

**ARCHEOLOGICAL SURVEY OF PART OF CLASSEN-STEUBING PARK  
AND CONSERVATION EASEMENT, SAN ANTONIO,  
BEXAR COUNTY, TEXAS**

by

Eloise Frances Gadus

Principal Investigator: Ross C. Fields

LETTER REPORT NO. 925

submitted to

City of San Antonio, Texas  
Transportation and Capital Improvements

by

Prewitt and Associates, Inc.  
Cultural Resources Services  
Austin, Texas

PAI No. 218005

July 2018

**FINAL REPORT**

TEXAS ANTIQUITIES PERMIT NO. 8404

For public distribution; site locations are not shown



## TABLE OF CONTENTS

ABSTRACT .....	v
INTRODUCTION .....	1
ENVIRONMENTAL SETTING.....	1
RESULTS OF FILE SEARCH.....	4
METHODS OF FIELD INVESTIGATION .....	6
RESULTS OF THE SURVEY.....	6
RECOMMENDATIONS .....	17
REFERENCES CITED.....	18

## LIST OF FIGURES

1.	Project location map.....	2
2.	Map showing topography and site locations within and surrounding the Classen-Steubing Park survey area .....	3
3.	View southwest across the dry channel of Mud Creek to the bedrock escarpment and the uplands on the west side of Classen-Steubing Park .....	4
4.	Disturbances in the project area .....	7
5.	Map of 41BX2233 .....	9
6.	Photographs of 41BX2233 .....	10
7.	Map of 41BX2234 .....	11
8.	Photograph facing northwest across 41BX2234 showing rocky slope along the eastern edge of the site .....	12
9.	Map of site 41BX2235 .....	13
10.	Photograph facing north across 41BX449 with bedrock exposed on the surface and Soil Conservation Service dam in the background .....	14
11.	Photographs of 41BX2096 and 41BX2102 .....	16

## ABSTRACT

In April 2018, personnel from Prewitt and Associates, Inc., conducted an intensive archeological survey of 120 acres of land associated with the proposed Classen-Steubing Park and conservation easement in north-central San Antonio, Texas, under Texas Antiquities Permit No. 8404. The park location is north of Loop 1604 and just west of U.S. Highway 281. The full park development will cover about 204 acres. The western 84 acres of this were included in lands surveyed in 2017 for the Classen-Steubing Master Development Project, leaving 120 acres to be covered by this survey.

The field investigations identified three prehistoric Native American archeological sites (41BX2233, 41BX2234, and 41BX2235) and revisited three previously recorded sites (41BX449, 41BX2096, and 41BX2102). All are surface scatters of lithic artifacts of unknown age, likely resulting from the procurement of lithic resources cropping out at the surface. The field investigations indicated the these sites have been impacted by multiple disturbances that include erosion, dam and road construction, and activities associated with a nearby quarry. None has the capacity to contain important archeological information, and all six are considered ineligible for listing in the National Register of Historic Places under Criterion D and designation as State Antiquities Landmarks. Prewitt and Associates, Inc., recommends that these sites do not warrant additional archeological investigations.

The survey did not recover artifacts from the sites identified or revisited. Notes on the artifacts observed on the surface and found in shovel tests were recorded in the field. As such, this project does not require artifact curation. Project records and photographs currently housed at the offices of Prewitt and Associates, Inc., will be transferred to the Texas Archeological Research Laboratory at The University of Texas, Austin.



## INTRODUCTION

In April 2018, personnel from Prewitt and Associates, Inc., conducted an intensive archeological survey of 120 acres of land associated with the proposed Classen-Steubing Park and conservation easement in north-central San Antonio, Texas, under Texas Antiquities Permit No. 8404. The park location is north of Loop 1604 and just west of U.S. Highway 281 (Figure 1). The survey area within the park is east of soon-to-be-completed Hardy Oaks Boulevard, which will cross the park from north to south, and it is west of a large operational quarry and gravel pit. Mud Creek, modified by a Soil Conservation Service impoundment dam built around 1973, flows southward through the middle of the survey area, and the dam and spillway are in the south end of the survey area (Figure 2). The dam and spillway, along with road construction at the north end of the area and activities associated with the quarry on the east, are the most substantial man-made disturbances within the survey area. Despite these disturbances, three new sites (41BX2233, 41BX2234, and 41BX2235) were recorded by this survey, and three previously recorded sites (41BX449, 41BX2096, and 41BX2102) were revisited to determine their present condition. All of these sites are surface scatters of lithic artifacts of unknown age situated in the uplands or on the upland edge surrounding the Mud Creek floodplain.

The full park development will cover about 204 acres. The western 84 acres of this were included in lands surveyed in 2017 for the Classen-Steubing Master Development Project, leaving 120 acres to be covered by this survey. All of the survey work done within this 120 acres complies with the requirements of the Antiquities Code of Texas (Texas Natural Resource Code of 1977, Title 9, Chapter 191, VTCS 6145-9) and the City of San Antonio's Historic Preservation and Design Section of the Unified Development Code (Article 6 35-360-634).

## ENVIRONMENTAL SETTING

The project area includes upland terrain flanking Mud Creek and part of the floodplain of that creek, which has been extensively altered by the construction of a dam. Mud Creek is a tributary of Salado Creek, and the project area is about 10 km north-northwest of the confluence of those streams. It is on the edge of the Balcones Escarpment in north-central Bexar County along the boundary between the Blackland Prairie to the southeast and the Edwards Plateau to the northwest (Arbingast et al. 1973:6; Griffith et al. 2004; McMahan et al. 1984:Figure 1). This portion of the Blackland Prairie is characterized by rolling to nearly level tall-grass plains underlain by soft interbedded marls, chinks, limestones, and shales. The scarp along the edge of the Edwards Plateau is a rugged dissected landscape of limestone hills and canyons created by extensive stream downcutting and headward erosion. On the west side of the project area, Mud Creek has created a steep bedrock escarpment along its course (Figure 3). According to the Geologic Atlas of Texas (Bureau of Economic Geology 1983), the area is mapped as Edwards Limestone undivided; no Holocene alluvium is mapped along this segment of Mud Creek. Over most of the area, soils are mapped as the Tarrant association, rolling to hilly, with Crawford and Bexar stony soils in the uplands surrounding Mud Creek (Taylor et al. 1991). Both

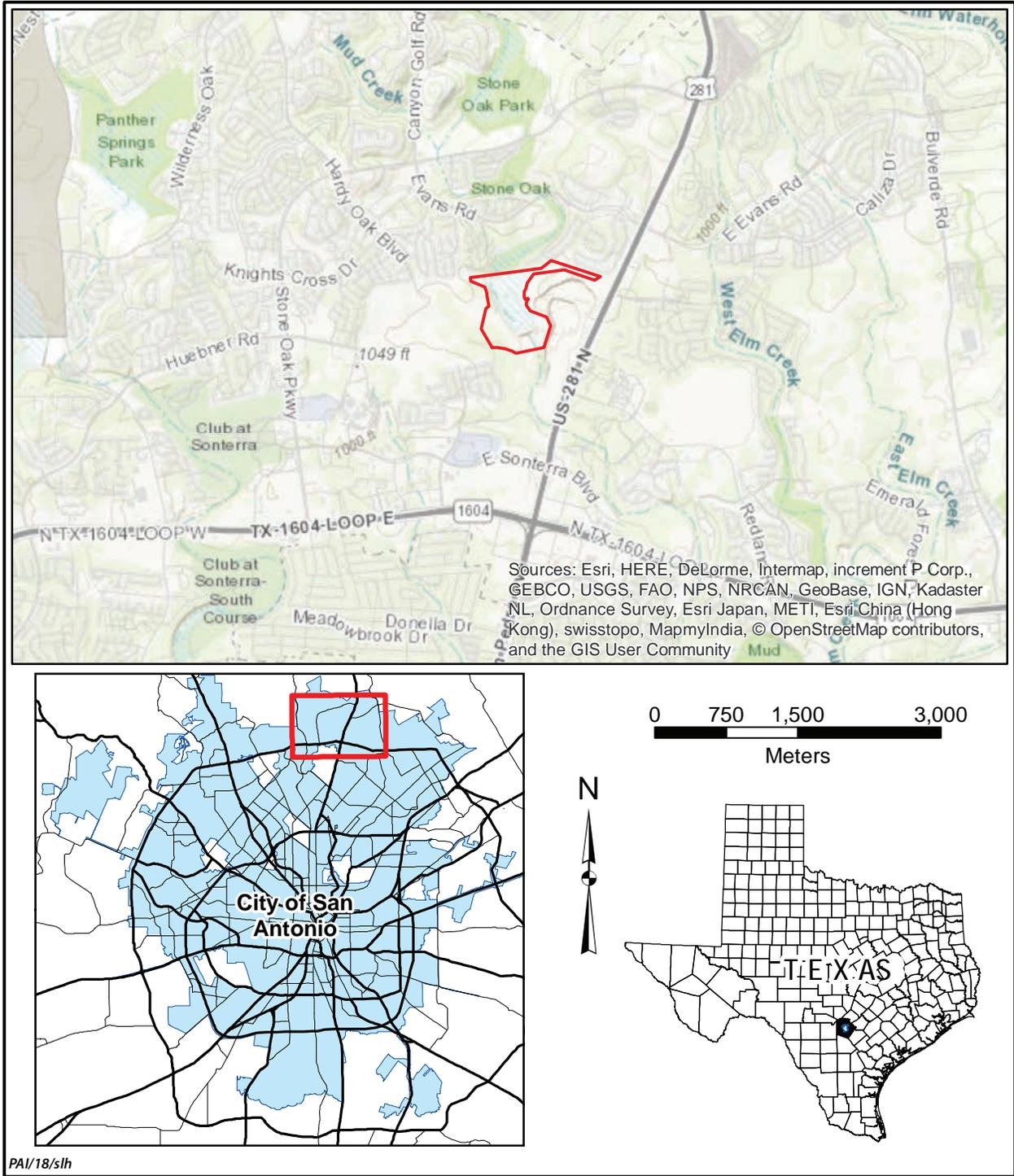
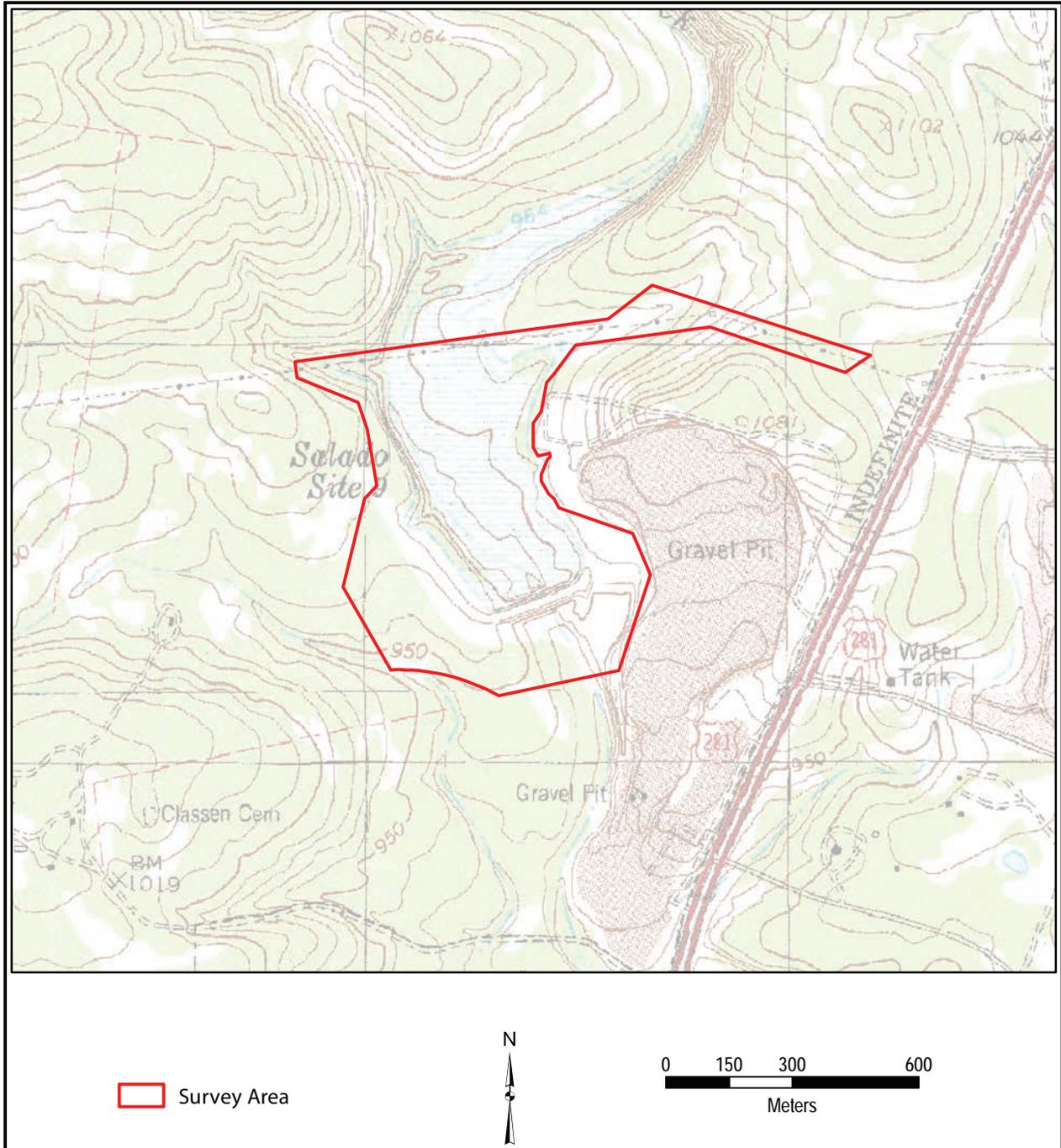


Figure 1. Project location map.



**Figure 2.** Map showing topography and site locations within and surrounding the Classen-Steubing Park survey area (section of USGS 7.5-minute Bulverde and Longhorn quadrangles). Site locations are not shown in report copies for public distribution.

are shallow, stony, clayey soils developed in uplands underlain by limestone. Krum complex soils occur at the base of the upland slopes and in the narrow floodplain of the creek. This complex consists of patches of Tarrant association soils as well as Trinity and Frio soils that consist of clay loam to gravelly clay. Vegetation in the uplands consists of live oaks and junipers with an open understory of shrubs, cacti, and sparse to medium grasses. The Mud Creek floodplain supports scattered oaks and shrubs with dense grasses and forbs.



**Figure 3.** View southwest across the dry channel of Mud Creek to the bedrock escarpment and the uplands on the west side of Classen-Steubing Park.

### **RESULTS OF FILE SEARCH**

Review of the Texas Historical Commission's Archeological Sites Atlas in April 2018 revealed 4 previous archeological investigations and 13 documented archeological sites within 1 km of the project area. Based on these data, the current project area has a high potential for Native American sites, but any sites present are likely to be restricted to the surface or shallowly buried. One investigation consisted of survey of the Las Lomas Elementary School property just west of the project area, done by the Center for Archaeological Research of the University of Texas at San Antonio (CAR-UTSA) in 2010 (Munoz 2010). This survey resulted in documentation of 41BX1867 and 41BX1868 (described below). The other three previous investigations were along U.S. Highway 281 just east of the project area. The Atlas has limited information on them, but one apparently was a recent (2014) survey of the full highway right of way done by the Texas Department of Transportation

(TxDOT). The other two were done in 1977 (CAR-UTSA) and 1987. Although not indicated as surveyed areas on the Atlas, three other recent investigations were in the immediate vicinity of the project area. They were done in 2015 and 2017 by SWCA Environmental Consultants. The 2015 survey was for the Vista Ridge Pipeline project from Bexar County to Burleson County (Ward 2017a:11); sites 41BX2095 and 41BX2102 were first recorded then. One of the 2017 projects consisted of survey of 274 acres for the Classen-Steuben Master Development Project, a proposed mixed-use development (Ward 2017a); this survey overlapped the west side of the current project area and covered about 84 acres of the proposed park; it recorded or revisited 4 sites (41BX2096, 41BX2102, 41BX2159, and 41BX2160). The other 2017 investigation was a survey for a new sewer alignment associated with the Classen-Steuben Master Development Project (Ward 2017b). It consisted of linear survey of 3.7 miles; no new sites were found.

The 13 known sites within 1 km of the project area are 41BX90–41BX92, 41BX449, 41BX751, 41BX755, 41BX777, 41BX1867, 41BX1868, 41BX2096, 41BX2102, 41BX2159, and 41BX2160. Sites 41BX90–41BX92 are east of the project area, on the east side of U.S. Highway 281. They were recorded in 1977, apparently by CAR-UTSA for a proposed park development; they consisted of surface scatters of lithic artifacts (flakes, cores, and tools). Site 41BX91 was revisited in 2012, but no evidence of the site was noted. Site 41BX449 is at the southeast corner of the current project area. It was recorded in 1974 by CAR-UTSA and apparently was a scatter of flakes and cores. Sites 41BX751 and 41BX755, 0.4 km north and 0.8 km northwest of the project area, were recorded in 1987 by avocational archeologists; they consisted of surface scatters of flakes, bifaces, and a dart point fragment. Site 41BX777, 0.7 km south of the project area on the west side of U.S. Highway 281, was recorded in 1987 by personnel with the State Department of Highways and Public Transportation; it consisted of a light scatter of lithic debris and occasional burned rocks. Sites 41BX1867 and 41BX1868, on the Los Lomas Elementary School property 0.8–1.0 km west of the project area, are small surface scatters of lithic debitage, bifaces, cores, and a dart point. Sites 41BX2096 and 41BX2102 are just west of the current project area in the western part of the proposed park area. They were recorded in 2015 and 2017 by SWCA Environmental Consultants as surface scatters of mostly lithic debitage, bifaces, and cores. Site 41BX2159, 0.8 km southwest of the project area, is a historic-age farmstead, with various buildings dating from the early part of the twentieth century and later. Site 41BX2160, 0.5 km west of the project area, is a surface scatter of flakes, cores, and bifaces.

In addition to review of the Archeological Sites Atlas, the potential for historic archeological sites was assessed using maps obtained from the Texas Department of Transportation's Texas Historic Overlay and a series of aerial photographs accessed through the Nationwide Environmental Title Research (NETR Online) web viewer. None of the maps reviewed (1871 and 1887 maps of Bexar County, 1911 USDA soils map, 1938 U.S. Army Corps of Engineers map, 1958 USGS map, and 1959 county highway map) and aerials inspected (1955, 1963, 1966, and 1973) depict improvements within the project area. Hence, it is considered to have a low probability for containing historic archeological sites.

## METHODS OF FIELD INVESTIGATION

The archeological survey consisted of 100 percent pedestrian coverage of the 120-acre project area by a team of two archeologists. As per the Texas Historical Commission's (THC) minimum survey standards, the team walked the project area on transects spaced 30 m apart examining surface exposures for evidence of prehistoric and historic artifacts and features. A total of 48 shovel tests were excavated where the ground surface was obscured by vegetation and in settings with the potential for buried archeological deposits. The number of shovel tests excavated exceeds the THC's minimum standard of 1 test per 3 acres for project areas of this size. Shovel tests also were used to determine deposit depths at all newly identified archeological sites, unless they clearly had no potential for subsurface deposits. Shovel tests were 30 cm in diameter and, due to the extremely rocky and clayey nature of the sediments, were shallow at 5 cm deep on average. Sediments removed from the shovel tests were carefully sorted with a trowel as they were too difficult to screen efficiently. A shovel test record form was used to record brief sediment descriptions and notes about artifact recovery for each test. Shovel test locations were recorded with a handheld GPS unit.

All information gleaned from the newly discovered sites was recorded on a temporary site form so that information could later be entered into the TexSite database. In addition, photographs were taken of survey conditions across the project area, the new sites discovered, and disturbances to sites revisited. A photograph log and a daily journal of project activities, discoveries, and observations were also kept by the project archeologist.

## RESULTS OF THE SURVEY

The archeological survey identified three previously unknown sites (41BX2233, 41BX2234, and 41BX2235) and revisited three previously record sites (41BX449, 41BX2096, and 41BX2102). Sites 41BX2096 and 41BX2102 are in the park boundaries but outside the current survey area. All of these sites are surface scatters of lithic artifacts and are interpreted as expedient prehistoric lithic resource procurement sites. Temporally diagnostic artifacts were not recovered from any of them.

All of sites identified and revisited by this survey, except 41BX449, are in the uplands west of Mud Creek. Site 41BX449 is on the east side of the creek on an upland remnant impacted by the dam spillway. Surface visibility within much of the uplands was 50 to 80 percent or better, even within some of the grass-covered areas. Sites were found by observing artifacts on the surface along the survey transects, and shovel tests were employed to help determine site extent. Landforms and surface exposures provided the most information on site extent and condition, however. Shovel testing mainly confirmed that the sites are on the surface.

Much of the project area has been extensively disturbed. For instance, the south half of the project area, including the western upland edge, was disturbed by construction of the Soil Conservation Service dam and spillway. A dramatic meters-deep cut into the bedrock forms the east wall of the dam spillway and water impoundment basin. The floor of the spillway and Mud Creek floodplain adjacent

to the dam consists of crushed limestone on top of bedrock (Figure 4a). Two-track exposures and shovel tests in the Mud Creek floodplain north of dam show rocky dark brown silty clay loam that has been reworked by stream migration. The potential for intact archeological deposits here is zero. Dam construction also affected the western half of the project area, as an arm of the dam and an associated gravel road extend northwest along and on top of the upland edge. The eastern valley wall has been affected by bulldozing to form a protective berm around an active quarry immediately east of the project area. Finally, road and utility construction have significantly impacted the full northern edge of the project area (Figure 4b).



a



b

**Figure 4.** Disturbances in the project area. (a) Southern view along the dam spillway cut deep into bedrock; (b) easterly view of road construction with overhead utilities along the northern edge of the project area.

## Newly Recorded Sites

### *Site 41BX2233*

Site 41BX2233 is situated at 970–980 ft above mean level on a broad flat sideslope of an interfluvium just west of the Mud Creek channel escarpment. Its horizontal dimensions are 150 m north-south by 90 m east-west (Figure 5). Vegetation consists of an open live oak canopy with an understory of sparse to medium grasses. Initially, a surface scatter of artifacts was encountered at the north end. The scatter included tested chert cobbles and primary decortification flakes (Figure 6a). Additional surface scatters or single lithic flakes were noted across the site, and a total of nine shovel tests were excavated, with most of the positive tests at the south end (Figure 6b). Shovel tests were shallow at 3–5 cm deep, as a dark brown stony clay loam was encountered. Four of shovel tests produced lithic debitage from the upper 5 cm. Shovel Tests AG09, AG14, and EG12 each produced single flakes, and Shovel Test EG05 yielded three flakes. The limited recovery is consistent with the surface evidence of a diffuse artifact scatter.

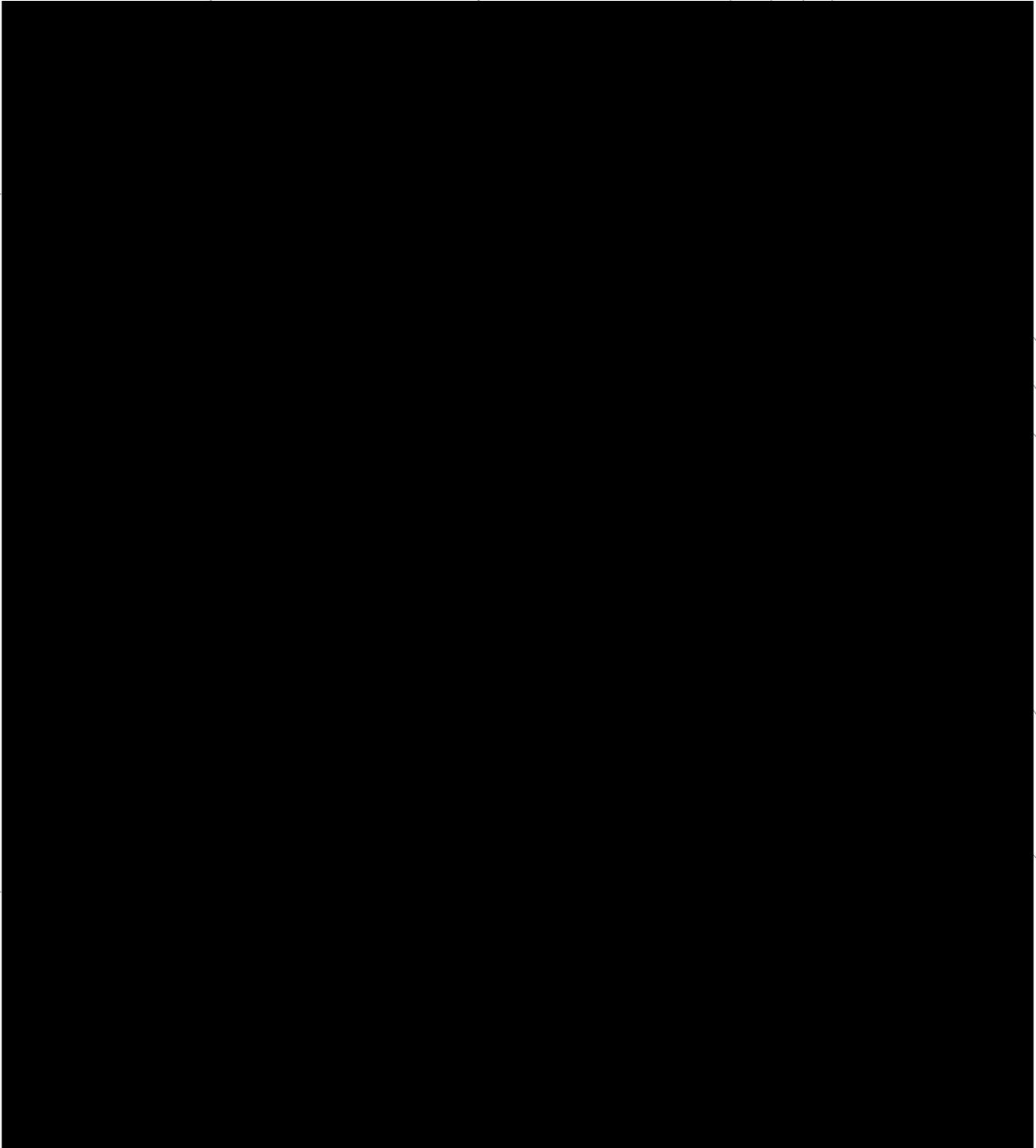
Site boundaries are based on the surface scatter of artifacts and the shovel test data, but also on landform extent and surface disturbance. The east side of the site is marked by the northwestern arm of the dam and a rock road that follows the base of this arm. At the south end of the site, the landform begins to slope to a side channel of the creek, and rocky outcrops are present. Aside from the dam, erosion along this slope is likely the main disturbance.

Based on the artifacts observed on the surface and in the shovel tests, the site appears to be an expedient lithic resource procurement location. Since no temporally diagnostic artifacts were found, it is unknown when this use occurred. Based on these characteristics and the documented disturbances, 41BX2233 lacks the capacity to contribute important information. Hence, it is not eligible for listing in the National Register of Historic Places under Criterion D or designation as a State Antiquities Landmark.

### *Site 41BX2234*

Site 41BX2234 is at 950–960 ft above mean sea level on an interfluvium toeslope below the dam on the west side of the Mud Creek channel. Its horizontal dimensions are 120 m north-south by 80 m east-west (Figure 7). Vegetation, as at the other sites, consists of an open live oak canopy with an understory of sparse grasses. A surface scatter of artifacts was noted across the site from north to south, and six shovel tests were excavated, two of which produced artifacts; the artifacts found were two pieces of chert shatter each in Shovel Tests EG13 and EG14. All of the shovel tests were shallow at 3–5 cm, where dark brown stony clay loam was encountered. Evidence on the surface and in the tests indicates this is a diffuse artifact scatter.

Site boundaries are based mainly on the surface scatter of artifacts, the landform, and surface disturbance. The east side of the site is marked by a steep rocky slope down to the creek channel (Figure 8). Erosion along this slope is the main disturbance. The dam and a rock road that follows the dam down to the creek



**Figure 5.** Map of 41BX2233.

bed forms the northern boundary of the site. A two-track road coming southeast off of the dam road marks the western and southern boundaries of the site. No artifacts were seen in this road.

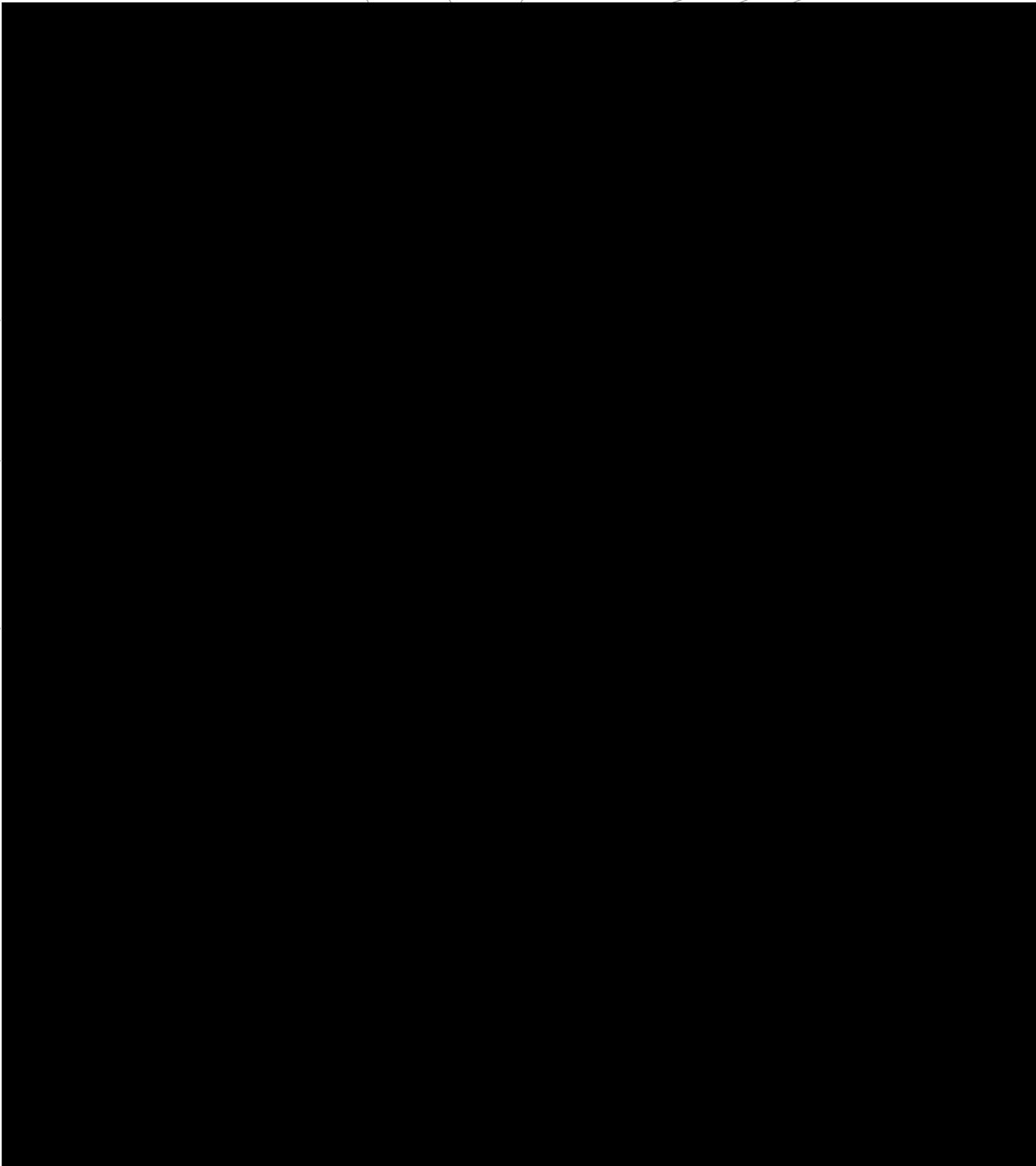


a



b

**Figure 6.** Photographs of 41BX2233. (a) Northernmost surface exposure of tested chert cobbles and lithic debitage; (b) view southwest across the site with Aaron Gibson at Shovel Test AT14 and Shovel Test EG5 at orange flag.



**Figure 7.** Map of 41BX2234.



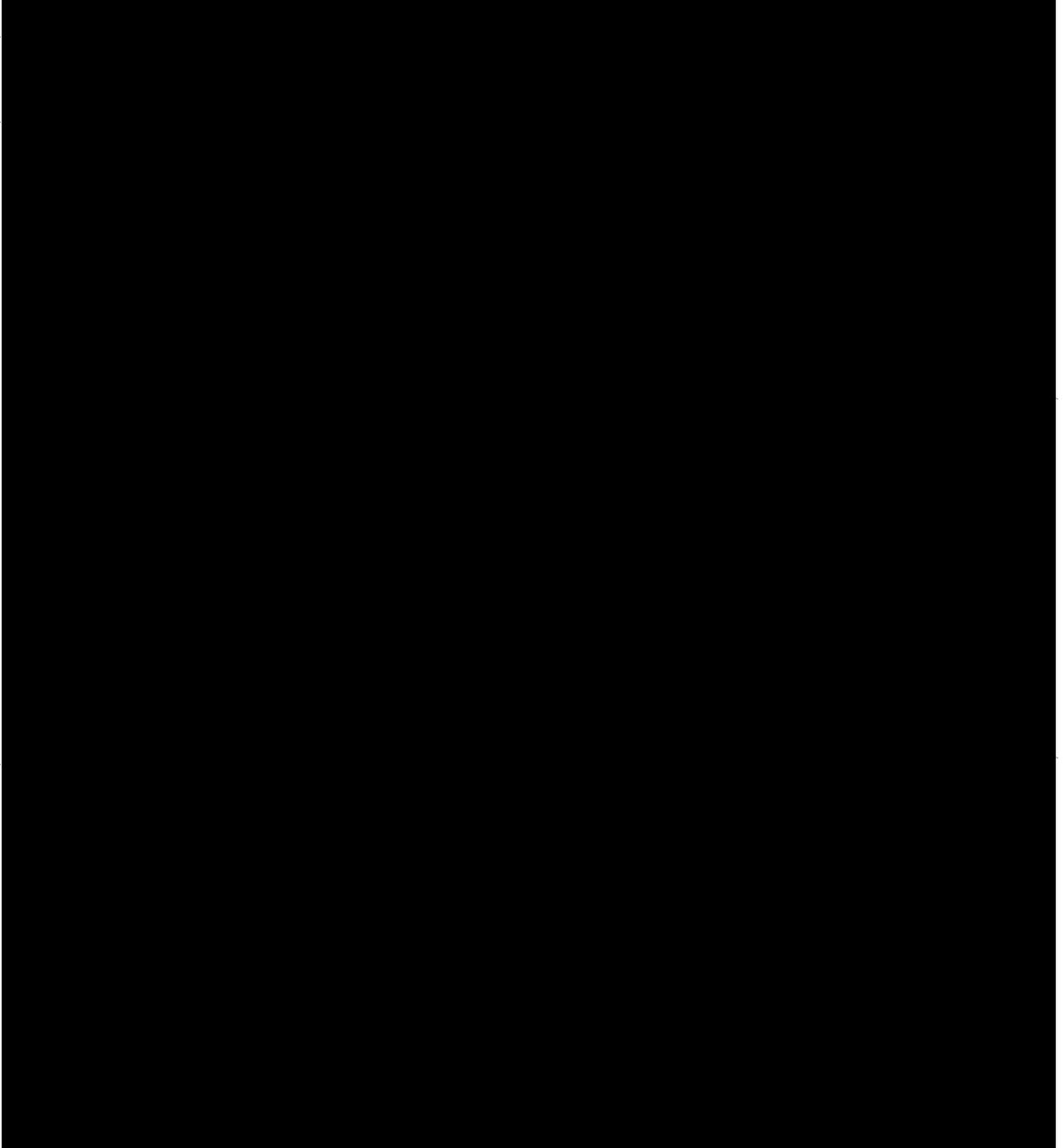
**Figure 8.** Photograph facing northwest across 41BX2234 showing rocky slope along the eastern edge of the site.

The artifacts observed on the surface and in the shovel tests suggest that 41BX2234 represents an expedient lithic resource procurement site used by prehistoric peoples. Since no temporally diagnostic artifacts were found, it is unknown when the site was used. Based on these characteristics and the documented disturbances, 41BX2234 lacks the capacity to contribute important information. Hence, it is not eligible for listing in the National Register of Historic Places under Criterion D or designation as a State Antiquities Landmark.

#### ***Site 41BX2235***

Site 41BX2235 is at 980–990 ft above mean sea level on an interfluvial sideslope west of and just above the Mud Creek channel escarpment. Its horizontal dimensions are 150 m north-south by 60 m east-west (Figure 9). Site 41BX2235 is on the same landform as previously recorded site 41BX2096, about 100 m to the east of it. Vegetation consists of an open live oak canopy and an understory of sparse to medium grasses with some cacti. A surface scatter of artifacts was noted in the north and middle sections of the site. These artifacts included tested chert cobbles and cores. Three shovel tests placed in areas with testable sediments did not produce additional artifacts. All of the shovel tests were shallow at 3–5 cm and encountered dark brown stony clay loam. The artifact scatter here is very diffuse.

Site boundaries are based on the surface scatter of artifacts and the landform. The east side of the site is marked by a steep rocky escarpment down to the creek



**Figure 9.** Map of site 41BX2235.

channel. The north and south ends are marked by rocky slopes, and the west side is marked by the survey area boundary. Erosion along the slopes adjacent to the site is the main disturbance.

The artifacts observed suggests that 41BX2235 represents an expedient lithic resource procurement site used by prehistoric peoples. Since no temporally diagnostic artifacts were recovered, it is unknown when this occurred. Based on these characteristics and the documented disturbances, 41BX2235 lacks the capacity to contribute important information. Hence, it is not eligible for listing in the National Register of Historic Places under Criterion D or designation as a State Antiquities Landmark.

### Previously Recorded Sites

#### *Site 41BX499*

Site 41BX499 was recorded in 1974 by CAR-UTSA. It was characterized as a surface scatter of flakes and cores covering an area about 45 m in diameter “in a flat meadow” surrounded by disturbance from dam and spillway construction. The site was revisited during the current survey, as it sits at 940–960 ft above mean sea level in the southeast corner of the project area near the edge of the dam spillway and the Mud Creek channel. Much of this area has been impacted by construction of the spillway, and it appears that the landform on which the site is situated was sculpted during that construction, with areas scraped to bedrock.

During this survey revisit, the site area was found to support a sparse to medium grass cover with shrubs and small oak trees at the drop-off to the creek on the sculpted spillway wall. Bedrock exposures are prevalent (Figure 10). Two pieces of lithic debitage were discovered on the spillway surface above the creek 50 m west of the original mapped site location. This suggests that what remains of this small site is eroding or has eroded downslope toward the creek.



**Figure 10.** Photograph facing north across 41BX449 with bedrock exposed on the surface and Soil Conservation Service dam in the background.

Site 41BX449 was not assessed formally in 1974, but based on the original limited recovery from the site, the lack of temporally diagnostic artifacts, its setting in eroding uplands, and the abundant disturbance from dam and spillway construction, it is clear that it lacks the capacity to contribute important information. Hence, it is not eligible for listing in the National Register of Historic Places under Criterion D or designation as a State Antiquities Landmark.

#### ***Site 41BX2096***

Site 41BX2096, just west of the present project area, was originally recorded in 2015 by SWCA Environmental Consultants as part of the Vista Ridge Pipeline project. The site was revisited in 2017 by another SWCA crew who expanded the site boundaries to 350 m east-west by 260 m north-south covering the top of an upland knoll (Ward 2017a:61–63). Both investigations found the site to support a vegetative cover of oak and juniper trees with moderately dense grasses and scattered cacti. Together, these investigations dug 21 shovel tests, and both characterized the site as a surface lithic scatter with artifacts consisting of chert flakes, utilized flakes, bifaces, and cores. No temporally diagnostic materials were found. The site was recommended as not eligible for listing on the National Register of Historic Places or designation as a State Antiquities Landmark.

A revisit during the current survey found 41BX2096 to be as described by the 2015 and 2017 investigations. The only notable difference is that utility and road construction at the north end of the site has expanded to impact a 30-m-wide area (Figure 11a). This construction has disturbed most of the 2015 site boundary (Ward 2017a: Figure 72). Otherwise, the site appears to be unchanged. No evidence was found during this revisit to change the original assessment that the site is not eligible for listing in the National Register of Historic Places or designation as a State Antiquities Landmark.

#### ***Site 41BX2102***

Site 41BX2021, approximately 450 m beyond the western edge of the present project area, is adjacent to what will become Hardy Oak Boulevard through Classen-Steubing Park. The site was originally recorded in 2015 by SWCA as part of the Vista Ridge Pipeline project, and it was revisited in 2017 by another SWCA crew who expanded the site boundaries to 310 m northwest-southeast by 100 m northeast-southwest, covering a gentle slope of upland knoll toward an intermittent drainage (Ward 2017a:64–66). The investigations found the site to support a vegetative cover of oak and juniper trees with moderately dense grasses, and areas of dense cobbles and bedrock outcrop were noted across the site. Together, both investigations dug 19 shovel tests and characterized the site as a surface lithic scatter with artifacts consisting of chert flakes, bifaces, and cores. No temporally diagnostic materials were found. The site was recommended as not eligible for listing in the National Register of Historic Places or designation as a State Antiquities Landmark.

A revisit during the current survey found 41BX2021 to be as described by the 2015 and 2017 investigations. One major difference is that now road construction



a



b

**Figure 11.** Photographs of 41BX2096 and 41BX2102. (a) View to the west of clearing associated with road and utility construction at the north end of 41BX2096; (b) view to the northwest of road construction impacting the west half of 41BX2102.

associated with Hardy Oaks Boulevard has severely impacted the west half and northern end (Figure 11b). Also, a sewer line is being constructed at the east edge of the site. All of this construction activity suggests that little of this site will remain intact. The revisit to 41BX2102 did not find any evidence to change the original assessment that the site is not eligible for listing in the National Register of Historic Places or designation as a State Antiquities Landmark.

### **RECOMMENDATIONS**

Sites 41BX2233, 41BX2234, and 41BX2235 were newly discovered during survey of 120 acres that will become part of Classen-Steubing Park and associated conservation easement in north-central San Antonio. Three other previously recorded sites in or adjacent to the project area—41BX449, 41BX2096, and 41BX2102—were revisited as well. All six sites are diffuse surface scatters situated in the uplands above Mud Creek. The sites contain primary decortification flakes, cores, and tested cobbles and likely represent expedient lithic resource procurement by prehistoric peoples utilizing the chert cobbles that naturally crop out in the stony soils along Mud Creek. No temporally diagnostic artifacts were found, and thus the chronology of site use remains unknown. However, multiple episodes of use are likely. These characteristics, along with numerous documented disturbances, indicate that all six sites lack the capacity to contribute important archeological information. Hence, all six are considered ineligible for listing in the National Register of Historic Places under Criterion D and designation as State Antiquities Landmarks. Hence, Prewitt and Associates, Inc., recommends that these sites do not warrant additional archeological investigations.

## REFERENCES CITED

- Arbingast, Stanley A., Lorren G. Kennamer, Robert H. Ryan, Alice Lo, David L. Karney, Charles P. Zlatkovich, Michael E. Bonine, and Roberta G. Steele  
 1973 *Atlas of Texas*. Bureau of Business Research, The University of Texas at Austin.
- Bureau of Economic Geology  
 1983 *The Geologic Atlas of Texas, San Antonio Sheet*. Reprint. Originally published in 1974. Bureau of Economic Geology, The University of Texas at Austin.
- Griffith, G. E., S. A. Bryce, J. M. Omernik, J. A. Comstock, A. C. Rogers, B. Harrison, S. L. Hatch, and D. Bezanson  
 2004 Ecoregions of Texas (color poster with map, descriptive text, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:2,500,000).
- McMahan, Craig A., Roy G. Frye, and Kirby L. Brown  
 1984 *The Vegetation Types of Texas, including Cropland*. Map and accompanying illustrated synopsis. Wildlife Division, Texas Parks and Wildlife Department, Austin.
- Munoz, Cynthia Moore  
 2010 *An Intensive Pedestrian Archaeological Survey of Five Northeast Independent School District Campuses in San Antonio, Bexar County, Texas*. Archaeological Survey Report No. 413. Center for Archaeological Research, The University of Texas at San Antonio.
- Taylor, F. B., R. B. Hailey, and D. L. Richmond  
 1991 *Soil Survey of Bexar County, Texas*. United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Experiment Station.
- Ward, Rhiana D.  
 2017a *Cultural Resources Investigations for the Classen-Steubing Master Development Project, Bexar County, Texas*. SWCA Cultural Resources Report No. 17-32. SWCA Environmental Consultants, San Antonio.
- Ward, Rhiana D.  
 2017b *Cultural Resources Investigations for the San Antonio Water System Alignment Portion of the Classen-Steubing Master Development Plan Project, Bexar County, Texas*. SWCA Cultural Resources Report No. 17-59. SWCA Environmental Consultants, San Antonio.