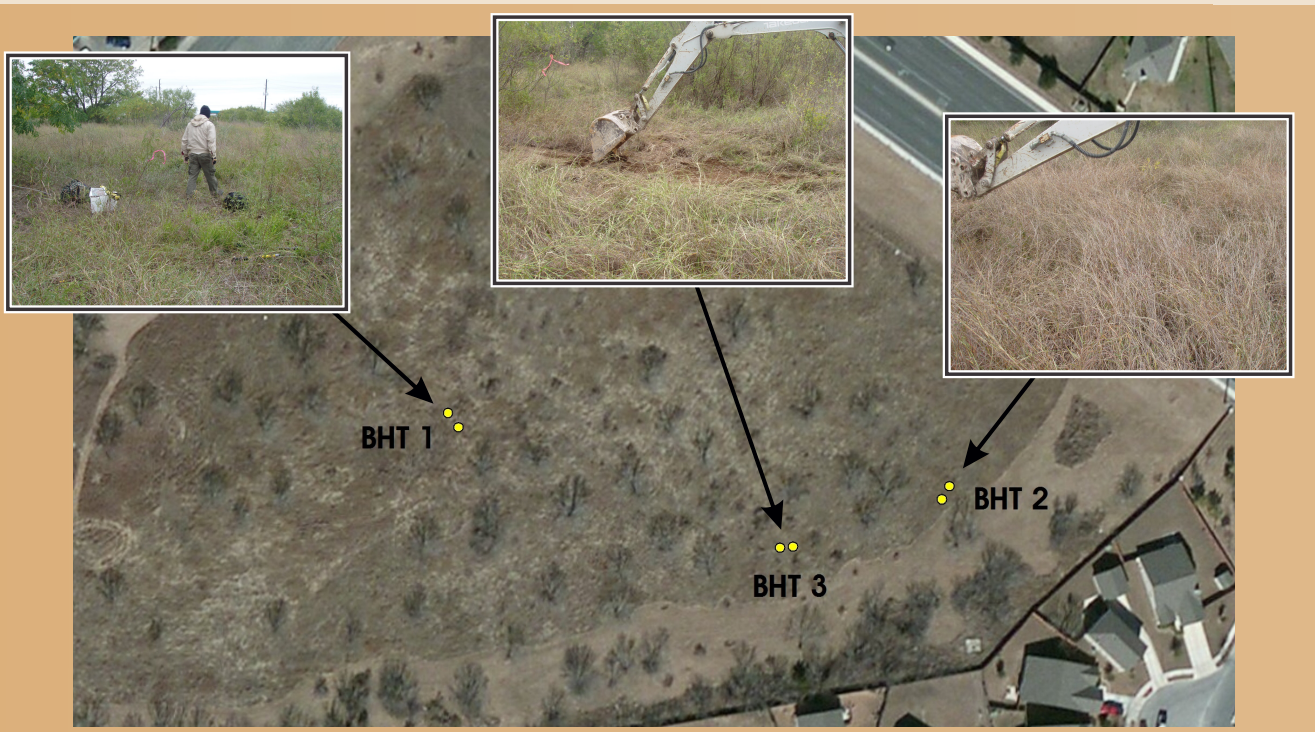
An Intensive Archaeological Investigation at the Westover Hills Assembly of God, San Antonio, Bexar County, Texas



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Technical Report, No. 61

Center for Archaeological Research
Preserving Cultural Resources
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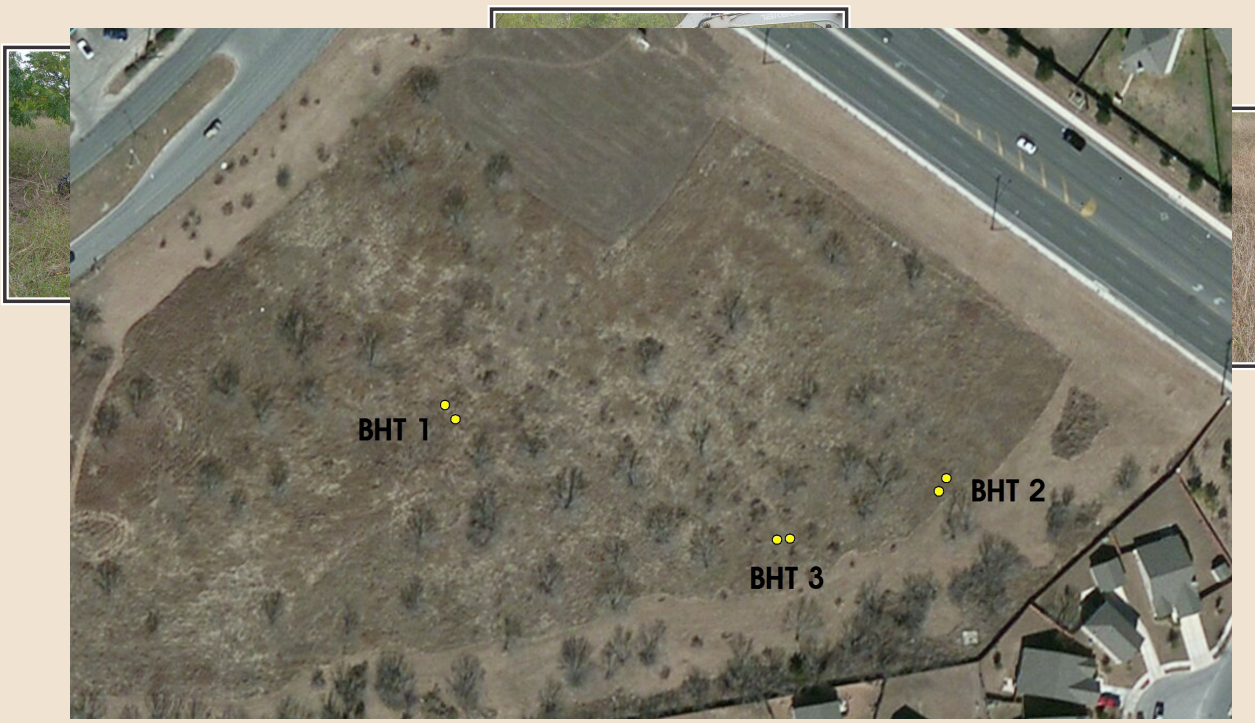

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Abstract:

In November 2014, the Center for Archaeological Research (CAR) at the University of Texas at San Antonio (UTSA) conducted an archaeological survey of five acres of private property owned by the Westover Hills Assembly of God. The survey was required by the City of San Antonio (COSA) in compliance with the COSA Unified Development Code Chapter 35.

Pedestrian survey with shovel testing and backhoe trenching were used to identify archaeological resources in the area. No cultural material or archaeological sites were identified. Therefore, the CAR recommends that any planned development proceed.

Records generated during this project were prepared for curation according to Texas Historical Commission (THC) guidelines and are permanently curated at the CAR at UTSA.

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Acknowledgements:

The archaeological survey was conducted by Alex McBride and Sarah Wigley of the Center for Archaeological Research at UTSA. Sarah Wigley served as the Project Archaeologist, Cynthia Moore Munoz served as the Project Manager, and Dr. Raymond Mauldin served as the Principal Investigator. Thanks are extended to Cynthia Moore Munoz for her comments on a draft of this report and to Cynthia Moore Munoz and Dr. Raymond Mauldin for their help in coordinating logistics of this project. Special thanks are extended to the Westover Hills Assembly of God for project details and the opportunity to work on this project. Thanks to Matthew Elverson with the City of San Antonio Historic Preservation Office for his help with this project. Laboratory Director Melissa Eiring processed the paperwork for this project. Laura Carbajal produced the maps, Rick Young drafted report figures, and Kelly Harris edited and produced the final report.

Chapter 1: Introduction and Project Summary

The Center for Archaeological Research (CAR) of the University of Texas at San Antonio (UTSA) was contracted by the Westover Hills Assembly of God to provide archaeological services required by the City of San Antonio (COSA) on five acres of property privately owned by the church. The work was coordinated through the COSA Office of Historic Preservation (OHP) in compliance with the COSA Unified Development Code Chapter 35. The CAR completed a 100 percent pedestrian survey with shovel testing and backhoe trenching to identify and record archaeological resources within the project area that could be impacted by future development. Dr. Raymond P. Mauldin, CAR Acting Director, served as Principal Investigator, Cynthia Moore Munoz served as Project Manager, and Sarah Wigley served as Project Archaeologist.

Project Summary

CAR archaeologists walked the entire project area to record prehistoric and historic cultural material visible on the ground surface. No surface artifacts were observed; however, the majority of the ground surface was not visible due to thick vegetation. To explore subsurface deposits present within the project area, ten shovel tests and three backhoe trenches were excavated. None were positive for cultural material.

This document presents the results of these investigations. Chapter 2 provides an overview of the environmental setting and reviews the previous archaeological investigations in the area. Chapter 3 outlines the laboratory and field methods used by the CAR during the completion of this project. Chapter 4 provides the results of field investigations. Chapter 5 summarizes the project and offers recommendations based on results.

Chapter 2: Project Setting

This chapter presents a brief discussion of the environment and culture history of the project area. A summary of previous archaeological work completed near the project area concludes the chapter.

Environmental Setting

The project area is located in northwest San Antonio in Bexar County, Texas. The project area encompasses five acres of undeveloped land owned by the Westover Hills Assembly of God. It is bounded by Westover Hills Boulevard to the northwest, Culebra Road to the northeast, and residential developments to the south (Figure 2-1). Power, gas, telephone, and cable easements lie along the western margin near Westover Hills Boulevard, and sewer easements lie along the northeast and southeast margin near Culebra Road. The project area is located on a stream terrace approximately 400 m south of Culebra Creek, which indicates the possibility of buried archaeological material.

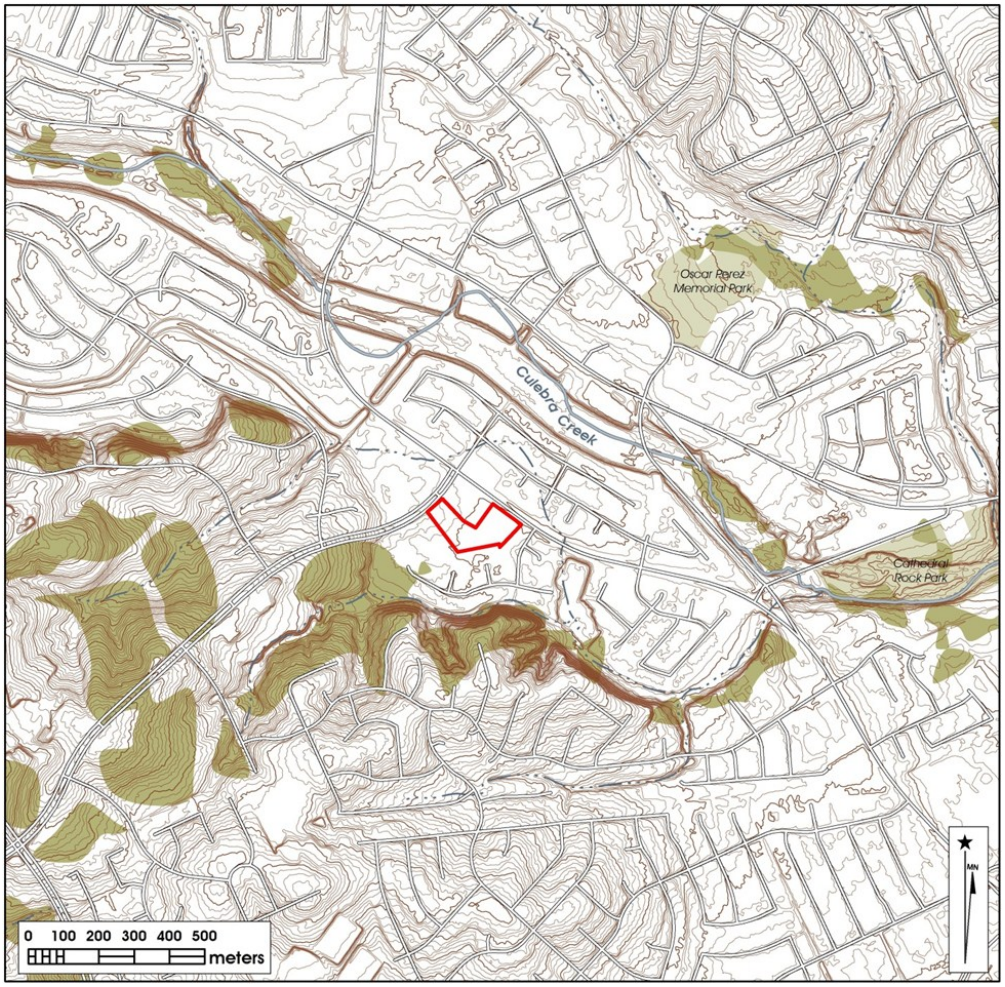

Figure 2-1. *The location of the project area (outlined in red) on the Longhorn 7.5-minute series USGS quadrangle map.*

Climate in Bexar County is classified as subtropical-subhumid, with an average rainfall of 79 cm per year. It has mild winters, with an average low temperature of 39 °F, and hot summers, with an average high temperature of 96 °F (Long 2010).

Three major landform regions converge near the project area: the Balcones Escarpment, the Blackland Prairie, and the South Texas Plain. The property is located within the Nueces-Guadalupe Plain, a subregion of the South Texas Plain. The South Texas Plain contains major river drainages including the Guadalupe, Frio, Sabinal, Nueces, and the San Antonio, of which Culebra Creek is a tributary (Nickels et al. 1998).

The mouth of Culebra Creek is located on Leon Creek in western San Antonio. Culebra Creek runs southeast for 19.3 km through rolling terrain characterized by mesquite and grasses (Texas State Historical Association [TSHA] 2010). The project area is located in an area with a historic climax community characterized by a tall grass savannah (Figure 2-2). The environment is dominated by little bluestem. Elm and hackberry can occur along streams in this environment, and live oaks are widely scattered (Soil Survey Staff [SSS] 2014c).

Figure 2-2. *Project area environment (A. McBride excavating Shovel Test 1, photographed facing south).*

The property is dominated by Sunev loam (VaB) soils, with slopes of 1-3 percent. The series commonly consists of very deep, loamy alluvium (SSS 2014a). A small section of the southwest portion of the project area contains Lewisville silty clay (LvA) soils, with slopes of 0-1 percent. These soils are very deep and moderately permeable (SSS 2014b). Both Sunev and Lewisville soils are located on stream terraces and generally extend to a depth of more than 200 cm. While deep, Sunev loam soils are "immature" and contain indistinct horizons. Gravel beds are common at depths below 91 cm (United States Department of Agriculture, Soil Conservation Service [USDA, SCS] 1991:103). The C horizon in these soils, occurring from 76-157 cm, consists of light yellowish heavy loam, which is very hard when dry. This horizon contains concretions and lumps of calcium carbonate ($CaCO_3$; USDA, SCS 1991).

Pedogenic carbonate accumulation is significant in arid, semiarid, and subhumid environments and is closely associated with soil age (Schoeneberger et al. 2012:2-28). Carbonate accumulation is described in stages (I-IV), with older soils displaying increased stages of carbonate accumulation. Carbonate accumulation within soil horizons is affected by both precipitation and temperature as $CaCO_3$ is deposited through water accumulation in the soil. Carbonates accumulate more rapidly in gravel because gravel contains less pore space. Therefore, carbonate heavy horizons in gravel may be younger than similar horizons in low gravel soils (Birkeland 1984:141). Heavy carbonate accumulation in the Southwest is associated with soils formed prior to and during the late Pleistocene (Gile et al. 1981; Machette 1985).

Cultural History

San Antonio's location at the edge of the Balcones Escarpment and the South Texas Plains places it at the intersection of the Central and South Texas archaeological areas. The prehistory of the two areas is generally discussed in terms of three broad periods: the Paleoindian period, the Archaic period, and the Late Prehistoric period. These periods are further distinguished through differences in material culture and subsistence. No cultural material relating to a specific time period was recovered during the course of this investigation; however, a general cultural history is provided.

Paleoindian Period

The Paleoindian period (11,500-8,800 BP) contains the earliest evidence of human activity in central and south Texas. The period begins around the end of the Pleistocene, when the climate was significantly cooler and moister than the present environment. Paleoindian components in Texas are often identified by surface material rather than by buried materials. Due to a constantly changing landscape, few archaeological sites in Central and South Texas are recovered from good stratigraphic contexts; stratigraphy is often mixed or eroded (Bousman and Oksanen 2012; Collins 2004; Hester 2004). Traditionally, subsistence in the Paleoindian period is described as focused on big game hunting; however, more recent investigations, especially in the field of zooarchaeology, suggest more diversified subsistence strategies including game

of all sizes. Preservation issues in the floral record constrain our ability to investigate exploitation of plant resources (Bousman and Oksanen 2012; Waguespack and Surovell 2003).

The population during this period is often described as more dispersed and highly mobile in comparison to later periods (Bousman and Oksanen 2012). Projectile point typologies play a significant role in identification and interpretation of Paleoindian sites in Texas. Folsom and Clovis points, characterized by fluting, are diagnostic of early Paleoindian cultural material, with Folsom occurring slightly later than Clovis. Greater diversity in point forms, including Golondrina, St. Mary's Hall, Wilson, St. Patrice, Berclair, and Big Sandy point types, occurs later in the Paleoindian period (Bousman et al. 2004; Collins 2004). Archaeological sites within Bexar County with Paleoindian components include 41BX452 (Pavo Real) and 41BX229 (St. Mary's Hall; Collins et al. 2003; Figueroa and Frederick 2008; Hester 1977).

Archaic Period

The Archaic period (8800-1200 BP) is characterized by heightened intensity in hunting and gathering of local resources and greater diversity in cultural material. The use of heated rocks in the form of hearths, middens, and other cultural features increases during this period. These features, in connection with the increased recovery of groundstone, are interpreted as evidence of the processing and cooking of plant resources (Black et al. 1997; Collins 2004). They have also been connected with increased organization resulting from the need to feed groups of people on a larger scale (Bousman and Oksanen 2012). The climate became drier in the Archaic period and megafauna, such as bison, became more scarce, which may have prompted this broadening of subsistence strategy.

The early part of the Archaic is characterized by Guadalupe tools and Angostura, early splitstem, and Martindale/Uvalde projectile point styles. Most researchers suggest that the increased diversity in specialized lithic tools and resource processing during the Middle Archaic indicates a population increase in Central and South Texas and that subsistence strategies diversified in response. Populations consolidated, and group boundaries may have evolved (Bousman and Oksanen 2012). This subperiod is defined by Nolan-Travis projectile points and Bell-Andice-Calf Creek and Taylor bifaces. During the Late Archaic, a wide variety of dart point styles were present, including Bulverde, Pedernales, Montell, Castroville, Frio, and Ensor. Corner-tanged knives and cylindrical stone pipes were also common. Bison were present in the area during this period. Large cemeteries, such as site 41BX1, also became more prevalent (Collins 2004; Hester 2004; Lukowski et al. 1988). Many Archaic period sites have been recorded in Bexar County, including 41BX1888 on the San Antonio River (Munoz and DiVito 2012).

Late Prehistoric Period

The Late Prehistoric period in Central Texas (1200-350 BP) is characterized by a shift from dart and atlatl to bow and arrow technology. The initial interval of this period, the Austin phase, is distinguished by Scallorn and Edwards points. Collins (2004) interprets this phase as an extension of Archaic patterns. The latter subperiod, the Toyah phase, is characterized by Perdiz dart points, the use of pottery, large thin bifaces, and prismatic blades. This subperiod is often described as a "horizon" due to its spread across a wide portion of Texas (Collins 2004:123). It is disputed (Collins 2004) whether this spread is due to the spread of a specific people (Johnson 1994) or technology dissemination across groups (Ricklis 1994). Material culture associated with this period suggests increasing complexity in technology and subsistence strategies, possibly due to increased population or mobility. Collins (2004) associates this with the use of bison as an important resource. In South Texas, cultural material indicating trade with Mesoamerica has also been recovered (Hester 2004).

Historic Period

The Historic period in Central Texas begins with the arrival of Europeans in the late seventeenth century. Early accounts, as described by Campbell (1988), document infrequent interactions between Europeans and Native Americans; however, population shifts had already occurred due to Spanish occupation in the south, Apache incursions in the north, and hostilities between the French and the Spanish. In addition, European-introduced diseases increased the mortality rates in Native American populations. Later in this period, many of the remaining native groups sought refuge in missions that had been established by the Spanish. Displacement, mortality from disease, and the introduction of the mission system significantly affected the Native American way of life (Collins 2004).

Previous Archaeological Investigations

No previously recorded sites were located within the project area; however, four recorded archaeological sites are located within 1.5 km of the project area (Figure 2-3). Site 41BX776 is located 0.5 km southeast of the project area site 41BX1617 is located 1.5 km to the northwest, and sites 41BX1595 and 41BX1596 are located approximately 1 km to the east along Culebra Creek.

Site 41BX776 is a prehistoric site located on private land. The site was recorded in 1987 by C. K. Chandler during a pedestrian survey of the area following reports of cultural material on the surface. It is described as an open campsite containing a buried burned rock midden. The site is defined by the presence of burned rock, chert debitage, unifacial chert tools, and Late Archaic projectile points. Human remains were reported in the area but not observed. The site is described as impacted by indiscriminate digging (THC 2014).

Site 41BX1617 is a historic site recorded by Kay Hindes and David Calame in 2005. The site is described as a stagecoach stop constructed of local limestone. It is located at the confluence of Culebra Creek and an

unnamed creek. Geo-Marine, Inc. reported that the site was completely destroyed by residential development as of 2007 (THC 2014).

Sites 41BX1595 and 41BX1596 were recorded during a survey conducted by Tierras Antiguas Archaeological Consulting in 2004 in Cathedral Rock Nature Park. Surface survey and shovel testing were completed. Site 41BX1595 is located east of the project area 40 m from Culebra Creek. The site is described as a prehistoric lithic scatter defined by lithic debitage and one utilized flake. The deposits were observed to be ephemeral and heavily disturbed. No temporally diagnostic artifacts or prehistoric features were observed (THC 2014). The site was mapped as spanning 820 m^2, but it was noted as likely truncated by a power substation to the east. The majority of the subsurface artifacts were found in dense gravels (Nickels 2004). Site 41BX1596 is located to the east of the project area on the edge of Culebra Creek. The site is described as an open prehistoric campsite defined by one firecracked cobble and lithic debitage. It is mapped as encompassing 304 m^2. The site was heavily disturbed by high-energy stream activity. No prehistoric features or temporally diagnostic artifacts were observed (THC 2014). It was recommended that both 41BX1595 and 41BX1596 be avoided until eligibility status for the NRHP could be determined (Nickels 2004).

Figure 2-3. *Location of sites near the project area (outlined in red).*

Chapter 3: Field and Laboratory Methods

Field Methods

Ten shovel tests were excavated to fulfill the THC minimum survey standards of two shovel tests per acre. Shovel test locations were evenly distributed within the project area. Shovel tests were 30 cm in diameter, and when possible, extended to a depth of 60 cm below the surface (cmbs). Shovel test excavations below 60 cm increase the chances of wall fall mixing with deep deposits, thus resulting in less and less confidence that anything found is in context. The shovel tests were excavated in 10-cm increments, and all soil from each level was screened through ¼-inch hardware cloth. A soil sample was collected from each level. All encountered artifacts were recovered with appropriate provenience for laboratory processing, analysis, and curation. A shovel test form was completed for every excavated shovel test. Data collected from each shovel test included the final excavation depth, a tally of all materials recovered from each 10-cm level, and a brief soil description (texture, consistency, Munsell color, inclusions). A profile sketch was included if warranted. The location of every shovel test was recorded with Trimble Geo XT GPS units. Shovel test locations were sketched onto topographic maps or aerial photographs as a backup to GPS provenience information. Any additional observations considered pertinent were included as comments on the standard shovel test excavation form.

Three backhoe trenches were excavated. The location of each trench was at the discretion of the Principal Investigator and Project Archaeologist. Trenches were excavated where deep soils were anticipated. Backhoe trenches were excavated to the interstice of Pleistocene and Holocene deposits, unless this terminus extended 3 m or more in depth. Per Occupational Safety and Health Administration (OSHA) regulations (OSHA 2014), CAR archaeologists did not enter trenches exceeding 1.5 m in depth. Therefore, trenches were excavated to a depth of 1.5 m below the surface (mbs), cleaned, profiled, and photographed, and then excavation continued to the stated terminus. All observations by CAR archaeologists of cultural material or stratigraphy below 1.5 mbs were made from the surface. Backhoe trenches did not exceed 5 m in length. Trench walls that revealed unique stratigraphy were profiled to record soil stratigraphy and any cultural material. All trench walls were photographed. Trench locations were recorded with a GPS unit and hand-plotted on aerial maps.

For the purposes of this survey, the CAR defines an archaeological site as containing cultural materials or features that are at least 50 years old with (1) five or more surface artifacts within a 15-m radius (ca. 706.9 m^2), or (2) a single cultural feature, such as a hearth, observed on surface or exposed in shovel testing or backhoe trenching, or (3) a positive shovel test or backhoe trench containing at least three artifacts within

a given 10-cm level, or (4) a positive shovel test or backhoe trench containing at least five total artifacts, or (5) two positive shovel tests or backhoe trenches located within 30 m of each other.

Laboratory Methods

No artifacts were collected from the project. All records obtained and/or generated during the project were prepared in accordance with 36 CFR part 79 and THC requirements for State Held-in-Trust collections. Digital photographs were printed on acid-free paper and labeled with archival-appropriate materials and placed in archival-quality sleeves. All field forms were completed with pencil. All records are housed at the CAR.

Chapter 4: Results of Field Investigations

In November 2014, an intensive pedestrian survey was conducted on property owned by the Westover Hills Assembly of God. Ten shovel tests and three backhoe trenches were excavated within the 5-acre project area. This chapter discusses the results of this investigation.

Shovel Testing

To identify possible surface material, CAR archaeologists walked the project area prior to conducting subsurface testing; however, dense ground vegetation obscured visibility of the ground surface. No artifacts were observed on the ground surface.

Ten shovel tests (STs) were excavated within the project area (Figure 4-1). Three shovel tests located within the western portion of the project area were terminated prior to the target depth of 60 cmbs due to obstructions. ST 1 (Figure 4-2) was terminated at 45 cmbs due to dense gravel. Soils in this shovel test consisted of a dark brown (10YR 3/3) clay loam to a mottled dark yellowish brown clay loam containing dense gravel. ST 1 was located near an electric, gas, telephone, and cable easement. The mottling indicates the area may have been disturbed. ST 2, terminated at 28 cmbs upon encountering limestone, consisted of a dark brown (10YR 3/3) clay loam containing gravel and carbonates. Carbonate accumulation is closely associated with soil age (Gile et al. 1981; Machette 1985). ST 4 (Figure 4-3) was also terminated at 28 cmbs due to limestone. This ST consisted of dark brown (10YR 3/3) loam containing carbonate flecks. Subsequent backhoe trenching, see following discussion, uncovered deep soils with some large inclusions of limestone suggesting that the limestone encountered in STs 2 and 4 was not bedrock. All other shovel tests reached the target depth of 60 cmbs (Table 4-1). In the eastern portion of the site, soils consisted of a dark brown loam/clay loam ranging to a yellowish brown sandy loam containing gravel and carbonates near termination depth. All 10 shovel tests were void of cultural material. No new archaeological sites, cultural features, or diagnostic artifacts were recorded during shovel testing.

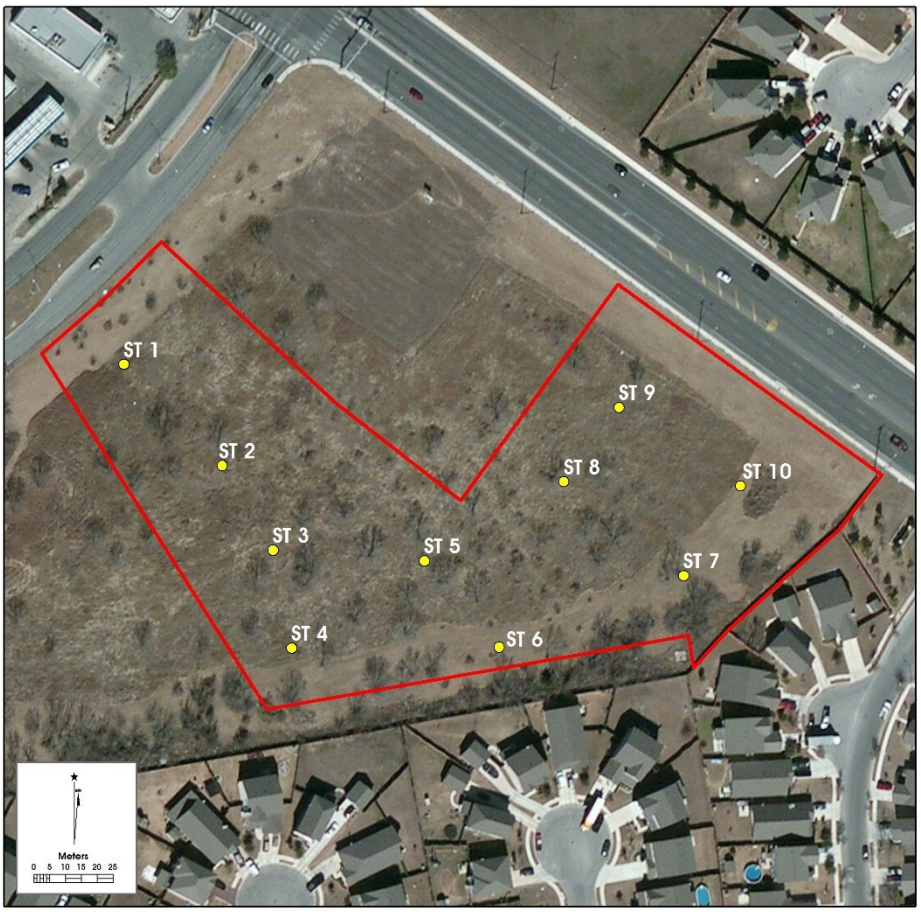

Figure 4-1. *Location of shovel tests within the project area.*

Figure 4-2. *ST 1 termination.*

Figure 4-3. *ST 4 termination.*

Table 4-1. Results of Shovel Tests

ST	Cultural Material Present	Termination Depth	Reason for Termination
1	No	45 cmbs	Dense gravel
2	No	28 cmbs	Rock spanning ST
3	No	60 cmbs	Complete
4	No	28 cmbs	Rock spanning ST
5	No	60 cmbs	Complete
6	No	60 cmbs	Complete
7	No	60 cmbs	Complete
8	No	60 cmbs	Complete
9	No	60 cmbs	Complete
10	No	60 cmbs	Complete

Backhoe Trenching

Three backhoe trenches (BHTs) were excavated within the project area (Figure 4-4). BHT 1 was located in the western portion of the project area, where several shovel tests terminated early due to encountering obstructions. BHT 2 was located in the eastern project area, where deep soils were noted. BHT 3 was located in the central portion of the project area, which had denser vegetation. No cultural material was observed in any of the backhoe trenches.

Figure 4-4. *Location of backhoe trenches within the project area.*

As discussed previously, carbonate accumulation is closely associated with soil age (Gile et al. 1981; Machette 1985). In this region, soils that are light in color and contain heavy amounts of carbonates due to advanced (Phase II and above) carbonate accumulation are associated with the Pleistocene, indicating that the soils are unlikely to contain cultural material. All backhoe trenches that were excavated terminated in this horizon.

BHT 1 (Figure 4-5) consisted of five depositional zones. Layer 1 (0-15 cmbs) was a very dark brown (10YR 2/2) loam containing a large number of roots. Layer 2 (15-45 cmbs) was a dark yellowish brown (10YR 3/4) sandy loam containing gravels. This layer also contained some large limestone rocks, which may explain the early terminations of shovel tests in this area. Layer 3 (45-60 cmbs) was a dark yellowish brown (10YR 4/4) and also contained gravels. Layer 4 (50-100 cmbs) was a dark yellowish brown (10YR 4/6) containing flecks of carbonates. Layer 5 (100-163 cmbs) was a very pale brown (10YR 7/4), very hard, dry clay loam containing a large amount of carbonates. The trench terminated at 163 cmbs.

Figure 4-5. *BHT 1 south profile.*

BHT 2 (Figure 4-6) contained five depositional zones. Layer 1 (1-20 cmbs) was a very dark grayish brown (10YR 3/2) loam containing a large number of roots. Layer 2 (20-70 cmbs) was a dark yellowish brown (10YR 3/6) clay loam containing gravel. Layer 3 (70-100 cmbs) was a dark yellowish brown (10YR 4/4) sandy loam containing heavy gravel and carbonates. Layer 4 (100-240 cmbs) contained yellow (10YR 7/6) sandy loam and very dense gravel. Layer 5 (20-30 cmbs) was a shallow lens of black (10YR 2/1), moist loam located in the northern section of the profile. This trench was profiled in detail to a depth of 150 cmbs. Archaeologists then exited the trench, and excavation continued to its terminal depth of 275 cmbs. The heavy gravels were observed to terminate at approximately 240 cmbs. Such gravel layers are common in Sunev series soils (USDA, SCS 1991). Very pale brown soils with carbonates similar to that recorded in BHTs 1 and 3 were observed from 240-275 cmbs (Figure 4-10). The trench terminated at 275 cmbs.

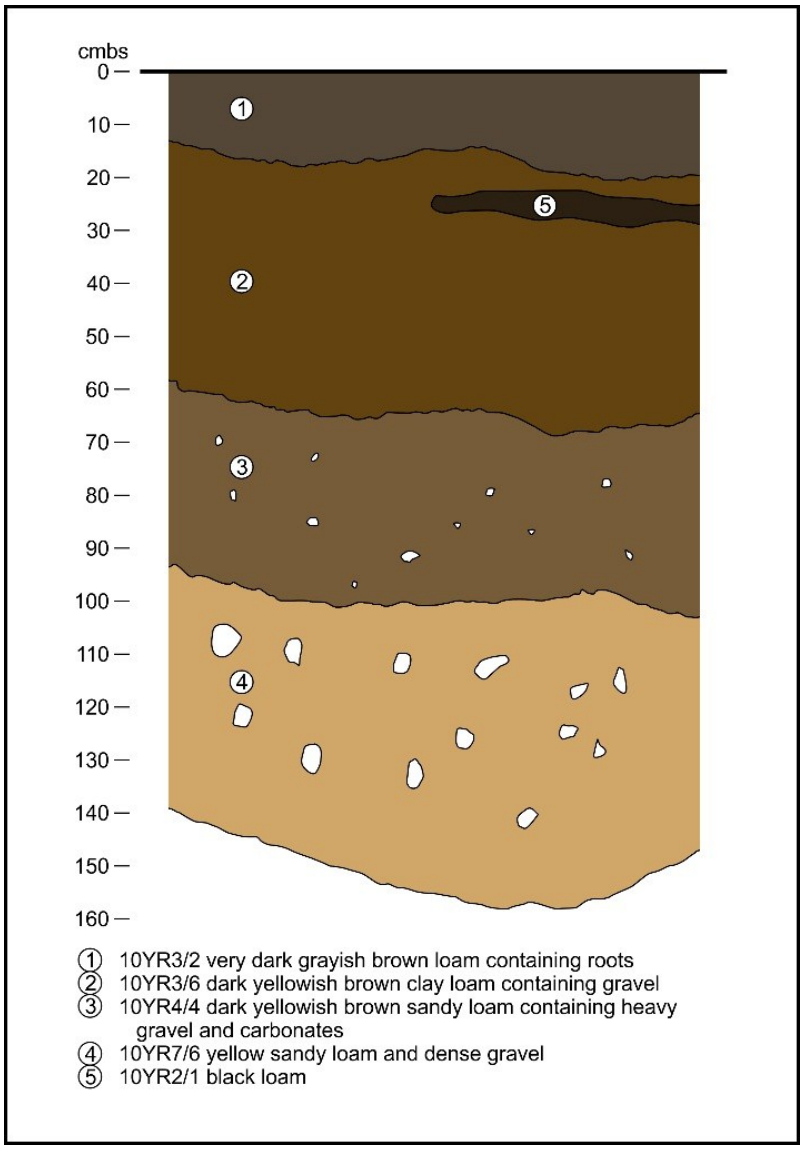

Figure 4-6. *BHT 2 west profile.*

BHT 3 (Figure 4-7) consisted of four depositional zones. Layer 1 (0-30 cmbs) was a very dark grayish brown (10YR 3/2) loam containing a large number of roots. Layer 2 (30-60 cmbs) was a dark yellowish brown clay loam. Layer 3 (60-90 cmbs) was a dark yellowish brown (10YR 4/4) clay loam with flecks of carbonates. Layer 4 (90-190 cmbs) was a very pale brown (10YR 7/4), hard, dry clay loam containing a large amount of carbonates. The trench terminated at 190 cmbs.

Figure 4-7. *BHT 3 west profile.*

Summary

No archaeological sites, cultural features, or artifacts were encountered during this survey. Shovel testing recovered no cultural material. The presence of mottled soil and gravel along the western edge of the project area indicates that the area may be disturbed by utility easements.

No cultural material was uncovered in backhoe trenches. The soil in the eastern portion of the project area was somewhat rockier with more carbonates than the soil in the western portion, which contained deep loams over heavy gravel.

Chapter 5: Summary and Recommendations

In November 2014, archaeologists from the Center for Archaeological Research (CAR) at the University of Texas at San Antonio (UTSA) conducted a pedestrian survey with shovel testing and backhoe trenching of a 5-acre property owned by the Westover Hills Assembly of God in compliance with the COSA's Unified Development Code Chapter 35. The goal of this survey was to determine whether any archaeological material was located within the project area, record any sites encountered, and to assess the impact of proposed activities on any sites identified.

Ten shovel tests and three backhoe trenches were excavated within the 5-acre project area. No cultural material or archaeological sites were recorded in either shovel testing or backhoe trenches. No surface artifacts were noted. No additional archaeological investigations are recommended. The CAR recommends that the Westover Hills Assembly of God's development of the property proceed as planned.

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