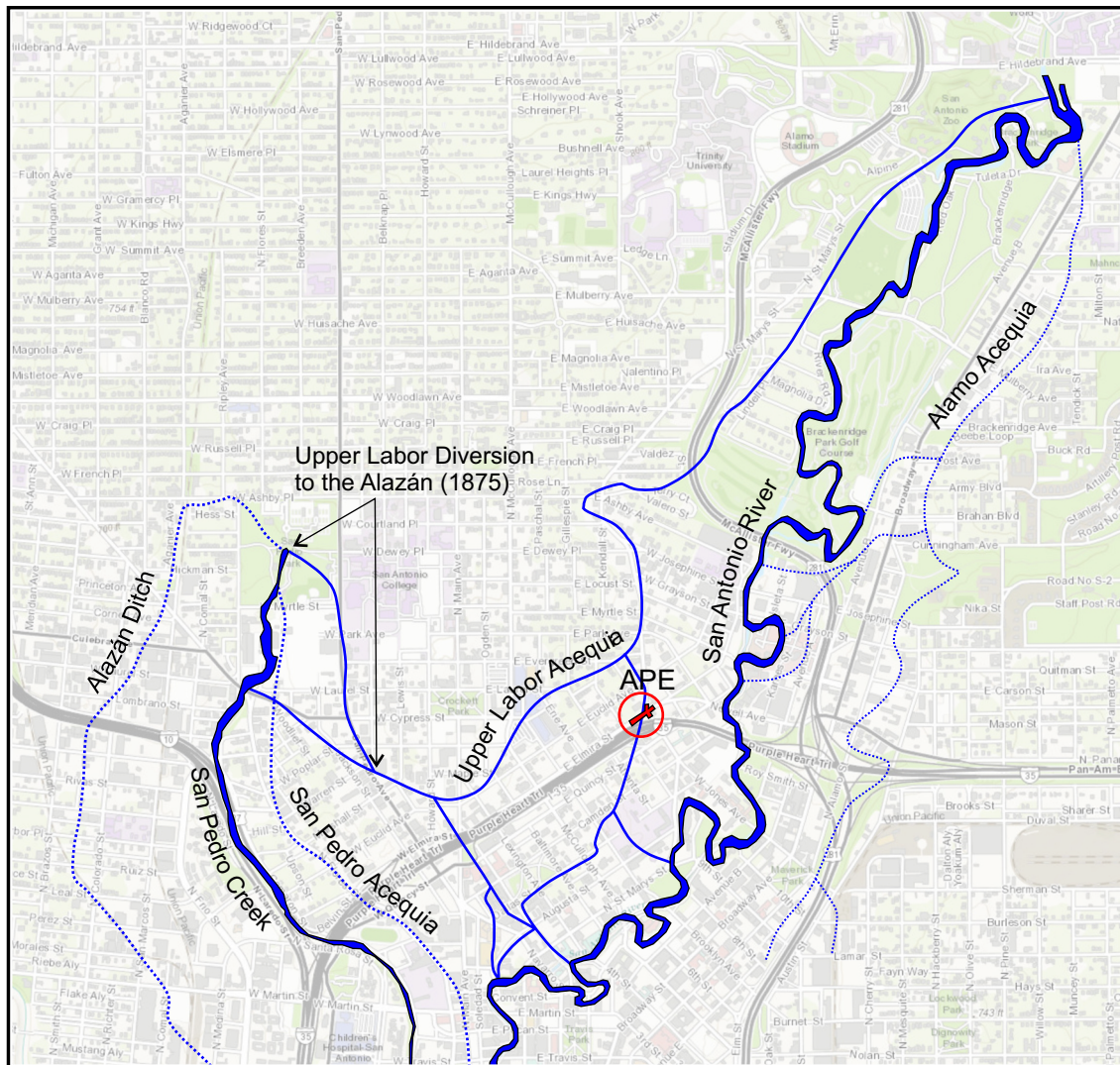


# Monitoring for the Upper Labor *Acequia* at the Intersection of East Elmira Street and North St. Mary's Street, San Antonio, Bexar County, Texas

by  
Leonard Kemp



Texas Antiquities Permit No. 7710

Principal Investigator  
Paul Shawn Marceaux

Prepared for:  
Adams Environmental, Inc.  
12018 Las Nubes Street  
San Antonio, Texas 78233



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Prepared by:  
Center for Archaeological Research  
The University of Texas at San Antonio  
One UTSA Circle  
San Antonio, Texas 78249  
Technical Report, No. 70



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## **Abstract:**

In March of 2017, The University of Texas at San Antonio's (UTSA) Center for Archaeological Research (CAR) conducted archaeological monitoring under contract with Adams Environmental, Inc. (AEI) for the City of San Antonio (COSA). This monitoring was related to the excavation and construction of a sewer manhole and sewer lines for the McCullough Avenue Drainage project. Because the project was conducted by the COSA, a political subdivision of the State of Texas, it warranted archaeological investigation under the Texas Antiquities Code and the City's Unified Development Code. Archaeological monitoring was conducted under Texas Antiquities Committee Permit No. 7710 with Dr. Paul Shawn Marceaux serving as the Principal Investigator and Leonard Kemp serving as the Project Archaeologist.

Based on historical maps and previous archaeology, it was believed that the Upper Labor *Acequia* (41BX2043) crossed at the intersection of East Elmira and North St. Mary's streets. This was designated as the Area of Potential Effect (APE). CAR archaeologists monitored excavations for the sewer manhole and line. The acequia or remnants of the acequia were not found, nor was any other cultural material observed during the monitoring. Based on these findings, CAR suggests that the acequia is no longer present within the APE. However, the Upper Labor *Acequia* or portions of it may still exist outside the APE; therefore, CAR recommends any future excavation that may impact other areas associated with the Upper Labor *Acequia* should be monitored.

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## Table of Contents:

Abstract.....	i
List of Figures .....	v
List of Tables .....	vii
Acknowledgements.....	ix
Chapter 1: Introduction .....	1
The Area of Potential Effect .....	1
Report Organization .....	2
Chapter 2: Historical Background of the Project Area .....	3
The Upper Labor <i>Acequia</i> .....	3
Tobin Hill .....	6
Previous Archaeology.....	7
Summary.....	8
Chapter 3: Field and Laboratory Methods .....	9
Field Methods .....	9
Laboratory Methods .....	9
Chapter 4: Results and Summary of the Field Investigation.....	11
Summary.....	12
References Cited .....	13

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## List of Figures:

Figure 1-1. The location of the APE on the San Antonio East USGS 7.5-minute series quadrangle map with the two proposed locations for the Upper Labor <i>Acequia</i> (blue: CAR; green: Cox 2005:19). Inset shows a 2016 aerial of the project area.....	2
Figure 2-1. The Upper Labor <i>Acequia</i> (solid blue line) and the APE.....	4
Figure 2-2. The 1912 Rullman map showing landownership relative to the Upper Labor <i>Acequia</i> and the APE. The Fuentes tract is in light green .....	5
Figure 2-3. Augustus Koch's 1886 <i>Bird's Eye View of San Antonio</i> . Project is at the intersection of Elmira and St. Mary's streets. The image also shows the Upper Labor <i>Acequia</i> , the Pearl and Lone Star Breweries.....	7
Figure 4-1. The APE (in red) prior to construction view from East Elmira to the east (Google Earth 2016) .....	11
Figure 4-2. Excavation for manhole (left). Soil profile of excavation showing clay with caliche (right).....	12
Figure 4-3. Excavation for sewer line showing evidence of previous construction (left). Image on the right shows a similar soil, clay with caliche, as observed during the manhole excavation .....	12

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## List of Tables:

Table 2-1. Previous Archaeology near the Project Area.....	8
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## **Acknowledgements:**

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# Chapter 1: Introduction

In March of 2017, The University of Texas at San Antonio's Center for Archaeological Research (CAR) conducted archaeological monitoring for the Upper Labor *Acequia* (41BX2043) under contract with Adams Environmental, Inc. (AEI) for the City of San Antonio (COSA). The COSA is defined as a political subdivision of the State of Texas. As such, COSA is required under the Texas Antiquities Code and the City's Unified Development Code Chapter 35 to consider the impact to known or potential archaeological sites and/or deposits and to mitigate those effects. The Texas Historical Commission (THC) granted Texas Antiquities Permit No. 7710 to Dr. Paul Shawn Marceaux, the Principal Investigator, to conduct the project. Leonard Kemp served as the Project Archaeologist.

The goal of archaeological investigation was to monitor for any historical properties or features that might be present in the project area, specifically the Upper Labor *Acequia*. The Upper Labor *Acequia* was built in 1776-1778 as an irrigation system for agricultural lands just north of Villa Bexar in present-day downtown San Antonio. The archaeological investigation was associated with the McCullough Avenue Area Drainage Project. Plans for the project included the construction of a water filtration system to improve the quality of storm water entering the San Antonio River (COSA 2016). The project also included infrastructure upgrades consisting of street widening, new sidewalks, and new gas, water, and sewer lines (COSA 2016).

## The Area of Potential Effect

The Area of Potential Effect (APE) was defined by the possible construction impacts to the Upper Labor *Acequia* crossing in the vicinity of East Elmira Street and North St. Mary's Street (Figure 1-1). The size of the APE was approximately 105-x-50 m (344.5-x-164 ft.) or approximately 0.18 hectares (0.44 acres). The width of the area varied from 10-12 m (32.8-39.4 ft.). CAR monitored below-surface construction activities associated with the installation of San Antonio Water System (SAWS) sewer manhole and lines within the APE. This construction was considered to be the most likely to encounter the acequia or its remnants.

Two possible acequia locations are shown on Figure 1-1. The first location is derived from Geographic Information System (GIS) data created from historic maps and documents compiled by CAR. The second location of the acequia is found in Cox (2005:19) and is identified on digitized maps of the acequia route produced by the COSA Office of Historic Preservation (COSA-OHP). The APE is presently an urban environment just north of the city center of San Antonio with Interstate 35 directly south of the APE (Figure 1-1, inset).



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*Figure 1-1. The location of the APE on the San Antonio East USGS 7.5-minute series quadrangle map with the two proposed locations for the Upper Labor Acequia (blue: CAR; green: Cox 2005:19). Inset shows a 2016 aerial of the project area.*

## Report Organization

This report documents the archaeological monitoring for the Upper Labor *Acequia* at East Elmira and North St. Mary's streets. It consists of four chapters, including this introductory chapter. The second chapter provides a brief history of the Upper Labor *Acequia* and the development of the area surrounding the APE. Chapter 3 presents the field and laboratory methods used by CAR to conduct this project. The final chapter presents the results of the fieldwork and a summary of the project.



## Chapter 2: Historical Background of the Project Area

The land surrounding the APE has been extensively modified in the last 100 years. The history of the project area is essentially that of change from farmlands to suburbs and then to an urban area. This chapter will begin with the history of the Upper Labor *Acequia* when the landscape was primarily farmlands. The second section describes the transition of the area to the suburban community known as Tobin Hill. The chapter concludes with previous archaeological sites recorded in the vicinity of the APE.

### The Upper Labor *Acequia*

The following is a brief summary of the Upper Labor *Acequia* (41BX2043). Additional information can be found in Cox (2005) and Cox et al. (1999). The Upper Labor *Acequia* was the last Spanish Colonial acequia built to serve San Antonio (Cox 2005). It was built to serve the agricultural land north of the city center. The construction of the Upper Labor *Acequia* began in 1776 and was completed in 1778 (Cox 2005). The main section of the acequia is approximately 9.48 km (45.6 miles) in length. It begins at the headwaters of the San Antonio River, goes southwest, skirts the “Loma de la Vieja” (identified by Corner [1890:49] as Tobin Hill), crosses the San Pedro *Acequia*, and empties into San Pedro Creek (Figure 2-1). Several subsections of the acequia empty into the San Antonio River. The Upper Labor *Acequia* served 78 lots (*suertes*) or approximately 242 hectares (600 acres; Corner 1890; Cox et al. 1999:1).

The acequia was managed by a 1784 edict of Domingo Cabello, Governor of Texas (1778-1786). The edict set a schedule for cleaning and general maintenance (Cox et al. 1999:6). This allowed the acequia to provide an adequate amount of water for the surrounding area for the next 100 years with the exception of the Mexican Revolution when the acequia was neglected (Cox et al. 1999:6)

The 1912 Rullman map (Figure 2-2) was created by John Rullman, who was the City Engineer, using a combination of old city and county maps over the then-current plan of the city (Rullman 1912). It shows ownership within the APE “granted to the priest’s” “Toribio de Fuentes” and “Pedro de Fuentes.” Toribio Fuentes supervised a portion of the construction of the Upper Labor and was compensated with extra land (Cox et al. 1999). Chabot (1937) lists Pedro de la Fuente(s) as the son of Toribio de la Fuente(s). He served as the parish priest of San Fernando serving from 1771 to 1790 (Wright 2010).

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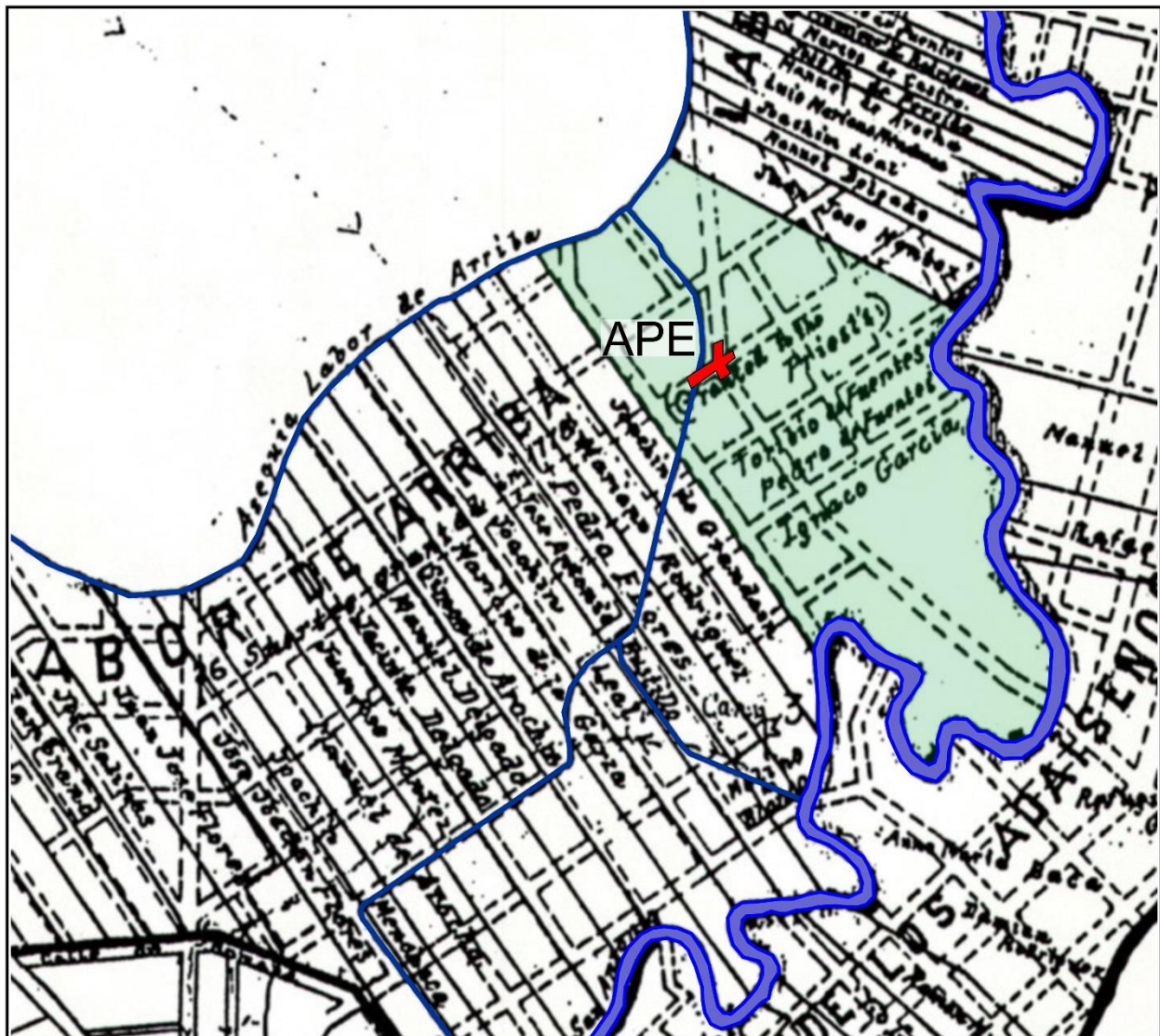


Figure 2-2. The 1912 Rullman map showing landownership relative to the Upper Labor Acequia and the APE. The Fuentes tract is in light green.

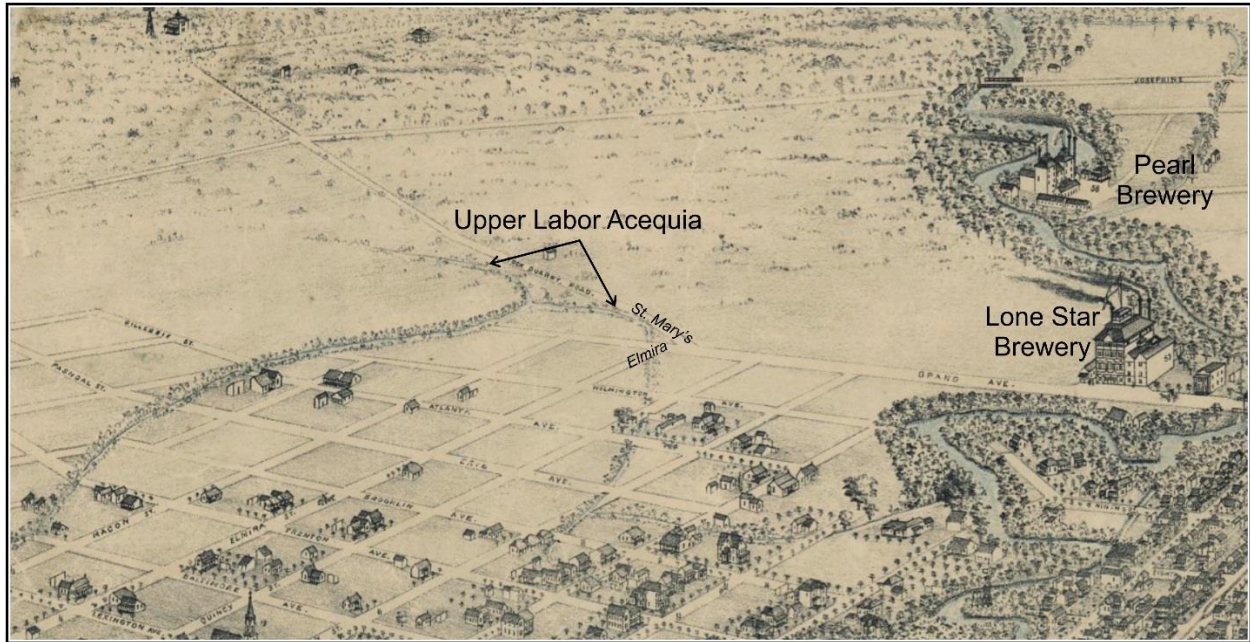
Urban modernization began in San Antonio in the late nineteenth century and included the development of an enclosed water and sewage system (Cox 2005). The acequia system, as a whole, was seen as a public health hazard and not effective as a drainage system (Cox et al. 1999). By 1904, all the acequias with the exception of Espada and San Jose acequias, were closed and filled in (Cox 2005).

## **Tobin Hill**

Tobin Hill, known during the Spanish Colonial era as the Loma de Viejo, is the de facto but unofficial name given to the area that encompasses the APE (COSA 2017). It was named this because members of the Tobin family settled in this area. The Tobins were and are a prominent San Antonio family (Gillespie 2010). Augustus Koch's *1886 Bird's Eye View of San Antonio* (Figure 2-3) shows the project area as it is just beginning to develop from farmland to a suburb of downtown. The Upper Labor *Acequia* is shown with streets and houses beginning to fill in what were once agricultural plots. Two major manufacturers and employers Pearl (1883) and Lone Star (1884) breweries are also shown in the 1886 Koch map. Lone Star would become the largest mechanized brewery in Texas (Hennech and Etienne-Gray 2016).

In 1890, streetcar service was extended to Tobin Hill (Watson 1982). Watson (1982) cites the streetcar system as a major factor in the development outside the city servicing suburbs such as Tobin Hill. Over a period of twenty years, commercial and residential development led to the building of schools, churches, and a hospital in Tobin Hill (COSA 2017). However, by the early 1950s, the Tobin Hill area was exhibiting decline as housing stock aged (COSA 2017). This downward trend was further exacerbated by the construction of Interstate 35 (1957-1964) disrupting existing businesses and cutting off the area from the downtown (Purcell 2016).

The decline began to reverse in the 1970s with the purchase of the Lone Star Brewery (Jones Avenue location) bought by the San Antonio Museum Association (San Antonio Museum of Art [SAMA] 2017). The brewery was renovated to house the art collection, and it opened in 1981 as the San Antonio Museum of Art (SAMA 2017). A blow to development was the closure of Pearl Brewery in 2001; however, the Pearl buildings and land were bought in 2002 with the goal of creating an urban and retail village. The revitalization of the "Pearl" in conjunction with the River Walk extension (see Figueroa et al. 2006) has fostered new investment and growth in the area.



*Figure 2-3. Augustus Koch's 1886 Bird's Eye View of San Antonio. Project is at the intersection of East Elmira and North St. Mary's streets. The image also shows the Upper Labor Acequia, the Pearl Brewery, and the Lone Star Brewery.*

## Previous Archaeology

A portion of the Upper Labor *Acequia* was first identified by the CAR in 1987 by Fox and Cox (1988) near the project area at North St. Mary's and East Myrtle streets. It was unlined and reached an approximate depth of 1.5 m (5 ft.) below the surface (Fox and Cox 1988). In 2010, Abasolo Archaeological Consultants (Shafer and Hester 2010) monitored the cleaning out of an existing 131-m (429.8-ft.) section of the Upper Labor *Acequia* between the San Antonio Zoo and Brackenridge Drive. The open portion of the acequia was stone-lined, most likely of twentieth-century origin (Shafer and Hester 2010; also see McKenzie 2017). CAR recorded the Upper Labor *Acequia* in 2014 as 41BX2043 in association with the Brackenridge Monitoring project (McKenzie 2017). The boundary of the acequia was confined to what was investigated in the park. In 2014, SWCA Inc. also identified a possible remnant of the Upper Labor *Acequia* at San Pedro Avenue and West Poplar Street (THC 2017).

In addition to these projects, other archaeological surveys have been undertaken in the area, such as the Museum Reach project along the San Antonio River (Figuerola et al. 2006). The following table lists and describes archaeological sites found in the approximate 1-km (0.62-mile) radius of the APE as reported on the Texas Site Atlas accessed July 2016. The majority of the sites are historic in origin with all but two associated with the use of the San Antonio River. These sites consisted of dam(s), a raceway for a mill, and a little-known acequia. Only four sites had a prehistoric component. One is listed as a village, and the other three consisted of lithic scatters.

Table 2-1. Previous Archaeology near the Project Area

Site	Name	Time Period	Site Type
41BX13	n/a	Prehistoric	village
41BX1817	Alamo Mills Dam	19th century	engineered structure
41BX1818	Lexington Avenue Dam (Hugman Dam)	20th century	engineered structure
41BX1899	n/a	Prehistoric	lithic scatter
41BX1913	n/a	Prehistoric	lithic scatter
41BX2072	Alamo Mills Raceway	19th century	engineered structure
41BX2129	Avenue C Electric Street Rail	19th century	engineered structure
41BX2123	n/a	Prehistoric/19th century	artifacts scatter with lithics
41BX2124	Navarro <i>Acequia</i>	Historic	engineered structure

## Summary

Based on historical maps, the Upper Labor *Acequia* is thought to cross the APE. This was the last acequia built in the Spanish Colonial-era and served the farmland known as the *Labore de Arriba* (the Upper Labor) from 1776 through the nineteenth century. In the late 1880s, the area encompassing the APE began to transition from farming to a suburb of San Antonio. Over the next 75 years, the area now known as Tobin Hill began to transform with an increase in housing, businesses, and public infrastructure. During the middle of the twentieth century, the area experienced decline as it aged, and the decline was made worse by the construction of the interstate system just to the south of the APE. However, the area has rebounded with the founding of the San Antonio Museum of Art in the former Lone Star Brewery and the Pearl, an urban residential and retail development at the site of the Pearl Brewery.

## **Chapter 3: Field and Laboratory Methods**

The CAR, in response to a request from AEI acting on behalf of the City of San Antonio conducted archaeological monitoring for the Upper Labor *Acequia* at the intersection of East Elmira and North St. Mary's streets, created a scope of work (SOW) to define procedures associated with this project. The SOW and procedures were approved by AEI, the COSA-OHP, and the THC. The following chapter presents the field and laboratory methods used to accomplish this work.

### **Field Methods**

Prior to the archaeological monitoring, CAR archaeologists initiated a background review of the project area and the Upper Labor *Acequia* in particular. A GIS data specialist constructed field maps of the APE with the proposed alignments of the acequia. Archaeological monitoring is defined for the current study as the identification during construction excavation of the Upper Labor *Acequia* or remnants of the acequia. In addition, if encountered, archaeologists would identify and document previously unknown archaeological deposits or features. The archaeologist completed a daily standardized form that included a description of the construction activity, the length of the trench monitored, and if applicable, the observation of features and/or deposits. This form was supported by digital photographs and, if appropriate, the collection of data points by a sub-meter accurate GPS unit. The CAR provided updates and summaries of all field activities to AEI and COSA-OHP.

### **Laboratory Methods**

No cultural materials were collected during the monitoring. The records generated during the project were prepared in accordance with federal regulation 36 CFR part 79 and THC requirements for State Held-in-Trust collections. Digital photographs were printed on acid-free paper, labeled with archival appropriate materials, and placed in archival-quality sleeves. All field forms were completed with pencil. All field documentation was printed on acid-free paper and placed in an archival folder. A copy of the report was printed on acid-free paper, and all digital data associated with the investigation and analysis were transferred to an archival-rated computer disk. The report and the computer disk are stored in an archival box and curated with the field notes and documentation. Upon completion of the project, all collected materials and records were permanently curated at CAR, a state-held-in-trust facility.

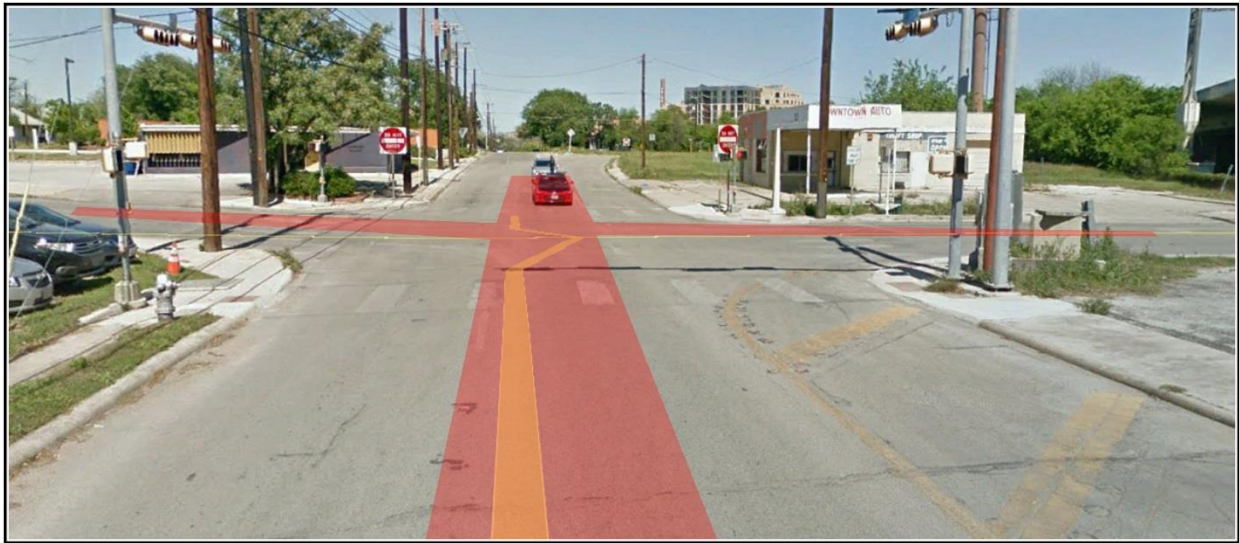


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## Chapter 4: Results and Summary of the Field Investigation

The CAR conducted monitoring of the McCullough Avenue Drainage APE from March 3-31, 2017. Figure 5-1 shows the intersection of East Elmira Street and North St. Mary's Street prior to the beginning of excavation. The work commenced with the excavation for the manhole to a depth of 3.9 m (13 ft.; Figure 4-2, left). An archaeologist observed utilities approximately 1.8 m (6.0 ft.) below the street level noting the impact to this portion of the APE (Figure 4-2, right). Soil consisted of clay with caliche. The acequia or remnants of the acequia were not observed nor was any other cultural material found.



*Figure 4-1. The APE (in red) prior to construction view from East Elmira Street to the east (Google Earth 2016).*

The remainder of the project consisted of excavation for the sewer line along East Elmira and North St. Mary's streets that would tie into the manhole. CAR archaeologists were on site to monitor excavation as requested for 14 days beginning March 7, 2017. During monitoring, existing utilities and poor soil conditions were encountered that caused construction delays and, in turn, increased the length of monitoring (Figure 4-3, left). The presence of previous utilities was not unexpected. The 1912 Sanborn map of San Antonio shows a 25.4-cm (10-in.) waterline in the APE on East Elmira Street crossing the intersection of what would be North St. Mary's Street and another 25.4-cm (10-in.) line on North St. Mary's Street (Sanborn 1912). Soils that were relatively undisturbed consisted of clay and caliche (Figure 4-3, right). Excavation for the sewer line ranged from 2.7 m (9 ft.) to 3.9 m (13 ft.) in depth. No cultural material or evidence for the acequia were observed during the excavation for the sewer lines.



*Figure 4-2. Excavation for manhole (left). Soil profile of excavation showing clay with caliche (right).*



*Figure 4-3. Excavation for sewer line showing evidence of previous construction (left). Image on the right shows a similar soil, clay with caliche, as observed during the manhole excavation.*

## Summary

CAR archaeologists monitored the excavation for a sewer manhole and connecting sewer lines in the McCullough Avenue Drainage APE, specifically to look for the Upper Labor *Acequia* or its remnants. Archaeologists observed an area highly disturbed by previous construction that may have impacted the acequia. The acequia or remnants of the acequia were not found, and no cultural material was observed during the monitoring. Based on these findings, the CAR suggests that the acequia is no longer present within the APE. However, the Upper Labor *Acequia* or portions of it may still exist outside the APE; therefore, any future excavation that may impact other areas associated with the Upper Labor *Acequia* should be monitored.

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