

**An Intensive Pedestrian Archaeological Survey
of the Salado Creek Greenway, Wetmore Avenue to
Eisenhauer Road, San Antonio, Bexar County, Texas
Phase I: N. E. Loop 410 to Eisenhauer Road**



by
Cynthia Moore Munoz

Principal Investigator
Raymond P. Mauldin

Texas Antiquities Permit No. 4561

Prepared for:
Adams Environmental Incorporated
12018 Las Nubes
San Antonio, Texas 78233



Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
Technical Report, No. 8

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Abstract

During the Summer of 2007 (July through August), The Center for Archaeological Research (CAR) of The University of Texas at San Antonio, in conjunction with volunteers from the Southern Texas Archeological Association (STAA), conducted an intensive pedestrian archaeological survey of the Salado Creek Greenway project located in San Antonio, Bexar County, Texas to fulfill contract requirements with Adams Environmental, Inc. of San Antonio. The survey was conducted under the requirements of the City of San Antonio Unified Development Code Chapter 35, Section 106 of the National Historic Preservation Act (NHPA) of 1966, and the Texas Antiquities Code. The survey was performed under Texas Antiquities Permit No. 4561, with Dr. Raymond Mauldin, CAR Assistant Director, serving as Principal Investigator and Cynthia Moore Munoz serving as the Project Archaeologist. The work was conducted in advance of construction of a multi-use greenway trail proposed by the Parks and Recreation Department of the City of San Antonio.

The project consists of development of a multi-use greenway trail running from Wetmore Avenue to Eisenhower Road along the Salado Creek channel. The project area will be surveyed in two phases with the first phase from N.E. Loop 410 to Eisenhower Road completed in August 2007 and the second phase from N.E. Loop 410 to Wetmore Avenue to be completed prior to the close of 2008. This report summarizes the results of the fieldwork from Phase I, N. E. Loop 410 to Eisenhower Road, and provides recommendations regarding the management of cultural resources located on the project area.

Pedestrian reconnaissance, site revisits, shovel tests, and backhoe trenches were used to search for cultural resources within the project right of way (ROW) and on city-owned land parcels immediately adjacent to the ROW. No features or new sites were observed within the project area. Of the twelve previously recorded sites located on the proposed Greenway, cultural material was noted in the vicinity of six of the sites (41BX17/271, 41BX474, 41BX475, 41BX476, 41BX478). The remaining six sites could not be located. The Granberg site (41BX17 and 41BX271) is located on the proposed trailhead/parking lot. Because the trailhead/parking lot will be built up from the existing surface elevations using additional fill, the Granberg site should not be adversely affected by the construction. However, it is possible that signage footings could impact subsurface Granberg cultural materials. Therefore, the CAR recommends that the construction of the proposed trailhead/parking lot proceed as planned. However, the far eastern side of the trailhead/parking lot should be avoided as locations for signage footings. One of the previously recorded sites, 41BX481, had Texas Atlas UTM coordinates placing it directly on the proposed multi-use

alignment. No cultural evidence could be located in the vicinity of the UTM coordinates. It appears that the site is no longer in existence or has incorrect coordinates. Therefore, the CAR recommends that the installation of the proposed hike and bike trail alignment proceed as proposed.

Artifacts collected and records generated during this project were prepared for curation according to Texas Historical Commission guidelines and are permanently curated at the Center for Archaeological Research at the University of Texas at San Antonio.

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Chapter 1: Introduction

The Center for Archaeological Research (CAR) of The University of Texas at San Antonio was contracted by Adams Environmental Inc. of San Antonio to conduct an intensive pedestrian archaeological survey for the Salado Creek Greenway project located in San Antonio, Bexar County, Texas. The survey, conducted in advance of the proposed construction of a hike and bike trail, occurred from July through August 2007. The Area of Potential Effect (APE) consists of a multi-use greenway trail, trailhead, trail switchbacks, signage, and a parking lot. The parking lot will be built up from the existing surface elevations using additional fill and will consist of an 8 inch (.20 m) deep layer of asphalt. Thus, no excavation is anticipated during parking lot construction. Signage along the trail and at the trail head will require footings that could go as deep as 24 to 36 inches (.61-.91m). The principal goal of the pedestrian survey was to identify and document all prehistoric and/or historic archaeological sites that may be impacted by the proposed improvements within the specific APE. The archaeological survey was performed under Texas Antiquities Permit No. 4561, with Dr. Raymond Mauldin, CAR Assistant Director, serving as Principal Investigator and Cynthia Moore Munoz serving as Project Archaeologist.

The land impacted by the project is owned by the City of San Antonio, a political subdivision of the State of Texas. As such, the project has to comply with State Historic Preservation laws and specifically the mandates of the Antiquities Code of Texas. The work was also coordinated through the City's Historic Preservation Office in compliance with the City of San Antonio Unified Development Code Chapter 35. In addition, because the project area is located along a waterway, and a bridge will have to be constructed across Salado Creek, a 404 Nationwide Permit will have to be issued by the Corps of Engineers (COE). Projects receiving federal funding and/or permitting must comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966. One outcome of the NHPA was the creation of the National Register of Historic Places (NRHP) and the Advisory Council of Historic Preservation. Section 106 of the NHPA stipulates that the Advisory Council must be given "a reasonable opportunity to comment" regarding the effect of any undertakings that could impact properties that may be eligible for inclusion in the National Register. All undertakings that derive from actions funded by, permitted by, or licensed by federal agencies fall under this requirement.

The project consists of development of a multi-use greenway trail running from Wetmore Avenue to Eisenhower Road along the Salado Creek channel. The project area is within the Salado watershed in north-central San Antonio bordered by Wetmore Avenue to the northwest and Eisenhower Road to the

south. Loop 410 bisects the project area from the east to the west. The project area is approximately four and a half miles (7,242 meters) long and runs through commercial areas and residential neighborhoods. The right-of-way (ROW) is approximately 20 meters in width but varies in different locations of the project area. In addition to the project ROW along the greenway trail, a trailhead consisting of a parking lot and trail entrances will be constructed immediately south of N.E. Loop 410. The proposed project is part of the City's long-range plan to maintain, improve, and expand existing multi-use greenway trails within the San Antonio.

The project area will be surveyed in two phases (Figure 1-1). The first phase is from N.E. Loop 410 to Eisenhower Road. This initial segment was completed in August 2007. The second segment is from N.E. Loop 410 to Wetmore Avenue and will be completed prior to the close of 2008. The first phase of the survey, from N.E. Loop 410 to Eisenhower Road, is approximately two miles (3,219 meters) long. The second phase, from N.E. Loop 410 to Wetmore Avenue, is approximately two and a half miles (4,023 meters) long. The Phase I survey originally consisted of a 100 percent pedestrian reconnaissance of approximately 122 acres of city owned parcels including and adjacent to the proposed hike and bike alignment, a pedestrian survey with shovel testing of the alignment and trailhead, revisits to previously recorded sites on the project area, and backhoe testing of any deep soil deposits. This approach was adjusted after the completion of approximately 40% of the pedestrian reconnaissance due to extremely low surface visibility and the existence of large areas of submerged terrain from heavy recent rains. In lieu of a 100 percent reconnaissance, an intensive pedestrian reconnaissance was completed on the previously recorded sites located on the city-owned parcels. The reconnaissance was accompanied by a linear survey with shovel testing of the approximately 2 mile long alignment. Additionally, known sites along the project ROW were revisited to establish site boundaries. Backhoe testing was completed on the parking lot and trail head located immediately south of the N. E. Loop 410 access road. Figure 1-2 illustrates the project area on the Longhorn and San Antonio East, Texas USGS 7.5' quadrangles.

The survey of the Salado greenway included the hand excavation of 57 shovel tests and the mechanical excavation of three backhoe trenches. The backhoe trenches were positioned on the proposed parking lot and trail head along the northern portion of the project area immediately south of Loop 410 partially within and directly adjacent to the Granberg site (41BX17 and 41BX271). The western margin of the site originally extended at least 50 ft. into the highway right-of-way. The majority of the site appears to extend for an unknown distance southward and beyond the fence line onto the proposed parking lot. Shovel testing of this area resulted in the excavation of construction fill reaching a minimum depth of 60

cm below surface (cmbs). Backhoe trenches were excavated to further define the depth of the fill and to define the horizontal and vertical distribution of cultural materials remaining on the Granberg site.



Figure 1-1. Aerial photograph depicting the project area (note Phase 1 is highlighted in red and Phase 2 in blue).



Figure 1-2. The location of the project area on the Longhorn and San Antonio East 7.5 Minute Series U.S.G.S. Quadrangle maps (note Phase 1 is highlighted in red and Phase 2 in blue).

A utility trench three plus meters deep was erroneously excavated by a private contractor across the northeastern portion of the parking lot to connect new construction (adjacent on a privately owned lot

next to the Greenway parking lot) to the sewer main (Figure 1-3). This portion of the parking lot is over the Granberg site. Kay Hindes, the archaeologist for the City of San Antonio, initially inspected the trench and removed a bone tool from the lower portion of the trench wall. Upon visual inspection of the entire length of this trench by the CAR a highly organic dark-gray to black zone at approximately six feet below surface (1.8 m), sitting on top of deeper gravelly layers, was noted along much of the trench. This zone contained isolated fragments and localized concentrations of burned rock (Figure 1-4). There appears to be one segment of the trench, in the portion furthest away from the creek, that may be similar to Middle Archaic deposits previously excavated at the Granberg site (Thompson 2006). This segment appears to contain sandy deposits between two layers of gravel situated below the Late Archaic material. Other than this location, all deposits sitting below the Late Archaic seem to consist of stream-deposited gravels. The City of San Antonio Historic Preservation Office has differed final decision as to the resolution of this intrusion into the Granberg site to the Texas Historical Commission. The matter of how to proceed is currently unresolved.



Figure 1-3. Utility trench across 41BX217.

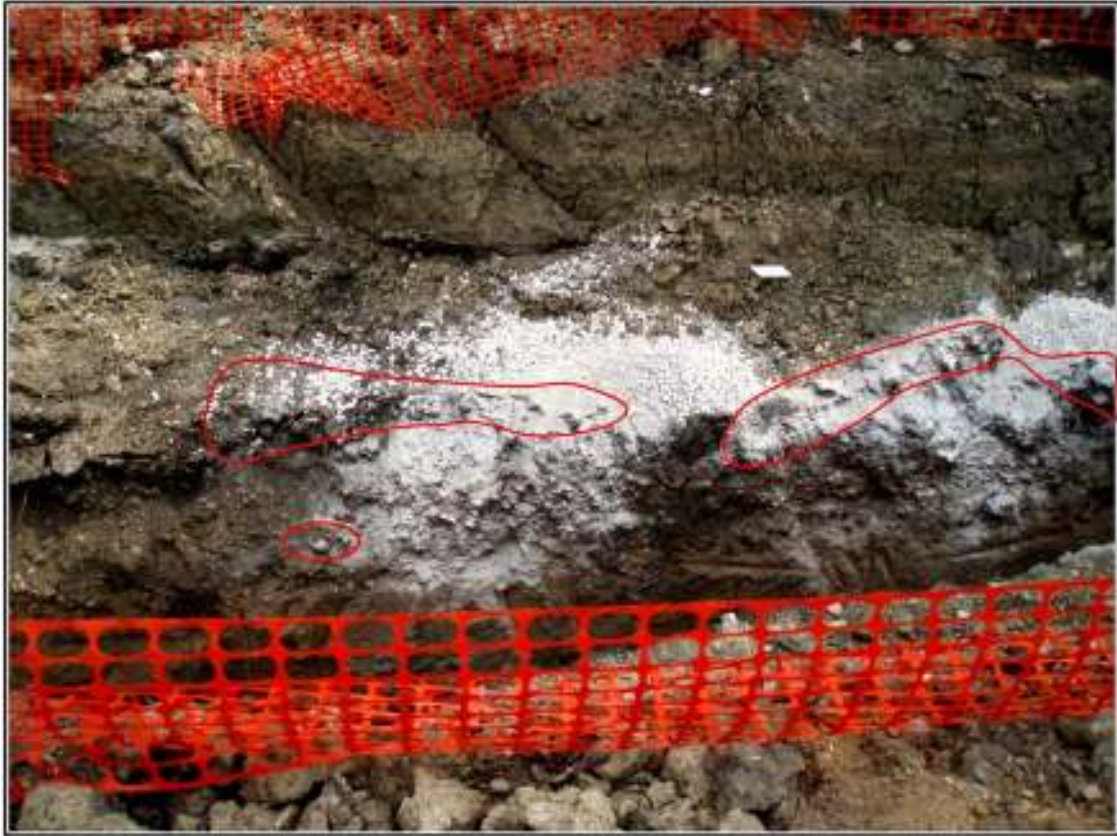


Figure 1-4. Burned rock in the wall of utility trench across 41BX217.

In the process of conducting the Salado Creek Greenway survey no new sites were identified. Of the 12 previously recorded sites, three are located directly on the project ROW. One, 41BX481, is located along the trail alignment and the Granberg site (41BX17 and 41BX271) is located on the trailhead/parking lot. 41BX481 was relocated with recorded UTM coordinates. No cultural material was noted. It appears that the site is no longer in existence or has incorrect coordinates. Therefore, the CAR recommends that the installation of the proposed hike and bike trail alignment proceed as proposed. Because the trailhead/parking lot will be built up from the existing surface elevations using additional fill, the Granberg site should not be adversely affected by the construction. However, it is possible that signage footings could impact Granberg cultural materials. Therefore, the CAR recommends that the construction of the proposed trailhead/parking lot proceed as planned. However, the far eastern side of the trailhead/parking lot should be avoided as locations for signage footings. Recommendations will be discussed in detail in Chapter 5.

This document summarizes the Phase I results of the fieldwork and provides recommendations regarding the management of cultural resources located on the project area. This report is organized into five chapters. Chapter 2 provides a brief overview of the project area and summarizes the archaeological knowledge about the region. Chapter 3 discusses the fieldwork and laboratory methodology employed during the project. The results of the archaeological survey are presented in detail in Chapter 4. Chapter 5 summarizes the work and provides recommendations for the Phase I portion of the Salado Creek Greenway project.

Chapter 2: Project Overview

This chapter presents a brief description of the Salado Creek Greenway project and characterizes the project area environs and culture history. The chapter concludes with a summary of previous archaeological work conducted in the vicinity of the project area.

The Project Area

The project area is within the Salado watershed in north-central San Antonio bordered by Wetmore Avenue to the northwest and Eisenhower Road to the south. Loop 410 bisects the project area from the east to the west (see Figure 1-1). The project area proper represents a linear stream channel and its immediately adjacent floodplain and low-lying terrace deposits. The project area consists of an alignment approximately four and a half miles (7,242 meters) long running through commercial areas and residential neighborhoods. The alignment is located on approximately 247 acres of city owned land. The alignment for the first phase of the survey from N.E. Loop 410 to Eisenhower Road is approximately two miles (3,219 meters) long and traverses approximately 122 acres of city property. The second phase, from N.E. Loop 410 to Wetmore Avenue, is approximately two and a half miles (4,023 meters) long on 125 acres. The ROW is approximately 20 meters in width, though it varies in different locations of the project area.

Project Environs

The immediate project area is located in what Potter et al. (1995) terms the Middle Salado watershed. The Middle Salado consists of approximately 25 linear km of drainage from the confluence of Panther Springs and Salado creeks to roughly 20 km above the Salado/San Antonio River confluence. This portion of the Salado has a significant decrease in stream gradient when compared to the Upper Salado. This lessening gradient is accompanied by broadening floodplain and terrace landforms, deeper alluvial deposits and significantly increased stream meandering in comparison to the linear aspects of the Upper Salado (Potter et al. 1995). The Middle Salado meanders through the Blackland Prairie region of Texas, a biotic zone running west to east across most of central Bexar County. The Blackland Prairie is characterized by low, rolling hills with gentle slopes (Diamond et al. 1987). Elevations in the project area range from 670 to 700 feet AMSL. This area supports a diverse assemblage of flora (Figure 2-1) including a variety of oaks (*Quercus sp.*), pecan (*Carya illinoensis*), cedar elm (*Ulmus crassifolia*), mesquite (*Prosopis sp.*), buffalo grass (*Buchloe dactyloides*), Texas grama (*Bouteloua rigidiseta*), big bluestem (*Andropogon gerardi*), little bluestem (*Schizachyrium scoparium*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum*

virgarum), sideoats grama (*Bouteloua curtipendula*), hairy grama (*Bouteloua hirsute*), tall dropseed (*Sporobolus asper*), and Texas wintergrass (*Stipa leucotricha*) (South Central Texas Regional Water Planning Group 2006A).



Figure 2-1. Typical vegetation along the Middle Salado watershed.

The soils in the immediate vicinity of the active channel are described as frequently flooded Trinity and Frio Soils (Tf). These soils occur as narrow, irregularly shaped areas on the flood plains of small streams and larger drainageways. These soils are frequently flooded, generally after a heavy rain. Trinity/Frio soils range from one to one and one half meters deep and consist of a surface layer of clay loam and a subsurface layer of clay with pockets of thin loamy strata (Taylor et al. 1991). The soils abutting the active channel are identified as Lewisville silty clays (Lv), Patrick soils (Pa), and Tarrant association (Ta). The Lewisville series consists of moderately deep, dark colored, alluvial soils. Patrick soils contain shallow, calcareous clay loam. The Tarrant series is characterized by gently undulating, stony, clay loam overlying shallow bedrock. A small segment of the soils adjacent to the active channel near the southern end of the project area are identified as Pits and Quarries (Pt). This land type consists of clay, gravel and sand pits, limestone, chalk and rock quarries, and city dumps (Taylor et al. 1991).

Climate in this general area is classified as humid subtropical with hot, humid summers and mild, dry winters. Rainfall averages approximately 30 inches a year. The mean annual temperature for the region is 70°F (South Central Texas Regional Water Planning Group 2006B).

Culture History

The project area lies at the intersection of two broad archaeological regions, Central Texas and South Texas. Because archaeological sites with long sequences of stratified deposits are sparse in South Texas, the prehistoric sequence developed for Central Texas is often relied on to frame the prehistory of South Texas. The following culture history emphasizes Central Texas although reference is made to trends in South Texas. The discussion is based primarily on the chronologies developed by Collins (1995), Johnson and Goode (1994), and Black (1989) for Central Texas, with observations from Hester (1995) for South Texas. Four major time periods define South Central Texas: Paleoindian, Archaic, Late Prehistoric, and Historic. These periods are further divided into sub-periods that are based on particular subsistence strategies and material culture. A brief description of each period follows to illustrate the archaeological potential of the region.

Paleoindian

The Paleoindian period (11,500-8800 BP) is divided into early and late sub-periods, each characterized by particular projectile point styles and subsistence patterns (Collins 1995). The period begins at the close of the Pleistocene with the earliest evidence of humans in the Central Texas region. Projectile points include lanceolate-shaped, fluted forms such as Clovis, Plainview, and Folsom. In the past Paleoindian populations have generally been characterized as hunter-gatherers ranging over wide areas in pursuit of now extinct megafauna, such as mammoth and *Bison antiquus*. This view of Paleoindian peoples is now being reassessed. Although exploiting Late Pleistocene megafauna may have constituted a part of Paleo-Indian subsistence, these peoples are perhaps better characterized as more generalized hunter-gatherers, exploiting a wide variety of plants and animals including large herbivores like deer and *Bison bison* and small animals such as turtles, alligators, rabbit, and raccoons (Collins 1995, Nickels 2000). Paleoindian artifacts are commonly recovered as isolated finds or from lithic scatters lacking good stratigraphic context including kill, quarry, cache, camp, ritual and burial sites (Collins 1995).

Archaic

The Archaic period (8800-1200 BP) is marked by intensification in hunting and gathering of local resources and by a broader array of material culture (Collins 1995). A change in food processing is

evident from a widespread increase in hearth, oven and midden features. During this period, large cemeteries were formed indicating an increasing population and the subsequent establishment of territories (Black and McGraw 1985). Collins (1995) and Johnson and Goode (1994) subdivided the Archaic into Early, Middle, and Late subperiods. These subperiods are distinguished by variances in climate conditions, resource availability, subsistence practices, and diagnostic projectile point styles (Collins 1995; Hester 1995).

Late Prehistoric

The beginning of the Late Prehistoric period (1200-350 BP) is marked by the appearance of arrow points, indicative of bow and arrow technology, and pottery (Collins 1995, Hester 1995). The Late Prehistoric is subdivided into early and late sub-periods termed Austin and Toyah Phases, respectively. Temporal diagnostics including Scallorn and Edwards arrow points define the Austin Phase (1200-650 BP, Prewitt 1981). It appears that the use of burned rock middens may have reached its peak during this phase (Black and Creel 1997). The subsequent Toyah Phase spans 650-350 BP and includes the first occurrence of pottery in South Texas. Characteristic artifacts of this phase include Perdiz and Clifton arrow points (Black 1986). Material culture associated with the Late Prehistoric period points to increasing complexity in subsistence patterns and to very large prehistoric populations (Black 1989, Collins 1995).

Historic

The Historic period in South Texas begins with the arrival of Europeans. Although the Historic period theoretically begins in Texas with the shipwreck of the Narvaez expedition along the Texas coast in 1528, the majority of the inhabitants of Texas were Native Americans until the late eighteenth century. From AD 1550 to the late 1600s, European forays into South and Central Texas were infrequent. René Robert Cavelier, Sieur de La Salle, established a French settlement, Fort St. Louis, along Matagorda Bay on the Texas coast in 1685. Hunger, disease, and escalating hostilities between the French and the Karankawas, subsequently destroyed the colony (Foster 1998). The first Europeans settled in the region in early AD 1700 (Taylor 1996). The southward incursion of the Comanche and Apache and the northward expansion of Spanish influence led to the displacement of many of the area's indigenous groups. Some Native Americans moved to the protective environment of the various missions that were established in the area in the early eighteenth century. The move to the missions significantly impacted the hunter-gatherer way of life and the material culture. Artifacts from the Historic period reflect European influences and include metal, glass, and ceramics along with pre-Hispanic Goliad wares and lithic arrow points, tools, and gunflints (Taylor 1996).

Previous Archaeological Investigations

A background literature review revealed an abundance of recorded prehistoric archaeological sites in the project area. These sites are located along and in the immediate vicinity of Salado Creek. No historic sites are represented in the project area. Because the project area is located along the Salado watershed, a desirable locale for prehistoric hunters and gatherers, potential exists for additional cultural resources. Archaeological sites on and in close proximity to the project area are 41BX841, 41BX229, 41BX1007, 41BX17, 41BX271, 41BX473, 41BX474, 41BX475, 41BX476, 41BX477, 41BX478, 41BX479, 41BX480, 41BX481, and 41BX482. The first three sites are on the northern half of the project area from N. E. Loop 410 to Wetmore and will be discussed in detail in the Phase II report of the Salado Creek Greenway.

The Granberg site is immediately adjacent to the east bank of Salado Creek. The proximity of two separately recorded sites (41BX17 and 41BX271) and a more accurate plotting of the earlier site, 41BX17, indicate that both are part of a prehistoric site once located on a small knoll overlooking the east bank of Salado Creek (Thompson 2006). The western margin of the site known as 41BX17 originally extended at least 50 ft. into the highway right-of-way where Harvey Kohnitz first identified it in the early 1960s. The majority of the site appears to extend for an unknown distance southward and beyond the fence line into property recently purchased by the City of San Antonio (Córdova et al. 2005).

Site 41BX17 was partially excavated in 1962 by Mardith Schuetz of the Witte Museum. Schuetz recorded two general strata: an upper humic zone and a lower burned rock zone. The upper zone contained diagnostics from the Terminal Late Archaic, Middle Late Archaic, and Early Late Archaic. The lower zone contained diagnostics from the Middle and Early Late Archaic. The excavations uncovered five features including two hearths, and three burials containing five individuals (Schuetz 1966). 41BX271 was investigated once in 1973-1974 by members of the Southern Texas Archaeological Association (STAA) and again in 1979 by The University of Texas at San Antonio (UTSA). The STAA excavations uncovered a burned rock midden (Stratum II) in the upper 55 cm of deposits containing diagnostics of the Late Archaic Period, a thick transitional zone extending to 360 cm (Stratum III), deposits (Stratum IV) consisting of artifacts diagnostic of the Early Middle Archaic, and a charcoal-stained distinctive living floor at 2.45 meters (Stratum VIII, Hester and Kohnitz 1975). There is no map or site report available of the 1979 UTSA excavations but some student papers discuss the excavation (Galín 1979, Jones et al. 1979, and Markey 1979). The stratigraphy revealed in the 1979 work appears similar to that reported for the 1973-1974 STAA work, but precise correlations are difficult to make. There are references to features,

Feature 2 and F7, but no information is available on the characteristics of these features. One radiocarbon date, calibrated to 3650-3370 B.C., was recovered and was reportedly associated with a Bell projectile point (Cordova et al. 2005). The total span of occupations encompasses a period from about 4000 B.C. to A.D. 1200 as evidenced by the styles of projectile points uncovered from these early excavations (Córdova et al. 2005; Thompson 2006; Schuetz 1966).

The University of Texas at San Antonio conducted archeological significance testing at 41BX17 from January to March 2006 for the Texas Department of Transportation (TxDOT). The distribution of the artifacts, the geomorphic investigations, the radiocarbon assays, and temporally diagnostic artifacts indicate the presence of Middle and Late Archaic archaeological materials with good stratigraphic integrity. Radiocarbon dates and preliminary artifact analysis suggests that prehistoric human occupation at the Granberg Site spanned 3,000 years from the Middle Archaic to the Late Archaic (Thompson 2006).

In August of 1977, the University of Texas at San Antonio conducted an archaeological survey along Salado Creek as part of the Tobins Oakwell Farm project (McGraw and Valdez 1977). That survey documented ten prehistoric sites: 41BX473, 41BX474, 41BX475, 41BX476, 41BX477, 41BX478, 41BX479, 41BX480, 41BX481, and 41BX482. Seven of the sites were considered lithic scatters, one a lithic scatter with a possible deflated midden (41BX476), one a quarry (41BX479), and one a quarry with possible occupation (41BX481). Of the ten sites, seven were deemed ineligible and three potentially eligible (41BX476, 41BX479, and 41BX481) for the NRHP. Four of the sites (41BX473, 41BX474, 41BX475, and 41BX476) are immediately adjacent to the active stream channel but on the opposite side of the stream from the proposed hike and bike trail. The remaining six sites (41BX477-482) are all on or immediately adjacent to the proposed trail. No subsurface testing was conducted as part of the 1977 survey (McGraw and Valdez 1977, THC 2007).

Chapter 3: Field and Laboratory Methods

As part of the archaeological services provided to Adams Environmental Inc., and in accordance with the Texas Historical Commission guidelines, the Center for Archaeological Research was contracted to conduct the following Phase I fieldwork: 1) complete a linear intensive pedestrian survey accompanied by shovel testing of the two mile (3219 m) alignment located between N.E. Loop 410 and Eisenhower Road; 2) complete an intensive pedestrian survey accompanied by shovel testing of the trailhead/parking lot; 3) revisit and shovel test previously recorded sites along the project ROW to establish site boundaries; 4) complete intensive pedestrian surveys of all previously recorded sites on city-owned parcels adjacent to the alignment; and 5) augment the survey with mechanically excavated backhoe trenches to investigate any deposits that cannot be effectively explored using shovel testing. This chapter presents the field and laboratory methods used during the archaeological investigations of the Salado Creek Greenway Project.

Field Methods

The project area for Phase I consists of an alignment of approximately two linear miles (3,219 m) and 122 acres of City of San Antonio-owned parcels including and immediately adjacent to the alignment. The area includes active channel, floodplain, and terraces within the portion of the Salado watershed located between N.E. Loop 410 and Eisenhower Road in north-central San Antonio (Figure 3-1). A preliminary assessment of the project area indicated that much of the survey area may consist of deep sediment deposits deemed high probability areas. A combination of methods were used during the survey of the Salado Creek Greenway including pedestrian surface reconnaissance, site revisits, shovel testing, and backhoe trenching. Shovel testing was employed prior to backhoe trenching in order to determine the depth of soil deposits as well as the horizontal and vertical distribution of any cultural material in the project area. Based on artifact densities and soil depth revealed by the shovel tests and on known areas of potential impact, three backhoe trenches were excavated.

Pedestrian Survey and Shovel Testing of the Alignment

The archaeological investigation of the alignment consisted of an intensive pedestrian survey accompanied by shovel testing with additional shovel testing on the ROW in the vicinity of previously recorded sites. Based on the alignment length (approximately 2 miles), excavation required to fulfill the THC minimum survey standards for linear projects less than 30 meters wide was a minimum of 32 shovel tests (STs), at a density of 16 STs per mile. Shovel test locations were evenly distributed along the ROW on the floodplains and terraces abutting the active channel. This resulted in 36 locations. UTM

coordinates for these 36 locations were determined, and uploaded into Trimble Geo XT GPS units prior to the CAR's commencement of fieldwork. Shovel tests were located in the field using the GPS map feature. Shovel tests were 30 cm in diameter and when possible extended to a depth of 60 cm below surface (cmbs). They were excavated in 10-cm increments, and all soil from each level was screened through ¼-inch hardware cloth. 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). Any additional observations considered pertinent were included as comments on the standard shovel test excavation form.

After completion of the shovel testing the CAR was informed by Adams Environmental, Inc. of a change in the proposed alignment. The southern portion of the hike and bike trail from Tobin Park to Eisenhower Road was realigned to the west side of Salado Creek. Six additional shovel tests were excavated on the adjusted trail segment.

Of the 42 shovel tests, one, located on the southern half of the alignment, was positive for cultural material. Four additional shovel tests were excavated adjacent to the positive test. The additional tests were placed on the alignment, two on each side of the positive test, at distances of 25 m and 50 m to attempt to delineate the boundary of the cultural material concentration. None of the additional tests were positive.

Twelve previously recorded sites are located on the project area. One of these, 41BX481 has UTM coordinates placing it immediately on the alignment. Nine of the sites, based on UTM coordinates, 41BX473, 41BX474, 41BX475, 41BX476, 41BX480, 41BX482, 41BX478, 41BX479, and 41BX477, are not located directly on the alignment but are on city-owned parcels adjacent to the trail. Of the nine, the first four, 41BX473-476 are located on the opposite side of Salado Creek from the alignment and therefore, did not require additional shovel testing along the alignment to define the site boundaries. These sites are discussed in a following section explaining the intensive pedestrian survey of previously recorded sites. The remaining five are adjacent to the trail and are located on the same side of the Creek. Six additional shovel tests were excavated along the alignment in an attempt to further delineate the boundaries of these six sites (41BX480, 41BX481, 41BX482, 41BX478, 41BX479, and 41BX477). The remaining two previously recorded sites, 41BX17 and 41BX271, are discussed in a following section

detailing the pedestrian survey, shovel testing and backhoe testing of the trailhead. Overall the pedestrian survey of the alignment resulted in the hand excavation of 52 shovel tests (Figures 3-2).



Figure 3-1. The location of the Phase I project area with the hike and bike alignment (red), and city-owned parcels (yellow).



Figure 3-2. The location of shovel tests (yellow) and backhoe trenches (green) on the Salado Greenway Right of Way.

Pedestrian Survey, Shovel Testing, and Backhoe Trenching of the Trailhead/Parking Lot

In addition to the greenway trail alignment, a trailhead consisting of a parking lot and trail entrances will be constructed immediately south of N.E. Loop 410. The trailhead is over and adjacent to the Granberg site (41BX17 and 41BX271). The western margin of the site known as 41BX17 originally extended at least 50 ft. into the highway right-of-way. The majority of the site appears to extend for an unknown distance southward and beyond the fence line onto the proposed parking lot. The trailhead area is approximately 85 meters by 75 meters (6,375 square meters). The archaeological investigation of the trailhead consisted of an intensive pedestrian survey accompanied by shovel testing and the mechanical excavation of three backhoe trenches. Based on the trailhead area (1.6 acres), excavation required to fulfill the THC minimum survey standards for areas measuring up to two acres is a minimum of five STs, at a density of three STs per acre. Shovel test locations were distributed along two transects spaced 30 meters apart (see Figure 3-2). UTM coordinates for these five locations were determined, and uploaded into Trimble Geo XT GPS units prior to the survey of the trailhead. Shovel tests were located in the field using the GPS map feature.

Shovel testing of this area resulted in the excavation of construction fill reaching a minimum depth of 60 cmbs. Based on the results of the shovel tests, three backhoe trenches were excavated to expose stratigraphic profiles and potential features, further define the depth of the fill, and to define the horizontal and vertical distribution of cultural materials remaining on the Granberg site. The backhoe trenches were positioned on the proposed parking lot and trail head along the northern portion of the project area immediately south of Loop 410 partially within and directly adjacent to the Granberg site (41BX17 and 41BX271). To comply with the Minimum Survey Standards as defined by the THC, the backhoe trenches were approximately one meter wide, five meters in length and 1.6 meters deep. After the excavation of each backhoe trench, the project archaeologist entered the trench to examine the stratigraphy and artifact density associated with the trench walls. Any discrete, potentially intact prehistoric features or deposits that were detected in the mechanically excavated backhoe trenches were recorded (i.e., profiled, photographed, scaled drawing). The backhoe trenches were excavated in full compliance with Occupational Safety and Health Administration (OSHA) standards for protection of employees in excavations (29CFR1926.652). No matrix removed via mechanical means was screened, but sediments were inspected for artifacts upon excavation. All diagnostic artifacts encountered in backhoe trenches were collected for analysis and subsequent curation.

Intensive Pedestrian Survey of Previously Recorded Sites

In addition to the pedestrian survey of the alignment and trailhead/parking lot, the Phase I survey originally consisted of a 100 percent pedestrian reconnaissance of approximately 122 acres of city-owned parcels including and adjacent to the proposed hike and bike alignment. Transects spaced 30 meters apart were evenly distributed along the city owned parcels. This resulted in 61 transects (Figure 3-3). UTM coordinates for these 61 linear locations were determined, and uploaded into Trimble Geo XT GPS units prior to the CAR's commencement of the reconnaissance. Transects were located in the field using the GPS map feature, aerial photographs and hand-held compasses. The CAR field crew, accompanied by STAA volunteers, traversed the project area along the transects. Surface artifacts were noted and recorded with Trimble Geo XT GPS units. This approach was discontinued after the completion of approximately 40% of the pedestrian reconnaissance due to extremely low surface visibility and the existence of large areas of submerged terrain from heavy recent rains (Figures 3-4).

In lieu of the 100 percent reconnaissance, an intensive pedestrian reconnaissance was completed on 10 of the 12 previously recorded sites located on the city-owned parcels (41BX473, 41BX474, 41BX475, 41BX476, 41BX480, 41BX481, 41BX482, 41BX478, 41BX479, and 41BX477). The UTM coordinates for these ten locations were determined, and uploaded into Trimble Geo XT GPS units prior to the CAR's site revisits. The CAR field crew thoroughly traversed the areas corresponding to the UTM coordinates. Surface artifacts were noted and recorded with Trimble Geo XT GPS units. The remaining two sites, 41BX17 and 41BX271 (the Granberg site), were thoroughly surveyed employing shovel tests and backhoe trenches (see previous section).

Site Recording and Identification

For the purposes of this survey, newly encountered archaeological sites were defined as locations containing a certain number of cultural materials or features that are at least 50 years old within a given area. The definition of a site used for this project was as follows: (1) Five or more surface artifacts within a 15-meter radius (ca. 706.9 m²), or (2) a single cultural feature, such as a hearth, observed on surface or exposed in shovel testing, or (3) a positive shovel test containing at least three artifacts within a given 10-cm level, or (4) a positive shovel test containing at least five total artifacts, or (5) two positive shovel tests located within 30 meters of each other, or (6) a buried cultural feature, such as a hearth, exposed in a backhoe trench, or (7) a buried surface containing cultural material exposed in a backhoe trench.

Artifacts encountered that did not meet the minimum requirements for a site were treated as isolated finds. These artifacts were recorded with a GPS unit and their locations were plotted on the maps and aerials. Only those isolated finds that were temporally diagnostic were collected.



Figure 3-3. The location of transects for surface reconnaissance (note completed transects are highlighted in red).



Figure 3-4. Example of heavy vegetation encountered during surface reconnaissance.

Archaeological Laboratory Methods

Cultural materials and records obtained and/or generated during the project were prepared in accordance with federal regulation 36 CFR part 79, and THC requirements for State Held-in-Trust collections. Additionally, the materials were curated in accordance with current guidelines of the Texas Archaeological Laboratory (TARL). Artifacts processed in the CAR laboratory were washed, air-dried and stored in 4-mm zip locking archival-quality bags. Materials needing extra support were double-bagged. Acid-free labels were placed in all artifact bags. Each label contained provenience information and a corresponding lot number written in archival ink, with pencil or laser printed. Tools were labeled with permanent ink over a clear coat of acrylic and covered by another acrylic coat. Artifacts were separated by class and stored in acid-free boxes. Boxes were labeled with standard labels. Digital photographs were printed on acid-free paper and labeled with archivally appropriate materials and placed in archival-quality sleeves. All field forms were completed with pencil. Field notes, forms, photographs, and drawings were printed on acid-free paper and placed in archival folders. A copy of the survey report and all computer disks pertaining to the investigations were stored in an archival box and curated with the field notes and documents. Upon completion of the project all cultural materials and records will be permanently curated at the CAR facility.

Chapter 4: Survey Results

The survey of Phase I of the Salado Creek Greenway project was completed between July and August 2007. This chapter discusses the results of the pedestrian survey of the project area. The fieldwork consisted of a linear intensive pedestrian survey accompanied by shovel testing of the alignment located between N. E. Loop 410 and Eisenhower Road and of previously recorded sites along the alignment ROW (n= 52), an intensive pedestrian survey accompanied by shovel testing of the 1.6 acres comprising the trailhead/parking lot (n=5), intensive pedestrian surveys of all previously recorded sites on the city owned parcels (122 acres) adjacent to the alignment, and mechanically excavated backhoe trenches to investigate any deposits that could not be effectively explored using shovel testing (n=3).

The pedestrian survey, shovel testing, and backhoe trenching of the project area revealed no evidence of historic artifacts and only sparse instances of prehistoric cultural material. Of the twelve site revisits attempted during the survey, surface artifacts could only be located for four of the sites (41BX478, 41BX474, 41BX475, 41BX476). There was no evidence of subsurface artifacts along the alignment in the vicinity of any of the previously recorded sites.

Shovel Tests

Fifty-seven shovel tests were excavated during the survey of Phase I of the Salado Creek Greenway project. Thirty-six of the fifty-seven shovel tests (63%) were excavated to 60 cmbs. The remaining 21 shovel tests were terminated at depths ranging from 20 to 55 cmbs due to impenetrable road fill (14%), solid rock (11%), or commencement of the water table (12%; Table 4-1). The eight shovel tests terminated before 60 cmbs due to impenetrable road fill were located immediately adjacent to Holbrook Road between Eisenhower Road and Austin Highway (STs 1-5) and on the trailhead/parking lot immediately south of N. E. Loop 410 (STs 34, 37, and 38). Shovel Tests 35, 39, 40 (trailhead/parking lot), and 101 (immediately adjacent to Austin Highway) also contained road fill but were successfully excavated to 60 cmbs (Figures 4-1 and 4-2). Seven shovel tests were abandoned before reaching 60 cmbs due to the shallow water table. All were located in low areas near inundated bogs (STs 6, 7, 8, and 10) or near flowing inlets to the Salado (STs 12, 13, and 43; see Figure 4-1).

Table 4-1. Termination Depths and Presence/Absence of Artifacts for Shovel Tests

Shovel Test	Termination Level	Depth (cmts)	Reason for Termination	Presence of Artifacts	Shovel Test	Termination Level	Depth (cmts)	Reason for Termination	Presence of Artifacts
1	2	20	Road Fill	No	30	6	60		No
2	4	40	Road Fill	No	31	3	30	Large Rock	No
3	5	45	Road Fill	No	32	6	60		No
4	5	50	Road Fill	No	33	5	50	Large Rock	No
5	2	20	Road Fill	No	34	5	50	Road Fill	No
6	4	40	Water Table	No	35	6	60		No
7	3	30	Water Table	No	36	6	60		No
8	5	50	Water Table	No	37	4	32	Road Fill	No
9	6	60		No	38	4	40	Road Fill	No
10	5	50	Water Table	No	39	6	60		No
11	6	60		No	40	6	60		No
12	3	22	Water Table	No	41	6	60		No
13	5	48	Water Table	No	42	6	60		No
14	6	60		No	43	6	55	Water Table	No
15	6	60		Yes	44	6	60		No
16	6	60		No	45	6	60		No
17	6	60		No	46	6	60		No
18	6	60		No	47	6	60		No
19	6	60		No	48	5	43	Large Rock	No
20	6	60		No	49	4	35	Large Rock	No
21	6	60		No	50	6	60		No
22	6	60		No	51	6	60		No
23	6	60		No	100	6	60		No
24	6	60		No	101	6	60		No
25	6	60		No	102	6	60		No
26	3	28	Large Rock	No	103	6	60		No
27	6	60		No	104	6	60		No
28	5	50	Large Rock	No	105	6	60		No
29	6	60		No					



Figure 4-1. Southern portion of project area.

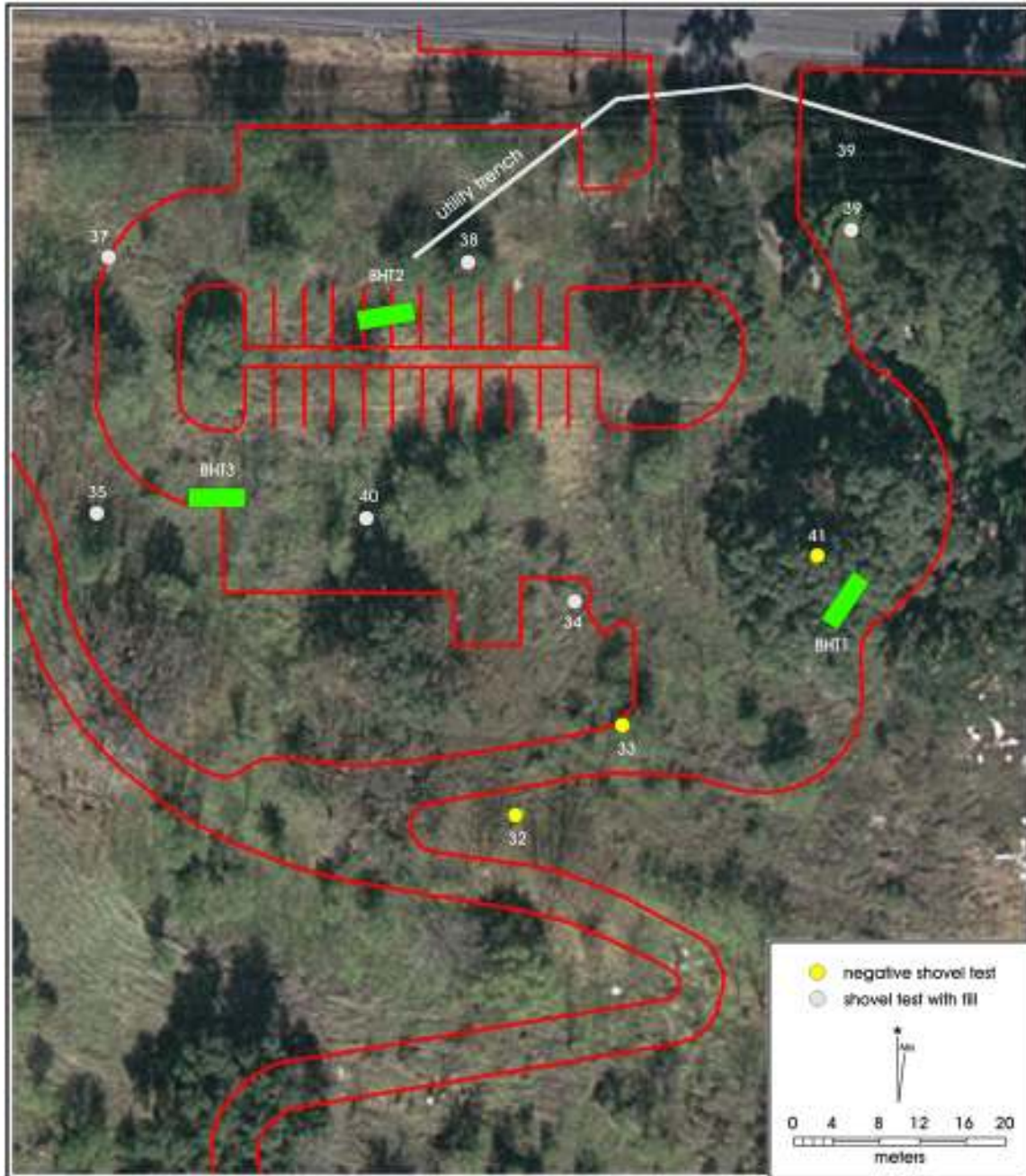


Figure 4-2. Location of the proposed trail head/ parking lot (outlined in red) of the Phase I project area.

The soils from all but 11 of the shovel tests were fairly homogenous and consisted of approximately five to ten cm of saturated, compact, medium brown, silty clay overlying wet, dark brown, hard to very hard, silty clay. The sediments contained small pebbles and large amounts of river rolled gravels throughout the 60 cm. Of these 46 tests, all but 13 (28%) appeared to contain deep sediments that are the result of

periodic flooding events. Thirteen percent were terminated due to large rocks or possible bed rock and 15% due to the high water table. Thus, the depth of the sediments for these tests could not be assessed. The 11 exceptions all were located in direct proximity to Holbrook Road, Austin Highway, or N. E. Loop 410. These shovel tests contained a fill material made up of gravels and yellowish-brown to tan, sandy clay. Because the shovel tests near N. E. Loop 410 were located over and in the immediate proximity of the Granberg site, this area was further tested with backhoe trenches to assess the depth of the fill (see the following section).

Initially five shovel tests were excavated on the trailhead/parking lot and 36 along the alignment followed by the placement of 16 additional tests, six to test a change in the proposed alignment, four to delineate cultural material associated with a positive shovel test, and six to attempt to define boundaries along the alignment of previously recorded sites. Previously recorded sites are discussed in a following section. Of the 57 shovel tests, one (2%) was positive. A bifacially retouched tool was recovered in Level 4 (30-40 cmbs) from Shovel Test 15. This tool measures 67.76 mm (maximum length) by 37.09 mm (width) by 15.56 mm (thickness). Based on the polished rounding of its edges it is evident that the tool was stream rolled and was recovered from a secondary context. Four additional shovel tests (45, 46, 50, and 51) were excavated adjacent to ST 15 (Figure 4-3). The additional tests were placed on the alignment two on each side of the positive test at distances of 25m and 50m to attempt to delineate the boundary of the cultural material concentration. None of the additional tests were positive.

Backhoe Trenching

Based on the results of the five shovel tests placed on the proposed trailhead/parking lot and on its proximity to the Granberg site, this area was further tested with backhoe trenches to assess the depth of the fill. These shovel tests contained a fill material made up of gravels and yellowish-brown to tan, sandy clay to their termination at 60 cmbs. Three backhoe trenches were excavated on and adjacent to site 41BX17/41BX271 to expose stratigraphic profiles and potential features, further define the depth of the fill and to define the horizontal and vertical distribution of cultural materials remaining on the Granberg site. Backhoe Trench 1 was excavated on the east side of the trailhead/parking lot, and Backhoe Trenches 2 and 3 were placed on the west side (see Figure 4-2).



Figure 4-3. Project area (note positive shovel test and shovel test coverage of the alignment).

Backhoe Trenches 2 and 3 revealed construction fill to 160 cmbs (Figure 4-4). Because no undisturbed sediments were observed, profiles were not drawn. Backhoe Trench 1 consisted of fill to 100 cmbs on the western end of the trench and to 50 cmbs on the eastern end. Below the fill, intact sediments consisted of dark yellowish brown (10YR3/4), firm, silty clay (Figure 4-5). Dark yellowish brown (10YR4/6), loose, sandy loam alluvium was evident at the base of the trench, approximately 140-144 cmbs (Figure 4-6). No features or artifacts were identified in the walls of Backhoe Trench 1. Two tertiary specimens of lithic debitage were observed in the backdirt associated with this trench.



Figure 4-4. *South wall profile of Backhoe Trench 3.*



Figure 4-5. North wall profile of Backhoe Trench 1.

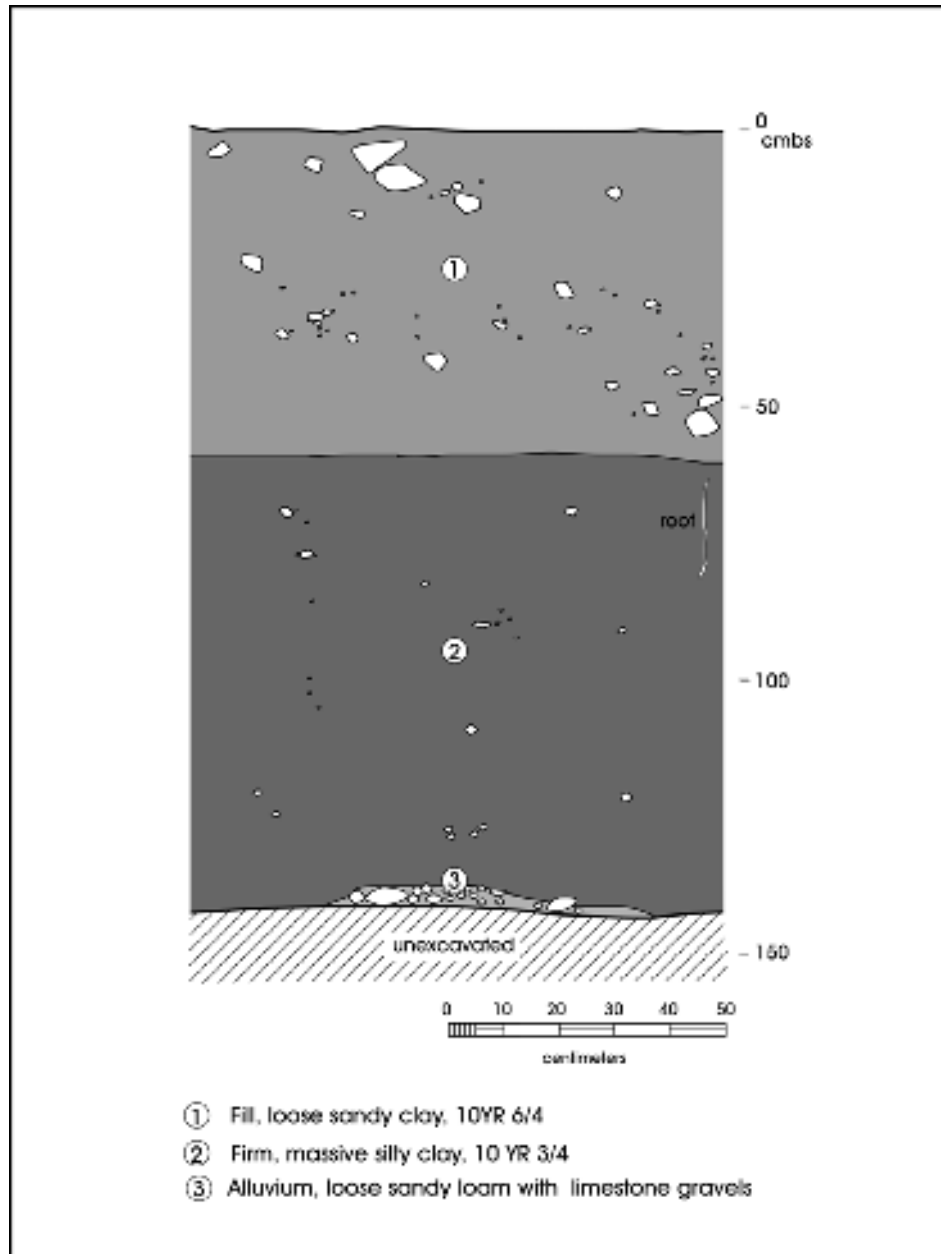


Figure 4-6. Profile section of north wall of Backhoe Trench 1.

Reconnaissance of Previously Recorded Sites

In addition to the pedestrian survey of the alignment and trailhead/parking lot, the Phase I survey originally consisted of a 100 percent pedestrian reconnaissance of approximately 122 acres of city-owned parcels including and adjacent to the proposed hike and bike alignment. The CAR field crew traversed the

project area along evenly distributed transects spaced 30 meters apart (See Figure 3-3). This approach was discontinued after the completion of approximately 40% of the pedestrian reconnaissance due to extremely low surface visibility and the existence of large areas of submerged terrain from heavy recent rains. During the reconnaissance, one surface artifact was noted along transect 24 where it crossed the alignment. The artifact was an unmodified piece of lithic debitage, recorded as an isolated find.

The survey was continued as an intensive pedestrian reconnaissance of the previously recorded sites on the project area. Twelve previously recorded sites are located on the project area. One of these, 41BX481 has UTM coordinates placing it on the alignment. Nine of the sites, 41BX473, 41BX474, 41BX475, 41BX476, 41BX480, 41BX482, 41BX478, 41BX479, and 41BX477, based on the UTM coordinates, are not located directly on the alignment but are on city-owned parcels adjacent to the trail. Of the nine, the first four (41BX473-476) are located on the opposite side of Salado Creek from the alignment and therefore, did not require additional shovel testing along the alignment to define the site boundaries. The remaining five are adjacent to the trail and are located on the same side of the Creek. Six additional shovel tests (STs 42, 43, 44, 47, 48, and 49) were excavated along the alignment in an attempt to further delineate the boundaries of these six sites (41BX480, 41BX481, 41BX482, 41BX478, 41BX479, and 41BX477; see Figure 4-3). The shovel tests were all negative.

Because the UTM coordinates for all of the sites except 41BX17 and 41BX271 were point data, not polygons, the points were located in the field and an area of approximately 100 m by 100 m was traversed by the field crew. No cultural material was observed on the surface for sites 41BX473, 41BX477, 41BX479, 41BX480, 41BX481, or 41BX482. Heavy vegetation on the project area resulted in poor surface visibility with approximately 50% visibility for 41BX473, 25% for 41BX477, 0% for 41BX479 and 41BX481, and 30% visibility for 41BX480. 41BX482 was completely obscured by a thick layer of silt, apparently the result of recent flooding events (Figure 4-7). A lithic scatter was noted in the vicinity of 41BX478. The scatter consisted of a sparse scattering of debitage with a radius of approximately two meters (Figure 4-8). Sites 41BX474, 41BX475, and 41BX476 are located within close proximity of one another across the Salado from the proposed greenway trail. A slight scattering of lithic material was noted in the area encompassed by these sites. No concentrations were seen but isolated specimens of debitage and several bifacial tools were noted. These sites are located on a steep eroded slope descending east from Ira Lee Road to Salado Creek. The area is damaged by recent flooding evident from modern trash on the surface and in the trees (Figure 4-9). Due to the erosion and flood damage it is unlikely that the cultural material is in primary context. The remaining two sites on the project area, 41BX17 and

41BX271 (the Granberg site), were thoroughly surveyed employing shovel tests and backhoe trenches (see previous section). With the exception of two pieces of lithic debitage from backhoe trench backdirt no subsurface or surface artifacts were evident from the CAR's pedestrian survey on the Granberg site.



Figure 4-7. UTM location of 41BX482 (note the silt and damage from recent flooding events).

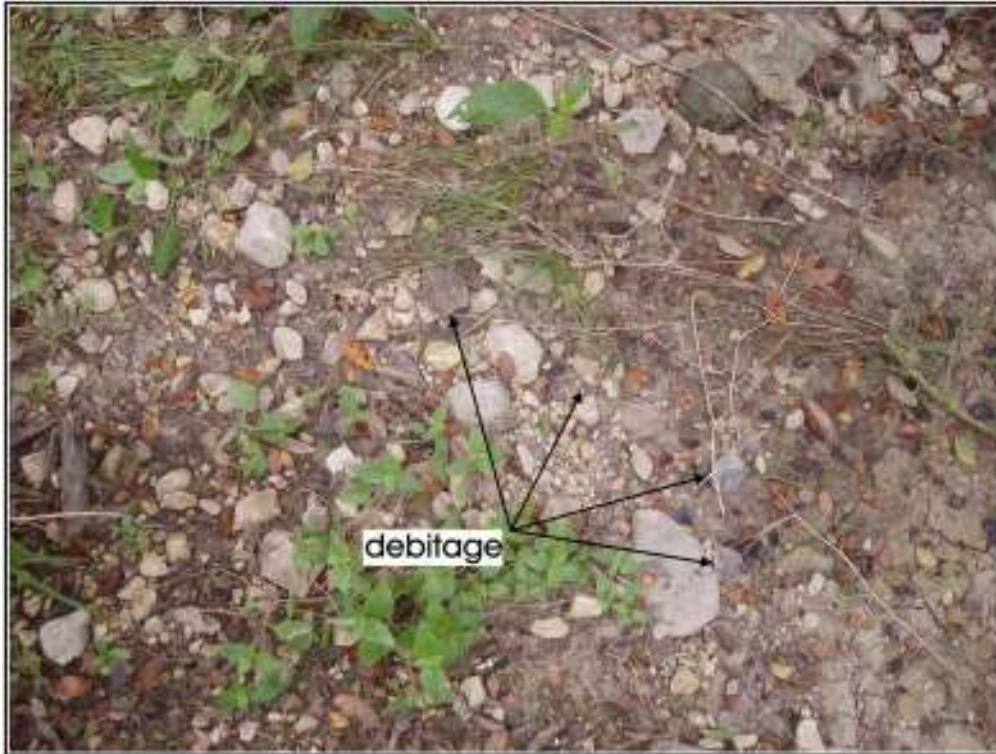


Figure 4-8. Lithic scatter located near UTM location of 41BX478.



Figure 4-9. Flood damage to UTM location of 41BX474.

Summary of the Archaeological Survey

The survey of the Salado Creek Greenway project used an intensive pedestrian survey accompanied by shovel testing and backhoe trenching to investigate the proposed alignment, trailhead/parking lot and the adjacent 122 acres of city-owned parcels. Fifty-seven shovel tests were excavated resulting in the removal of approximately 2.4 cubic meters of sediment. One artifact (.42 artifacts per cubic meter) was recovered from shovel testing, a bifacially retouched tool in secondary context, and one isolated surface find, a single specimen of debitage, was recorded. Shovel testing of the trailhead/parking lot revealed construction fill to a minimum of 60 cmbs. Because of its proximity to the Granberg site, three backhoe trenches were excavated on the proposed trailhead/parking lot to determine the depth of construction fill covering the area. The two trenches excavated on the western side of the area contained fill to the bottom of the trenches (150 cmbs). The trench excavated on the eastern side over a portion of the Granberg site, revealed fill to 50 to 100 cmbs covering intact soils. No cultural material was noted in the trench walls but two pieces of lithic debitage were seen in the backfill dirt. No prehistoric or historic features or historic artifacts were observed on the project area. Twelve previously recorded archaeological sites were revisited as a part of the Greenway survey. Cultural material was noted on five of the sites (41BX474, 41BX475, 41BX476, 41BX478, and 41BX271). No surface artifacts were seen on the remaining sites possibly due to inaccurate UTM coordinates and/or low visibility.

Chapter 5: Summary and Recommendations

Summary

The Center for Archaeological Research (CAR) of the University of Texas at San Antonio conducted an intensive pedestrian archaeological survey of the Salado Creek Greenway project area located in Bexar County, Texas for Adams Environmental, Inc. The project area is within the Salado watershed in north-central San Antonio bordered by Wetmore Avenue to the northwest and Eisenhower Road to the south. Loop 410 bisects the project area from the east to the west. The project area will be surveyed in two phases with the first phase from N.E. Loop 410 to Eisenhower Road completed in August 2007 and the second from N.E. Loop 410 to Wetmore Avenue to be completed prior to the close of 2008. The survey of Phase I consisted of a pedestrian reconnaissance of approximately 122 acres of city-owned parcels including and adjacent to the proposed hike and bike alignment. After the completion of approximately 40%, the reconnaissance was changed to areas surrounding previously recorded sites only. This adjustment was due to extremely low surface visibility and the existence of large areas of submerged terrain from heavy recent rains. The Phase I work also included a pedestrian survey with shovel testing of the alignment and trailhead/parking lot, revisits to previously recorded sites on the project area, and backhoe testing of any deep soil deposits. This report discussed the survey of this property conducted between July and August 2007.

Because the project area is immediately adjacent to the Middle Salado watershed (Potter et al. 1995), a desirable locale for prehistoric hunters and gatherers, potential exists for cultural resources. The archaeological work was conducted to determine whether buried cultural deposits exist in the immediate vicinity of the hike and bike alignment and trailhead/parking lot, to record any sites encountered, and to determine the impact of the new construction on previously recorded archaeological sites.

Fifty-seven shovel tests were excavated resulting in the removal of approximately 2.4 cubic meters of sediment. One artifact (.42 artifacts per cubic meter) was recovered from shovel tests on the southern half of the alignment and one isolated surface find was recorded. No features were observed on the project area. No new sites were located.

Twelve previously recorded sites were revisited. The Granberg site (41BX17 and 41BX271) was surveyed via a surface reconnaissance, shovel testing, and backhoe trenching. No artifacts were seen on the surface. The only subsurface artifacts documented were two pieces of debitage found in the backdirt

of Backhoe Trench 1. The trailhead/parking lot will be constructed over the western portion of what remains of the Granberg site. Backhoe trenching established that most of this area consists of construction fill. Backhoe Trenches 2 and 3 contained fill to their termination depth (150 cmbs). Backhoe Trench 1, located on the far eastern side of the proposed trailhead/parking lot was excavated over 41BX17. This trench contained intact soil beginning from 50 to 100 cmbs. No artifacts were present in the trench walls. Because the parking lot will be built up from the existing surface elevations using additional fill and will consist of an 8 inch (.20 m) deep layer of asphalt, no excavation is anticipated during construction. Signage along the trail and at the trail head will require footings that could go as deep as 24 to 36 inches (.61-.91m). Therefore, the Granberg site should not be adversely affected by the trailhead/parking lot construction. It is possible that signage footings could impact Granberg cultural materials, thus, the CAR recommends that the far eastern side of the trailhead/parking lot be avoided as locations for signage placement.

A utility trench approximately three plus meters deep was erroneously excavated by a private contractor across the northeastern portion of the parking lot to connect new construction, adjacent on a privately owned lot next to the Greenway parking lot, to the sewer main. This portion of the parking lot is over the Granberg site. Upon visual inspection of the entire length of this trench by the CAR a highly organic dark-gray to black zone at approximately six feet below surface (1.8 m) sitting on top of deeper gravelly layers was noted along much of the trench. This zone contains isolated fragments and localized concentrations of burned rock. There appears to be one segment of the trench, in the portion furthest away from the creek that may be similar to Middle Archaic deposits previously excavated at the Granberg site. This segment appears to contain sandy deposits between two layers of gravel situated below the Late Archaic but we cannot establish this without a closer look. Other than this location, all deposits sitting below the Late Archaic seem to consist of stream-deposited gravels. The City of San Antonio Historic Preservation Office has differed final decision as to the resolution of this intrusion into the Granberg site to the Texas Historical Commission. The matter of how to proceed is currently unresolved.

No cultural material was observed on the surface for sites 41BX473, 41BX477, 41BX479, 41BX480, 41BX481, and 41BX482. Heavy vegetation and thick layers of silt from recent flooding episodes resulted in poor surface visibility. All but one of these sites was located off of the alignment and will not be affected by trail construction. The exception is 41BX481 with UTM coordinates placing it on the proposed alignment. Three shovel tests were placed on the alignment, one directly on the UTM coordinate and the other two 50 meters distant in each direction. All three STs were negative for cultural material.

The possibility exists that the UTM coordinates are not accurate or that the site, recorded in 1977, consisted only of a surface scatter that no longer exists.

A sparse lithic scatter approximately 2 meters wide was noted in the vicinity of 41BX478. Sites 41BX474, 41BX475, and 41BX476 are located within close proximity of one another across the Salado from the proposed greenway trail. A slight scattering of lithic material was noted in the area encompassed by these sites. Because none of these sites are located on the alignment, they should not be affected by trail construction.

Recommendations

The intensive pedestrian survey of the Salado Creek Greenway project area was completed in accordance with State Historic Preservation laws and the mandates of the Antiquities Code of Texas. The work adhered to the requirements of the City of San Antonio Unified Development Code Chapter 35, and to the requirements of Section 106 of the NHPA. No new sites were documented during the pedestrian survey. Of the 12 previously recorded sites three are located directly on the project ROW. One, 41BX481, is located along the trail alignment and the Granberg site (41BX17 and 41BX271) is located on the trailhead/parking lot. 41BX481 was relocated with recorded UTM coordinates; however no cultural material was located. It appears that the site is no longer in existence or has incorrect coordinates. Therefore, the CAR recommends that the installation of the proposed hike and bike trail alignment proceed as proposed. Because the trailhead/parking lot will be built up from the existing surface elevations using additional fill, the Granberg site should not be adversely affected by the construction. However, it is possible that signage footings could impact Granberg cultural materials. Therefore, the CAR recommends that the construction of the proposed trailhead/parking lot proceed as planned. However, the far eastern side of the trailhead/parking lot should be avoided as locations of signage footings.

References Cited

Black, S. L.

1986 *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 to the Rio Grande: Human Adaptation 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. 17-36. Research Series No. 33. Arkansas Archeological Survey, Fayetteville.

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

1997 The Central Texas Burned Rock Midden Reconsidered. In *Hot Rock Cooking on the Greater Edwards Plateau: Four Burned Rock Midden Sites in West Central Texas*, Volume I, by S. L. Black, L. W. Ellis, D. G. Creel, and G. T. Goode, pp. 269-301. Studies in Archeology 22. Texas Archeological Research Laboratory, The University of Texas at Austin. Archeology Studies Program, Report 2. Texas Department of Transportation, Environmental Affairs Division, Austin, Texas.

Black, S. L. and A. J. McGraw

1985 *The Panther Springs Creek Site: Cultural Change and Continuity in the Upper Salado Creek Drainage, South-Central Texas*. Archaeological Survey Report, No. 100. Center for Archaeological Research, The University of Texas at San Antonio.

Collins, M.B.

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

Córdova, K. J., B. K. Moses, and R. P. Mauldin

2005 Records and Collections Assessment of Previous Investigations at Sites 41BX17 and 41BX271 (Granberg I and II) within the ROW of Loop 410 East at Salado Creek, San Antonio, Bexar County, Texas. Report on file at the Center for Archaeological Research, The University of Texas at San Antonio, Texas.

Diamond, D. D., D. H. Riskind, and S. L. Orzell

1987 A Framework for Plant Community Classification and Conservation in Texas. *The Texas Journal of Science* 39(3):203-221.

Foster, W. C.

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

Galín, D

1979 *Gastropod Analysis 41BX271 (Granberg II Site) Summer 1979*. Unpublished Manuscript on file, Center for Archaeological Research, The University of Texas at San Antonio.

Hester, T.R.

1995 The Prehistory of South Texas. *Bulletin of the Texas Archeological Society* 66:427-459.

Hester, T.R., and H. Kohnitz

1975 Chronology and Placement of "Guadalupe" Tools. *La Tierra* 2(2):22-25.

Johnson, L. and G. Goode

1994 A New Try at Dating and Characterizing Holocene Climates, as well as Archaeological Periods, on the Eastern Edwards Plateau. *Bulletin of the Texas Archaeological Society* 65:1-15.

Jones, C.J., J. W. Kunert, and P. M. Foster

1979 *Analysis of Debitage Material Recovered from 1979 Summer Field School Excavation of 41BX271 (Granberg II)*. Unpublished Manuscript on file, Center for Archaeological Research, The University of Texas at San Antonio.

Khonitz, M.

1990 Site Survey Record on file at the University of Texas at San Antonio Center for Archaeological Research.

McGraw, A. J. and F. Valdez

1977 *A Preliminary Assessment of Archaeological Resources at Tobins Oakwell Farm, San Antonio, Texas*. Archaeological Survey Report, No. 43. Center for Archaeological Research, The University of Texas at San Antonio.

Markey, B.

1979 *Granberg II: 41BX271*. Unpublished Manuscript on file, Center for Archaeological Research, The University of Texas at San Antonio.

Nickels, D. L.

2000 *The Beisenbach Site (41WN88): A Case Study in Diet Breadth*. Unpublished Master's Thesis. College of Liberal and Fine Arts. The University of Texas at San Antonio.

Potter, D. R. and S. L. Black, and K. Jolly

1995 Archaeology along the Wurzbach Parkway, Module 1: Introduction, Conceptual Framework and Contexts of Archaeological Investigations in Bexar County, South-Central Texas. *Studies in Archeology* 17, Texas Archeological Research Laboratory, The University of Texas at Austin.

Prewitt, E.R.

1981 Culture Chronology in Central Texas. *Bulletin of the Texas Archeological Society* 52:65-89.

Schuetz, M.K.

1966 *The Granberg Site: An Archaic Indian Habitation in Bexar County, Texas*. Studies No. 1. Witte Memorial Museum, San Antonio, Texas.

South Central Texas Regional Water Planning Group

2006A Vegetational Areas, http://www.watershedexperience.com/ish_vege_area.html, accessed November 2006.

2006B Climate, http://www.watershedexperience.com/ish_climate.html, accessed November 2006.

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

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

Taylor, R. (editor)

1996 *The New Handbook of Texas in Six Volumes*. The Texas State Historical Association, Austin.

Texas Historical Commission (THC)

2007 Texas Archeological Sites Atlas, <http://www.nueces.thc.state.tx.us/>, accessed May 2007.

Thompson, J. L.

2006 *National Register of Historic Places/State Archeological Landmark Eligibility Testing of the Granberg Site (41BX17)*. Manuscript on file. The Center for Archaeological Research, University of Texas San Antonio, Texas.