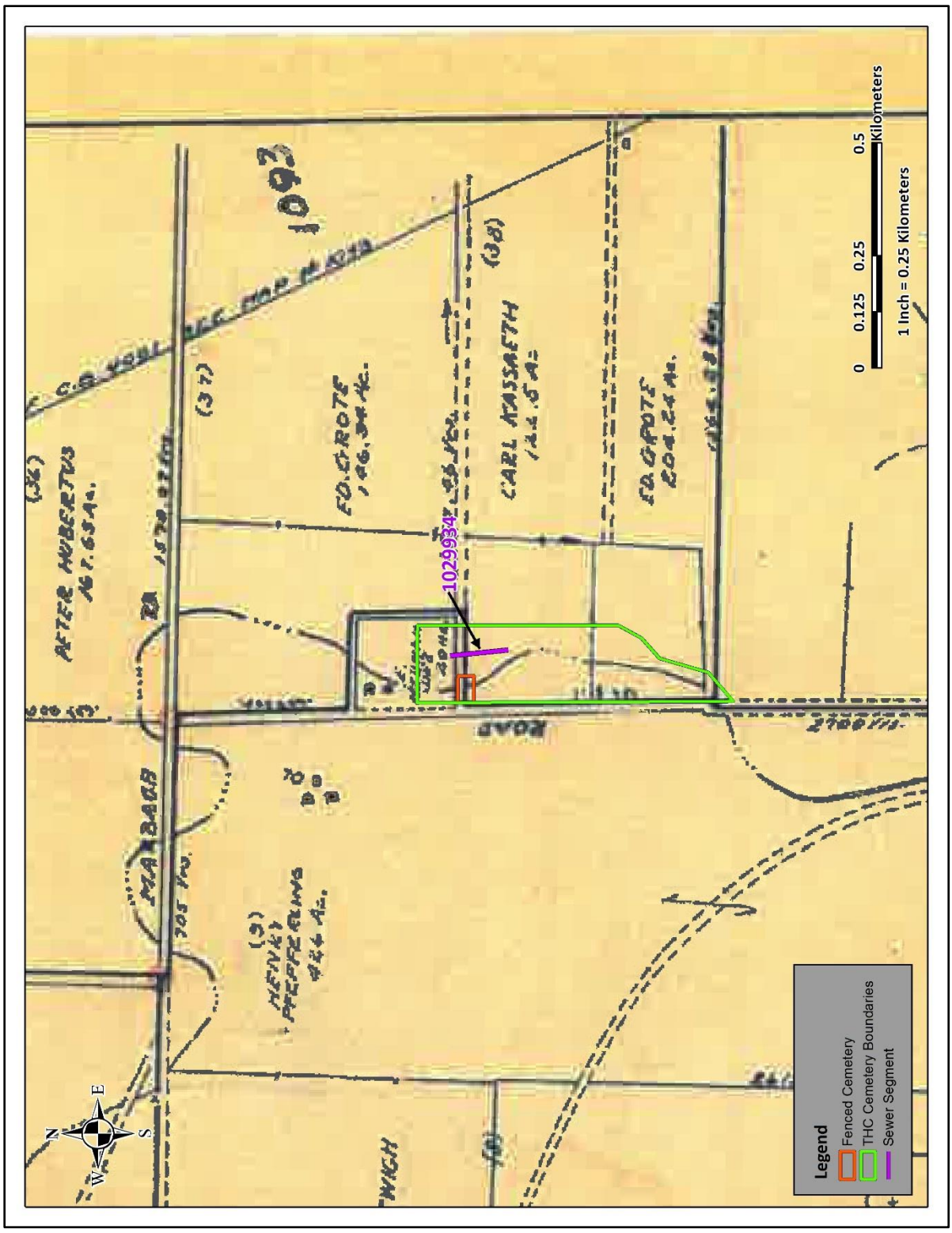


**Figure 5-1. Projection of Hunt Lane Cemetery on 1930-1940s Stoner System Map.**

The first map to recognize the Hunt Lane Cemetery is the 1958 Texas Highway Department General Highway map of Bexar County (Texas State Highway Department 1958) (**Figure 5-2**). The map depicts the alignment of Hunt Lane as projecting north/south, with the exception of an angular curve just south of its intersection with Marbach Road. The curve in the road is depicted immediately adjacent to the illustrated cemetery, and the unnamed tributary of Medio Creek is depicted as meandering from northeast to southwest, more-or-less parallel to the Hunt Lane right-of-way. It is important to note that, although the unnamed tributary of Medio Creek is depicted as intersecting the mapped cemetery, the generic symbol for a cemetery on the 1958 map is consistently the same size and shape for all cemeteries identified throughout the map. As such, it must be recognized that the symbol marking the location of the Hunt Lane Cemetery on the 1958 General Highway map does not accurately reflect the dimensions or boundaries of the physical cemetery.

A review of historic topographic maps from 1959, 1969, 1975, 1983, and 1993 continue to depict the Hunt Lane Cemetery as east of the Hunt Lane right-of-way and west of the unnamed tributary. The cemetery is continuously illustrated as a rectangular-shaped area that measures roughly 127 m east/west by 65 m north/south. The 1959 and 1969 topographic maps also depict a pronounced curve in the Hunt Lane right-of-way, but it is likely that the curve was attributed to the meandering projection of the drainage and not the cemetery. A review of aerial photography does not provide clear evidence of the cemetery, but does confirm that sometime between 1966 and 1973, the Hunt Lane Cemetery right-of-way was straightened, repositioning the road immediately adjacent to the western cemetery boundary.

The Bexar County Appraisal District (BCAD) lists the Hunt Lane Cemetery as a 0.5-acre private cemetery with no prior deed history available (BCAD 2018). The legal description for the lot is defined as “NCB 17877 BLK 37 LOT P-28E “Adams Hill” Annexatn”. No owner is listed on the property record. A search of the Bexar County Clerks Records and San Antonio Municipal Archives did not find any additional records associated with the lot that would lend further detail to the Hunt Lane Cemetery description. Furthermore, a records search for the deed and land transactions associated with the lots to the north, east, and south of the cemetery also did not yield any further information regarding the cemetery.

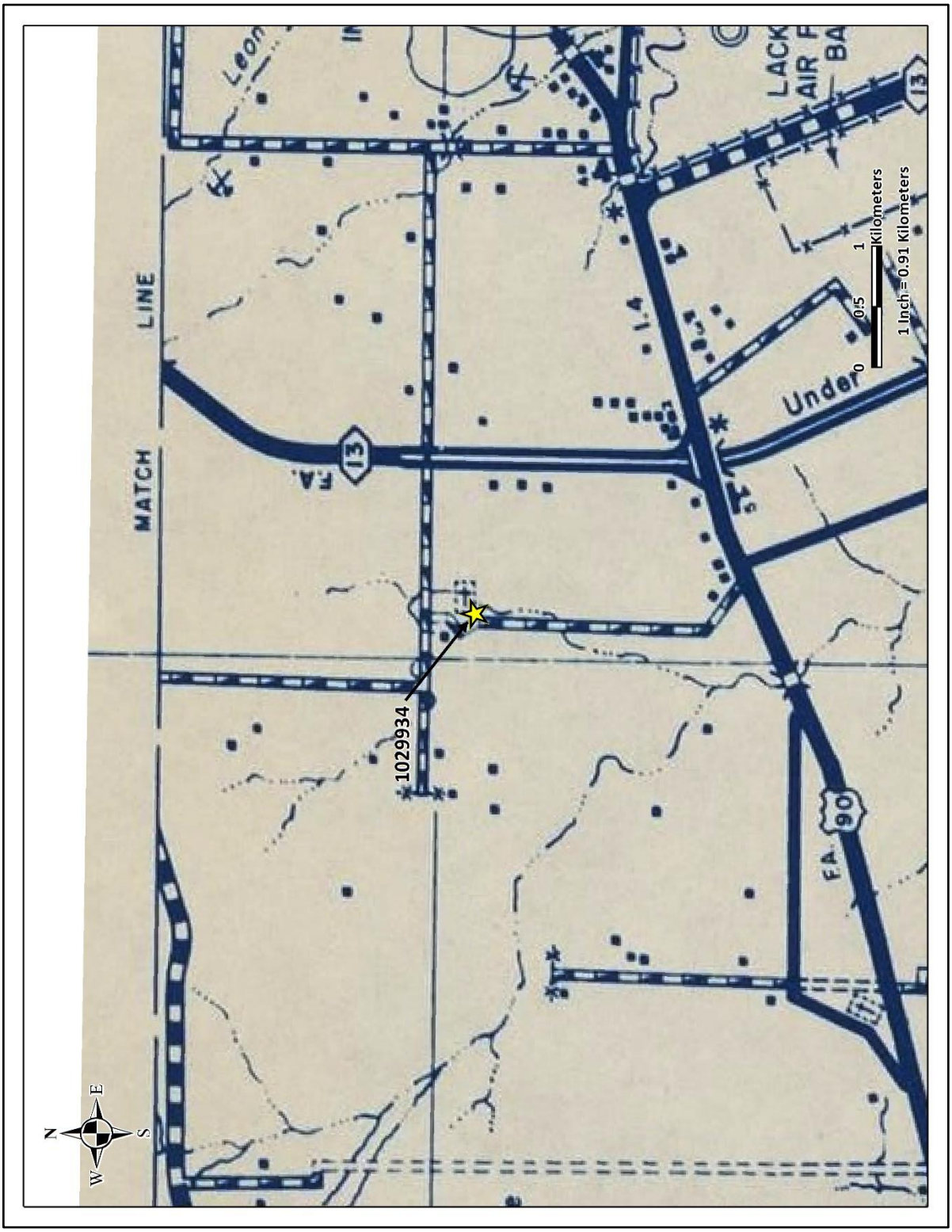


**Figure 5-2. Vicinity of Hunt Lane Cemetery on 1958 Texas Highway Department General Highway Map of Bexar County.**

## Pedestrian Survey with Shovel Testing

On April 12, 2018, **RKEI** Archaeologists conducted a pedestrian survey augmented with shovel testing for Locations 1-3 and 10. A total of 12 shovel tests was excavated, none of which were positive for cultural materials. Investigations identified relatively shallow soils that showed evidence of disturbance associated with land modification and utility installation.

### *Location 1*

Location 1 is a 150 m section of alignment located adjacent to a residential development and parallel to an existing access road for the Mud Creek drainage (**Figure 5-3**). Topography consisted of a heavily modified terrace that extends from the level, residential development and steeply sloped to the west into the lower Mud Creek floodplain (**Figure 5-4**). Vegetation consisted of short grasses bordered by dense riparian vegetation.

**Figure 5-3. Overview of Location 1 topography and vegetation, facing northeast.**

**Figure 5-4. Overview of modified terraces and steep slope into the Mud Creek lower floodplain, facing south.**

Two shovel tests, CM01 and JW01, were excavated within the temporary easement for Location 1 (**Figure 5-5**). Testing uncovered dark brown (10YR3/3) and very dark grayish-brown (10YR3/2) silty loam and clay loam soils from 0 to 10 cm below surface (bs) that terminated at dense cobbles and eroding bedrock (**Figure 5-6**). Soils appeared to be heavily disturbed, likely from utility installation and terrace modifications for the residential development. No cultural materials were observed during the investigations of Location 10.

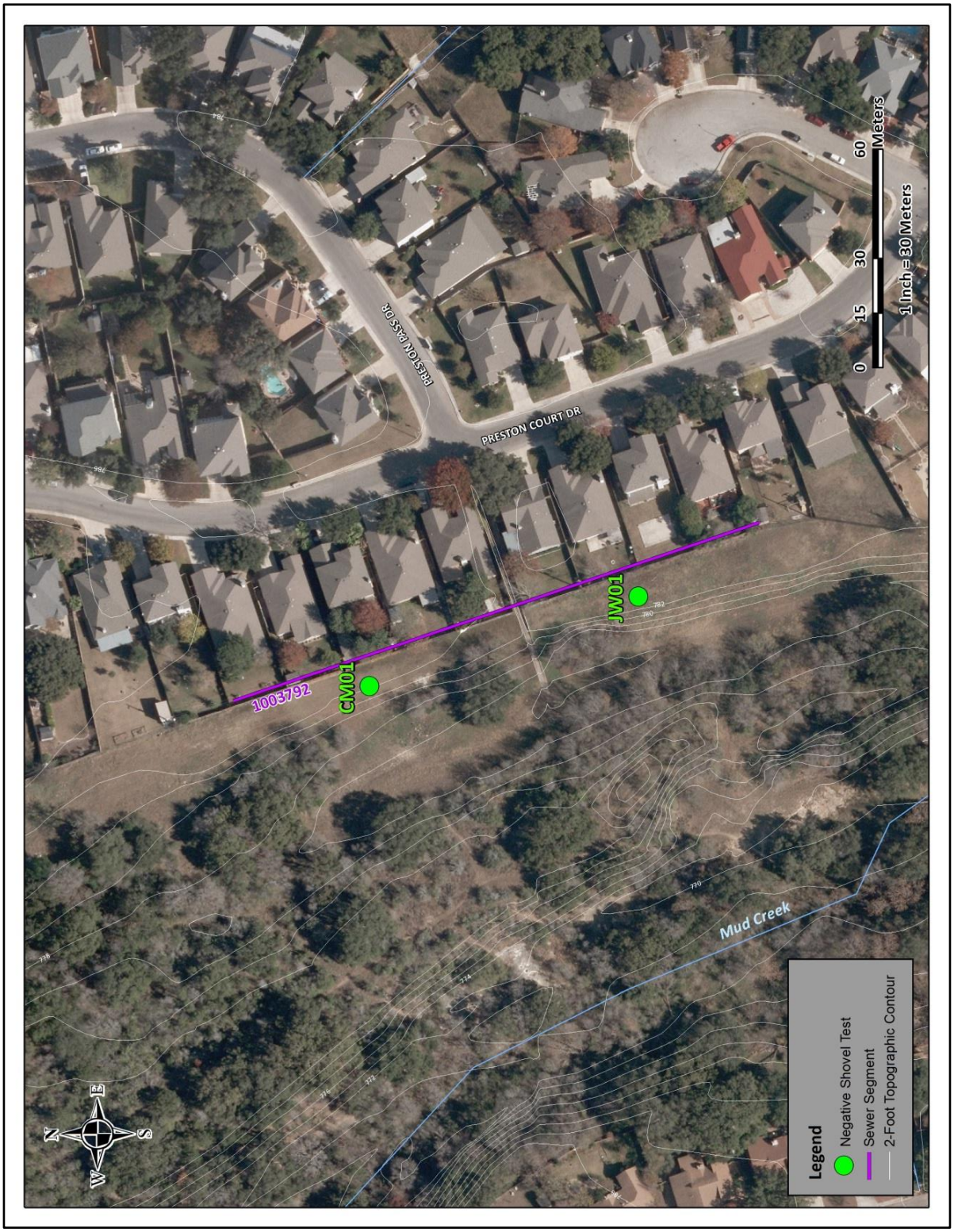


**Figure 5-5. Location 1 survey results.**

**Figure 5-6. Example of soils for Location 1, CM01.**

### *Location 2*

Location 2 consisted of a 150 m long existing alignment and a 550 m long temporary access road located within the Silverhorn Golf Course (**Figure 5-7**). Topography and vegetation for the existing alignment consisted of artificial mounds and maintained grassy landscapes characteristic of a recreational golf course (**Figure 5-8**). The temporary access road for Location 2 consisted of generally level terrain that skirts around the toe of an earthen dam associated with the golf course (**Figure 5-9**). Vegetation boarding the southern portion of the dam consisted of mixed hardwood trees, scrub brush, prickly pear cactus, and short to medium grasses.

A total of six shovel tests was excavated for Location 2: one within the temporary work space for the existing alignment (CM04); and five within the temporary access road (CM02-03 and JW02-04) (see **Figure 5-7**). Only one shovel test was excavated within the temporary work space associated with the existing alignment to prevent damage to the maintained golf course landscape. Soils within the temporary work space consisted of very dark gray (10YR3/1) silty clay with over 20-percent gravel inclusions that terminated at dense cobles at 32 cmbs (**Figure 5-10**).

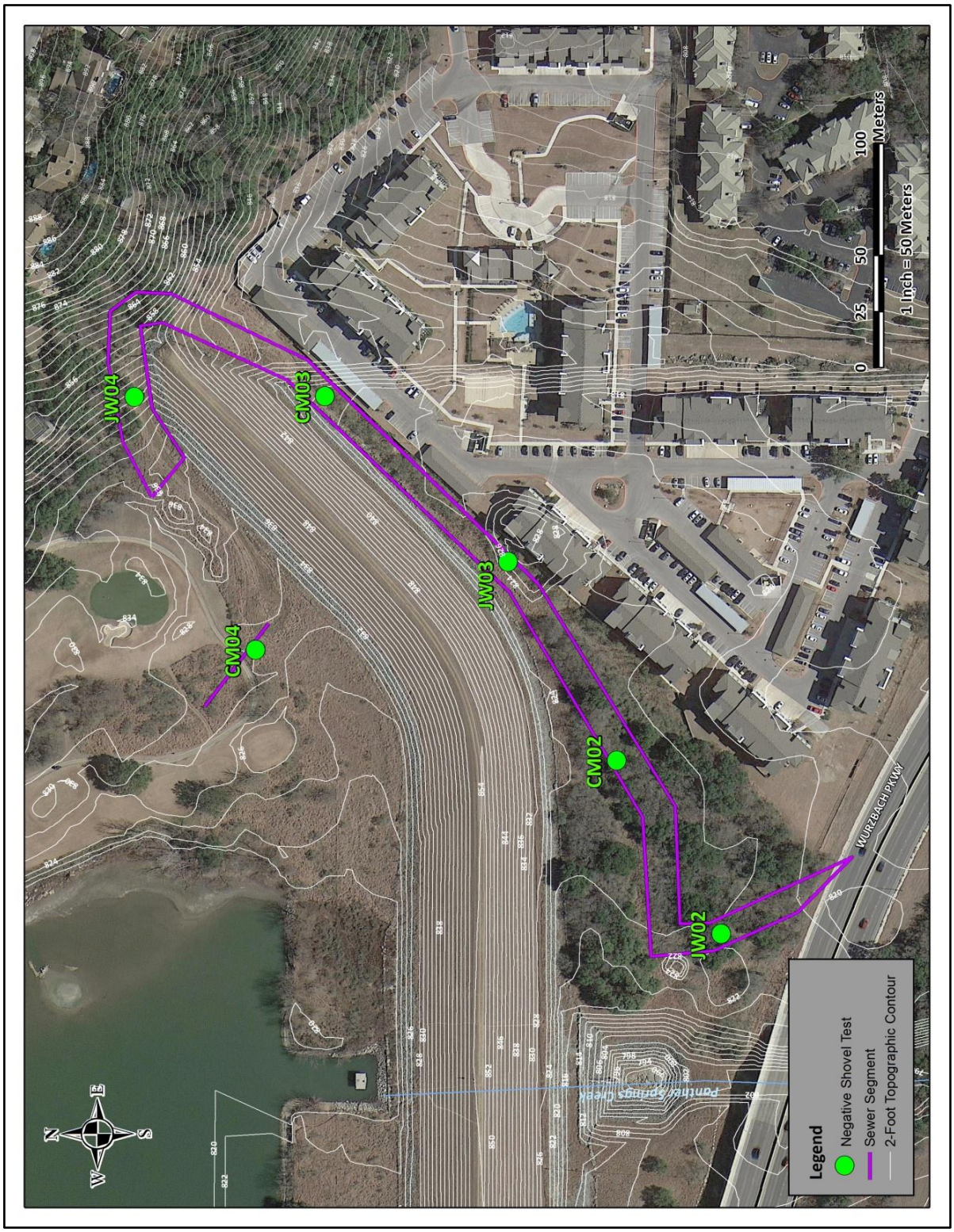


**Figure 5-7. Location 2 survey results.**

**Figure 5-8. Overview of Location 2 within the Silverhorn Golf Course, facing north.**

**Figure 5-9. Overview of temporary access road that skirts the earthen damn within the golf course.**

**Figure 5-10. Example of soil profile located adjacent to Location 2 alignment, CM04.**

Soils along the temporary access road consisted of very dark brown (10YR2/2) to light yellowish brown (10YR6/4) silty loams and silty clays that were terminated by heavy cobbles at 3 to 20 cmbs (**Figure 5-11**). Soils exhibited evidence of disturbance, including dense gravel and cobble inclusions and mottled soils. Disturbance likely occurred during dam construction and the development of the Silverhorn Golf Course. No cultural materials or features were documented during the Location 2 investigations.

### *Location 3*

Location 3 is situated parallel to a discharge drain that directs storm water runoff from the residential development to the French Creek drainage (**Figure 5-12**). Topography was generally level, with a less than 5 percent slope towards the drainage. Vegetation consisted of mixed hardwood trees and short to medium grasses.

**Figure 5-11. Example of soil profile located adjacent to Location 2 alignment, JW03.**

**Figure 5-12. Overview of Location 3, facing southwest.**

Two shovel tests (CM05 and JW05) excavated within the Location 3 temporary work space documented very dark brown (10YR2/2) to very dark grayish-brown (10YR 3/3) silty clay and clays soils that ranged from 0 to 25 cmbs (**Figures 5-13 and 5-14**). Inclusions observed consisted of 10 to 40 percent gravels and some mottled soils. Shovel tests were terminated due to dense cobbles and roots. No evidence of cultural materials or features was documented during Location 3 investigations.

### *Location 10*

Location 10 is positioned parallel to an existing overhead utility right-of-way and a residential development to the east, and an unnamed tributary of Medio Creek to the west (**Figure 5-15**). Topography of the alignment was generally level with a less than 5-percent slope to the west and south, towards the unnamed tributary of Medio Creek. Vegetation generally consisted of tall grasses and low-lying shrubs bordered to the west by tall grasses and dense riparian vegetation (**Figure 5-16**). An erosional drainage that directs storm water runoff from the easterly neighborhood into the unnamed drainage is also located near the southern extension of the alignment. Evidence of frequent flooding was observed throughout Location 10, including scattered refuse and vegetation debris.

Two shovel tests were excavated within Location 10 (CM06 and JW06) (see **Figure 5-15**). The shovel tests were placed on the west side of the existing SAWS alignment. No shovel tests were excavated within the existing overhead utility right-of-way to the east of the SAWS alignment. Shovel tests uncovered dark grayish brown (10YR4/2) and black (10YR2/1) silty clay and clays soils from 0 to 60 cmbs (**Figure 5-17**). Mottled soils and less than 10-percent gravel inclusions were observed indicating disturbance, likely from utility installation and flooding. No evidence of cultural materials or features was documented during Location 3 investigations.

A visual inspection of the area immediately east and south of Location 10 was conducted in order to locate any evidence of human burials that may be associated with the Hunt Lane Cemetery. A visual inspection of the ground surface did not identify any burial markers, depressions, grave goods, or vegetation that would suggest the extension of the cemetery beyond its' current fence boundaries. Instead, the pedestrian survey observed copious amounts of modern refuse and flood debris within the unnamed tributary drainage.


**Figure 5-13. Location 3 survey results.**

**Figure 5-14. Average soil profile within Location 3, CM05.**

A field visit to the Hunt Lane Cemetery was conducted during field investigations; however, locked gates prevented access to the private family cemetery. Observation from the fence parameter noted a 0.5-acre area enclosed with a chain-link aluminum fence, topped with barbed wire. Twenty-five to 35 marble and granite monuments were observed within the fenced area, most of which faced east and away from Hunt Lane (**Figures 5-18 and 5-19**). Limited observation from the fence parameter noted inscriptions that ranged from 1938 to 2007, with Hernandez and Rodriguez being the most common surnames present. Several of the gravestones closest to the roadway are child burials. The cemetery appeared to be well-maintained with short grasses, rose bushes, and palm and ornamental trees throughout.

The surname Hernandez was identified on the 1930-1940 Stoner System maps, listed as a 20-acre parcel to E. Hernandez immediately north of where the cemetery is currently located. Furthermore, the contact names provided on the THC RIP Records are listed by the name of Rodriguez. The name correlations to the Stoner System map and RIP Records strongly suggest that the cemetery is likely a private, family cemetery that has been utilized since the 1930-1940s for the Hernandez family and their descendants.


**Figure 5-15. Location 10 survey results.**

**Figure 5-16. Overview of Location 10, facing south.**

**Figure 5-17. Average soil profile of Location 10, CM06.**

**Figure 5-18. View of Hunt Lane Cemetery from Hunt Lane, facing southeast.**

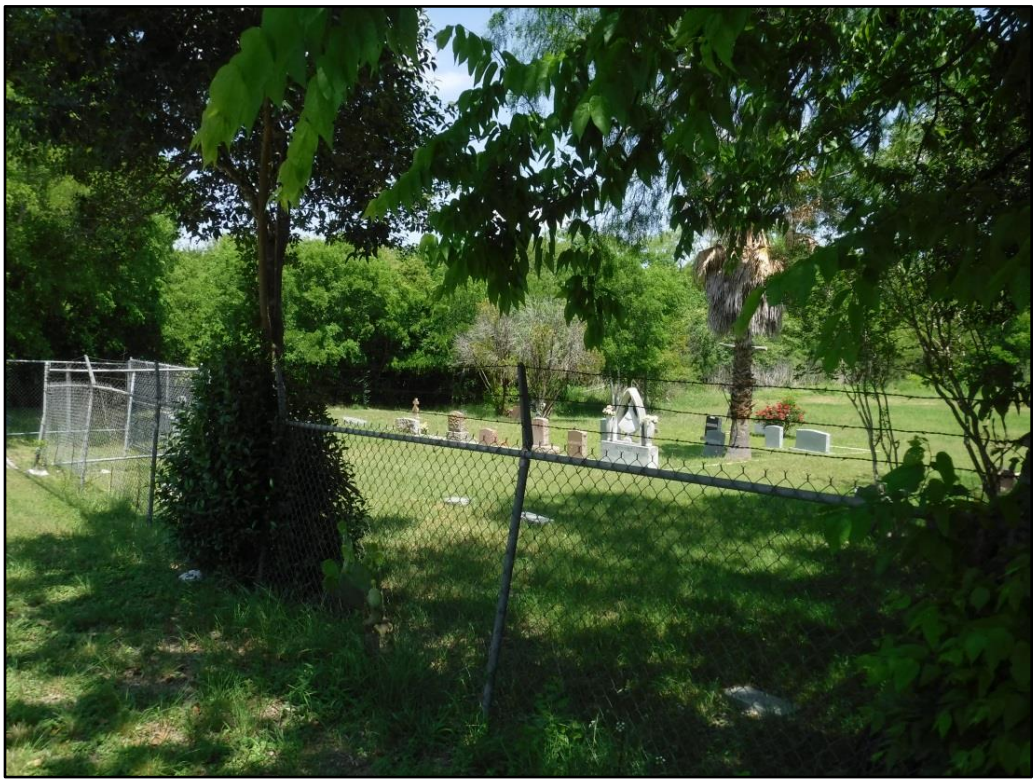

**Figure 5-19. View of Hunt Lane Cemetery from Hunt Lane, facing northeast.**

# CHAPTER 6. SUMMARY AND RECOMMENDATIONS

**RKEI** was contracted by K FRIESE + ASSOCIATES, on behalf of SAWS, to perform cultural resources investigations for the SAWS Package 6 Project. The project consists of the replacement and rehabilitation of four distinct locations (Location 1- 3 and Location 10) of existing sewer alignment throughout San Antonio, Bexar County, Texas. To ensure that the project met the requirements of regulating agencies, **RKEI** performed archival research for Location 10, located within the mapped boundaries of the Hunt Cemetery, and an intensive archaeological survey augmented with shovel testing for Locations 1-3 and 10. All work complied with THC and CTA guidelines and standards.

On April 4, 2018, **RKEI** archaeologists conducted an archival search for the Hunt Lane Cemetery. The search determined that the cemetery was likely dedicated as a private cemetery in the 1930s-1940s for the use of the Hernandez family and their descendants. Based on historic maps and aerial photography, the review also determined that the cemetery does not likely cross the flood plain of the unnamed tributary and therefore does not extend within the boundaries of Location 10.

On April 12, 2018, **RKEI** archaeologists conducted a pedestrian survey augmented with shovel testing for the temporary work spaces associated with Locations 1-3, and 10. No testing was conducted within the existing SAWS right-of-way or other existing right-of-ways (existing utility right-of-ways, residential streets, etc.) due to existing disturbance. A total of 12 shovel tests was excavated for all four locations. Excavation identified disturbed soils resulting from utility installation and development. None of the shovel tests tested positive for cultural deposits and no new cultural resources were documented during the SAWS Package 6 Project.

Overall, no significant prehistoric or historic materials were encountered during the SAWS Package 6 Project investigations. Given this conclusion, no significant cultural deposits will be impacted by the proposed project, and **RKEI** recommends no further archaeological investigations for the current project. However, should additions be made to the project area, it is recommended that additional testing be conducted to determine the extent and significance of cultural deposits beyond the currently defined boundaries.

## REFERENCES CITED


Barnes, V.E.

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

Bement, L. C.

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

Bexar County Appraisal District (BCAD)

2018 Property Search, 681326 CEMETERY (PRIVATE) for Year 2018. http://www.bcad.org/clientdb/Property.aspx?cid=1&prop_id=681326&year=2018. Accessed April 4, 2018.

Black, S. L.

1986 *The Clemente and Herminia Hinojosa Site, 41JW8: A Toyah Horizon Campsite in Southern Texas*. Special Report, No. 18. Center for Archaeological Research, The University of Texas at San Antonio.

1989 Central Texas Plateau Prairie. In *From the Gulf Coast to the Rio Grande: Human Adaptations in Central, South, and Lower Pecos Texas*, by T.R. Hester, S.L. Black, D.G. Steele, B.W. Olive, A.A. Fox, K.J. Reinhard, and L.C. Bement, pp. 17-38. Research Series No. 33. Arkansas Archaeological 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, B. C.

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.

Collins, M. B.

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

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

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

1998 The Archaic Period, 8800 to 1300 B.P. 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.

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.

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, Denton.

Fox, A. A.

1977 *An Archaeological Assessment of the San Antonio 201 Wastewater Treatment Project*. Archaeological Survey Report, No. 41. Center for Archaeological Research at the University of Texas at San Antonio.

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.

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.

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 April 4, 2018.

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.

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.

*San Antonio Daily Light, The* [San Antonio, Texas]
1886 "A Sixty-Thousand-Dollar Residence". 28 April 1886, pp. 4, The Portal to Texas History. https://texashistory.unt.edu/ark:/67531/metapth144831/m1/4/. Accessed February 27, 2018.

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 20, 2018.

Story, D. A.
1985 Adaptive Strategies of Archaic Cultures of the West Gulf Coastal Plain. In *Prehistoric Food Productions in North America*, edited by R.I. Ford, pp. 19-56. Anthropological Papers No. 75. Museum of Anthropology, University of Michigan, Ann Arbor.

Texas General Land Office (TxGLO)
2018 Land Grants, *Grantee File No. 1543. Ralph E. Sevy*. http://www.glo.texas.gov/ncu/SCANDOCS/archives_webfiles/arcmaps/webfiles/landgrants/PDFs/1/5/7/157491.pdf. Accessed April 4, 2018.

Texas Historical Commission (THC)
2018 Texas Archeological Sites Atlas. http://nueces.thc.state.tx.us/. Accessed April 4, 2018.

Texas State Highway Department (TSHD)
1958 "General Highway Map, Bexar County, Texas [Sheet 2]". The Portal to Texas History. https://texashistory.unt.edu/ark:/67531/metapth190633/?q=General%20highway%20map%20for%20Bexar%20county%20Texas. Accessed February 27, 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.
2014 Archaeology Along The Upper San Antonio River. Paper presented at the Southern Texas Archaeological Association Spring Quarterly Meeting.

Toomey, R. S., M. D. Blum, and S. Valastro, Jr.
1993 Late Quaternary Climates and Environments of the Edwards Plateau, Texas. *Global and Planetary Change* 7:299-320.

Weir, F. A.
1976 The Central Texas Archaic. Unpublished PhD. Dissertation, Anthropology Department, 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

| Location No. | Shovel Test No. | Depth (cm) | Munsell | Soil Color | Soil Texture | Inclusions | Positive/ Negative | Cultural Materials | Reason for Termination/ Comments |
|---|---|---|---|---|---|---|---|---|---|
| **1** | CM01 | 0-10 | 10YR3/3 | dark brown | silty loam | Over 10% gravels | Negative | - | Heavy cobbles at 10 cmbs |
| **1** | JW01 | 0-10 | 10YR3/2 | very dark grayish brown | silty clay | Over 30% gravels | Negative | - | Bedrock at 8 cmbs |
| **2** | CM02 | 0-10 | 10YR3/1 | very dark gray | silty loam | Less than 10% gravels | Negative | - | - |
| | | 10-20 | 10YR3/1 | very dark gray | silty loam | Roots and heavy cobbles | Negative | - | Heavy cobbles at 16 cmbs |
| **2** | CM03 | 0-10 | 10YR6/4 | light yellowish brown | silty loam | Over 50% gravels and cobbles | Negative | - | Heavy cobbles at 3 cmbs |
| **2** | CM04 | 0-10 | 10YR3/1 | very dark gray | silty clay | Over 20% gravels | Negative | - | - |
| | | 10-20 | 10YR3/1 | very dark gray | silty clay | Over 20% gravels | Negative | - | - |
| | | 20-30 | 10YR3/1 | very dark gray | silty clay | Over 20% gravels | Negative | - | - |
| | | 30-40 | 10YR3/1 | very dark gray | silty clay | Over 20% gravels | Negative | - | Heavy cobbles at 32 cmbs |
| **2** | JW02 | 0-10 | 10YR2/2 | very dark brown | silty clay loam | 20% gravels | Negative | - | - |
| | | 10-20 | 10YR2/2 | very dark brown | silty clay loam | 70% gravels and cobbles | Negative | - | Heavy cobbles at 15 cmbs |
| **2** | JW03 | 0-10 | 10YR4/4 | dark yellowish brown | silty loam | Over 60% gravels | Negative | - | Heavy cobbles at 5 cmbs |
| **2** | JW04 | 0-10 | 10YR3/3 | dark brown | clay | Over 10% gravels | Negative | - | - |
| | | 10-20 | 10YR3/3 | dark brown | clay | Over 50% gravels | Negative | - | Heavy cobbles at 20 cmbs |

| Location No. | Shovel Test No. | Depth (cm) | Munsell | Soil Color | Soil Texture | Inclusions | Positive/ Negative | Cultural Materials | Reason for Termination/ Comments |
|---|---|---|---|---|---|---|---|---|---|
| **3** | CM05 | 0-10 | 10YR3/2 | very dark grayish brown | silty clay | Over 10% gravels | Negative | - | - |
| | | 10-20 | 10YR3/2 | very dark grayish brown | silty clay | Over 10% gravels | Negative | - | - |
| | | 20-30 | 10YR3/2 | very dark grayish brown | silty clay | Over 10% gravels | Negative | - | Heavy cobbles and roots at 25 cmbs |
| **3** | JW05 | 0-10 | 10YR2/2 | very dark brown | clay | Roots | Negative | - | - |
| | | 10-20 | 10YR2/2 | very dark brown | clay | Over 20% gravels | Negative | - | - |
| | | 20-30 | 10YR2/2 | very dark brown | clay | Over 40% gravels and cobbles | Negative | - | Heavy cobbles at 24 cmbs |
| **10** | CM06 | 0-10 | 10YR4/2 | dark grayish brown | silty clay | Less than 10% gravels | Negative | - | - |
| | | 10-20 | 10YR4/2 | dark grayish brown | silty clay | Less than 10% gravels | Negative | - | - |
| | | 20-30 | 10YR4/2 | dark grayish brown | silty clay | Less than 10% gravels | Negative | - | - |
| | | 30-40 | 10YR4/2 | dark grayish brown | silty clay | Less than 10% gravels | Negative | - | - |
| | | 40-50 | 10YR4/2 | dark grayish brown | silty clay | Less than 10% gravels | Negative | - | - |
| | | 50-60 | 10YR4/2 | dark grayish brown | silty clay | Less than 10% gravels | Negative | - | Reached depth of 60 cmbs |

| Location No. | Shovel Test No. | Depth (cm) | Munsell | Soil Color | Soil Texture | Inclusions | Positive/ Negative | Cultural Materials | Reason for Termination/ Comments |
|---|---|---|---|---|---|---|---|---|---|
| **10** | JW06 | 0-10 | 10YR2/2 | very dark brown | clay | light roots | Negative | - | - |
| | | 10-20 | 10YR2/2 | very dark brown | clay | light roots | Negative | - | - |
| | | 20-30 | 10YR2/1 | black | clay | light roots | Negative | - | - |
| | | 30-40 | 10YR2/1 | black | clay | light roots | Negative | - | - |
| | | 40-50 | 10YR2/1 | black | clay | over 10% cobbles | Negative | - | - |
| | | 50-60 | 10YR2/1 | black | clay | over 10% cobbles | Negative | - | Reached depth of 60 cmbs |