

Archeological Resources Study Report

Proposed Improvements at Barbara Drive, Project SA-3
Bexar County, Texas

Prepared for the Bexar County Flood Control Capital Improvement Program



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Acronyms

APE	Area of Potential Effects
USGS	United States Geological Survey

Abstract

Prewitt and Associates, Inc., conducted an archeological file and historic map search for Project SA-3, Proposed Improvements at Barbara Drive, to see if any known or previously recorded archeological sites are present within the Area of Potential Effects (APE). The file and map searches did not find any previously recorded archeological sites or structures 50 years old or older within the APE. The nearest known archeological site is 41BX1799, a prehistoric lithic scatter and lithic procurement site that is ca. 300 m southeast of the project area. Although an on-the-ground archeological survey of the project area was not conducted, it is highly unlikely that any intact and significant archeological sites are present given the level of development and urbanization across the project area. Therefore it is recommended that no additional archeological investigations are warranted.

Introduction

Project Description

The proposed project location is on McCullough Avenue south of Barbara Drive in San Antonio, Texas. The purpose of the project is to replace the concrete-lined open channel located between McCullough Avenue and the confluence of box culverts approximately 800 ft east of McCullough Avenue. The project will also reconstruct McCullough Avenue from Barbara Drive to Sharon Street to incorporate an underground storm sewer system with curb inlets and to elevate Barbara Drive and McCullough Avenue.

Description of the Study Area

The project area is in Bexar County, which straddles the Balcones Fault Zone, separating the Edwards Plateau from the Blackland Prairie of the Gulf Coastal Plain to the southeast (Arbingast et al. 1973:6; Bureau of Economic Geology 1983). The Edwards Plateau margin has been heavily dissected by stream downcutting and headward erosion, resulting in a rugged landscape of limestone hills and canyons. The Blackland Prairie is typically rolling tall grasslands underlain by soft limestones, marls, and chalks.

The climate of the Blackland Prairie region can be classified as modified humid subtropical with Gulf-influenced hot summers and continental-influenced mild winters; the Edwards Plateau region is subtropical steppe with low summer humidity (Natural Fibers Information Center 1987:10–12). Summer temperatures can exceed 100°F, and freezing temperatures can occur during the winter months, although such extremes are more frequent in the Edwards Plateau region. The mean annual precipitation for Bexar County is 29.1 inches (739 mm). Rain falls throughout the year, with slight peaks in the late spring and early fall (Natural Fibers Information Center 1987:49).

Like the landscape and climate, the biota of Bexar County differs east to west, although there is geographical overlap of some species. The flora and fauna of the Edwards Plateau are defined as Balconian, while those of the Blackland Prairie are characterized as Texan (Blair 1950).

Urban residential use with landscaped ornamental vegetation characterizes the study area. An unnamed tributary of Olmos Creek crosses Barbara Drive and the east end of the study area before joining Olmos Creek ca. 1,200 m to the south.

Environmental Setting

Geology

The study area is situated on the upper Cretaceous Pecan Gap Formation (Bureau of Economic Geology 1983). The chinks and marls of the Pecan Gap Formation are incised by Olmos Creek and its network of tributaries. The tributary valley that traverses the study area probably contains some Holocene alluvium but not enough to be mapped as a discrete unit on the 1:250,000-scale *Geologic Atlas of Texas–San Antonio Sheet*.

Soils

Soils of the Houston Black and Sumter series are mapped on the uplands of the study area, while Trinity and Frio series soils are mapped along Olmos Creek and its tributaries (Taylor et al. 1991).

Cultural History of Central Texas and Bexar County

The project area straddles the central Texas and south Texas archeological areas. A cultural chronology of these areas has been developed by Story (1985) and Johnson and Goode (1994) with refinements by Black (1989a, b), Collins (1995, 2004), and Hester (2004). Large-scale archeological projects by McGraw and Hindes (1987) and Thoms and Mandel (2007) have documented a detailed record of occupation for the Medina River and Elm Creek areas in the Late Paleoindian through Historic periods. Closer and more specific to the study area are the investigations at the Olmos Dam site (Lukowski 1988), which documented the remnants of a Late Archaic cemetery.

Paleoindian Period

The Paleoindian period (ca. 11,500–8,800 years B.P.) is divided into early and late subperiods in central and portions of south Texas (Collins 1995, 2004). Each subperiod is characterized by distinct styles of lanceolate projectile points and other stone tool technologies. Early Paleoindian sites are characterized by Clovis or Folsom projectile points, with each associated with a subsistence pattern related to hunting extinct forms of large mammals, primarily mammoth for the earlier Clovis hunters and bison for later Folsom hunters. Each group also used a wide variety of other animal and plant resources. Late Paleoindian sites are also associated with a series of distinctive projectile point forms: Plainview, Golondrina, Scottsbluff, and Angostura. Evidence from central and south Texas indicates that these later Paleoindian groups were using a more generalized hunting and gathering subsistence pattern similar to that of later Archaic groups in the region. Early and late Paleoindian site types are similar and include open campsites, special-purpose sites for procuring specific resources, and kill sites for mammoth and bison.

Archaic Period

The Archaic period is subdivided into Early (ca. 8800–6000 B.P.), Middle (ca. 6000–4000 B.P.), and Late subperiods (ca. 4000–1300 B.P.) (Collins 1995, 2004; Hester 2004). The Archaic period represents a continuation of the generalized hunting and gathering lifeway that characterized the Late Paleoindian subperiod. Each subperiod is characterized by distinctive changes in lithic technology and projectile dart point styles and groundstone technology, some of which are regionally specific for central and south Texas. Changes in technology and broad changes in subsistence and site types are correlated with regional changes in climate and resource distribution through time. Some indication of increasing social complexity during the Middle and Late Archaic is evident by the appearance of regional cemeteries and distinctive burial practices and the presence of various artifacts manufactured of nonlocal raw materials such as marine shell ornaments, bannerstones, and boat stones. Such artifacts imply participation in larger regional exchange networks, some of which have been traced to the greater

southeastern United States. Presence of established mortuary areas during the period is indicative of specific group territories and the existence of maintained, and in some cases defended, social boundaries among groups. A wide variety of site types has been recorded for the Archaic period. Although site types are rather comparable through the period, frequencies of different types of sites fluctuate over time and may be related in large part to continuing changes in environmental conditions and available resources. Site types include rockshelters, open campsites, special-purpose resource extraction locations (burned rock middens, ring middens, lithic procurement areas), and mortuary sites or cemeteries.

Late Prehistoric Period

The Late Prehistoric period (ca. 1300/1200–350 B.P.) in central and south Texas was marked by increased apparent social boundary differentiation and a continuation of the basic hunting and gathering subsistence strategy (Collins 1995, 2004; Hester 2004). Three significant traits—pottery, bow and arrow, and agriculture—also make their appearance during the Late Prehistoric. Collins (2004) divides the period into Austin and Toyah intervals. These intervals have become hallmarks of the Late Prehistoric for central and south Texas. The Austin interval is associated with a technological shift from Late Archaic style dart points to smaller arrow points associated with initial use of the bow and arrow technology; otherwise, there is actually little change in terms of subsistence patterns from the preceding Late Archaic period. The Toyah interval is distinguished by one primary arrow point style, the Perdiz point. Other technological aspects of Toyah assemblages include end scrapers, prismatic chert blades, and large thin bifacial knives—all of which are interpreted as signatures of a bison, deer, or antelope hunting tool kit. It is significant that the traits of Toyah assemblages appear at about the same time across central and south Texas and beyond into East Texas. This distribution has led some researchers to question whether it represents the spread of an adopted technological system by multiple ethnic groups or the widespread presence of a single ethnic group (Black 1989a, b; Johnson 1994; Ricklis 1994). Late Prehistoric cemeteries or mortuary areas indicate a continuation of the territorial boundary aspect developed during the Middle and Late Archaic, but perhaps for different social objectives. Site types reflect a continuation of those identified during previous periods: open occupation or camp sites, burned rock midden sites and hearth features, shell middens, lithic procurement sites and rockshelters, caves, and sinkholes. Isolated burials, cemeteries, rock art sites, and artifact caches reflect special-purpose sites. Some sites have also had small ephemeral structures associated with them.

Historic Period

The Historic period (beginning in ca. 350 B.P.) incorporates the initial encounters of Europeans and Native Americans in the region and the subsequent demise of native populations following initial expansion of European explorers and establishment of European and later Anglo settlements. Collins (2004) has assigned early, middle, and late subperiods. Archeological research and existing historic accounts by Spanish,

French, and Anglo writers has provided the basis for virtually all of our knowledge of this period. Written records provide a much more detailed glimpse into the lifeways and social aspects of native populations than exist for previous periods. The Historic period subsumes initial Spanish and French explorations and military and religious expeditions into central and south Texas, as well as the subsequent establishment and demise of the Spanish mission system (1700s–ca. 1800 A.D.). During this period, Native American populations were subjected to a dramatic influx of new ideas, new technologies, and diseases. Subsistence patterns continued to emphasize hunting and gathering, primarily of bison, deer, and antelope, with movement of native groups directed in response to game routes. Site types are similar to those documented for the Late Prehistoric and Protohistoric periods, but with the occasional use of European artifacts and materials as part of the technological system. Following the demise of the last mobile groups in the region, mainly the Comanche in central Texas, occupation and use of the area became dominated by Anglo-European and Hispanic farming and ranching and the development of urbanized areas.

Methods

The Texas Historical Commission's Archeological Sites Atlas was consulted to see if any previously recorded or known archeological sites are within a 1-km radius of the project area. In addition, historic maps, including older USGS maps from the Texas Department of Transportation's Texas Historic Overlay, were consulted to search for any historic structures or buildings 50 years old or older in the project area.

Results

The results of the Texas Archeological Sites Atlas search determined that there are no previously recorded or known archeological sites within the project area. However, two archeological sites are within 1 km of the project area. The first, 41BX1799, is approximately 300 m southeast of the project area. This large prehistoric lithic scatter and lithic procurement site on the Olmos Basin Golf Course was recorded in 2008 by SWCA during a survey for the San Antonio Golf Association. Artifacts observed included two biface preforms, cores, tested cobbles, and flakes from various stages of lithic reduction. All of the cultural materials were observed on the surface in disturbed contexts. Due to the level of disturbance, it was determined that the site had a low research value, and no additional investigations were recommended.

The second site, 41BX1800, is approximately 900 m south of the project area on the Olmos Basin Golf Course. The site was recorded during the same survey that recorded 41BX1799. Based on the presence of a single Darl-like dart point, it is a Late Archaic site of unknown type. No cultural features were observed, but there was a small scatter of burned rocks noted in a shallow trench. Other cultural materials observed include cores and flakes. Based on the level of disturbance noted by the SWCA archeologist, no further investigations were recommended for this site.

The historic maps of the Texas Historic Overlay revealed no structures or buildings 50 years old or older within the project area.

Archeological Resources Assessment

Summary

A file and historic map search revealed no known or previously recorded archeological sites or structures 50 years old and older in the project area. There are two known archeological sites within 1 km of the project area to the south and southeast. Both sites are highly disturbed and not eligible for listing in the National Register of Historic Places or designation as State Archeological Landmarks.

Recommendations

The Barbara Drive improvements project will not damage or impact any previously recorded archeological sites or known historic structures 50 years old or older in the APE. Although an on-the-ground archeological survey was not conducted, it is highly unlikely that such investigations would encounter an intact significant archeological resource given the high level of disturbance due to development and urbanization with the APE. Therefore, it is recommended that no additional archeological investigations be conducted.

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Appendix A – Project Maps

IMAGE RESTRICTED

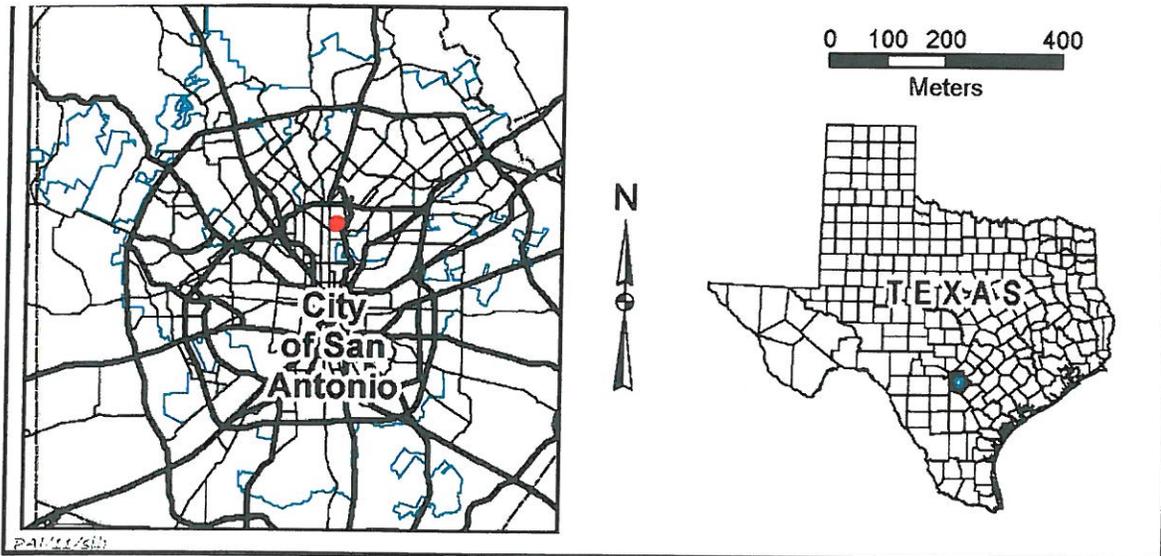


Figure 1. The project area in San Antonio, Texas, and two recorded sites within 1 km.

