



**Archaeological Monitoring at 41BX1396 and 41BX264,
Brackenridge Park, San Antonio, Bexar County, Texas
Trail Segments 12 and 12b**

by
Nathan DiVito

Texas Antiquities Permit No. 5858

Principal Investigator
Steve A. Tomka

Restricted

Prepared for:
Ford, Powell & Carson
Architects and Planners, Inc.
1138 East Commerce Street
San Antonio, Texas 78205



Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249
Technical Report, No. 31

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Abstract:

From February 21 through 23 and on March 1, 2011, the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) conducted archaeological monitoring associated with the construction of a proposed hike and bike trail impacting portions of sites 41BX1396 and 41BX264 (The Polo Field Site) located in Brackenridge Park, San Antonio, Bexar County, Texas. Monitoring was conducted under Texas Antiquities Permit No. 5858. Dr. Steve Tomka served as the Principal Investigator and Nathan DiVito served as Project Archaeologist for this project. The archaeological monitoring was conducted under contract with Ford, Powell & Carson Architects and Planners, Inc. and was sponsored by the San Antonio River Authority (SARA). All artifacts recovered during the project, in addition to all project related documentation, are permanently stored at the CAR curational facility.

The Area of Potential Effect (APE) includes a hike and bike trail located along Mulberry Avenue in Brackenridge Park. The proposed trail routes, 12 and 12b, extend along the south side of Mulberry Avenue, from Avenue A to Avenue B, on the northern edge of the Brackenridge Municipal Golf Course, and along the north side of Mulberry Avenue from Red Oak to the Polo Field Golf Center. Monitoring activities associated with path construction included a single light post located on the northern side of Mulberry Avenue, which is within the boundary of site 41BX264. Monitoring also focused on the mechanical excavation of a retaining wall trench located between the proposed path of Trail 12 and Mulberry Avenue, within the boundary of site 41BX1396, a State Archeological Landmark (SAL). Electrical trenches connecting the proposed light poles on the south side of Mulberry Avenue are also within the boundary of site 41BX1396.

Monitoring of the installation of the light pole on the edge of site 41BX264 yielded no cultural material or intact soils. This area is likely disturbed from the nearby road and bridge construction, as well as the construction of the train track that runs adjacent to its location. During the monitoring of the retaining wall trench and the electrical trenches affecting portions of 41BX1396, six burned rock features were documented and two Guadalupe adzes were recovered in intact soils from these trenches. These artifacts are associated with the Early Archaic component of 41BX1396.

The CAR recommends that impacts to sites 41BX1396 and 41BX264 be avoided in the future, if at all possible. In addition, the CAR recommends that archaeological monitoring or preferably pre-construction excavation be conducted for any new construction activities and/or subsurface impacts to these sites.

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Chapter 1: Introduction

From February 21 through 23 and again on March 1 of 2011, the Center for Archaeological Research (CAR) at The University of Texas San Antonio (UTSA) was contracted by Ford, Powell & Carson Architects and Planners Inc. to conduct archaeological monitoring associated with the construction of a proposed hike and bike trail impacting portions of 41BX1396 and 41BX264 (The Polo Field Site). Archaeological monitoring was necessary at this location because construction activities had the potential to impact cultural resources on State Archeological Landmark (SAL) site 41BX1396. The new trails, Trail 12 and 12b, located along Mulberry Avenue in Brackenridge Park, San Antonio, Texas, are part of the larger Museum Reach, San Antonio River Improvements Project (Figure 1-1).



Figure 1-1. *Project area location.*

In November of 2010, a survey and data recovery project was initiated for the project area under Texas Antiquities Permit No. 5776. The Principal Investigator on this project was Dr. Steve A. Tomka with Jennifer Thompson and Kristi M. Ulrich serving as the Project Archaeologists. The investigations consisted of shovel testing and a pedestrian survey of the Trail 12 and 12b areas, as well as the excavation of backhoe trenches and two 1-x-1-m test units at the locations of proposed light poles. Following the completion of this phase of the project, archaeological monitoring of all construction activities impacting subsurface deposits below 0.6 m was recommended. The Texas Historical Commission (THC) concurred with this

recommendation and issued Texas Antiquities Permit No. 5858 to Dr. Tomka to carry out the monitoring. Nathan DiVito served as the Project Archaeologist on the monitoring phase.

After the completion of the construction monitoring, it was determined that additional light poles would be installed along the hike and bike trail. Since these locations fell within the boundaries of site 41BX1396, additional investigations were necessary to ensure that no significant deposits would be impacted by the construction. The additional archaeological investigations continued under Texas Antiquities Permit No. 5776 with Jennifer Thompson and Kristi M. Ulrich serving as the Project Archaeologists. These investigations began in March of 2011 and consisted of the manual excavation of six 1-x-1-m test units at two additional light poles planned within the project area. All background information, history, and previous archaeology of the project area is contained in the survey and data recovery report (Thompson et al. 2013). The report presented here focuses on the results of the monitoring phase of the project.

Area of Potential Effect

Proposed Trail Segments 12 and 12b run parallel to Mulberry Avenue on the northern and southern sides of the roadway. The southern trail segment runs along the edge of the Brackenridge Municipal Golf Course, beginning just west of Avenue B and terminating at Avenue A, right before the bridge crossing of the San Antonio River. The northern trail segment crosses and runs parallel to the Brackenridge Eagle Tourist Train track from Red Oak Road, over the San Antonio River, and to the Polo Field Golf Center.

Summary of Work Completed

Impacts to the APE that required archaeological monitoring included the excavation of a retaining wall trench running in-between Mulberry Avenue and the proposed path, as well as utility trenches running in-between four proposed light poles located on the southern side of Mulberry Avenue. The retaining wall trench was installed at a depth of 0.6-0.9 m below ground surface and was 0.9 m wide. The electrical conduit trenches were excavated to a depth of 0.8 m below ground surface and were 0.3 m wide. All trenches excavated contained prehistoric cultural materials. Six burned rock features were documented, and two diagnostic Guadalupe adzes associated with features were recovered from the retaining wall trench.

A single mechanical auger excavation for a light pole on the northern side of Mulberry Avenue, situated between the Polo Field Golf Center and the San Antonio River, was monitored due to its potential impact on cultural resources at 41BX264 (The Polo Field Site). The auger hold penetrated to a depth of 2.4 m below the ground surface and was 41 cm in diameter. During the installation of the light pole, a single railroad spike was observed, likely associated with the nearby railroad track. No prehistoric materials were observed or collected.

Chapter 2: Archaeological Field and Laboratory Methods

Monitoring Methods

Archaeological monitoring was recommended due to the high probability of encountering prehistoric cultural material within the boundaries of the APE on sites 41BX1396 and 41BX264. All construction activities disturbing soil below a depth of 0.6 m or more were monitored by the CAR staff during the course of this project. All cultural materials encountered were documented and collected. Information was recorded in daily field notes listing the diameter and depth of the auger holes and the length, width, and depth of the trenches, as well as the types of materials encountered. Trenches were excavated in 5-8 cm layers using a mini-excavator with a smooth bucket. Auger holes and trenches were photo-documented, and their locations were recorded with a Trimble Geo X/T Unit (see Figures 2-1 and 2-2). The locations of any unique artifacts and all features within the APE also were recorded with the Trimble Geo X/T. Photographs were taken throughout all monitoring activities at the site. During the course of this project, six prehistoric burned rock features were profiled, recorded, and sampled. Additionally, two diagnostic Guadalupe adzes were recovered. All modern materials encountered were noted, but none were collected or analyzed.



Figure 2-1. Retaining wall trench south of Mulberry Avenue.



Figure 2-2. *Utility trench connecting light poles along sidewalk.*

Laboratory Methods

All cultural materials and records obtained and generated during the project were prepared in accordance with federal regulation 36 CFR part 79 and THC requirements for State Held-in-Trust collections. In addition to THC requirements, materials were also prepared in accordance with the current guidelines of the CAR. Artifacts processed in the CAR laboratory were washed, air-dried, and stored in 4-mil zip-locking, archival-quality bags. Heavier materials needing extra support were double-bagged. Acid-free tags were placed in all artifact bags. Each laser-printed tag contained provenience information with a corresponding lot number. All lithic artifacts were labeled by first applying a clear undercoat of acryloid. The site and catalogue number were written on this undercoat using archival-safe ink. Finally, an acryloid topcoat was applied to permanently seal the label. Artifacts were separated by class. All field produced paperwork including field notes, forms and photographs, were placed into labeled, archival-safe folders. Digital photographs were printed on acid-free paper, labeled with archival-appropriate materials, and placed into archival-quality sleeves. All field forms were completed in pencil. Any soiled forms were placed in plastic, archival-quality page protectors. Ink-jet-produced maps and illustrations were also placed in archival-quality page protectors to prevent against accidental smearing due to moisture. All artifacts recovered during the project and all project related documentation are permanently stored at the CAR. All collected burned rock was discarded.

Chapter 3: Results of Archaeological Monitoring

Retaining Wall Trench Monitoring

On February 21 and 22 of 2011, archaeological monitoring took place for a retaining wall trench associated with the construction of Trail 12 and 12b along Mulberry Avenue affecting portions of site 41BX1396 in Brackenridge Park (Figure 3-1). This trench was approximately 40 m long and was between 0.6-0.9 m deep. It is located on the south side of Mulberry Avenue between the proposed path and the existing road. The trench was excavated in 8-13 cm layers using a mini-excavator with a smooth bucket. Soils in this trench were disturbed down to approximately 40 cm below the surface (cmbs). Two diagnostic tools were collected from the trench, and six burned rock features were recorded (Figure 3-1). Features 1-3 were recorded during the survey and data recovery portions of the project; therefore, the first feature recorded during monitoring was designated Feature 4.

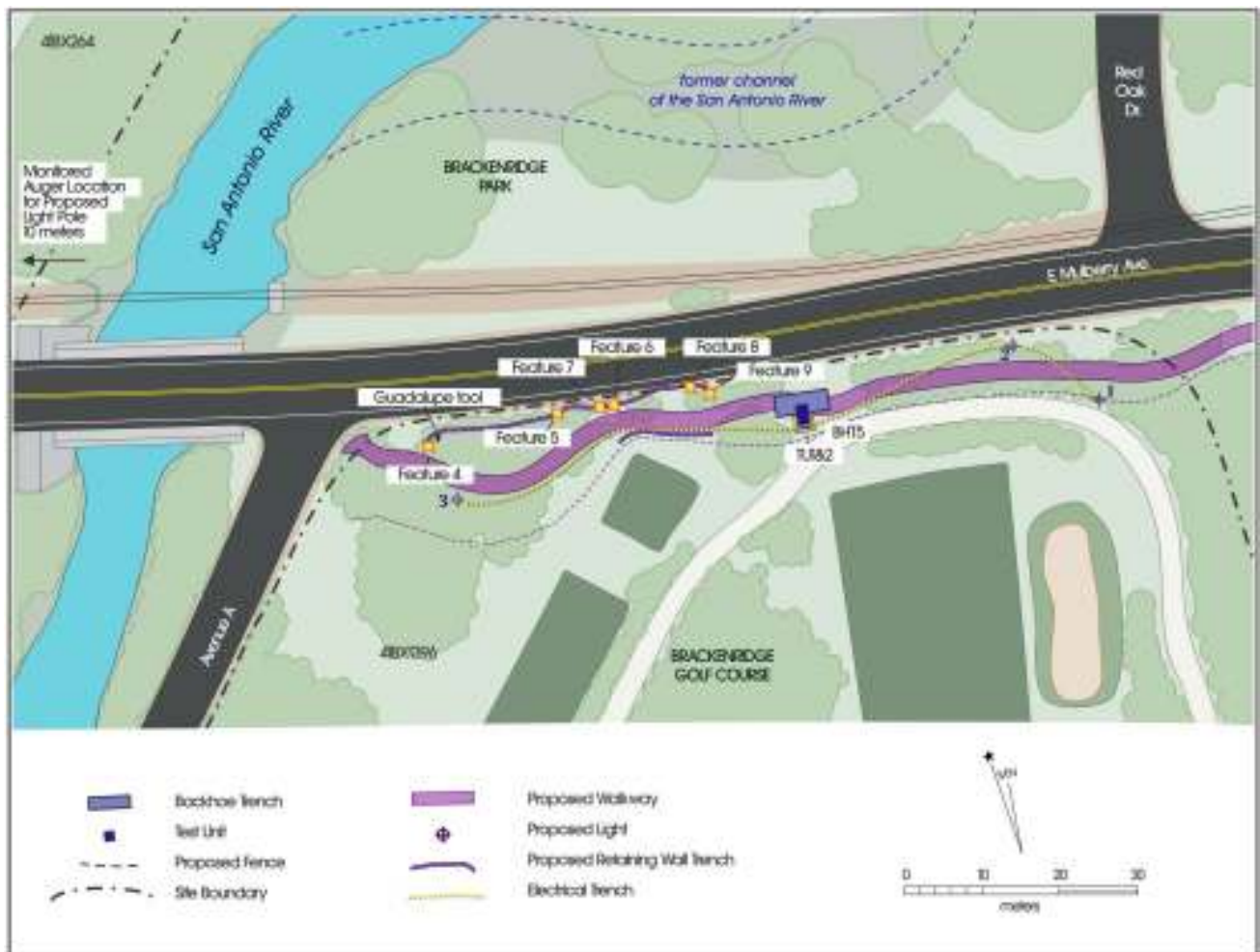


Figure 3-1. Location of features documented during monitoring.

Features

Feature 4 was located at the westernmost end of the retaining wall trench (Figure 3-1), very close to the corner of Mulberry Avenue and Avenue A. It was an intact, burned rock hearth and was found within a medium-brown, silty clay matrix (Figure 3-2). A scatter of flakes and burned rock began at approximately 65 cmbs with the densest concentrations of burned rock found between 75-85 cmbs. The feature is about 30 cm thick and measures 65-x-65 cm. An unknown portion of the hearth had been removed by the mini-excavator. A large primary flake and a core tool were contained within the hearth, and three pieces of debitage were collected from the surrounding matrix. The hearth was round in shape, and no pit was discernible. It consisted mostly of burned limestone mixed with a few fragments of burned sandstone. Burned rocks within this feature had an average size of 3-6 cm. The total weight of burned rock collected from this feature was 5,795 grams. A Guadalupe adze was found approximately 0.9 m away from Feature 4 in the bottom of the retaining wall trench, at a depth of 75 cmbs. This stone tool dates to the Early Archaic (Turner and Hester 1999:256). Feature 4 was found at approximately the same depths as Features 1 and 2 excavated in Test Units 1 and 2 in site 41BX1329 (Thompson et al. 2013).

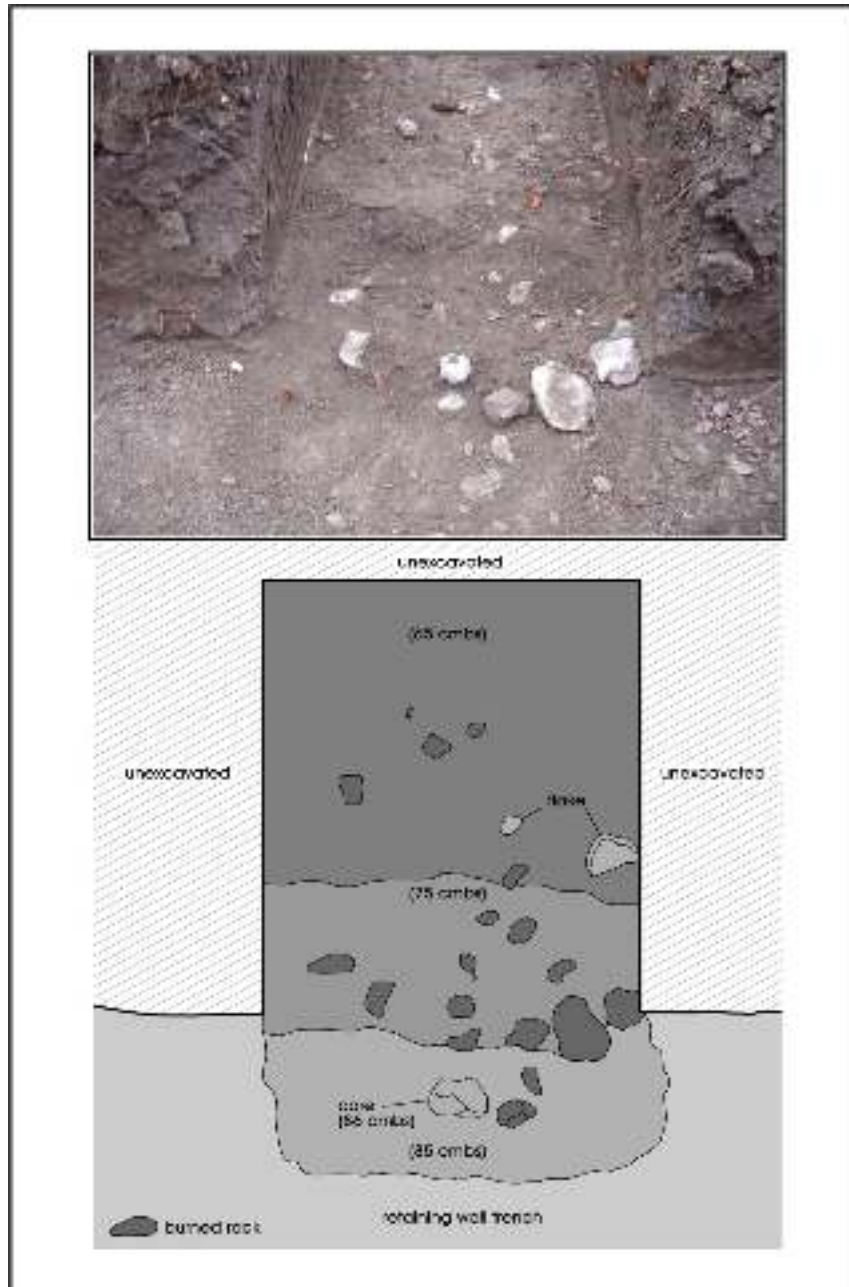


Figure 3-2. *Photograph and plain view of Feature 4.*

Feature 5 (not shown) was located in the middle portion of the retaining wall trench and was exposed in profile under a tree (Figure 3-1). The cluster of burned limestone had been heavily disturbed by tree roots that are fairly sparse and scattered. It was lying flat within a tan-brown, silty clay matrix at approximately 60-70 cmbs. The burned rock was spread over a 1-m area and was 10-15 cm thick. A large, heavily patinated primary flake was contained within it. Burned rock was collected from Feature 5. The total weight of the burned rock collected from this feature was 320 grams. No other artifacts were collected in or around this feature.

Feature 6 was located in the middle portion of the retaining wall trench (Figure 3-1). It is positioned around the tree roots overlying Feature 5. This feature was exposed at 12 cmbs in a medium-brown matrix in the initial cut for this portion of the trench. An unknown portion of this feature was disturbed or removed during the excavation. The remaining portion occupied a 35-x-40 cm area and consisted of a scatter of five pieces of burned limestone. The limestone ranged in size from 3-5 cm. The burned rock collected from this feature weighed 598 grams. The feature contained two burned tertiary flakes that were noted but not collected.

Feature 7 was located just west of Feature 6 in a tan-brown, silty matrix at the bottom of the retaining wall trench at approximately 60-80 cmbs (Figure 3-1). It is likely that this feature is a burned rock hearth that has been scattered by erosion and root activity. It is approximately 20-25 cm thick. It includes a concentration of burned rock along with a lithic and burned rock scatter. The scatter takes up an area that is about 1 m in length and 60 cm in width (Figure 3-3). The concentration is in a 30-x-30 cm area, consisting mainly of burned limestone with a single piece of burned sandstone and a few tertiary flakes. The bulk of the collected burned rock consisted of limestone, but it did contain burned chert as well. The average size of burned rock in this feature was 3-5 cm. The total weight of burned rock collected from this feature was 5,162 grams. Artifacts associated with this feature included: a Guadalupe adze, a biface, a uniface, a core tool, and sixteen large, primary and secondary flakes—including a large overshot flake. This feature was found at the same depth as Features 1, 2, 4, 5, and 9, and it is likely associated with the Early Archaic occupation of the site.

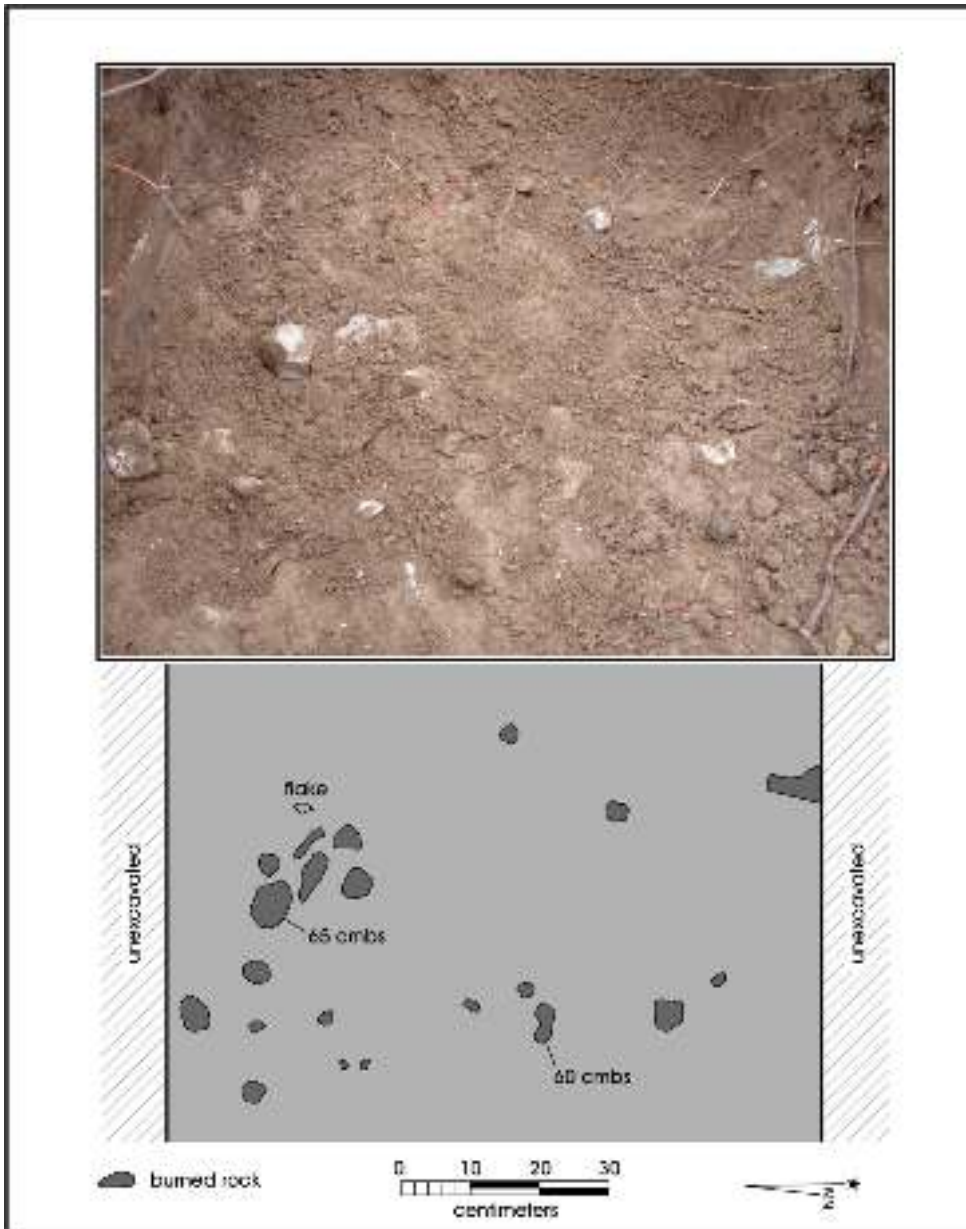


Figure 3-3. Photograph and plain view of Feature 7.

Feature 8 was located close to the road toward the easternmost part of the retaining wall trench at the bend where it proceeds to the southeast (Figure 3-1). The feature is a small cluster of burned rock measuring 40-x-40 cm in size (Figure 3-4). It was found within a medium-brown, silty clay matrix at 35-45 cmbs. It was circular in shape and was comprised almost entirely of burned limestone that contained a few small tertiary flakes. Burned rocks within the feature averaged roughly 3-5 cm in size. The total weight of burned rock collected from this feature was 5,378 grams. No other tools or artifacts were noted in association with this feature.

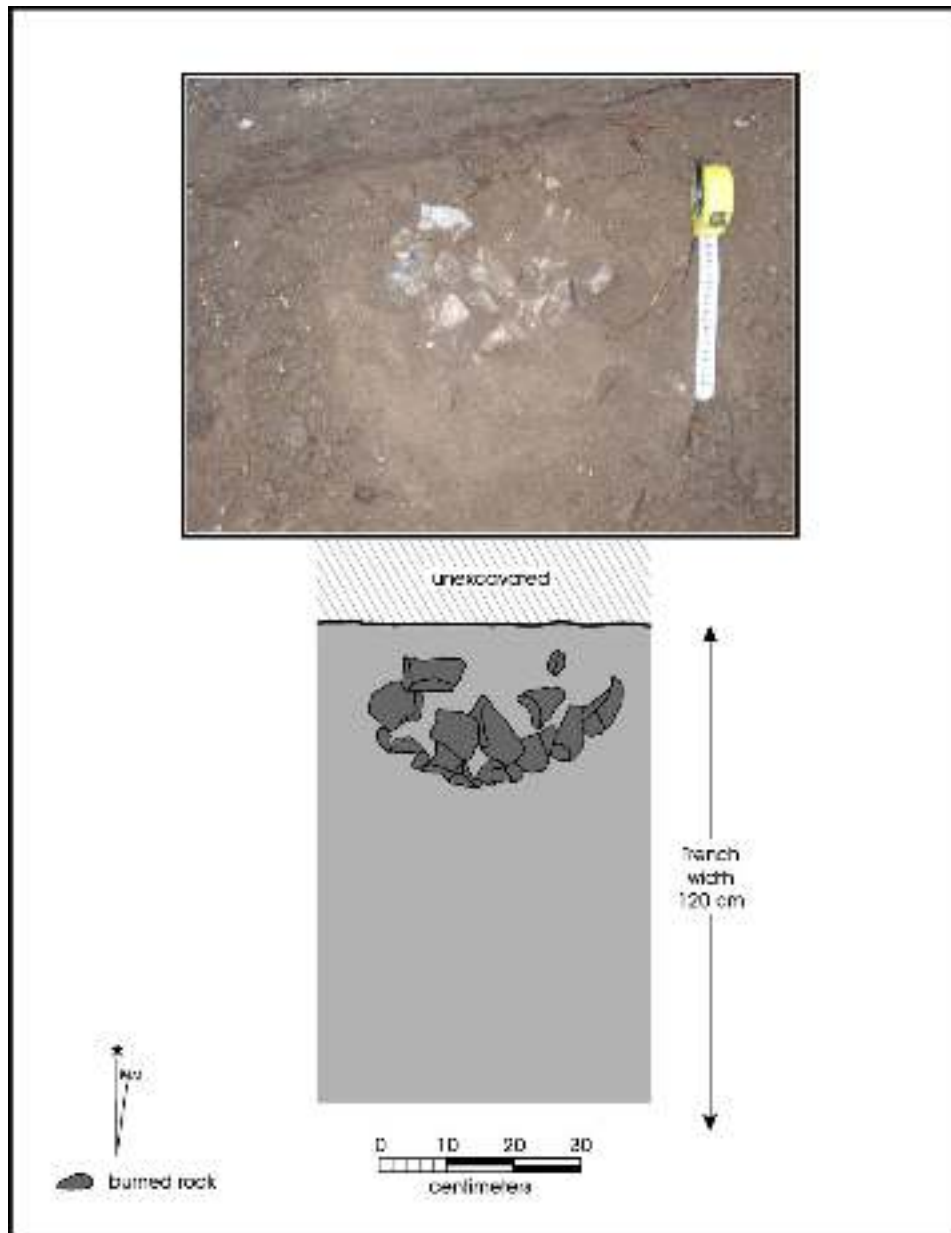


Figure 3-4. Photograph and plain view of Feature 8.

Feature 9 was located at the bottom of the easternmost end of the retaining wall trench at 65 cmbs (Figure 3-1). The feature is a tight cluster of burned rock measuring 25-x-30 cm in size. It was oblong in shape and 10 cm thick (Figure 3-5). It contained a small tertiary flake. Rocks within the feature consisted of 65 percent limestone and 35 percent chert. The size of burned rocks averaged 2-3 cm. A noted increase in small, burned rock fragments was present in Feature 9, compared to the other features. The total weight of burned rock collected from this feature was 1,910 grams. A small biface fragment was collected from the retaining wall trench at 67 cmbs, the terminal depth of the feature. This feature was also found at the same depth as Features 1, 2, 4, 5, and 7.

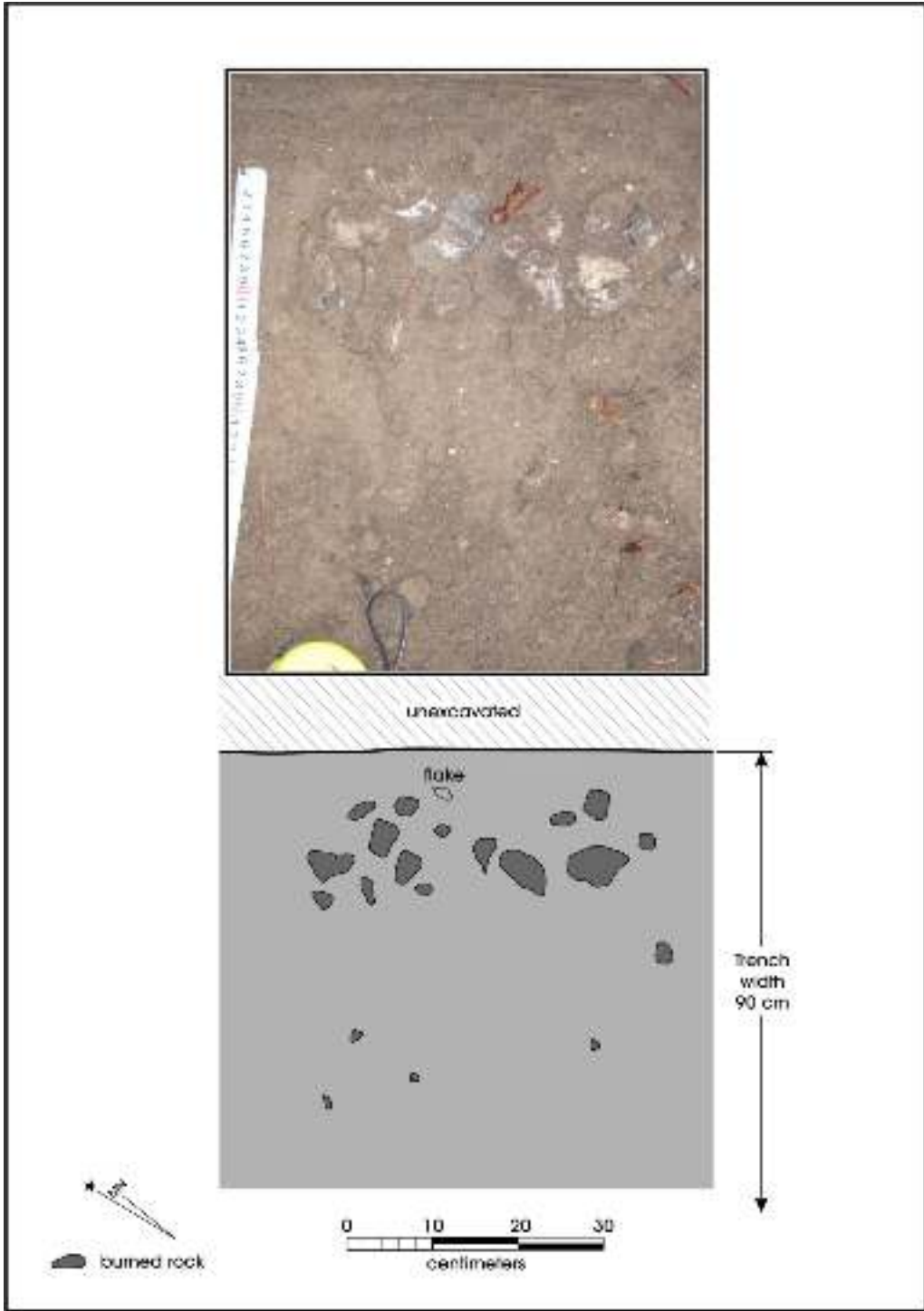


Figure 3-5. Photograph and plain view of Feature 9.

Electrical Trench Monitoring

On February 22 and 23 of 2011, archaeological monitoring took place for a utility trench connecting four proposed light poles on the south side of Mulberry Avenue with an electrical conduit. The excavation of the

utility trench impacted portions of site 41BX1396 (Figure 3-1). The trench starts at the easternmost light pole (Proposed Light 1) and continues to the location of Proposed Light 2. A light pole is situated very near Test Units (TU) 1 and 2 excavated during the survey and data recovery project. The trench then moves west past TUs 1 and 2 to the final proposed light pole located along the western edge of the golf course. Electrical trenches were excavated in 5-8 cm layers to a depth of 0.8 m using a mini-excavator with a smooth bucket. Trenches were 0.3 m wide.

No cultural materials were observed in the utility trench stretching from Proposed Light 1 to Proposed Light 2. A biface, an edge modified flake, and two pieces of burned rock were collected from the next portion of the trench extending from Proposed Light 2 to the location of TUs 1 and 2. The next portion of the trench extended from TUs 1 and 2 to the westernmost light pole. This portion of the trench contained a thin biface, a core, a few pieces of debitage, and three pieces of burned rock. In the portion of the trench adjacent to the tee box for the eighth hole, a concentration of cut limestone and mortar fragments was noted. The remains appeared to be discarded construction debris. No features were recorded during the excavation of the utility trenches.

Auger Monitoring

On March 1 of 2011, archaeological monitoring took place for the auger excavation of a proposed light pole located within the boundary of site 41BX264. The light pole is situated between the San Antonio River and the Polo Field Golf Center, along the northern portion of Mulberry Avenue (see Figure 3-1). The light pole was excavated to a terminal depth 2.4 m and was 41 cm in diameter. A single railroad spike was observed during excavation, likely derived from the adjacent train track. The soil here was heavily disturbed due to the construction of the bridge and sidewalks and the installations of the train track and utilities. No prehistoric cultural materials or features were found during the excavation of the light pole.

Artifact Descriptions

During the course of this project, a total of 52 chipped stone artifacts were recovered and 343 pieces of burned rock, weighing 19,570 grams, were collected. Artifacts collected, along with their proveniences, are shown in Table 3-1.

Table 3-1. Artifacts Recovered during the Archaeological Monitoring of Trail Segments 12 and 12b

Provenience	Building Materials		Chipped Stone						Samples		Grand Total	Integrity
	Cut Limestone	Mortar	Choppers/Core Tools	Cores	Debitage	Expedient /Edge-Modified Tools	Misc. Bifaces/ Unifaces	Specialized Tools	Burned Rock (BR)	BR Weight (grams)		
Electrical Trench	1	1		1	2	1	2		5	366.6	13	Poor
Retaining Wall Trench			1		3		1		3	36.1	8	Poor
Feature 4					5		1	1	91	5,796.60	98	Very Good
Feature 5									10	319.8	10	Very Good
Feature 6									5	597.9	5	Very Good
Feature 7			1		19		2	1	63	5,162.40	86	Very Good
Feature 8					4				70	5,378.40	74	Very Good
Feature 9					6		1		96	1,909.50	103	Very Good
Grand Total	1	1	2	1	39	1	7	2	343	19,567.30	397	

Two diagnostic artifacts were recovered during this project (Figure 3-6). The first diagnostic artifact was recovered from the matrix adjacent to and associated with Feature 7. It is a Guadalupe adze. It is a heavily patinated distal fragment and exhibits what is likely a use fracture. The adze measures 72 mm in length and 45 mm in width, and it is 20 mm thick. It was found in association with a uniface and biface also exhibiting patina and patches of carbonates. Guadalupe tools date to circa 5500 BP or earlier in the Early Archaic Period (Turner and Hester 1999:256).

The second diagnostic artifact is a Guadalupe adze found in association with Feature 4. It was found in situ, lying ventral side up in the bottom of the retaining wall trench at roughly 1 m from the feature at a depth of 75 cmbs. The tool is very well made and has the classic tri-facial cross-section indicative to artifacts of this type. The adze is 114 mm long, 42 mm wide, and 25 mm thick. A thin layer of calcium carbonate is present on its dorsal side.



Figure 3-6. *Distal fragment and complete Guadalupe adzes associated with features.*

Chapter 4: Summary and Conclusion

Project Summary and Recommendations

From February 21 through 23 and on March 1, 2011, archaeological monitoring was conducted of construction activities associated with Trail Segments 12 and 12b impacting portions of sites 41BX1396 and 41BX264 in Brackenridge Park, San Antonio, Texas. The monitoring was recommended after the initial phase of survey and subsequent data recovery uncovered cultural deposits dating to the Early Archaic Period within the project APE. The CAR contracted with Ford, Powell & Carson Architects and Planners Inc. to conduct monitoring sponsored by the San Antonio River Authority.

During the monitoring, six prehistoric burned rock features were documented and two diagnostic tools dating to the Early Archaic Period were recovered from site 41BX1396. Features and tools were discovered in the trenches excavated for retaining wall construction. Given the association of a Guadalupe adze with Feature 4, it is likely that this feature is part of the Early Archaic component of the site. Moreover, the feature and tool are located at a similar depth (65-85 cm) to the two Early Archaic features found during the data recovery portion of the project (Thompson et al. 2013). Feature 5 was a burned rock scatter that was heavily disturbed by tree roots. It was located at the same depth as Features 1, 2, 4, 7, and 9 noted during data recovery and monitoring. It is possible that this scatter also dates to the Early Archaic, although no definitive evidence of this was found. However, the scatter's vertical position suggests an Early Archaic designation. Feature 6 was a small, burned rock cluster discovered just beneath the surface of the site; its temporal affiliation is not known. Feature 7 was discovered at 60-80 cmbs in the retaining wall trench. A Guadalupe adze, a biface, and a unifacial tool were found in association with the feature. Guadalupe adzes date to the Early Archaic, and it is therefore probable that the feature dates to this time period as well. It was found at the same depth as Features 4, 5, and 9. Feature 8 was a small hearth that lacked temporally diagnostic artifacts. Feature 9 was exposed in the bottom of the trench at 65-75 cmbs. It is a small, dense, burned rock concentration that was found at the same depth as Features 1, 2, 4, 5, 7, and 9. Based on its depth, it is likely that this feature is also Early Archaic in age; however, it is not possible to determine this with certainty in the absence of temporally diagnostic artifacts.

Other trenches excavated for electrical conduits had no features but yielded debitage, burned rock, and tools. Since these artifacts were not temporally diagnostic, they were noted but not collected during the monitoring. The single auger test that affected a portion of 41BX264 yielded no cultural material (see Table 3-1).

All archaeological monitoring for this portion of the Trail Segments 12 and 12b project is completed. Given the richness of temporally diagnostic artifacts recovered from the APE, the shallow depth of Early Archaic materials, and the presence of a deeper, late Paleoindian component, the CAR recommends that all subsurface activities should be monitored in the future and all deep impacts should be avoided within site 41BX1396, if at all possible. If avoidance is not feasible, the CAR recommends systematic excavation of the two components hitherto defined in the northern portion of the site adjacent to Mulberry Avenue.

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