



# **Archaeological Investigations at the Lily Pond in Brackenridge Park, San Antonio, Bexar County, Texas**

*by*  
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**Texas Antiquities Permit No. 6021**

**Principal Investigator**

**Steve A. Tomka**



*Prepared for:*  
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The University of Texas at San Antonio  
One UTSA Circle  
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Technical Report, No. 35



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## **Abstract:**

On August 18, 2011, archaeologists from the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) conducted archaeological monitoring of backhoe trenching within the Lily Pond located in Brackenridge Park. The CAR was contracted by the City of San Antonio to investigate whether or not portions of a dam had been uncovered within the Lily Pond. The investigations were conducted under Texas Antiquities Permit No. 6021. Steve A. Tomka served as Principal Investigator, and Kristi Miller Ulrich served as Project Archaeologist. Backhoe trenching within the Lily Pond did not reveal remnants of a dam. However, portions of Lily Pond wall that were constructed during the Works Project Administration (WPA) era were encountered and documented. CAR does not recommend any further investigations within the pond in relation to locating a dam in the western portion of the pond. No artifacts were collected and all documents related to the project are permanently curated at the Center for Archaeological Research.

# Table of Contents:

Abstract .....	i
Table of Contents .....	ii
List of Figures .....	iii
Acknowledgements .....	iv
Chapter 1: Introduction .....	1
Area of Potential Effect and Environs .....	1
Project Background .....	3
Chapter 2: Previous Archaeology .....	5
Chapter 3: Historic Maps .....	7
Chapter 4: Field and Laboratory Methods .....	13
Field Methods .....	13
Laboratory Methods .....	13
Chapter 5: Results and Recommendations .....	15
References Cited .....	21

## List of Figures:

Figure 1-1. Location of the Area of Potential Effect (APE) on the “San Antonio East” 7.5 minute series USGS quadrangle map .....	1
Figure 1-2. Aerial photo of the APE with the Lily Pond outlined .....	3
Figure 1-3. Possible rock alignment as it appeared shortly after being exposed .....	4
Figure 2-1. Aerial photo showing the Upper Labor <i>Acequia</i> and the locations of the BHTs excavated during the 1996 investigations.....	6
Figure 3-1. The current APE on the 1875 Giraud/Frieselben Map.....	7
Figure 3-2. Map of the project area drawn by City Engineer Louis Giraud in 1879 showing the San Antonio River and the current APE.....	8
Figure 3-3. Location of the headwaters of the San Antonio River and the current APE on the 1908 “Map Showing Brackenridge and Mahncke Park’s” by the City Engineer.....	9
Figure 3-4. Current APE highlighted on a 1918 map of Brackenridge Park .....	10
Figure 3-5. The current APE on a map of Brackenridge Park, circa 1908, that depicts the acquired parcels of land that make up the park .....	11
Figure 3-6. Detail of 1926 map, “Brackenridge and Koehler Park” .....	12
Figure 5-1. Bottles and modern material encountered in the southern portion of the trench.....	16
Figure 5-2. Southern profile of the cross-section of the backhoe trench .....	17
Figure 5-3. Entirety of the backhoe trench excavated within the Lily Pond. Rock wall fragments were encountered in the mid-portion of the trench .....	18
Figure 5-4. Fragment of the 1930s reconstructed Lily Pond rock wall encountered during backhoe trenching .....	18
Figure 5-5. Second fragment of the rock wall encountered while backhoe trenching in the Lily Pond .....	19
Figure 5-6. Portion of the currently standing Lily Pond wall near the fragments that were encountered in the backhoe trench. Note the cracks that indicate the unstable nature of the current wall .....	19

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# Chapter 1: Introduction

The Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) was contracted by the City of San Antonio Parks and Recreation Department to perform an archaeological investigation at the location of the Lily Pond in the northern portion of Brackenridge Park. The Lily Pond is a pool filled by natural springs that help fuel the headwaters of the San Antonio River. A Spanish Colonial Dam is located in the vicinity of the Area of Potential Effect (APE).

## Area of Potential Effect and Environs

The Area of Potential Effect (APE) is located in San Antonio, Bexar County, Texas, near the 800 block of East Hildebrand Avenue and across from the University of Incarnate Word. It is located on the “San Antonio East” USGS quadrangle map (Figure 1-1).

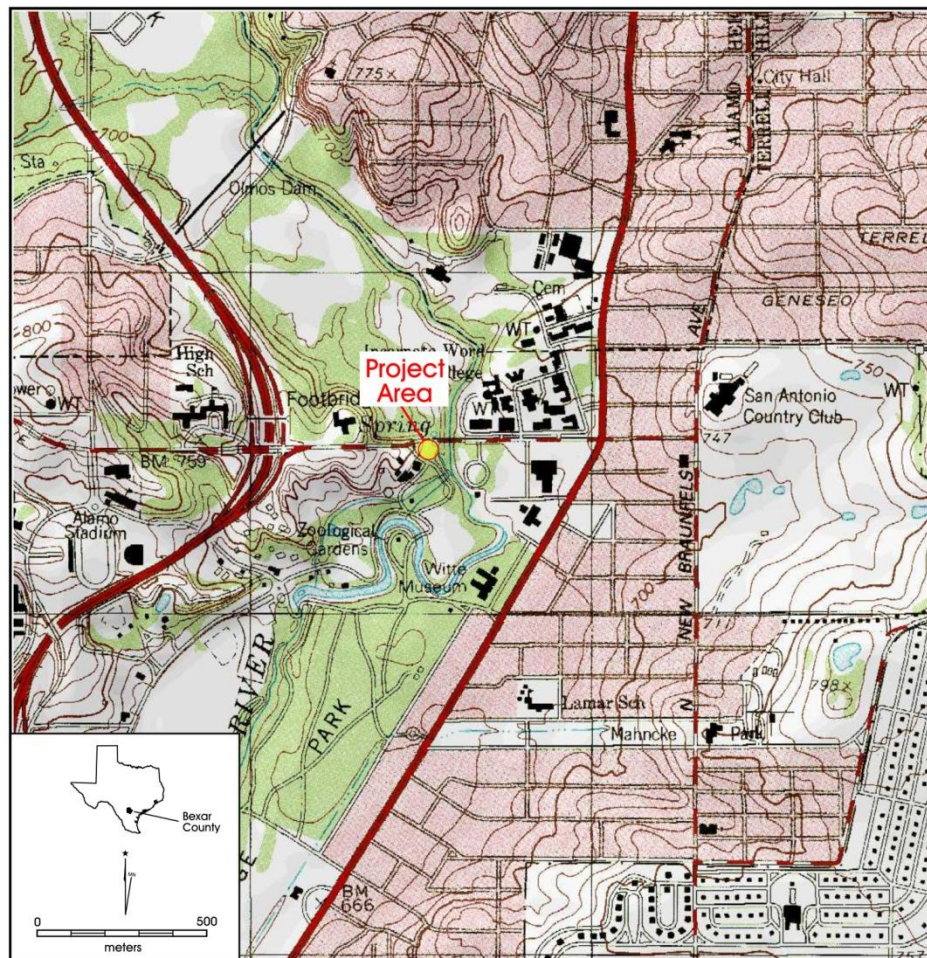


Figure 1-1. Location of the Area of Potential Effect (APE) on the “San Antonio East” 7.5 minute series USGS quadrangle map.

Bexar County is located in the transitional zone between the southern limits of the Edwards Plateau Escarpment and the lower Gulf Coastal Plain. San Antonio is located at the base of the Balcones Escarpment of the Edwards Plateau. Major drainages near the project area include the San Antonio River and Olmos Creek, which is located north of the APE. The headwaters of the San Antonio River are located just to the north of the APE on the grounds of the University of the Incarnate Word. The APE is located on the west bank of the San Antonio River.

The soils of the APE are listed as Frio and Trinity soils of the Austin-Tarrant Association. These soils tend to be moderately deep to very shallow silty clays over chalk and marl (Taylor et al. 1991). Three major geographic regions meet in Bexar County: the Edwards Plateau, the Blackland Prairie, and the South Texas Plains (SWTRWPG 2007). The Edwards Plateau gradually slopes to the southeast and ends in the Balcones Escarpment (Taylor et al. 1991). The limestone based Edwards Plateau is characterized by spring-fed, perennial streams that flow across the Balcones Escarpment (SCTRWPG 2007). Vegetation in the Edwards Plateau consists largely of Bald cypress (*Taxodium distichum*), live oak (*Quercus virginiana*), cedar elm (*Ulmus crassifolia*), and several species of grasses that include bluestem (*Schizachyrium* and *Andropogon spp.*), gramas (*Boutelous spp.*), Indiangrass (*Sorghastrum nutans*), common curly mesquite (*Hilaria belangeri*), buffalo grass (*Buchloe dactyloides*), and Canadian wild rye (*Elymus Canadensis*) (Fentress 1986).

The Blackland Prairies vegetation includes several species of oaks, pecan (*Carya illinoensis*), cedar elm (*Ulmus crassifolia*), and mesquite (*Prosopis sp.*). Several varieties of grasses are common to this region and include: big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), sideoats grama (*Bouteloua curtipendula*), and hairy grama (*Bouteloua hirsute*) (Fentress 1986).

The vegetation of the South Texas Plains area is typical of subtropical drylands. Tree species present include honey mesquite (*Prosopis glandulosa*), live oak (*Quercus virginiana*), blackbrush acacia (*Acacia rigidula*), huisache (*Acacia smallii*), and Mexican Palo Verde (*Parkinsonia aculeata*) (Fentress 1986).

The climate in South Central Texas is humid subtropical with hot and humid summers (SCTRWPG 2007). The hot weather is typical from May to late September. The cool season begins in early November and extends through March. South Texas winters are usually short and mild. Light precipitation is characteristic during the winter months. Rainfall in the San Antonio area averages about 10 cm (3.92 in.) per year (SRCC 2007).



Figure 1-2. Aerial photo of the APE with the Lily Pond outlined.

## Project Background

Recent attempts by San Antonio Parks and Recreation Department to clean out silt that had accumulated in the Lily Pond immediately west of the Spanish Colonial Upper Labor Dam exposed an apparent rock alignment in the western portion of the pond paralleling the existing rock wall (Figure 1-2). This apparent alignment is located approximately 0.9-1.1 m (3-3.5 ft.) inside of the reconstructed rock wall that borders the Lily Pond along the western edge. The rock alignment appeared to consist of large cut limestone blocks. Prior to the beginning of the project, only the upper few inches of these blocks had been exposed. At the time, it appeared as if these blocks were held in place by cement-containing mortar. The wall segment appeared to be approximately 5.5-6.1 m (18-20 ft.) in length starting near the mouth of the reconstructed channel of the Upper Labor *Acequia* and running northward. Given the small amount that was exposed, it was not possible to establish the construction technique of the wall or its possible relationship to the Upper Labor Dam that is located on the east bank of the Lily Pond.

The City of San Antonio Parks and Recreation Department contracted the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) to conduct an archaeological investigation at the location of the rock alignment. The investigation aimed to answer two questions: 1) is there a relationship between this rock alignment and the Upper Labor Dam exposed by Cox et al. (1999)? and 2) what is the alignment of the rocks exposed during cleaning?



The investigation of the rock alignment consisted of two phases. The initial phase involved archival research to locate historic maps of the project area that would shed light on the construction date or use of the feature. The second phase consisted of field investigations to uncover the rock alignment.



Figure 1-3. *Possible rock alignment as it appeared shortly after being exposed.*

## Chapter 2: Previous Archaeology

There are 18 recorded archaeological sites within a 0.8 km (0.5 mi.) radius of the current APE. Eight of the sites are prehistoric, eight are historic, and four are multi-component sites. Just north of the APE, across Hildebrand Avenue, are the grounds of the University of the Incarnate Word. A good portion of the property makes up the Headwaters of the San Antonio River National Register District. Many prehistoric and historic archaeological sites are located within this district. In addition to the archaeological sites, there are several historic structures that are located within a 0.8 km (0.5 mi.) radius of the APE. These structures include the Sweet House (Fernridge), the Ruiz House, and the Navarro House. The latter two are structures that had been moved from their original locations to the grounds of the Witte Museum.

The following brief review focuses only on previous archaeological work in the immediate vicinity of the APE. Projects and sites that are on the University of the Incarnate Word campus and within Brackenridge Park but at a greater distance from the APE are not discussed.

In 1996, a portion of the Upper Labor *Acequia* was exposed in the northern portion of Brackenridge Park. The City of San Antonio Parks and Recreation Department contracted the CAR to investigate the feature. During the course of the project, Site 41BX1273 was recorded. The site was identified as the Upper Labor Dam, first constructed in 1776 with limestone blocks to divert water from the river into the Upper Labor *Acequia*. The dam was modified during the nineteenth century with dressed stone and set at a slightly different angle. A prehistoric component to the site was also recorded during this project. The prehistoric deposits were noted at 120 cm (47.2 in.) below the surface and consisted of lithic debitage (Figure 2-1) (Cox et al. 1999).

During the fall of 2008, CAR conducted an intensive archaeological survey of Miraflores Park located just to the east of the current APE. A total of 122 shovel tests, four 50-x-50-cm units, one 50-x-100-cm unit, and four trenches were excavated within the park during the project. The purpose of the project was to locate buried architectural features and sculptures that were installed within the park during the 1920s. The entirety of the park was nominated to the National Register in 2001, but it was not considered to be an archaeological site at that time. During the course of the 2008 project, a trinomial was assigned to Miraflores Park. The park is now listed as 41BX1754, a multi-component site containing prehistoric material, historic material, and art and architecture relating to the development of the park by Dr. Urrutia (Ulrich 2008).



Figure 2-1. Aerial photo showing the Upper Labor Acequia and the locations of the BHTs excavated during the 1996 investigations.

Finally, in 2009, the CAR staff excavated the remnants of a dam on the west bank of the San Antonio River within the footprint of the bridge that was to connect Miraflores Park with Brackenridge Park (Tomka and Dowling 2009). The bridge is shown in the lower center of Figure 2-1. The archaeological materials that were recovered included Early Archaic temporal diagnostics, but they were determined to be out of context and re-deposited from a site located immediately adjacent to Hildebrand Avenue. The dam appeared to have been associated with the San Antonio Waterworks Raceway although a 1926 map of the area shows at least three smaller dams across branches of the stream near this location (see Chapter 3).



## Chapter 3: Historic Maps

Prior to the fieldwork, historic maps and records were consulted to help determine what the feature located within the Lily Pond could be and to approximate a construction date. Early maps of the area that depicted the headwaters of the San Antonio River and the surrounding area were located.

Two Giraud maps were examined to determine if a feature was located in the APE during the late 1800s. The 1875 Giraud/Frieselben Map shows the San Antonio River, the Upper Labor *Acequia*, and various drainages that were spring fed and that fueled the river (Figure 3-1). Though the current APE can be located on this map, no indication of a rock feature is noted on the map.

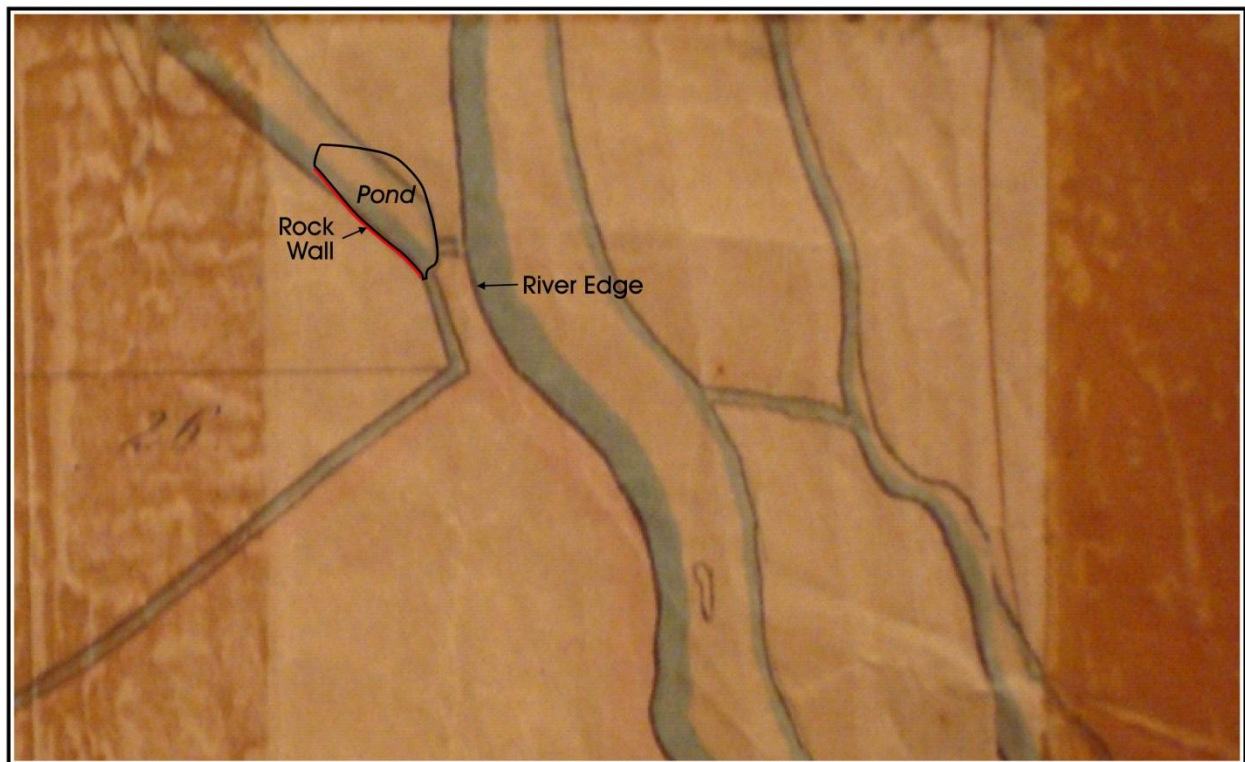


Figure 3-1. *The current APE on the 1875 Giraud/Frieselben Map (Electronic copy on file, CAR).*

The 1879 Giraud map also was consulted to determine if a rock alignment was constructed in the area just to the south of headwaters (Figure 3-2). This map depicts the headwater area of the San Antonio River but does not reveal any stone wall feature that is related to the feature recently uncovered.

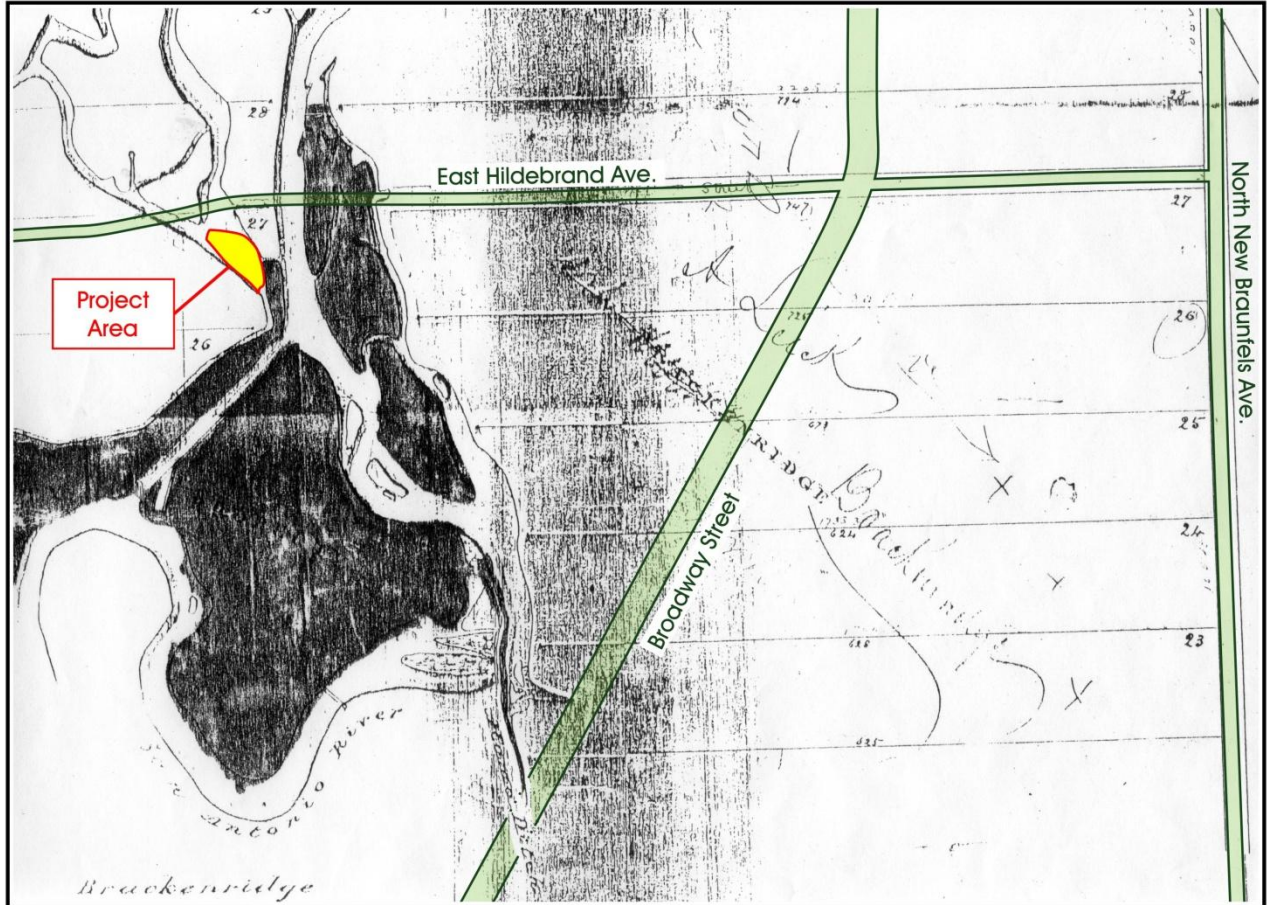


Figure 3-2. Map of the project area drawn by City Engineer Louis Giraud in 1879 showing the San Antonio River and the current APE (Electronic copy on file, CAR).

The 1908 City Engineering Map (Rullman) shows the vicinity of the current APE, but it does not show any indication of a stone wall or other feature that may be related to what was uncovered in the Lily Pond (Figure 3-3). The map depicts the Upper Labor Acequia, as well as the mill race that fed the Water Works. Various stream channels are shown on the map, but there is no indication of a stone wall in the vicinity of the APE.



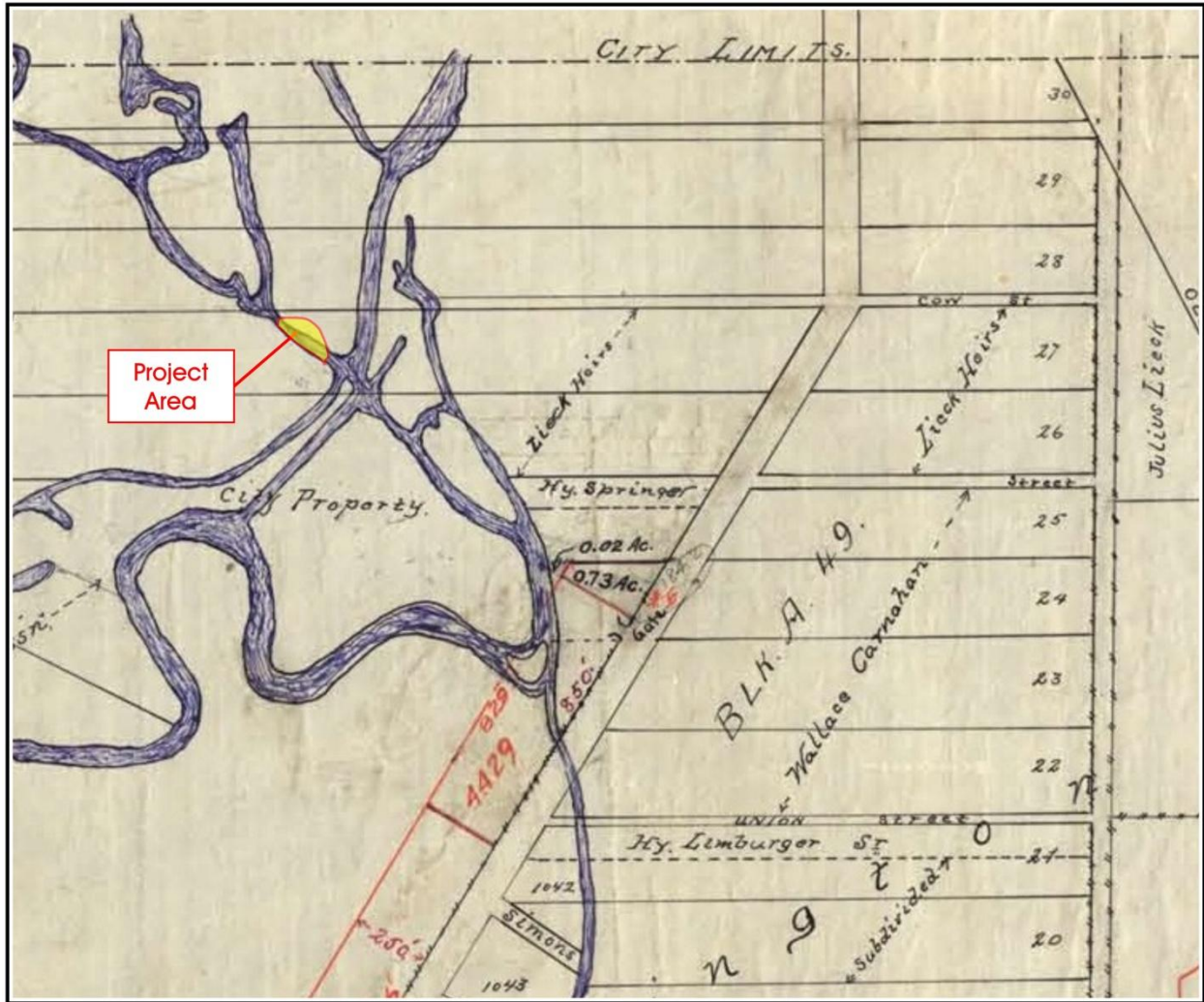


Figure 3-3. Location of the headwaters of the San Antonio River and the current APE on the 1908 "Map Showing Brackenridge and Mahncke Park's" by the City Engineer (Electronic copy on file, CAR).

The 1918 map of the area identifies the park as Riverside Park rather than Brackenridge Park (Figure 3-4). The Upper Labor *Acequia* is shown, but no indication of a rock alignment in the vicinity of the Lily Pond is noted. The detail on this map is not to the scale that would reveal such feature.

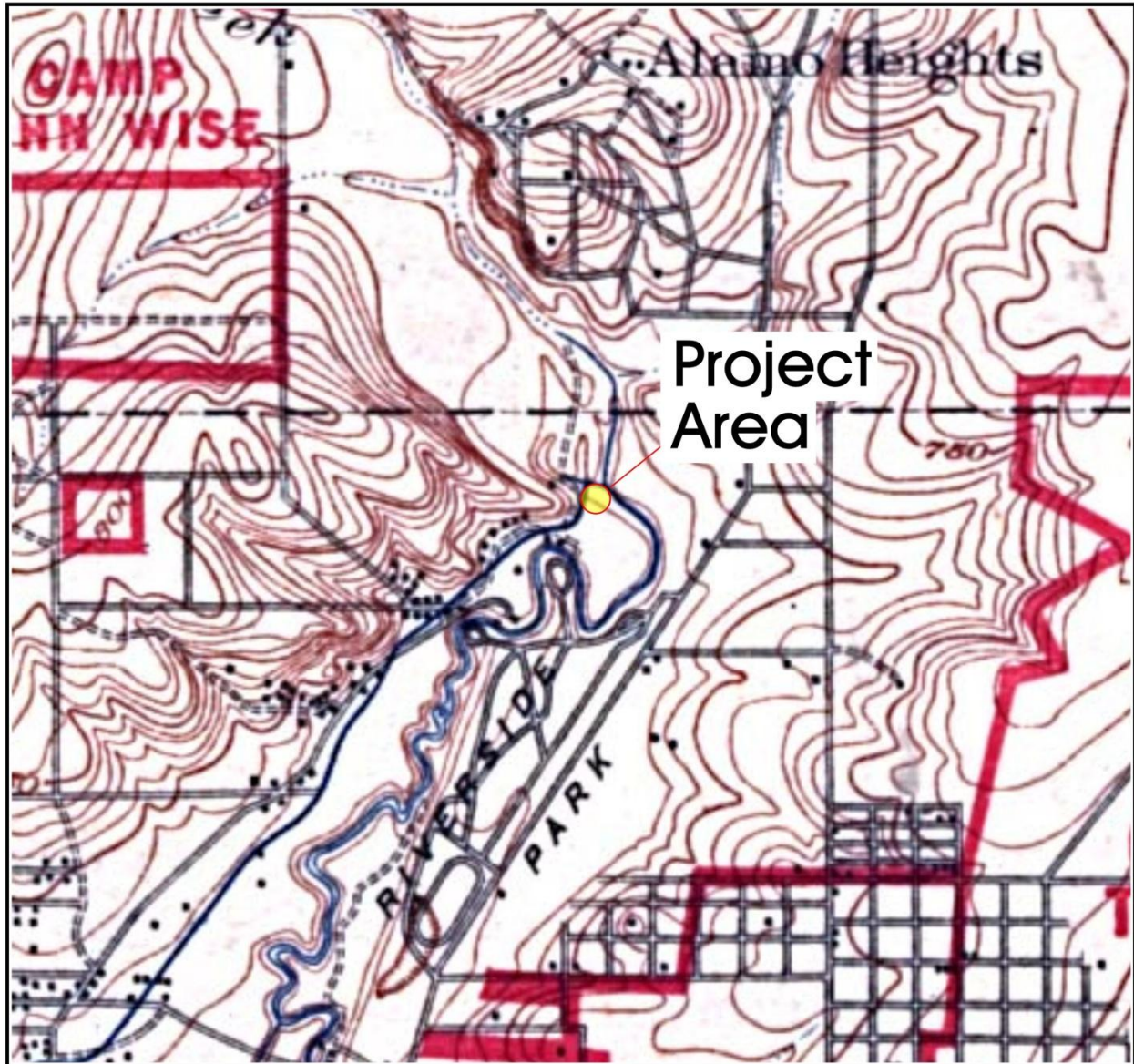


Figure 3-4. Current APE highlighted on a 1918 map of Brackenridge Park (Electronic copy on file, CAR).

An undated map, likely drawn in 1908 or later, of the Brackenridge Park area depicted all the additions that had occurred since the first designation of the property as a park (Figure 3-5). Inspection of the area of the Lily Pond does not reveal a feature that could be related to the stone alignment. As evident on the map, a path or road leads to the area of the Lily Pond and also splits off to cross over the Upper Labor Acequia and the millrace that lead to the Water Works pump house.





Figure 3-5. The current APE on a map of Brackenridge Park, circa 1908, that depicts the acquired parcels of land that make up the park (Electronic copy on file, CAR).

The 1926 map of Brackenridge and Koehler Parks shows a more detailed illustration of the headwaters of the River at Hildebrand Road (Figure 3-6). Three dams are depicted on this map just south of the current APE. The Lily Pond area seems to be the same as what is labeled as “Well” on this map. It is difficult to see if there is a feature that could be related, but there is a line on the 1926 map that potentially can be interpreted as something other than the riverbank. This map is more accurate with its depiction of the road leading into the park from Hildebrand. The road passed by the Lily Pond and a foot path, which had been created at this time, located between the road and the river.

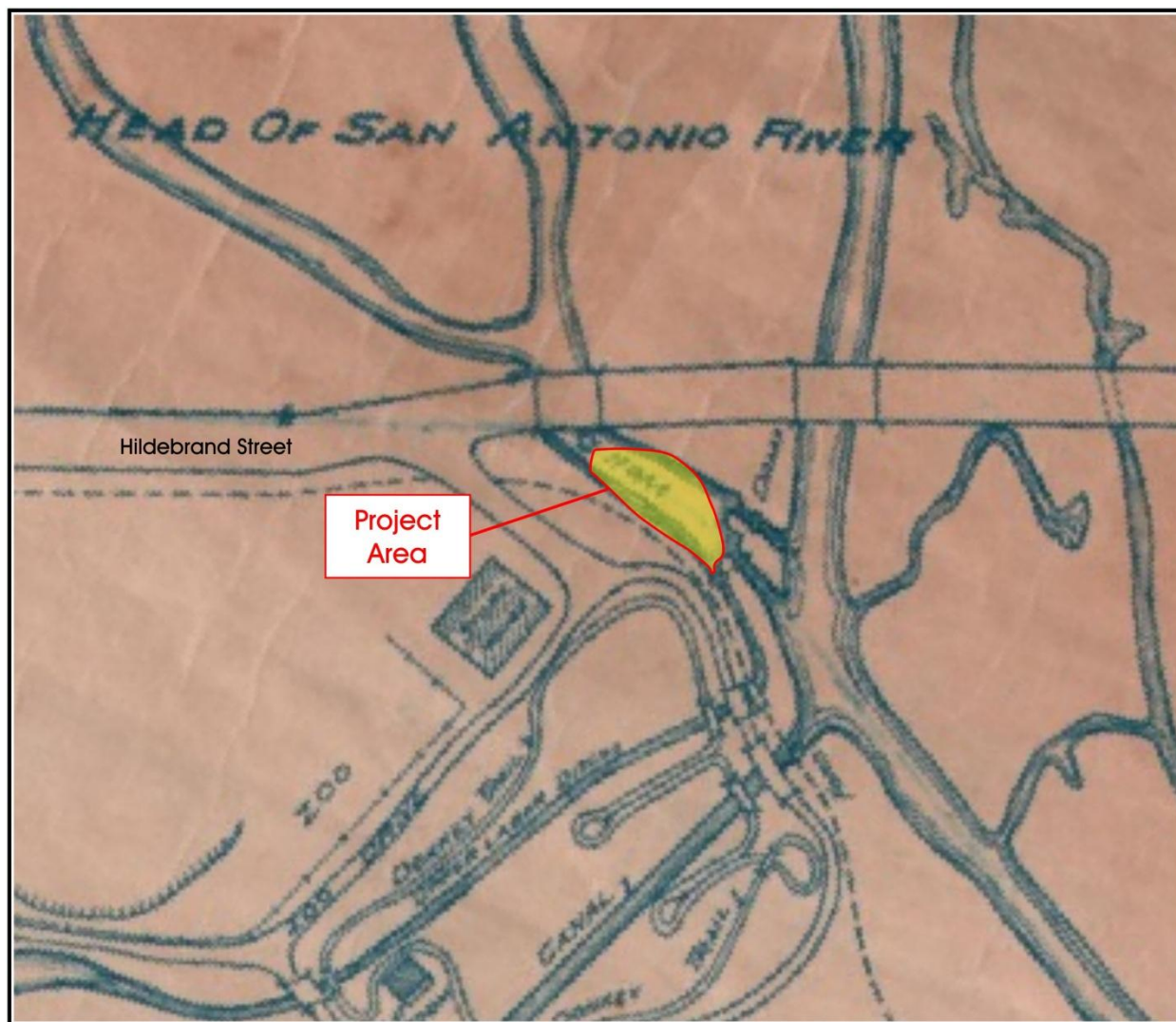


Figure 3-6. Detail of 1926 map, "Brackenridge and Koehler Park" (Electronic copy on file, CAR).

## **Chapter 4: Field and Laboratory Methods**

### **Field Methods**

To establish the orientation of the alignment of stones, a trench was excavated along the eastern (inside) edge of the alignment. The trench extended only to a depth of 0.3-0.45 m (1.0-1.5 ft.) below the surface. The goal was to establish the orientation of the stone alignment without exposing too much of the possible wall and precipitate undesired impacts from rapid drying or potential flood damage. The trench was to extend from the end of the alignment to the mouth of the reconstructed channel of the Upper Labor *Acequia* or along the entire length of the alignment if it terminated before reaching the southern edge of the Lily Pond. In addition to this north-south trench, a second trench was to be excavated at the north end of the alignment to expose the height of the possible wall.

### **Laboratory Methods**

All cultural materials (i.e., two samples of mortar) collected and records generated during the project were prepared in accordance with federal regulation 36 CFR Part 79 and Texas Historical Commission (THC) requirements for State Held-in-Trust collections. Additionally, the materials are curated in accordance with current CAR guidelines. Only two samples of mortar were recovered during the project and were processed in the CAR laboratory. Laboratory processing began by washing and subsequent air-drying. The mortar samples are stored in 4 ml zip locking archival-quality bags. Acid-free labels were placed into all artifact bags. Each label, which is generated by a laser jet printer, contains provenience information and a corresponding lot number. Field notes, field forms, and photographs were placed into labeled archival folders. Digital photographs were printed on acid-free paper, labeled with archive-appropriate materials, and placed in archival-quality plastic sleeves. All field forms were completed with pencil. Any soiled forms were placed in archival-quality page protectors. Ink-jet produced maps and illustrations were placed in archival-quality, plastic page protectors to prevent against accidental smearing due to moisture. All collected materials and project related documentation are permanently housed at CAR.



## **Chapter 5: Results and Recommendations**

On August 18, 2011, archaeologists from the Center for Archaeological Research monitored the excavation of backhoe trenches within the Lily Pond in Brackenridge Park. The trenches were to be located along the eastern edge of what was believed to be an unknown rock alignment within the pond. Prior to the excavation of the trench, archaeologists removed the brush from the portion of the Lily Pond thought to contain the alignment.

The trench was orientated in a north-south direction. The scope of work required the trench to be approximately 0.3 m (1 ft.) in depth, but the trench ended up being approximately 0.9 m (3 ft.) deep. The increase in depth was due to the fact that no evidence of a rock alignment was noted subsurface during the initial excavation of 0.3 m (1 ft.) below the surface. The trench was started on the east side of a limestone block that was exposed on the surface. Excavation of an approximately 3 m (10 ft.) long trench did not reveal any indication of a rock alignment. The project archaeologist had the trench widened to the west to cut closer to where the alignment was believed to be. When no indication of a rock alignment was noted in the widened trench, a new strategy was developed.

The project archaeologist asked the backhoe operator to stop work in the northern portion of the trench and open what would be the southern end of the trench. Large limestone blocks were noted on the surface in the southern portion adjacent to the southern wall of the pond, and the trench was opened up approximately 30 cm (12 in.) east of the stones. No evidence was noted in the profile of the trench that would indicate a dam or rock alignment. The soil in the southern portion of the trench consisted of fill material that had many glass bottles (Figure 5-1). The bottles dated to the 1970s and 1980s and consisted of soda (Pepsi, RC Cola, Sprite, Mountain Dew, and other varieties) and beer bottles (Michelob). Several pull tab cans were noted as well (Pepsi and Budweiser). The project archaeologist then had the trench expanded to the west to see if stones were present, but none were noted that were adjoined to one another.





Figure 5-1. *Bottles and modern material encountered in the southern portion of the trench.*

Since both the northern and southern portion of the trench appeared to have no evidence of a systemic alignment, the project archaeologist opted to cross-section the area that was believed to contain an alignment. This east-west running trench was located approximately 5 m (16 ft.) north of the south wall of the pond. The trench did not reveal any rock alignment (Figure 5-2). The fill noted in the southern portion of the initial north-south trench extended well into this area.





Figure 5-2. *Southern profile of the cross-section of the backhoe trench.*

In a final attempt to search for any buried rock alignment, it was decided to connect the two ends of the trench (Figure 5-3). In the process, two remnants of the original Lily Pond wall were encountered in the mid-portion of the trench. The larger fragment was approximately 2.05 m (6.7 ft.) in length (Figure 5-4). Approximately 1.75 m (5.7 ft.) of the second fragment was uncovered in the trench (Figure 5-5). Both fragments appear to have fallen into the pond (Figure 5-6). The wall is 30 cm (11.8 in.) in thickness, which is the same as the currently standing reconstructed portion running around the pond today. The location of the wall fragments within the pond coincides with areas of the wall that show cracks and repairs. These wall fragments are related to the original rock wall that, in all likelihood, was constructed during the WPA era.





Figure 5-3. Entirety of the backhoe trench excavated within the Lily Pond. Rock wall fragments were encountered in the mid-portion of the trench.



Figure 5-4. Fragment of the 1930s reconstructed Lily Pond rock wall encountered during backhoe trenching.





Figure 5-5. *Second fragment of the rock wall encountered while backhoe trenching in the Lily Pond.*



Figure 5-6. *Portion of the currently standing Lily Pond wall near the fragments that were encountered in the backhoe trench. Note the cracks that indicate the unstable nature of the current wall.*

The trench was backfilled at the completion of the project. No signs of a dam or rock alignment were noted during the course of the project. The rocks noted on the surface consisted of two styles. One resembled that which is similar to the rock wall that surrounds the pond. The second style was cut limestone block adjoined with mortar. These appear to not belong to the WPA era wall, but similar stones were noted in the base of the wall nearest the mouth of the *acequia*. They were not in situ and not associated with any feature. Due to the lack of a rock feature within the Lily Pond, CAR does not recommend any further investigations. The presence of the fallen rock wall was documented, and it should be noted that it likely represents the WPA-era construction within Brackenridge Park. All documents and photos associated with the project have been permanently curated at the Center for Archaeological Research. Besides two samples of mortar, no other cultural material was collected during the project.

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