Archaeological Monitoring and Limited Testing for Recent Development in Hemisfair Park, San Antonio, Bexar County, Texas

by

José E. Zapata, Antonia L. Figueroa, C. Stephen Smith, and Clinton M. M. McKenzie

Texas Antiquities Permit No. 7118

NON-REDACTED

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Center for Archaeological Research
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One UTSA Circle
San Antonio, Texas 78249
Archaeological Report, No. 456

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Abstract:

In response to a request from the City of San Antonio (COSA), and under contract with Poznecki-Camarillo, Inc. (PCI) and Adams Environmental, Inc., the Center for Archaeological Research (CAR) of The University of Texas at San Antonio (UTSA) conducted archaeological monitoring and limited testing for three redevelopment projects at Hemisfair Park between January 2015 and February 2017. These investigations followed monitoring and test excavations previously conducted by Prewitt and Associates in 2014 and an extensive archival report from 2013 (Dase 2013; Fields and Dase 2014; Fields et al. 2015).

The project area intersects or is adjacent to four historic districts or proposed historic districts. The La Villita Historic District and Lavaca Historic District are listed on the National Register of Historic Places (NRHP) and the River Walk Historic District is eligible for the NRHP. The HemisFair '68 Historic District was recently recommended as eligible for the NRHP (Dase 2013:65). All four are also local historic districts. Archaeological services were in response to a request for full-time monitoring of subsurface excavations with the potential to impact significant archaeological resources within the project area. Given the project area is primarily COSA-owned property, the project fell under the COSA Unified Development Code (Article 6 35-630 to 35-634). The project also required regulatory review by the Texas Historical Commission (THC) under the Antiquities Code of Texas. Work was conducted under Texas Antiquities Permit No. 7118. Dr. Raymond Mauldin was Principal Investigator until July 2015, when Dr. Paul Shawn Marceaux took over the role. Stephen Smith, Antonia Figueroa, and José Zapata served as Project Archaeologists.

The work covered in this report involved three related subprojects: Yanaguana Garden, Historic Homes, and Internal Streets. The project area was originally part of the Labores de Valero, or the farmlands of Mission San Antonio de Valero. Some 250 years later, the area was the setting for the San Antonio World's Fair, commonly known as HemisFair or HemisFair '68. The earliest archaeological evidence identified during these investigations was the Spanish Colonial Acequia Madre de Valero (41BX8), also known as the Acequia del Alamo, the irrigation canal that provided water for the mission pueblo farmlands. CAR staff also documented features associated with early residences constructed in the 1850s, as well as structural remnants and features related to later nineteenth- and twentieth-century occupations.

Work on the different subprojects often occurred concurrently, and archaeologists documented numerous historic-period features within the 8.8-acre Area of Potential Effect (APE). CAR staff revisited several previously recorded sites and recorded three new historic home sites (41BX2123, 41BX2124, and 41BX2246). CAR recommends none of the newly recorded sites are eligible for listing on the NRHP or as a State Antiquities Landmark (SAL). The most significant result was the location of extant parts of the Acequia Madre de Valero (41BX8), along the north and south end of the project area. CAR recommends these existing sections of the Acequia Madre de Valero (41BX8) are eligible to the NRHP and as a SAL.

Wide-ranging past development projects and construction activities have disturbed and/or caused substantial impacts across the project area. However, current work demonstrated that some undisturbed areas with intact archaeological features remain. Importantly, significant cultural resources persist at depths of less than 12 inches (in.) below the surface. CAR recommends avoiding ground disturbance in undisturbed areas and in the areas with known historic resources. This is especially true along the path of the *acequia*, which is now clearly marked by paving stones at the south end. If ground disturbance is unavoidable, then CAR recommends monitoring excavations or a comprehensive systematic effort to recover significant data.

All records generated during the project were prepared in accordance with federal regulations 36 Code of Federal Regulations (CFR) Part 79 and THC requirements for State Held-in-Trust collections. In consultation with the THC, subsequent to proper analyses and/or quantification, artifacts possessing little scientific value will be discarded pursuant to Chapter 26.27 (g)(2) of the Antiquities Code of Texas.

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Acknowledgements:

The project took more than two years to complete and involved numerous organizations and staff who contributed to its successful completion. Ross Fields and Amy Dase of Prewitt and Associates, Inc. began the archaeological fieldwork in mid-2014 and were very generous in sharing the results of their research. We are very appreciative of the construction staff of Jerdon Enterprises, Joeris General Contractors, and Stoddard Construction. Providing project oversight were Sable Kitchen and Brian Gottschalk of Adams Environmental, Inc. and Jackie Lopez and Lena Camarillo of Poznecki-Camarillo, Inc. (PCI). We also would like to thank Gary Boyd and Roger Tavares of the Hemisfair Park Area Redevelopment Corporation (HPARC).

We are grateful to Jennifer DiCocco, Celine Finney, Zane Dunnam, Alan Lopez, and Emilio Gonzalez of the City of San Antonio's Department of Transportation and Capital Improvements (TCI). Kay Hindes of the City of San Antonio's Office of Historic Preservation (OHP) and Mark Denton of the Texas Historical Commission (THC) were always accessible and provided exceptional guidance.

Tom Shelton and Carlos Cortez of the UTSA Institute of Texan Cultures Special Collections were very helpful in our research efforts. Center for Archaeological Research (CAR) field staff were Lindy Martinez, Jason Perez, Sarah Wigley, Colt Dresser, and Alex McBride. Karlee Jeffery, Andrea Thomas, and Melissa Eiring completed laboratory processing and analysis. Cindy Munoz, Leonard Kemp, Dr. Jessica Nowlin, Laura Carbajal, and Katherine Smyth provided Geographic Information System (GIS) and digital imaging support. CAR staff who contributed to the preparation of this report were Dr. Raymond Mauldin, Antonia Figueroa, José Zapata, and C. Stephen Smith. Patty Sanchez and Mary Jane Chavarria provided the ever-important administrative support. Dr. Kelly Harris and Dr. Paul Shawn Marceaux reviewed, edited, and produced the final draft.

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Chapter 1: Introduction

C. Stephen Smith

The Center for Archaeological Research (CAR) of The University of Texas at San Antonio (UTSA), in response to a request from the City of San Antonio (COSA), and under contract with Poznecki-Camarillo, Inc. (PCI) and Adams Environmental, Inc., monitored construction activity and conducted limited testing within Hemisfair Park in San Antonio, Bexar County, Texas (Figure 1-1). Construction work was part of the first phase of a multi-phase redevelopment project in Hemisfair Park. CAR involvement in the project began in January 2015, and fieldwork concluded in February 2017.

The majority of land holdings within the project area are property of COSA and/or dedicated rights-of-way for the municipally owned CPS Energy (CPS) or San Antonio Water System (SAWS). As public municipal property, any

Figure 1-1. The project area in downtown San Antonio, Bexar County, shown on Esri aerial imagery, NAD 83 UTM Zone 14N.

undertakings that might affect archaeological or historical sites are subject to regulatory review. At the municipal level, the property falls under COSA's Unified Development Code (Article 6 35-630 to 35-634). The project also required review by the Texas Historical Commission (THC) under the Antiquities Code of Texas. CAR conducted the work summarized in this report under Texas Antiquities Committee Permit No. 7118. Dr. Raymond Mauldin was Principal Investigator until July 2015, when Dr. Paul Shawn Marceaux assumed that role. C. Stephen Smith, Antonia Figueroa, and José Zapata served as Project Archaeologists for Yanaguana Garden, Historic Homes, and Internal Streets, respectively.

Area of Potential Effect and Land Use

The project area was an irregular-shaped, roughly quadrilateral tract of land in the southwest quadrant of Hemisfair Park (Figure 1-1). South (S.) Alamo Street, East (E.) Nueva Street, Hemisfair Way, and East (E.) César Chávez Boulevard delimit the 8.8-acre tract, which includes all of New City Blocks (NCB) 127, 889, and 890, and a small part of NCB 144. The project consisted of three subprojects: Yanaguana Garden, Historic Homes, and Internal Streets. The boundaries of these subprojects served as Areas of Potential Effects (APEs) and are shown in Figures 1-2, 1-3, and 1-4.

Figure 1-2. Yanaguana APE on Esri aerial imagery, NAD 83 UTM Zone 14N.

Figure 1-3. Historic Homes APE on Esri aerial imagery, NAD 83 UTM Zone 14N.

It is noted here that Goliad Street, as it appears on the varied Sanborn Insurance maps, was previously known as Camino de la Bahia. The street's name was changed in 2016 and is now known as E. Nueva Street, but in some instances, Goliad Street is used in this report. Water Street was also changed in 2016 and is now Hemisfair Way. To facilitate discussion, and better align with historical documents, Goliad Street and Water Street are still used in this report.

The area that made up these APEs was originally part of the Labores de Valero, or the farmlands of Mission San Antonio de Valero (see Chapter 2). These farmlands supported the mission and associated pueblo. The mission polity held these lands in common, and mission neophytes provided the labor for farming. The earliest archaeological evidence identified during these investigations was the Spanish Colonial Acequia de Valero (41BX8), the irrigation canal that provided water for the farmlands of the mission pueblo. The Camino de la Bahia was also part of the project area and ran along the alignment of modern day E. Nueva Street. This Camino Real, or Royal Road, led to the Presidio de la Bahia and mission of Nuestra Señora de la Bahia in modern day Goliad, Texas. CAR staff also documented features associated with the early residences constructed in the 1850s, as well as structural remnants and

Figure 1-4. Internal Streets APE on Esri aerial imagery, NAD 83 UTM Zone 14N.

features related to later nineteenth-century occupations. The subsequent discussions of land divisions describe how alignments of the streets are influenced in large measure by the *acequias* that bracketed the area (see Chapter 2).

Most of the larger lots in the project area were subdivided into smaller lots for residential sale by 1875. Over the next 75 years, the area experienced growth and change similar to that in the urban cores of most major cities in the United States. This transformation included the encroachment of commercial interests at the expense of residential properties and urban flight to the suburbs.

The single greatest change in the project area is directly associated with the 1968 World's Fair (see Chapter 3). This led to the change from residential and commercial use to municipal functions. The San Antonio World's Fair, commonly known as HemisFair or HemisFair '68, was

planned to commemorate the 250th anniversary of the city's founding, as well as showcase municipal, state, and national interests (Dase 2013:23). The fair included a permanent site to honor the city's cultural heritages and focused on the "Confluence of Civilizations in the Americas" (Texas State Historical Association [TSHA] 2010).

In advance of HemisFair '68, the historic street grid was altered, and numerous buildings were removed or relocated. Twenty-two (22) historic structures were preserved in HemisFair with a majority residing in the "Historic Triangle" (Fisher 1996:305). HemisFair '68 is notable for several firsts among World's Fairs. It was the first World's Fair in the U.S. Southwest, the first in the downtown area of a large city, the first incorporated into a downtown urban renewal plan, and the first to integrate historic buildings into the fair (Huxtables 1968). The Woman's Pavilion also marked the first World's Fair exhibit devoted to the contributions of women (Dase 2013:30).

Recent Redevelopment and Documented Historic Resources

Over the last 50 years, numerous redevelopment plans have continued the shift toward municipal-focused development and use of the Hemisfair Park area. In 2012, the Hemisfair Park Area Redevelopment Corporation (HPARC), a local government organization that manages the park and revitalization plan, published the Hemisfair Park Area Framework and Master Plan (HPARC 2012). This plan drove the current project, which included new large-scale park amenities, a new hotel site, and mixed-use development. The plan conveyed goals for future development and laid out specific principles for historic preservation. Relevant to the current project, the framework principles included:

- Preserve, renovate, and reuse the historic structures and historic site features;
- Reflect and celebrate the layers of history on the site;
- Re-instate Goliad Street (E. Nueva Street) as a central street and restore the historical street grid, reflecting to the degree possible the original street grid from pre-1968 and helping to restore some of the historic context of the surviving structures to help clarify their meaning;
- Use the tradition of the *acequia* to help organize the site and recall its origins; and
- Use water features as form-defining elements in the community (HPARC 2012:12).

Additionally, as part of the organization's logo and branding, the HPARC Board of Directors voted in favor of using "Hemisfair" without the capital "F" (HPARC 2012). The ensuing narrative will use HemisFair to distinguish between the 1968 World's Fair and the post-2012 branding by HPARC.

Prior to CAR's fieldwork and current investigations, Prewitt and Associates, Inc. (PAI) completed an archaeological background report for the S. Alamo Street and E. César Chávez Boulevard improvements (Fields and McWilliams 2012). The PAI team also completed an extensive historical resources study for the project area (Dase 2013). The PAI study included a comprehensive file search, literature review, and development of a research design. The file search and literature review identified many historically significant properties with national, state, and local designations within the project area (Dase 2013:Table 1).

Notably, the current APE intersects or is adjacent to four historic districts. The La Villita Historic District and Lavaca Historic District are listed on the National Register of Historic Places (NRHP), and the River Walk Historic District is eligible for the NRHP. The HemisFair '68 Historic District has not yet been comprehensively documented and evaluated, but PAI's recent research recommended it as eligible for the NRHP (Dase 2013:65). All four have a local historic district designation. In and around these historic districts are 38 listed and 51 eligible National Register properties (Dase 2013:90). Twelve (12) previously recorded archeological sites exist within the APE, including 10 extant structures, a historic trash pit, and the Acequia Madre de Valero (41BX8). A detailed summary of these districts based on the submitted nominations and eligibility determinations is available in the PAI study (Dase 2013).

Project History

Yanaguana Garden

The proposed Hemisfair Yanaguana Garden, also known as the Play Escape, was designed to be a recreational outdoor area that produces a rich and diverse experience in a context that incorporates the art and culture of San Antonio, the backdrop of Hemisfair, and the San Antonio River, historic springs, and the Spanish Colonial *acequia* (HPARC 2012). CAR staff monitored 12 work tasks in the Yanaguana Garden APE from January to September 2015, during which CAR staff documented 18 features. A section of the Acequia Madre de Valero (41BX8) and a late nineteenth-century privy were the most significant of the finds.

Historic Homes

CAR provided archaeological services in the Historic Homes APE from January 2015 through April 2015. Working ahead of infrastructure improvements, CAR archaeologists conducted limited testing at the Smith House (41BX589) and monitored trenching activities of a mini-excavator and hand digging around the entire perimeter of the house. CAR

also monitored grading and excavations for a lean-to addition at the rear of the Smith House. At the Espinoza House (41BX593), CAR staff performed 27 shovel tests prior to the augering for deck piers northwest of the structure. Seventeen (17) shovel tests were positive for cultural material. CAR monitored trenching for the installation of plumbing at the Koehler House (41BX592), the Halff House (41BX578), and the Kampmann-Halff House (41BX586), and archaeologists monitored excavations related to the installation of sump pumps in the basements of the aforementioned houses. On the west side of the Pereida House (41BX591), CAR staff excavated a 20-x-20 in. test unit on the south side of a concrete structure with a hand pump to determine if the structure was a cistern or well. Archaeologists recovered a small number of artifacts during these investigations.

Internal Streets

The majority of the streets in the project area have had one or more names applied to them in the past 250 years. It will be the convention of this report to utilize the current name of each street. When any given street is first mentioned in the report, reference to its former names and associations will be discussed. From that point on, only the current name will be utilized.

Over a period of 26 months, January 2015 to February 2017, CAR staff was involved in the monitoring of extensive ground disturbance related to the installation of utilities and landscaping along Hemisfair Way and E. Nueva Street. The work along these streets involved trenching and the installation of storm drains, water lines, gas lines, and duct banks for transmission cables. All of these utility lines included a series of laterals. Additionally, contractors removed trees from their locations along Hemisfair Way and transplanted them to E. Nueva Street and the S. Alamo Street intersection. Thirteen (13) features were recorded within the Internal Streets APE, with the most significant being the Acequia Madre de Valero (41BX8). No artifacts were collected during monitoring of Internal Streets.

Report Overview

The following report consists of nine chapters and two appendices. Chapter 2 follows this introduction and provides a synthesis of the natural setting and cultural history of the area. This includes a discussion of land assembly and historic land use, as well as the organizing impact of the Acequia Madre de Valero (41BX8) on subsequent land divisions and street patterns in the project area. Chapter 3 presents a detailed account of HemisFair ’68 and associated development. Chapter 4 reviews the previous archaeology conducted in the immediate area of the APE, and Chapter 5 presents the field and laboratory methods used on this project. Chapters 6, 7, and 8 provide the results of the monitoring and testing of the Yanaguana Garden, Historic Homes, and Internal Streets, respectively. Chapter 9 summarizes the work on the project and offers a series of recommendations.

Close to two years transpired over the course of this project. The appendices serve to underscore the depth of history in the project area and the transformative efforts of the project as it relates to Hemisfair Park and its historic properties. Appendix A features a number of the historic buildings that received attention during this project. Historic photos are included along with recent comparative photographs of the properties. Appendix B is a collection of work-in-progress photographs with present-day views of the same locations.

Chapter 2: Environmental Setting and Cultural History

Clinton M. M. McKenzie and C. Stephen Smith

Environmental Setting

This section presents an overview of the San Antonio environment, with a focus on the downtown area. The nearest body of water to the project area is the San Antonio River, which is approximately 1,300 ft. to the west. This channelized portion of the river is part of the famous San Antonio River Walk. The riverbanks are surrounded by commercial structures; therefore, much of this area has been disturbed by utilities and large construction efforts. The natural soils are a Branyon Clay (HtB) with clay that varies from 20-80 in. in thickness (Natural Resources Conservation Service 2016). Vegetation, mostly in the form of trees, was planted during the original construction of the HemisFair in 1968.

The San Antonio region is described as a moderate, subtropical, humid climate with generally cool winters and hot summers (Norwine 1995; Taylor et al. 1991). The monthly average temperature in San Antonio between 1980 and 2010 varied between 51°F and 83°F. The average annual temperature in San Antonio for this period was 69.5°F (National Oceanic and Atmospheric Administration [NOAA] 2016). The warmest months are July and August, while the coolest are December and January. Annual rainfall peaks in May and June with smaller peaks occurring in the fall months of September and October. The driest period occurs from winter to early spring in the months of December through March, with each month averaging less than 2.5 in. of precipitation (NOAA 2016).

Cultural History and Historic Background

This section does not recapitulate the full archival history of all the subject lots within the project area, as the majority of the properties have been addressed in previous archaeological and architectural studies (Cox and Fox 1983; Dase 2013; Fox and Cox 1990; Johnson and Cox 1995; Johnson et al. 1997). This cultural history and historic background is divided into three parts. The first part consists of a broad discussion of the various chronological periods representative of cultural materials and features previously identified or recently recorded within the project area. The second part examines the land use and land assembly history for the combined APE, including a detailed discussion of the Acequia Madre de Valero, (Acequia del Valero) or Alamo Ditch, and its organizing impact on subsequent land divisions and street patterns. Additionally, a brief discussion on the Camino de la Bahia, or the Old Goliad Road, is also presented. The third section connects and expands on lot histories and prior archaeology as related to features and cultural materials encountered in the current work.

Chronological Periods

For purposes of this report, the Historic period is divided into the Proto-historic period (AD 1528-1700), the Colonial/Mission period (1700-1821), the Mexican period (1821-1836), and the Republic of Texas to the close of the nineteenth century (1836-1900). Part of the discussion from the Colonial/Mission period and the Mexican period is adapted from McKenzie and colleagues (2016).

As no prehistoric cultural materials were observed during the current project, they are not discussed in this report. For a detailed discussion of the prehistory of the San Antonio area, readers are encouraged to review Collins (2004), Hester (2004), Kenmotsu and Boyd (eds., 2012), and Munoz and Mauldin (2011). Additionally, historic materials that post-date 1900 are not specifically discussed, although they are present in some abundance within the project area. These materials relate to periods already well documented in the archaeological record or of such a recent age as to warrant brief mention and no other specific treatment.

Previous testing conducted for the project demonstrated that a significant portion of the project APE was disturbed to a depth of 2-5 ft. from a combination of factors (Fields et al. 2015). This included filling the Acequia Madre de Valero in the early twentieth century, the demolition of buildings and land leveling for HemisFair ’68, and the construction and demolition of temporary building and landscape modifications following the fair. These prior investigations concluded that most traces of human activity on the original ground surface (including Native American occupation) has disappeared (Fields et al. 2015:16).

Proto-historic Period (1528-1700)

Generally, the Proto-historic period in Texas corresponds with the advent of the shipwrecked survivors of the Pánfilo de Narváez Spanish expedition in 1528 along the Texas shoreline near Galveston, Texas. The leader of the survivors, Àlvar Núñez Cabeza de Vaca, lived among the Native Americans of the Texas Coast and Central Texas for nearly seven years (Bannon 1972:xii-xiii). Additional early Spanish accounts of Texas come from the survivors of the Hernando de Soto expedition under Luis de Moscoso who entered Texas in 1541-1542 from the northeast and made it as far as the Brazos River in the vicinity of Waco, Texas, before returning to Arkansas and Louisiana. During this period, Francisco Vázquez de Coronado’s expedition also

entered Texas from the northwest in his search for the Seven Cities of Cibola (Bolton 1949:355-356; Chipman 1992:40). Neither expedition entered into South Central Texas. The Proto-historic period ends with the European settlements established at the close of the seventeenth century along the Lower Rio Grande and the Spanish colonizing efforts in northeast Texas beginning in 1685 (Chipman and Joseph 2010; Weddle 1968). Archaeological evidence of Native American and European contact is scant (Thoms and Ahr 1995). Therefore, most of what is known about the period comes from written European accounts.

Colonial/Mission Period (1700-1821)

This period began with the founding of permanent missions in South and Central Texas. In San Antonio, the Spanish founded the Presidio San Antonio de Bexar, the Villa de Bexar, and Mission San Antonio de Valero in 1718 followed two years later with the founding of Mission San José y San Miguel de Aguayo some 2.5 miles south of San Antonio de Valero. Three additional missions were relocated to San Antonio from East Texas in 1731, bringing the total number of mission pueblos to five. In addition to the five missions, a colonial enterprise of Canary Islanders arrived in 1731, contributing to the permanent Spanish presence in Central Texas.

Missions in San Antonio were on the decline by the close of the 1700s. Falling population totals and several epidemics, including small pox and measles, hastened this decline (Ewers 1973). Secularization of the missions began in 1794 and was effectively complete by 1824 when they ceased operation as separate political entities (Carlson 1994; Cox 1997, 2005b). Contemporaneous with the decline of the mission system, civilian settlements in Texas began to increase along with the demands on the Spanish Crown for support and defense. By the close of the eighteenth century, the numerous tensions between Royalist Spain and its colonies in the New World increased with a number of rebellions against the Spanish Crown and cries for independence. In Texas, initial rebellions began in 1810, leading to the Royalist victory at the Battle of Medina in 1813. Rebellion at the national level was ultimately successful when Mexico became independent in 1821, essentially ending Spanish Colonial rule (Henderson 2009; McKenzie et al. 2016).

Mexican Period (1821-1836)

Texas, as a whole, and San Antonio, in particular, were underpopulated at the time of the Mexican Revolution. Low population was directly associated with the rebellion of 1812 and its aftermath when General Arredondo took reprisals on rebels and their families across the state. San Antonio lost nearly 40 percent of its population at that time. Mexico attempted to address the problem of low population by enacting laws and constitutional provisions in the early 1820s that encouraged new settlement, in particular from the United States (Cox 1997). Following Antonio Lopez de Santa Anna's usurpation and dismantling of the liberal constitution of 1824, the revolt in Texas began in earnest in 1834. In response, Santa Anna dispatched troops under Martín Perfecto de Cos to deal with the insurrection in San Antonio, which he and his troops occupied in October of 1835. Texas insurrectionists besieged Cos in San Antonio beginning December 5, 1835, and Cos was defeated and forced to surrender on December 10. He subsequently withdrew his forces south towards Laredo (Corner 1890:119-120, 164; Cox 1997; Marley 2014; McKenzie et al. 2016).

Santa Anna recaptured San Antonio on March 6, 1836, after an 18-day siege of the Alamo (formerly Mission San Antonio de Valero). Following the victory, Santa Anna dispatched forces to crush the remaining resistance but was himself defeated at the battle of San Jacinto on April 21, 1836, ending Mexican rule of Texas (Cox 1997; Davis 2004).

Republic of Texas to the Close of the Nineteenth Century (1836-1900)

The new Republic of Texas was declared on March 1, 1836, though true independence was not effectuated until the aftermath of the Battle of San Jacinto on April 21, 1836. Boundary disputes continued with Mexico until June 1843, when an armistice was reached (Cox 1997). The Republic offered cheap land to encourage immigrants who came from the United States and Europe (Meinig 1969). In 1845, the United States Congress and the Texas Republic agreed to annexation terms, and Texas was admitted as the 28th state on December 29, 1845 (Neu 2013). Texas statehood led to war between the United States and Mexico in May 1846. The Treaty of Guadalupe-Hidalgo, signed in February 1848, ended the dispute and established the Rio Grande as the southern boundary between the United States and Mexico.

Following the war, Texas experienced rapid population growth. People came from the southern states and from Europe with German, Czech, and Polish immigrants arriving in large numbers. By 1860, population totals exceeded 600,000, which was a significant increase from 1847 when the population had been recorded as 142,000 (Campbell 2003). Much of this growth was tied to the availability of farmland. Cotton, often supported by slave labor, was the dominant crop in East Texas. Roughly 30,000 black slaves were present in the state in 1847 (Campbell 1989; Cox 1997), and this number increased to over 180,000 by 1860 (Campbell 1989, 2003; Meinig 1969).

Texas sided with the Confederacy and seceded from the United States in February 1861. The following month, Texas joined the Confederate States of America. Few major

battles occurred within the state (Campbell 2003). Following the defeat of the Confederacy, Texas was readmitted to the United States in 1870.

Throughout the late 1800s, the state's population increased. In the early 1870s, the population surpassed one million, and by the turn of the century, the number had grown to over three million (Meinig 1969). Relative to southern states, Texas had suffered little damage during the Civil War, and it possessed cheap land. Farming in eastern Texas and cattle ranching in the south, west, and the plains/panhandle areas were the major economic activities during this period (Campbell 2003; Meinig 1969; Sonnichsen 1950). Railroads expanded into Texas, and by 1900, the state was crisscrossed by an extensive network of rail lines connecting Texas with the rest of the United States (Meinig 1969; Reed 1941). As a result, commercial development increased throughout the twentieth century.

The combined APEs were almost certainly transiently occupied and utilized during the Proto-historic period although there is no direct archival or archaeological evidence to support that use. Both archival and archaeological evidence exists showing that the three APEs were utilized from circa 1719 to the current day. The earliest evidence recovered from the current excavations are the Spanish Colonial *acequia* remnants. Also recovered are features associated with the early residences constructed in the 1850s, as well as structural remnants and features associated with residential construction and occupation up until the close of the nineteenth century.

Land Assembly and Historic Land Use

Spanish Colonial Mission Period (1719-1794)

All five of the missions within the Upper San Antonio River Valley had dedicated farmlands and irrigation systems known respectively as *labores* and *acequias*. Figure 2-1 graphically represents each mission and its accompanying farmlands and irrigation systems during the active Mission period from 1719 to 1794. The area that comprises the combined APEs was originally part of the Labores de Valero, or the farmlands of Mission San Antonio de Valero (Figure 2-2). These farmlands supported the pueblo of Mission San Antonio de Valero and were lands collectively held in common by the mission polity and farmed by mission neophytes. The lands comprising the farmlands extended from the area of modern-day Brackenridge Park on the north, continued south past the mission compound to encompass the current project area, and terminated below modern-day Brackenridge High School just south of the King William neighborhood.

The combined project area is an irregular-shaped, roughly quadrilateral tract of land, located at the southwest corner of Hemisfair Park. As noted, the tract is bounded by S. Alamo Street, E. Nueva Street, Hemisfair Way, and E. César Chávez Boulevard. The area encompasses portions of NCB 127, NCB 889, and NCB 890, and a small part of NCB 144 (Figure 2-3).

The subsequent land divisions within the project boundaries and the curious alignments of the streets are influenced in large measure by the former Spanish Colonial *acequias*, or irrigation canals, that bracketed the area. These canals watered the farmlands of Mission San Antonio de Valero. Begun in January 1719, and completed and extended through the subsequent decades of the 1720s and 1730s, the Valero *acequia* system began in Brackenridge Park, just below modern-day Hildebrand Avenue on the grounds of the Witte Museum, on the east bank of the San Antonio River.

The Spanish erected a large, stone dam across the San Antonio River at the first major bend below the headwaters to raise the water level and direct the water into the mouth of the *acequia* (McKenzie 2017:20-21). This main canal, or ditch, is referred to in the colonial period as the Acequia Madre de Valero. This channel runs east across Broadway Street from Brackenridge Park, and then it follows the natural contour lines south into the modern downtown where the system splits into two branches slightly north of the Mission San Antonio de Valero compound.

The Valero *acequia* system (41BX8) has two branches that merge into a single channel just north of the boundaries of the APEs. These branches have been referred to by various names over time, with the eastern branch most often called the "Acequia Madre" and the western branch most often called the "Acequia del Alamo" or "Alamo Acequia." A series of City Engineer's maps spanning from 1848 to 1877 indicate that individual City Engineers held their own conventions as to the names of these branches, as well as referring to the branches by multiple names over time. A map by City Engineer Francois Giraud in 1848 (Figure 2-4, A) shows the *acequias* from south of E. Commerce Street (formerly Alameda Street) to their confluence just above the northern boundary of the current APEs (City Engineer Survey Book [CESB] 1848:V1:34-35). The west branch is called Acequia del Alamo and the east Acequia Madre. City Engineer Gustave Freisleben replaced "*acequia*" with "ditch" and called them the Madre and Alamo ditches, respectively (CESB 1854:V1:223; Figure 2-4, B).

Giraud and subsequent City Engineers referred to the two branches in both similar and different terms, with Giraud himself in 1852 referring to the western branch in the survey notes as the Acequia del Solares (CESB 1852V1:154; Figure 2-5).

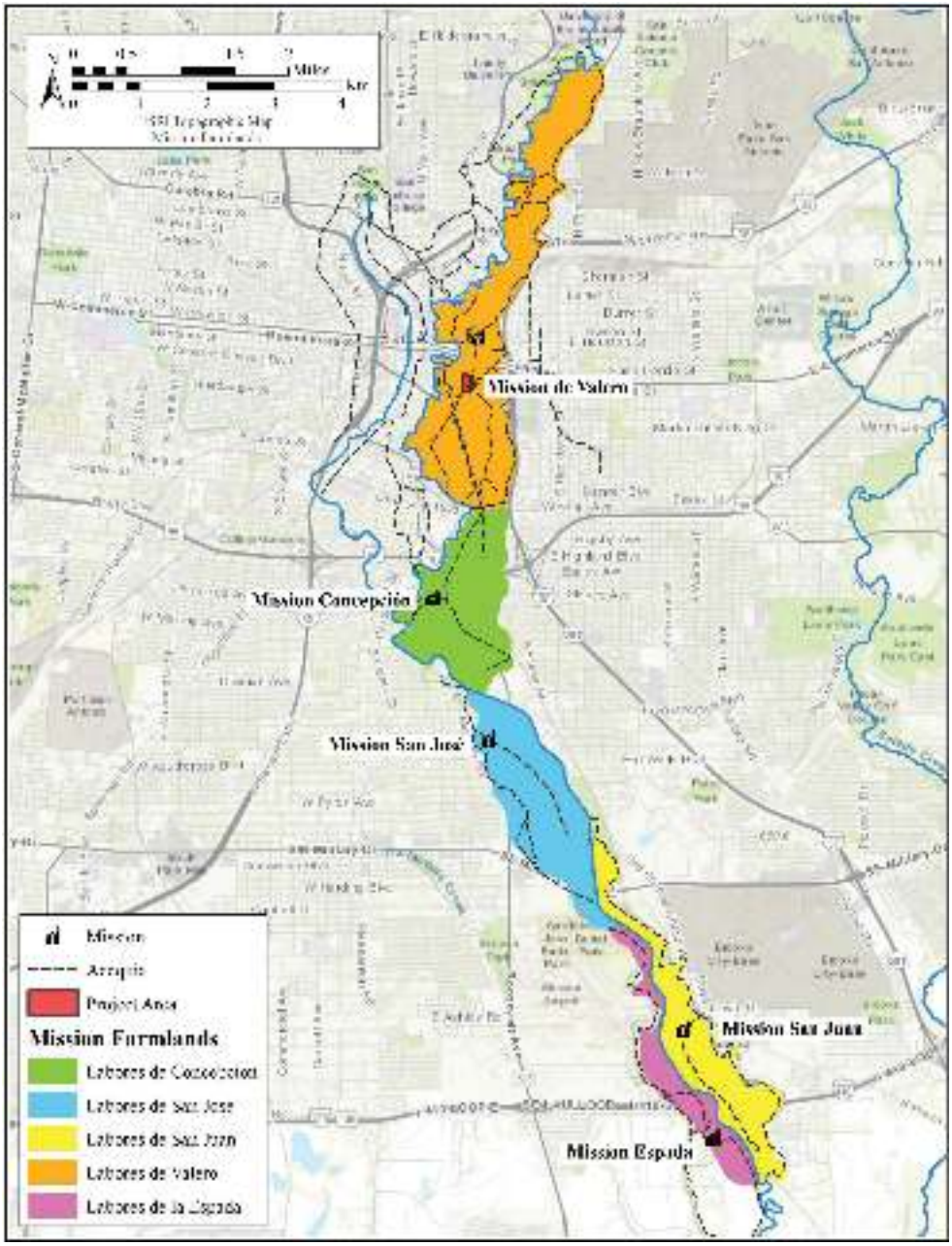

Figure 2-1. Missions, farmlands, and acequias*, 1719-1794. Adapted from the Historic Map of Old San Antonio de Bexar in 1837 by Rullman (1912) shown on Esri topographical map.*

City Engineer R.E. Clement (CESB 1853:V1:178; Figure 2-6, A) called them by the same name, Alamo Ditch. City Engineer Charles Smith (CESB 1877:V1:240; Figure 2-6, B) continued with the Alamo Ditch convention but made the further distinction of a "West Fork" and an "East Fork" of the Alamo Ditch.

Following convergence the western and eastern branches, Giraud and Clement referred to the combined branches as the Acequia Madre while the later Freisleben and Smith maps referred to it as the Alamo Ditch. The Alamo Madre was simply the main or "mother" irrigation canal of the Valero system, while the Acequia del Alamo was the western branch. These two names, while similar, described the two different branches. Their similarity and proximity to one another have caused confusion in the historical and archival record, as they are often misinterpreted one for the other, or conflated as the same alignment. Further, the pervasive late nineteenth-century and twentieth-century historical exclusive use of the terms Madre, Madre Ditch, and Alamo Madre for the Acequia de Valero system has given rise to the assumption that any reference to a "Madre" ditch in the historical record

Figure 2-2. Extent of the Mission San Antonio de Valero farmlands and nearby acequias*, 1719-1794. Adapted from the Historic Map of Old San Antonio de Bexar by Rullman 1912) shown on Esri topographical map.*

is de facto a reference to the main Valero irrigation canal. The term is not unique to the Valero, however, and all *acequia* systems have a Madre, or main ditch.

Figure 2-7 depicts a portion of former City Engineer John D. Rullman's *Historic Map of Old San Antonio de Bexar in 1837*, which was published in 1912. The Rullman map shows the two branches of the Valero system converging above the alignment of E. Nueva Street and the Madre branch continuing southwesterly through the project area. The two branches originally split just north of the Valero compound, with the Madre branch running southeast and the Acequia del Alamo southwest. Then, each branch again made an oblique angle and returned southwest and southeast, respectively, before rejoining above the Camino Real de la Bahia (E. Nueva Street). This made a diamond configuration more-or-less split by the alignment of E. Commerce Street (formerly Alameda Street).

These earthen irrigation canals and their related *desagues* (side channels) and *cortadores* (smaller branch canals) persisted in service during the eighteenth and nineteenth centuries in the downtown area. These canals were lined with stone when they came under municipal control beginning in 1838 (Cox

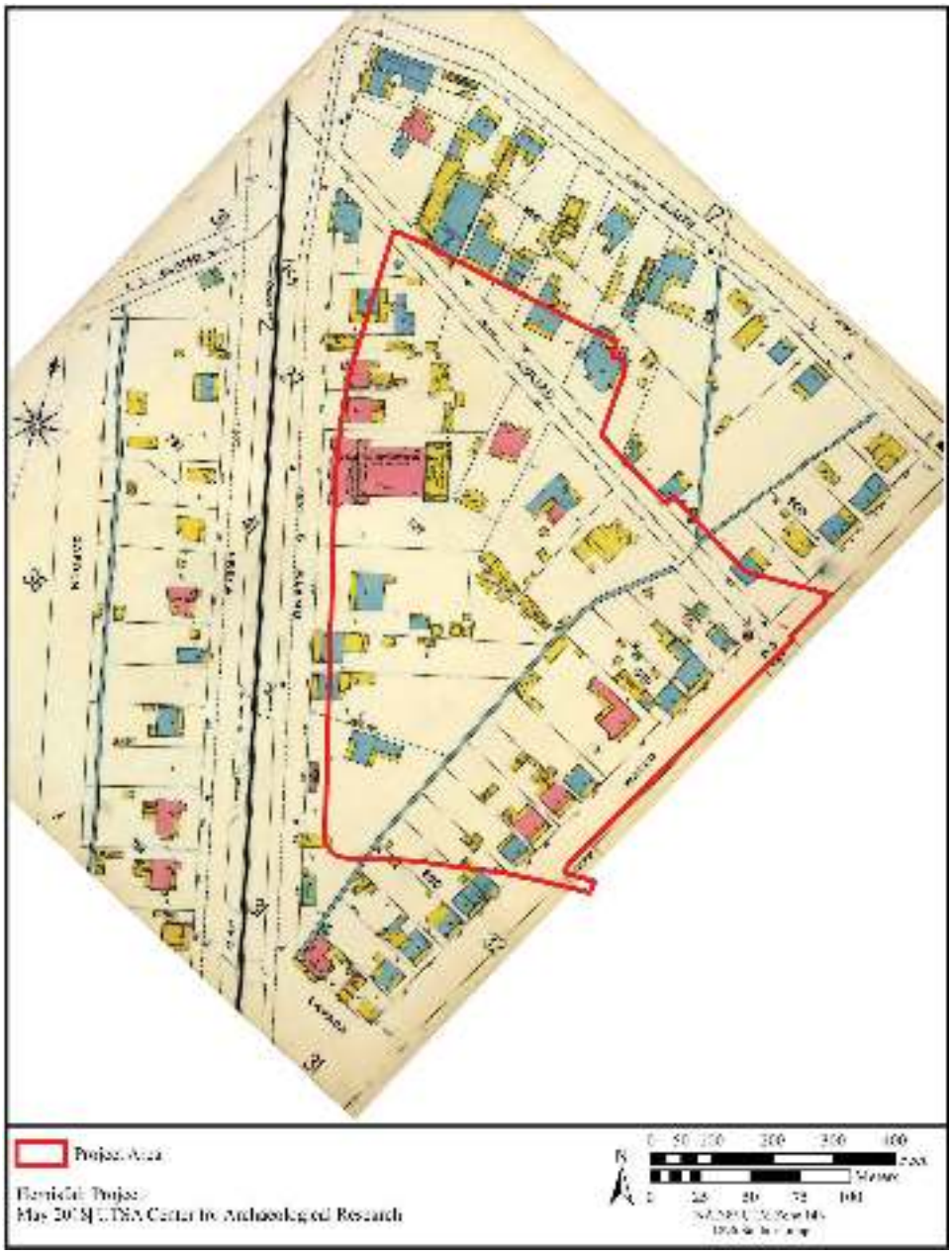

Figure 2-3. Project area outlined in red on 1896 Sanborn Fire Insurance Map *(Sanborn Map Company [Sanborn] 1896).*

2005a:40). They continued to be used for irrigation with varying success into the late nineteenth century. The advent of municipal water service and sanitation concerns ultimately resulted in their closure and backfilling in 1904 through 1908 (Cox 2005a:48-49). Remnants of the stone-lined Acequia del Alamo and Acequia Madre de Valero were located within the project area in the 1960s, 1980s, and in 2015 (Fox 1985:3-8; Fox and Cox 1990:4-9; Tennis and Cox 1998:22-23).

Another major organizing influence on land was the alignment of the Spanish Road, or Camino Real, that led south and east to the 1749 Spanish Settlement, Presidio, and Mission at La Bahia (subsequently renamed Goliad). The road is shown on the 1764 Menchaca *Mapa del Presidio de San Antonio de Bexar* where it is clearly labeled Camino de la Bahia del Espiritu Santo. From the settlement's later name, the road became known as the Old Goliad Road. The La Bahia settlements, as discerned from their name, were originally on Matagorda Bay and moved a number of times until arriving at their final location, inland from the coast and on the north bank of the San Antonio River. The settlement retained the name La Bahia despite being some 37 miles from the Texas Coast. It was only in 1829 that the settlement's name was changed to the name Goliad (Walters 1951:296-297).

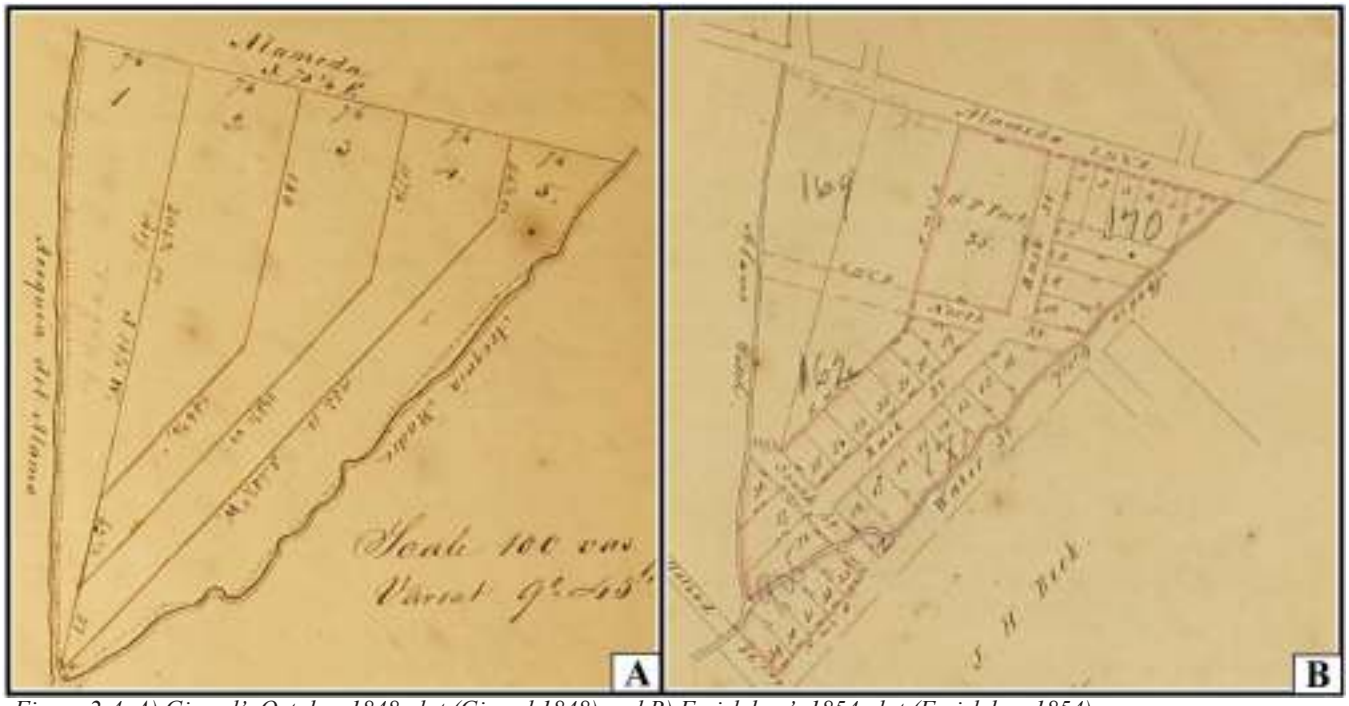

Figure 2-4. A) Giraud's October 1848 plat (Giraud 1848) and B) Freisleben's 1854 plat (Freisleben 1854).

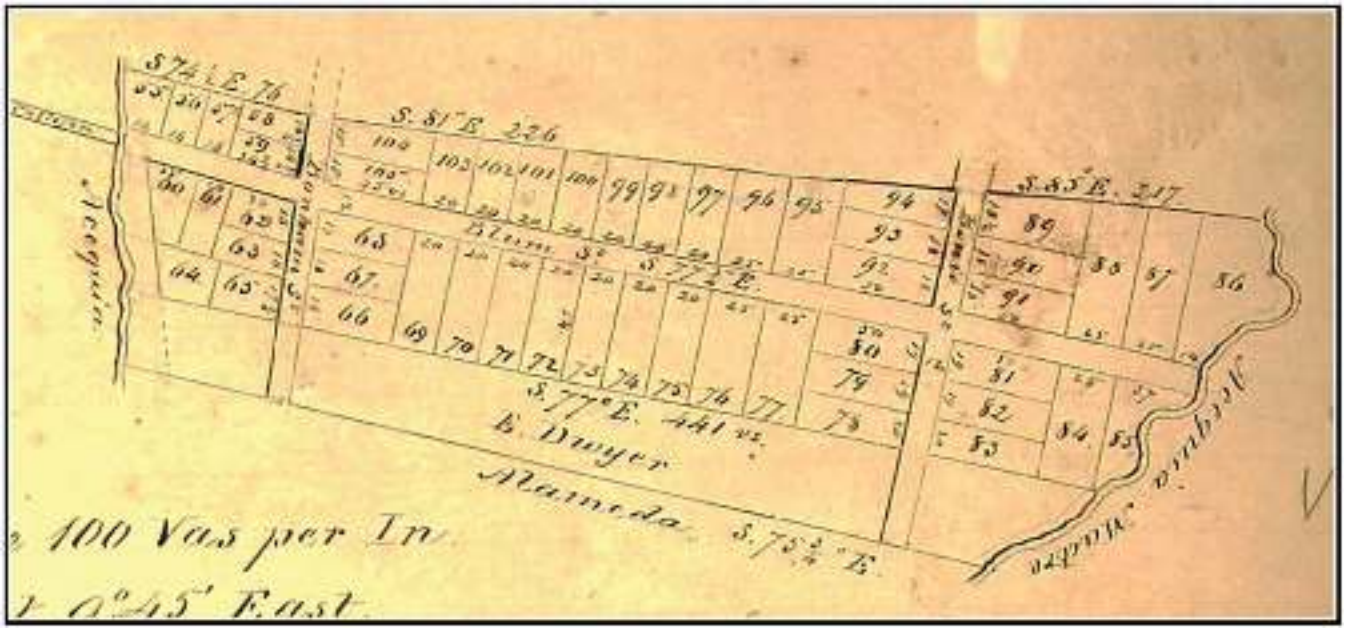

Figure 2-5. Giraud's May 1852 plat (Giraud 1852). Acequia de Solares on the west, and Acequia Madre on the east.

The historical Goliad Road alignment matches the modern alignment of E. Nueva Street with the road coming in from the east, crossing S. Alamo Street, running through La Villita, and crossing the San Antonio River. The east-west alignment of Alameda Street (now E. Commerce Street) and the Camino de la Bahia, along with such north-south thoroughfares as Presa and Alamo streets, established the street grid pattern for this area of downtown.

Post Secularization Period (1794-1841)

The close-up of the Rullman map is instructive because it shows the lot lines of San Antonio in 1837. Following secularization of Mission San Antonio de Valero in 1794, the farmlands of the mission were allotted to former neophytes. The allotments are referred to as *suertes* (chances) as the lands were allocated by lottery. A distinguishing feature of

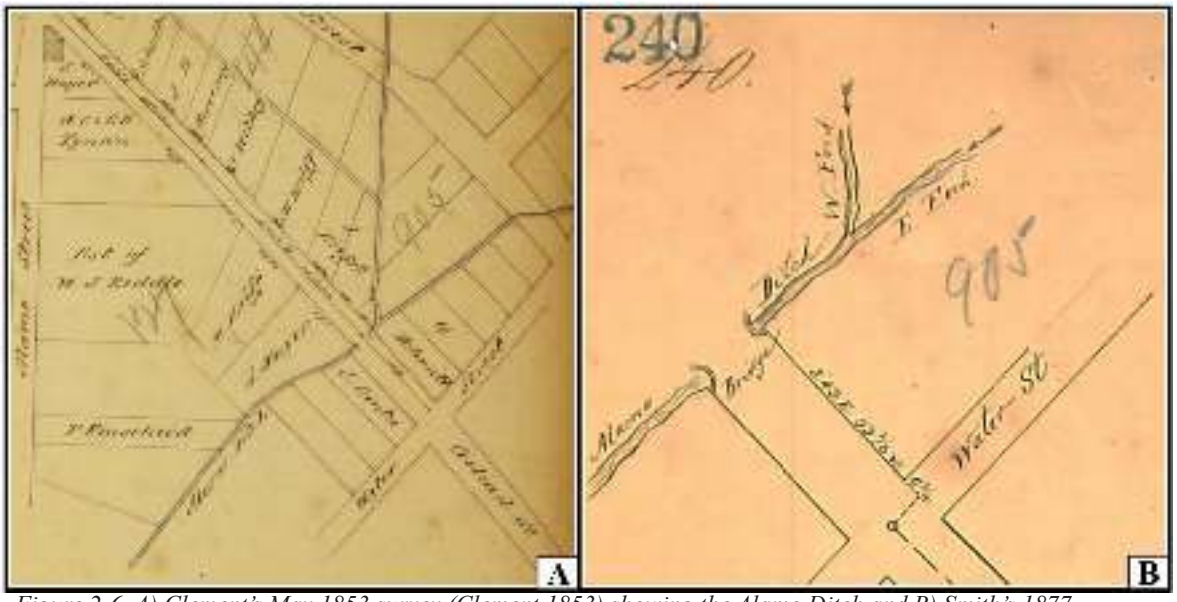

Figure 2-6. A) Clement's May 1853 survey (Clement 1853) showing the Alamo Ditch and B) Smith's 1877 (Smith 1877) survey showing the Alamo Ditch with east and forks.

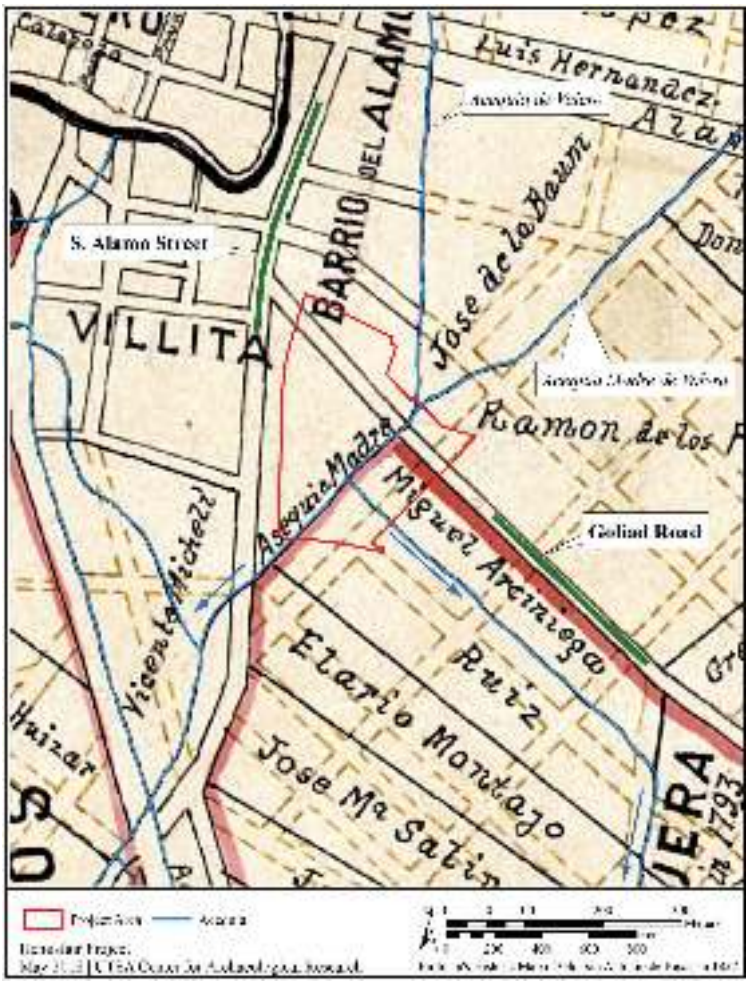

Figure 2-7. Close-up of project area from the Historic Map of Old San Antonio de Bexar in 1837 *by Rullman (1912). The blue arrows indicate the alignments and direction of flow for the acequia system.*

suerte lots is that they usually start and finish on an *acequia* or body of water. The narrow east-west running lots are *suertes*, each with the name of the owner in 1837 (see Figure 2-5). Miguel Arciñiega is the owner of the upper *suerte* just below the convergence of the Valero branches back into a single channel below José de la Baume's triangular-shaped track between the two branches. Arciñiega obtained his lot in 1811, and De la Baume purchased his portion in 1808 (Cox and Fox 1983:4-6). The next *suerte* belonged to Francisco Ruiz, and Elario Montoya owned the lower *suerte* in 1837. Ruiz obtained his *suerte* from Bosque in 1839 (Bexar County Deed Records [BCDR] A2:227-229). These three *suertes* begin on the Acequia Madre de Valero, and all end on a branch channel, or *desague*, of the same system. Blue arrows indicate the route and direction of flow for both the Madre and the *desague* (Figure 2-7).

In addition to the *suertes*, the various neighborhoods and districts of the city in 1837 are shown (Figure 2-6). The lots of Arciñiega, Ruiz, and Montoya lie within the Labor de Afuera (Outside Farms), so named because they were to the east of the Madre and on the outside boundary of the irrigable lands within the old Labores de Valero. The bulk of the project area is south of what was referred to as the Barrio del Alamo, or the Alamo Neighborhood, and immediately east of La Villita. These lot lines represent the second evolution of land assembly, the first being the original Labores de Valero and the second being the division of the lands into *suertes* utilized as private farms following secularization in 1793.

Commercial and Neighborhood Development (1841-1900)

The third division of lands began in the late 1840s and early 1850s when the larger lots were subdivided into smaller lots for residential sale, including the lands of the Barrio del Alamo and the area of La Villita (CESB 1848:V1:34-35, 134; 1853:V1:178; 1854:V1:223). The plat recorded by City

Figure 2-8. An 1853 map with the project area from a plat by R.E. Clement, City Engineer (Clement 1853).

Engineer R.E. Clement in October of 1853 (Figure 2-6, A, close-up; Figure 2-8, expanded) demonstrates the majority of the project area had been subdivided into smaller lots at this time. The map maintains the alignments of S. Alamo Street referential to the *acequia* and indicates the addition of new streets for access to the smaller lots, including South Street, Water Street (Hemisfair Way), and Lavaca Street.

These streets and lot lines became the basis for subsequent residential infill and limited commercial infill along S. Alamo Street, as indicated by the City Directories of 1877 and 1905-1906. Augustus Koch's 1873 Bird's Eye View Map of San Antonio (Figure 2-9) shows seven residences along S. Alamo Street and eight along the alignment of Water Street, all of which had access to the water in what was then called the Madre Ditch (formerly the Acequia Madre de Valero). Referentially, the 1853 plat is the basis for the alignment of both streets and lots as shown on both the Koch map of 1873 and the 1896 *Sanborn Fire Insurance Map* (Sanborn Map Company [Sanborn] 1896) depicted in Figure 2-3.

Neighborhood Growth and Decline (1901-1964)

The current project area experienced the same growth and change that affected the urban cores of most major cities in the United States during the first 60 years of the twentieth century. A review of the City Directory of 1905-1906 indicates that, with the exception of the Beethoven Hall at 418 S. Alamo Street, the 11 remaining addresses along S. Alamo Street were residences, half of which were owner-occupied (Appler 1906:512-513). Likewise, all of the addresses on the west side of Water Street were residences, eight were owner-occupied, five were renters, and two were vacant in 1905 to 1906 (Appler 1906:616). The advent of trolley lines resulted in urban flight to suburbs, and this migration was only exacerbated by the ubiquity of automobiles after World War II. The 1938 City Directory demonstrates that S. Alamo Street had become more commercial than residential and that the majority of residential properties along Water Street had become rental properties rather than owner-occupied. By the time of the Urban Renewal movement, much of the inner city of San Antonio was, by the terms of the times, "blighted" and "under utilized." The 1964 City Directory suggests the area had become a mix of commercial and residential properties, and the majority of residential occupants were renters (Ladd Little 1964).

Municipalization of the Area (1965-Present)

The buildings and associated archaeological deposits encountered during the course of the current project are directly related to the land assembly and use pattern formalized in the 1853 Clement's plat. The neighborhood and commercial district that developed on these properties between that

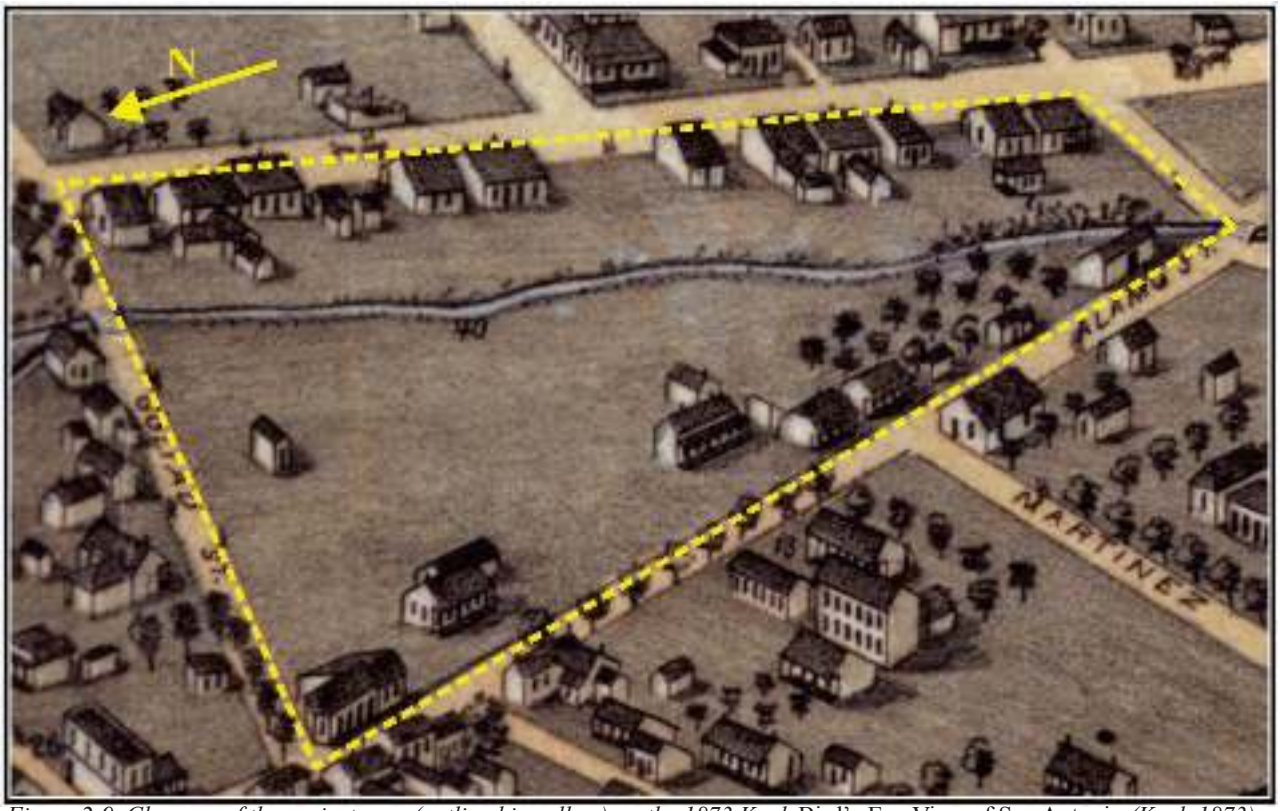

Figure 2-9. Close-up of the project area (outlined in yellow) on the 1873 Koch Bird's-Eye View of San Antonio *(Koch 1873).*

time and the early twentieth century are the same properties that were affected by the HemisFair development and all development iterations to the present day. The impacts to the historic street grid and the numerous buildings removed or relocated during HemisFair marked the beginning stages of a fourth land use: the change from residential/commercial to municipal function(s). Over the last five decades, Hemisfair Park and the numerous redevelopment schema, including two convention center expansions in 1997-1998 and 2013-2015, have contributed to the shift toward municipal-focused development and use of the area. Further redevelopment plans precipitated the current project, including major new park amenities, a new hotel site, and mixed development.

Specific Lot Histories Related to Archaeological Features

The project area consists of most of NCBs 127, 889, and 890, as well as a small part of NCB 144. NCB 127 is all of the lands west of the Acequia Madre, east of S. Alamo Street, south of Goliad Street, and north of Lavaca Street. NCBs 889 and 890 are east of the Acequia Madre, west of Water Street, south of Goliad Street, and north of Lavaca Street. NCB 889 consists of the upper three lots, while NCB 890 consists of the lower 11 lots. The small slice of the project area within NCB 144 includes several lots along the north side of Goliad Street. This section focuses on those lots from which new archaeological features or other cultural materials were recovered during the current project. These lot histories are further identified by project area, i.e. with Yanaguana Gardens, Historic Homes, or Internal Streets. Lot histories are provided for each encountered feature for associative purposes. These more detailed lot histories utilize the archival and historical literature work of previous authors supplemented with new research under the current project.

NCB 127

Lots 1, 2, 3, and 4 of NCB 127 were part of the Riddle (Eagar) property acquired from Miguel Arciñiega in March 1841 (BCDR A2:402-404). Riddle sold Lot 1 in June 1856 for $500 to Julius Hoyer (BCDR O1:172-173). In September 1913, the estate of Julius Hoyer sold Lot 1 to E. E. Hillje for $20,000 (BCDR 423:333). Feature 8 for the Internal Streets portion of the project is located on the northern and eastern side of the Hoyer Lot 1, and the site was assigned trinomial 41BX2246. Lots 2 and 3 of NCB 127 were sold to Edward Tynan in 1856 for $700 (BCDR O1:462). The two lots were then sold to H. Schultze in 1896 for $6,000 (BCDR 155:356). Lot 4 was sold to Edward Tynan in 1857 for $400 (BCDR P1:199). This lot sold in 1903 for $5,750 (BCDR 226:225). In each case, the property values increased considerably, indicating that Hoyer and Tynan constructed homes on these properties sometime after they were initially purchased.

In 1868, the Eagar property consisted of Lots 5, 6, 7, 8, 9, and 10 in NCB 127. The Eagar House (41BX587) was constructed on Lots 9 and 10 in 1870, at a cost of $4,821. John H. Kampmann built the house for Robert and Sarah E. Eagar (BCDR V1:329-330; see also BCDR 131:639-640). Sarah Eagar died in 1947 at the age of 105, and left the house to her daughter Florence. On June 30, 1967, Florence Eagar Roberts celebrated her 100th birthday at the Eagar House, then moved out to make way for the HemisFair ’68 development (Valentine 2014:62-63).

The Pereida House (41BX591) was constructed on Lot 13, NCB 127, in 1883, at a cost of $3,578. In July 1883, Rafael Pereida, a Canary Island descendant and a watchmaker, entered into a contract with local architects Wahlenberger and Bechmann to construct a one-story concrete dwelling. The contract stipulated it be completed by October 15, 1883 (BCDR 28:351-355). This “concrete dwelling” is actually *pisé de terre* or rammed earth construction. The walls of such constructions are formed by the compression of earthen fill between forms, and the Pereida Home is unique in being the only known remaining example in San Antonio of a home built utilizing this method of construction. On December 26, 1883, just a few months after the house was completed, Rafael Pereida (1846-1907) married Annie Schuetze (1852-1920; BCDR H:256). Pereida died in 1907, leaving his wife and three children with no means of support. The family is seen in a circa 1895 photo in front of their S. Alamo Street home (Figure 2-10).

NCB 144

Only a small portion of NCB 144 is within the project area. The area includes Lots 22 to 28 along the north side of Goliad Street. The Halff House (41BX578) at 139 Goliad Street (Lots 27 and 28 of NCB 144) was the only site archaeologically investigated in NCB 144. Mayer Halff erected this Gothic Revival limestone structure designed by architect Alfred Giles in 1893 to serve as the family home (Dase 2013). Mayer Hallf and his brother Solomon were prominent Jewish merchants, and they owned and operated the Halff Brothers Dry Goods Store. Mayer Halff was also a prominent cattleman the last half of the nineteenth century, at one point owning in excess of a million acres of ranchlands in Texas and New Mexico (Weiner and Roseman, eds. 2007:53-54).

NCB 889

The Smith House (41BX589) occupies Lot 1 of NCB 889. Lot 1 is at the northeast corner of the study area. The Smith House is conjectured to be among the earliest structures in the project area dating to circa 1857 (Cox and Fox 1983:13). It is a one-story, residential structure fronting Water Street and is constructed of Grade 3 limestone, which is referred to locally as “caliche-block” as it could be easily quarried and

Figure 2-10. Pereida Family circa 1895: Rafael Pereida at far left, Anne Schuetz Pereida to his left, Petrolina (8 years old) and Anita (2 years old), others not identified (photograph courtesy of UTSA Institute of Texan Cultures [ITC]).

saw cut while soft. Caliche-block was less expensive than hard stone and was covered in a durable hard lime plaster to protect it from elemental wear. The structure is dated to circa 1857, probably constructed soon after Riddle sold the property to Smith for $175 (BCDR P2:64-65). Samuel S. Smith (1810-1882) served two separate terms as mayor of San Antonio in the 1840s and served as Bexar County Court Clerk between 1850 and 1865. Riddle first acquired the property from Miguel Arciñiega in 1841 (BCDR A2:402-404) and held title to the property until 1857 when he sold it to Smith on June 29, 1857 (BCDR P1:310). Kush, a railroad engineer, purchased it as rental property as he is listed as living at 301 Goliad Street (41BX579) in 1910, 1920, and 1930 (13th, 14th, and 15th U.S. Census).

An east-west wall alignment was exposed just below the surface at 505 Water Street (Lot 2 of NCB 889). The wall alignment was recorded as Feature 7 of the Internal Streets portion of the project. The alignment was located 30 ft. south of the south line of the Smith House foundation, which is consistent with the 1896 *Sanborn Fire Insurance Map* that shows a stone structure at 505 Water Street, and indicates a 30-ft. gap between the structures at 503 and 505 Water Street. The stone structure was constructed for Heinrich and Franciska Gimbel sometime shortly after their acquisition of the property in the fall of 1865. The Gimbel House was assigned the site trinomial 41BX2124. The Gimbels emigrated from Germany in that year and purchased Lot 2 of NCB 889 (505 Water Street), from Justo Travieso in October 1865 for $175.00 (12th U.S. Census; BCDR T2:77-78). The 1910 U.S. Census lists the Gimbels as living at 219 Victoria, with Henry listed as a landlord. They sold the property to Joseph J. Kush in August 1907 for $2,000.00 (BCDR 267:315). Kush, a railroad engineer, must have purchased it as rental property, because he is listed as living at 301 Goliad Street (41BX579) in 1910, 1920, and 1930 (13th, 14th, and 15th U.S. Census). The 1912 City of San Antonio Directory lists Mrs. Caroline Urrutia as a renter at 505 Water Street further indicating the rental use of the property.

NCB 890

Two historic structures anchor the southeast corner of the project area at the César Chávez Boulevard entrance. The Espinoza House (41BX593) on Lot 8 of NCB 890 was constructed circa 1886, and the Koehler House (41BX592) on Lot 9 of NCB 890 was constructed in 1890. August Zander purchased Lots 8 and 9 for $250 in February 1864 (BCDR T1:117). He sold Lot 8 to Ludwig Ohde in 1877 for $600 (BCDR 7:254), but he bought it back from Ohde for the same amount in 1882 (BCDR 20:556). In June 1886, Zander used Lots 8 and 9 as collateral to secure a $1,200.00 loan (BCDR 47:394). On February 7, 1887, just eight months later, he sold Lots 8 and 9 "with all the improvements" to Franz and Maria Koehler for $3,000 (BCDR 53:275-277).

On January 27, 1890, Frank and Maria Koehler entered into an agreement with T.W. Carrico and Company for the construction of a "brick dwelling" to be completed "by the first day of June 1890," at a cost of $2,597 (BCDR D:568-570). It is described as a "Brick Dwelling House containing four rooms and one hall with a front and rear porch with a[n] extruded brick addition of two rooms with a bathroom on the rear porch" (BCDR D:568-570). Frank Koehler sold Lot 9 in 1901 for $3,400 (BCDR 195:317) and Lot 8 in 1902 for $3,500 (BCDR 210:275). The properties changed hands a few more times before they were vacated and repurposed for HemisFair '68.

Lot 10 of NCB 890 was the site of the Isidor Zizik home, addressed at 525 Water Street. Feature 4 of the Internal Streets portion of the project encountered foundation remnants of this early residence. This was recorded as site 41BX2123, the Zizik House. Isidor Zizik purchased the Lot 10 on June 1, 1866, from A. Werner (BCDR T2:788-789). Zizik operated an undertaking business, and the family name is still associated with the funeral industry in San Antonio with the Zizik-Kearns, Riebe-Saunders Funeral Home located at 515 N. Main Avenue in downtown San Antonio. The residential property at 525 Water Street remained in the Zizik family until February 7, 1947 (BCDR 2362:210-211).

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Chapter 3: History of the Hemisfair Property

C. Stephen Smith and Clinton M. M. McKenzie

HemisFair

The San Antonio World's Fair is commonly known as HemisFair, a term journalist Keith Elliott is alleged to have coined while writing a headline for *The San Antonian* (Elliott 1968). The event was planned to commemorate the 250th anniversary of the city's founding, as well as showcase municipal, state, and national interests (Dase 2013:23). The idea for a fair focused on the western hemisphere surfaced during a 1959 meeting of the San Antonio Chamber of Commerce where local businessman Jerome K. Harris proposed a permanent fair site to honor the city's cultural heritages (Dase 2013:23). His proposal gave the fair its focus on the "Confluence of Civilizations in the Americas" (TSHA 2010).

The City of San Antonio laid the public groundwork for HemisFair on November 28, 1962, during a regular meeting of the City Council (CCMB 1962:507-508). At this meeting, Bill Sinkin, Chairman of the Planning Committee for HemisFair, made the case for the city hosting the proposed World's Fair. Sinkin presented the merits of the fair project suggesting that financing of the fair could be achieved "through citizen participation, a City Bond Issue, and with a substantial part of the funds being provided by the Federal Government" (CCMB 1962:507). Following his presentation, Sinkin introduced Congressman Henry B. Gonzalez, who pledged the support of his office for the project. Congressman Gonzalez, in keeping with Harris's 1959 theme, called for a "Fair of the Americas" (Montgomery 1968:85). Joining with Congressman Gonzalez, State Senator Franklin Spears, County Commissioner Albert Peña, and District Judge Soloman Casseb endorsed the fair. Mayor McAllister stated his support for a five million dollar bond issue for the project.

A particularly contentious debate ensued over selecting among three different proposed sites for HemisFair, with the committee opting for an older residential section of town along the southeast quadrant of the central business district of downtown (Figure 3-1; Cox and Fox 1983:2; Fisher 1996:297-299).

Because the location contained numerous structures significant for their history and architecture, selection of this area sparked controversy, and in response, the HemisFair design office developed a plan to preserve a group of buildings in the selected area called the "Historic Triangle," a piece of real estate that corresponds to the present project area (Figure 3-2). Twenty-two (22) historic structures were preserved in HemisFair with a majority residing in the "Historic Triangle" (Figures 3-3 and 3-4; Fisher 1996:305). Selection of a site of historical significance was controversial, but the site enjoyed an important advantage the other two lacked, because here, the City could access federal urban renewal funds (Holmesly 2003:1).

Urban Renewal Project No. 5, The "Civic Center Project"

Title I of the Housing Act of 1949 allowed the federal government to extend financial help to local public agencies to eliminate slums and to prevent the future "spread of slums and urban blight" through "urban renewal projects." In September 1963, the COSA instituted Urban Renewal Project No. 5 and requested federal funds for surveying and planning of urban renewal of the proposed site. City Council approved the project (Urban Renewal Project No. 5) by city ordinance on October 17, 1963, and submitted a federal application requesting $486,891 for final planning (surveying and planning) on this approximately 149 acres (COSA Ord. No. 31829).

The Urban Renewal Administration, later renamed the Department of Housing and Urban Renewal, approved the City's application for final planning and made funds available on December 18, 1963 (CCMB 1966:520). On March 12, 1964, the City retained 92.6 acres from the initial 149 acres on which they planned to build a convention center and to use the rest of the real estate "for the use of the general public for municipal purposes" (COSA Ord. No. 32165). Prior to this ordinance, San Antonio voters had approved a $30 million special bond election on January 28, 1964, to finance the convention center and for "other related municipal facilities" (COSA Ord. 32165; Dase 2013:24). The retained 92.6 acres became the site of HemisFair.

The City commissioned a comprehensive structural survey of the area to be conducted by an independent architectural and engineering firm (COSA Ord. No. 32291). The area contained 569 total structures, of which 390 were residential, 137 commercial, 3 industrial, and 39 public or semi-public. The San Antonio Fair, Inc. (SAF) commissioned Economic Research Associates of Los Angeles to prepare a feasibility study. This Los Angeles group completed their study in April 1963 (Dase 2013:24). The $487,000 feasibility study examined rehousing and relocation of families and individuals impacted by work in the project area.

Figure 3-1. Area of San Antonio selected for site of HemisFair '68 on Esri Google imagery, NAD 83 UTM Zone 14N.

To accomplish the study, Economic Research Associates conducted a door-to-door survey of the project area to determine income levels, family size, composition, and other information pertinent to rehousing and relocation of residents of the areas affected by urban renewal. The study revealed that 593 households existed in the project area, with 344 of those households comprising families and 249 of these households comprising individuals. The study also recorded preference for occupancy (buy vs. rent) and preference for relocation (north, south, east, west, or central area of San Antonio; COSA Ord. No. 32291).

Bill Sinkin, President of the SAF, presented a proposal to the City Council on July 3, 1963, for 150 acres of land that were part of Urban Renewal Area No. 3 as the proposed site for HemisFair (CCMB 1963:100-101). City Council reviewed the proposal and authorized the Urban Renewal Agency to begin survey and plans for the area, which was subsequently authorized under COSA Ordinance No. 31786 (CCMB 1963:157, 1963:199; City Ordinance Book NN:465). With the positive results of the survey, SAF surpassed its $6 million goal, and by the end of September, it had received more than $7.5 million in pledges (CCMB 1963:223). City Council then

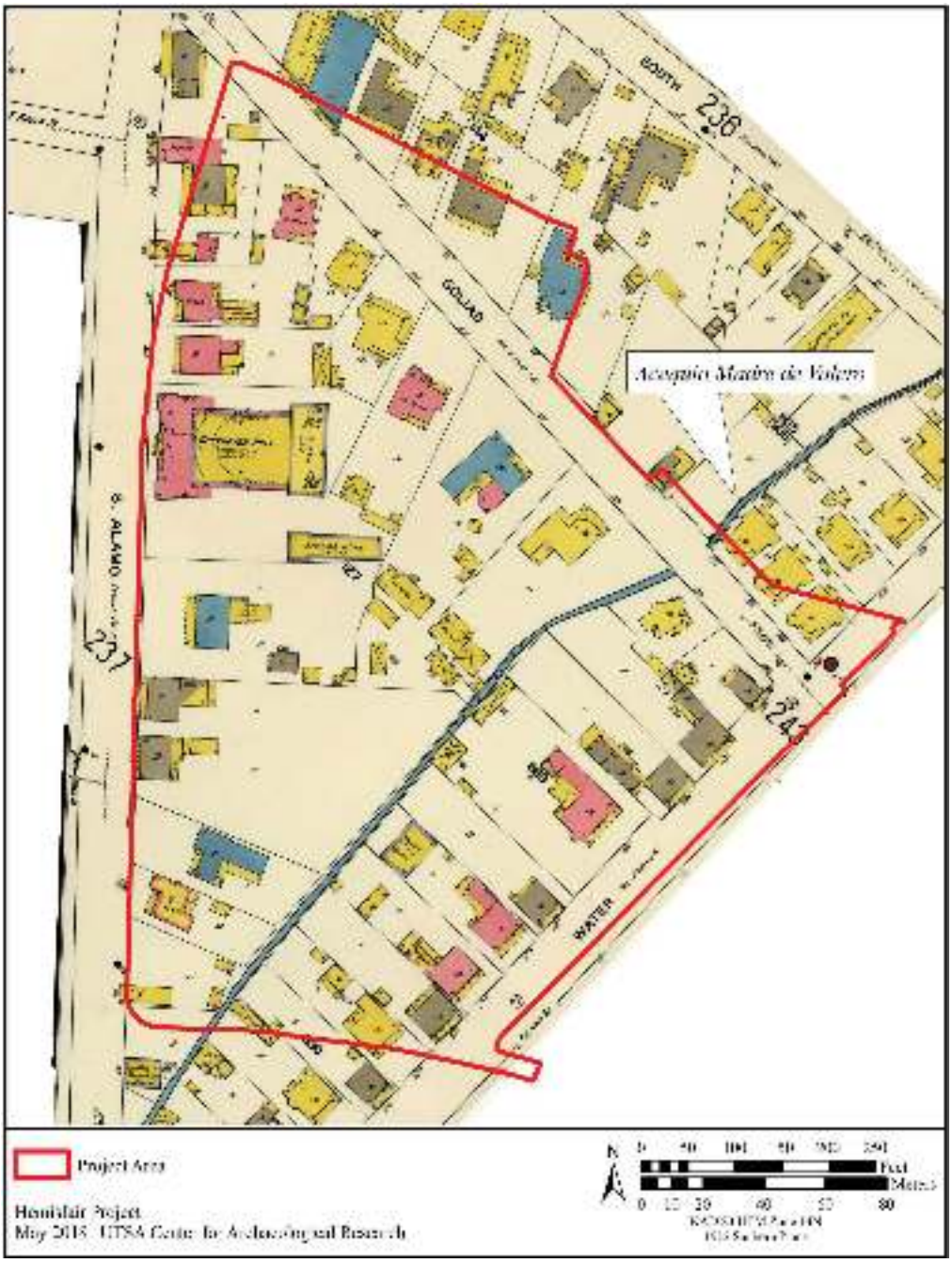

Figure 3-2. Project area outlined in red on 1912 Sanborn Fire Insurance Map *(Sanborn 1912).*

approved the submission of the survey and plans to federal authorities on October 17, 1963 (CCMB 1963:221). The Urban Renewal Agency then allocated $12.5 million for the project (Dase 2013:24).

The City lobbied federal officials and got Congressional passage of a HemisFair bill and the President's signature on a $125,000 appropriation for preliminary study and architectural fees of a federal exhibit complex at the HemisFair site (Dase 2013:25). In May 1965, the Texas House of Representatives appropriated an additional $7.5 million for HemisFair 1968 under House Bill 16/Senate Bill 166 sponsored by Bexar County Representative Glenn Kothmann and Texas Senator Franklin Scott Spears, Jr. (Legislative Reference Library of Texas 2018). Between November 1964 and July 1966, the Urban Renewal Agency purchased 99 percent of the original project area, moved 98.1 percent of the site's occupants, and demolished 88 percent of structures designated for removal (CCMB 1966:518-521).

Figure 3-3. The "Historic Triangle" viewed from the north with Goliad Street across in the foreground, Water Street to the left, and S. Alamo Street just visible in the upper right (photograph courtesy of UTSA-ITC).

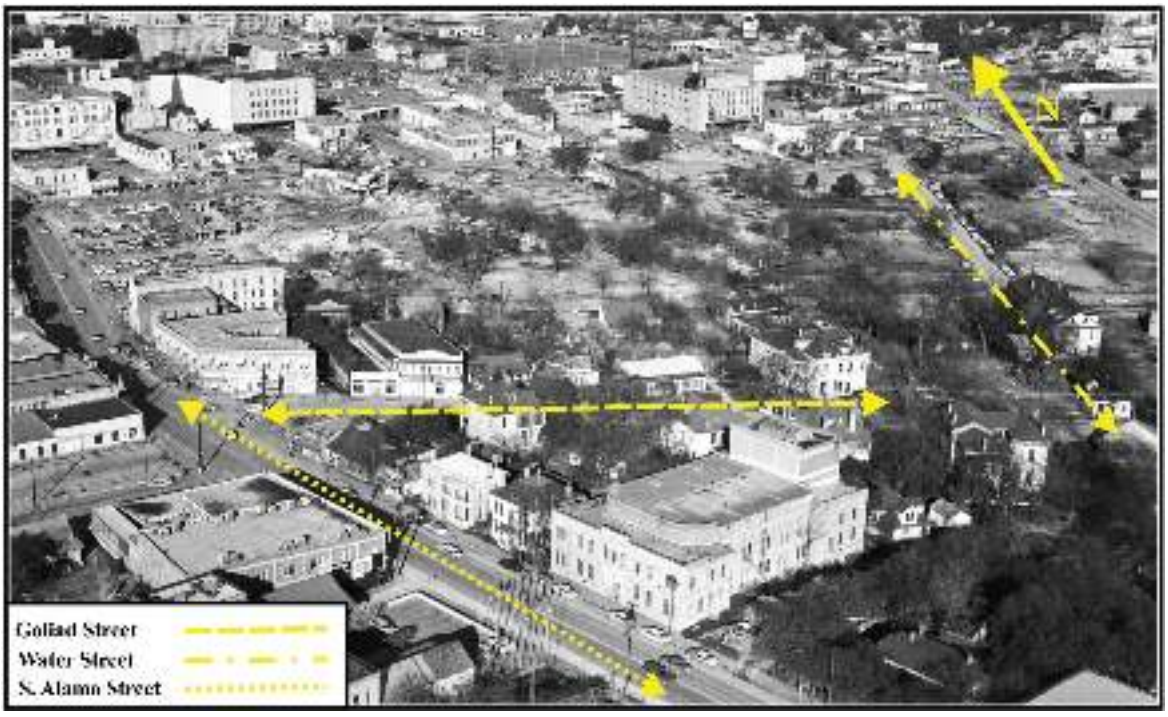

Figure 3-4. The "Historic Triangle" viewed from the southwest with S. Alamo Street in the foreground, and Beethoven Hall is the large building facing S. Alamo Street (photograph courtesy of UTSA-ITC).

HemisFair '68

HemisFair opened on Saturday, April 6, 1968. During a six-month run, the fair hosted about 6.4 million people (Holmesly 2003:1). Unlike most World's Fairs where structures are temporary or semi-permanent, HemisFair left several permanent buildings in place after the fair closed. Developers planned to leave in place more than 60 percent of the fair buildings as part of a downtown plan (Huxtables 1968). Of these permanent buildings, the more notable are the Tower of the Americas, the Texas Pavilion (Institute of Texan Cultures), the U.S. Pavilion Confluence Theater (present-day Federal Court House), and the U.S. Pavilion Exhibition Hall (present-day Adrian Spears Judicial Training Center). The San Antonio Civic Center and Lila Cockrell Theatre survived the fair (Dase 2013:30).

HemisFair recorded several firsts among World's Fairs. HemisFair was the first held in the U.S. Southwest, the first in the heart of a city, the first incorporated into an urban renewal plan for a downtown, and the first to use historic buildings as part of the fair (Huxtables 1968). The Woman's Pavilion marked the first World's Fair exhibit devoted to the contributions of women (Dase 2013:30). However, these firsts did not translate into financial success, as HemisFair closed on October 6, 1968, with a deficit (Vasquez 1968). This loss accrued due to construction overruns of about $3 million and $2.5 million more in unmet attendance projections (*New York Times* [*NYT*] 8 October 1968:26). Fair officials later increased those losses to $7.5 million (Dase 2013:39) and blamed "poor management and overconfidence" for these losses (*Business Week* 1968:40). Beyond such intangibles, final attendance figures fell short of the number of attendees expected, with 6,384,482 persons in actual attendance compared to an expected number of 7,200,000 visitors (Vasquez 1968).

Observers blamed a number of factors for the poor attendance. Weather was one factor. Rain fell 33 days in the first two months of the fair (*NYT* 8 October 1968:26). Other factors were the assassination of Martin Luther King, Jr. two days before the opening, Senator Robert Kennedy's assassination in June, the escalating violence in the Vietnam War, and President Johnson's announcement five days before the opening that he would not seek reelection (Fisher 1996:314). A mini-monorail accident in September that killed one and injured 50 more contributed to fewer attendees (*Newsweek* 1968:76). Despite these obvious difficulties San Antonio received national and international attention—over 2.6 million visitors arrived from other states or countries—contributing $122 million to the local economy and setting the stage for the city to become an important travel destination. Additionally, housing this number of visitors added more than 2,800 new hotel and motel rooms, which has proved essential to attracting the estimated 26 million annual visitors that San Antonio enjoys today (Dase 2013: 39). Twelve million dollars in permanent buildings, structures, and parkland exist in San Antonio today because of HemisFair.

Post-HemisFair

Planning for the fair's close began one month after it opened when the City inaugurated the HemisFair Re-Use Committee (Fisher 1996:396-397). The Re-Use Committee made its preliminary recommendation on August 1, 1968, scheduling all but about 30 acres of the grounds for reuse (Montgomery 1968:86). Among their recommendations, the committee sought to locate a four-year university on the fairgrounds and to extend the mini-monorail to service King William Street, the Alamo, and Municipal Auditorium (Fisher 1996:397; Tamez 1980:4). In time, both recommendations would fail. UTSA leased land and headquarters space and began classes only to abandon these efforts when The University of Texas System Board of Regents accepted a land donation of 600 acres northwest of the city (Whitson 2010). The mini-monorail extension never occurred, and eventually, the City disassembled the mini-monorail transportation system and sold it (Fisher 1996:398).

One day after closing on October 6, the site became an entertainment park named Fiestaland (Brand 1968; *NYT* 8 October 1968:26). Viewed as adjunct to the $15 million convention center and Texas Pavilion, supporters heralded Fiestaland as "a sort of Tivoli Gardens" (Brand 1968:6; Monclús 2009:68). In late summer of 1969, the Chamber of Commerce raised $25,000 for the Southwest Research Institute to study ways to transform Fiestaland into a South Texas version of Tivoli Gardens. One year later, following several fact-finding trips to Copenhagen to visit Tivoli Gardens and with cost estimates topping $10 million, the City Council cancelled the project (Castillo 1969). Twelve months after the closing of the fair, the new park still lacked direction (Johnson et al. 1997:24), and it had amassed a $278,112 debt to be borne by City taxpayers (*San Antonio Express News* [*SAEN*] 2 November 1969:2).

HemisFair Plaza

The 92-acre site of Fiestaland reopened on March 29, 1969, under the new name of HemisFair Plaza. Still operated as a City-run amusement park, HemisFair Plaza continued to boast many of the attractions popular during the World's Fair. The 622-ft. Tower of the Americas with its revolving

restaurant, the mini-monorail, and the three sky rides remained in operation. The ITC continued with its original mandate to promote understanding of the state's diverse ethnicity (Tiller 2015). In 1968, the ITC took part in the Smithsonian Institution's National Folklife Festival in Washington, D.C. and held the first statewide folklife festival in September 1972. The festival became an immediate success (Johnson et al. 1997:24).

During this time, alternative ideas for how to use the remaining HemisFair grounds outside the ITC continued to be put forward. Late in 1969, City Manager Jerry Henckel spearheaded a plan to build a four-lane roadway splitting HemisFair Plaza (*SAEN* 21 November 1969). Henkel championed the plan as a way to help bring business to the Tower of the Americas (Fisher 1996:398). On a somewhat different track, the HemisFair Plaza Advisory Committee offered ideas of its own. One such idea involved the U.S. Bicentennial celebration. The national celebratory plan called for creation of Bicentennial Parks in each state and in Puerto Rico. The federal government would gain the land, and it would build and maintain the 51 parks, designating each park as that state's centerpiece for the nation's 200th birthday party. Following the celebration, the government would return the land to its respective state as a permanent green space (Sutton 1972). The Committee offered the HemisFair Plaza site for the Texas bicentennial party (Sutton 1972:f3). The HemisFair Plaza Advisory Committee also floated the idea that the City Council designate HemisFair Plaza a historic district (Fisher 1996:398). While these plans competed, a very different image of HemisFair Plaza was emerging. City officials were comparing the premises to "a ghost town" and admitting that the City was losing money on plaza operations (*SAEN* 2 November 1969:2).

In 1986, the City enacted a $25-million revitalization plan for HemisFair Plaza (Philips 1987). The plan proposed expanding the convention center, constructing a water park, building new facilities for the Texas A&M Extension Service and the National Autonomous University of Mexico, creating a new parking garage, and constructing a Sheraton Hotel on land provided by the City (Philips 1987). The plan also proposed combining a piece of the HemisFair grounds with La Villita to create a festive marketplace (Wood and Ramirez 1988). However, the City abandoned the revitalization plan within a year due to problems regarding the economic feasibility of the park and La Villita configuration, financing of the hotel, and opposition from the San Antonio Conservation Society over the changes that the plan would cause to historic La Villita (*SAEN* 18 March 1988).

Hemisfair Park Area Redevelopment Corporation

In March 1988, Mayor Henry Cisneros announced the death of the $25-million revitalization plan (Wood and Ramirez 1988). In the aftermath of the latest failure, the City proposed HemisFair Plaza be landscaped and renamed HemisFair Park (*SAEN* 10 June 1988). Two years later, former Mayor Henry Cisneros told a Downtown Revitalization Conference that development of HemisFair Park would require "a strong dose of planning and political leadership" (*SAEN* 14 November 1990). Meanwhile, HemisFair Plaza continued losing money on one-day events like the 1989-1990 New Year's Eve party. Slated to be funded by private money, the event cost the City more than $50,000 (*SAEN* 6 January 1991:8b). Another event was a Labor Day Grand Prix Race around HemisFair Park that failed for want of funding (*SAEN* 20 January 1991:19C).

On May 12, 2011, City Council approved a plan to revamp HemisFair, as presented by the HPARC (2011). Labeled an "ambitious plan," it offered a framework "to revitalize HemisFair Park" that included changes to the park, Convention Center, and ITC (*SAEN* 27 April 2011). City Council approved the HPARC Master Plan in February 2012 (*SAEN* 10 February 2012). Under the plan, HemisFair would receive $30 million for improvements as part of a $596-million bond proposal (*SAEN* 26 February 2012:8B). After voters approved the bond plan in May, the City set aside $30 million for street and green space improvement in HemisFair Park (*SAEN* 27 April 2011).

Historic building restoration at three properties (Eager House, Eager Dependency, and Carriage House) took precedence as the first scheduled construction project to occur (*SAEN* 20 April 2012). Squabbling over how to limit hotel expansion nearly scuttled a bill designed to allow the City to recompose the park land at Hemisfair without further public consent until a political compromise rescued the law (*SAEN* 17 October 2013). Controversies over preservation of historic sites continued (*SAEN* 10 November 2013), and the City unveiled plans for a PlayEscape called Yanaguana Garden in November 2013 (*SAEN* 24 June 2015). Opened in October 2015, the 4.1-acre Yanaguana Garden is Phase One of a three-phase project. Phase Two is the "Grand Civic Park" at S. Alamo Street and Market Street (completion date slated for 2018), and Phase Three is the "Tower Park" around the Tower of the Americas (completion date slated for 2020; *SAEN* 4 October 2015).

Chapter 4: Previous Investigations

C. Stephen Smith and Antonia L. Figueroa

The following chapter presents a brief review of previous investigations in the APE. Recent reports provide more complete examinations of previous investigations and historic resources in the project area (Dase 2013; Fields and Dase 2014; Fields et al. 2015). Twelve (12) recorded archeological sites exist in the APE, including the Acequia Madre de Valero (41BX8), 10 extant structures, and a historic trash pit (Figure 4-1).

The first archaeological investigation took place in December 1966. During February of that year, workers encountered a section of the Acequia Madre de Valero (41BX8) while demolishing buildings and streets to make room for HemisFair. At the time of its rediscovery, about 50 ft. of curbstone marked the pathway of the ditch (Schuetz 1970:6). Mardith Schuetz, the curator of anthropology at the Witte Museum, directed nine volunteers in the excavation of a short

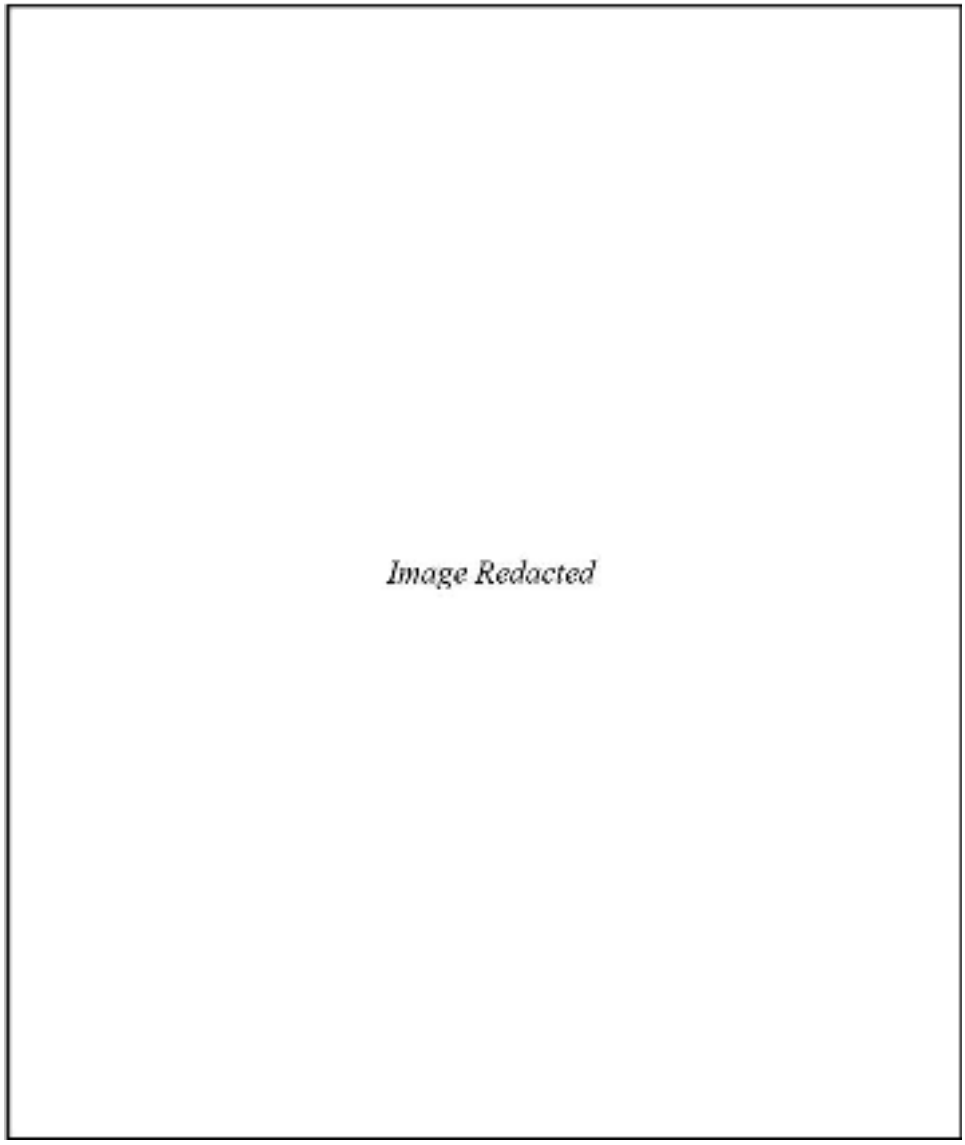

Figure 4-1. Locations of previously recorded archaeological sites in the APE based on Texas Archaeological Sites Atlas (THC 2017) on Esri topographic map, NAD 83 UTM Zone 14N.

section of the *acequia*. HemisFair staff provided a front-end loader and driver to remove "tons of debris" that had been dumped in the ditch during the early part of the twentieth century (Schuetz 1970:3).

Schuetz's work exposed 95 ft. of the ditch for an *acequia* exhibit in the Spanish Pavilion during HemisFair. Schuetz's excavation reported the ditch to have a depth of 5 ft. 2 in. and a width of 6 ft. 3 in. with stone walls along the excavated section. These walls comprised soft, quarried limestone blocks varying from 10-14 in. thick and from 11-41 in. long, with small rocks filling any cracks between these stones. This wall rested upon compact mud that appeared to be a natural stratum. The walls had five courses of limestone blocks, but across much of the exposed ditch, the first layer of stones was missing (Schuetz 1970:5).

After Schuetz completed the excavation, a water pipe was installed in the ditch, and a concrete floor was poured. The pipe supplied water for the reconstructed *acequia* exhibit featured in the Spanish Pavilion (Schuetz 1970:6). Remnants of the reconstructed *acequia* are present today in the Yanaguana Garden. However, there is some uncertainty of the original alignment of the *acequia*, since it was not properly mapped prior to the construction of additional pavilions (Johnson and Cox 1995:7).

In 1983, Anne Fox of CAR conducted test excavations in HemisFair Plaza to relocate the Acequia Madre de Valero and record its condition (Fox 1985). With the aid of a Sanborn Fire Insurance Map overlaid on a map of HemisFair, Fox commenced fieldwork in December 1983. She positioned a trench 35 ft. south of the Spanish Pavilion perpendicular to the *acequia* route. The crew hand excavated a 10-ft. long and 20-in. deep trench. In the upper layer, Fox found HemisFair construction fill. Beneath the fill was undisturbed brown clay. Fox moved east 6 ft. 5 in., hoping to intersect the ditch. She encountered a deposit similar to that which Schuetz identified 17 years earlier as the *acequia* (Schuetz 1970:7-13). However, the deposit was shallow and had the same clay beneath as the west end of the trench (Fox 1985:3-4). After two days in the field, Fox halted excavation (Fox 1985:3).

On February 15, 1984, Fox returned to HemisFair equipped with a backhoe (Fox 1985:5). Trenches were excavated to find the *acequia*. Fox began in the southwest corner of the project area, designating this as Trench 1 (Figure 4-2). Trench 1 failed to expose the *acequia*, but Trench 2 continued her trenching from December. Unlike the earlier excavation, Fox encountered caliche and cut limestone blocks about 20 in. below the surface (Fox 1985:5). The caliche proved to be a cap above the *acequia* channel. When she encountered a thick

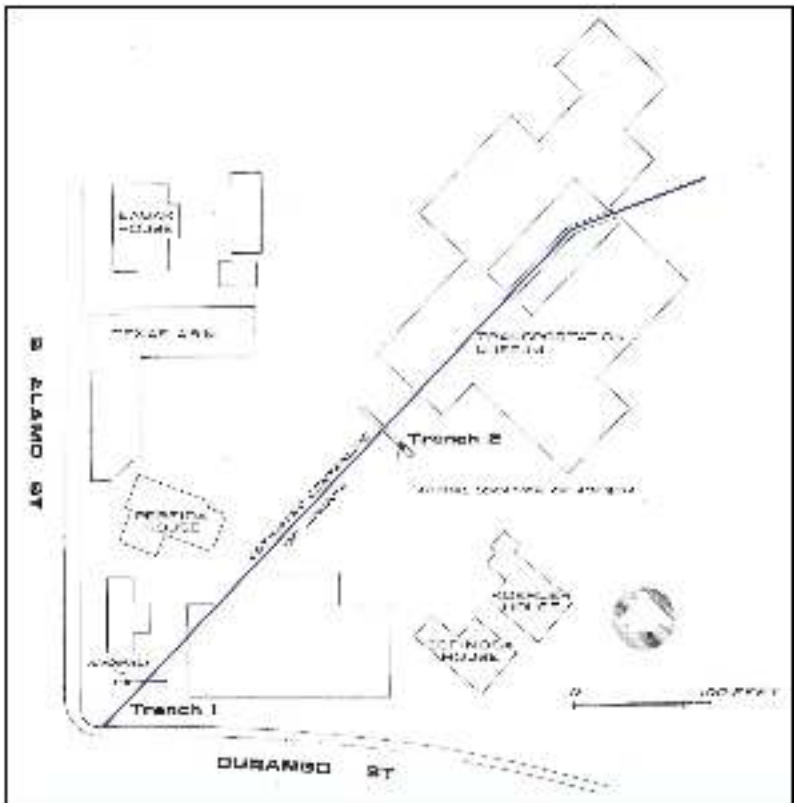

Figure 4-2. 1984 excavation map with projected route (blue) of Acequia Madre de Valero (Fox 1985:Figure 2).

deposit of artifacts, Fox concluded she found the Acequia Madre de Valero (Fox 1985:5). Fox noted the wall condition to be consistent with Schuetz's description of the *acequia* walls. In a third trench, Fox intersected a lateral of the Acequia Madre de Valero (Fox 1985:5). The lateral was on an 1841 property appraisal. The lateral ran northwest from the *acequia* toward S. Alamo Street. It appeared shallow and unlined. Surface grading had removed the upper portion, preventing Fox from determining its original depth (Fox 1985:8).

In January 1989, CAR began another investigation to locate the Acequia Madre de Valero and test its contents (Fox and Cox 1990:3). To avoid repeating Fox's earlier difficulty locating the *acequia*, Fox and Cox laid out their first trench perpendicular to the reconstructed section of the ditch. There, they recorded the *acequia* and moved southward along the line of the restored ditch and the located section, stopping to excavate trenches as they went. Following the ditch southward in this fashion, Fox and Cox excavated six 4-ft. wide trenches (Fox and Cox 1990:3). Once the crew encountered cut stone, they stopped the backhoe and began hand excavating and screening (Fox and Cox 1990:4). Their work revealed an intact east wall and a missing west wall. Fox and Cox concluded the ditch was filled with trash after water ceased flowing and before removal of the west wall (Fox and Cox 1990:22). After they finished trenching, the Texas Antiquities Committee recommended further testing (Fox and Cox 1990:25). The testing took place near the intersection of Goliad Street and Water Street, near the Smith House. They opened two units and one trench, and they found artifacts dating to the period of Smith House construction and chert flakes from a possible prehistoric occupation (Cox and Fox 1990:28). CAR recommended no further testing.

In 1992, utility construction prompted monitoring at HemisFair Park. CAR monitored three trenches near the Hermann and Kampmann houses on Goliad Street and five trenches near the Koehler and Espinosa houses on Water Street. In one trench southeast of the Espinosa House, Cox unearthed a foundation subsequently designated 41BX982, the Huebaum House (Cox 1992; Johnson et al. 1997).

In October 1995, CAR contracted with the architectural firm of Kell Muñoz Wigodsky, Inc. to provide archival research and evaluation of three historic structures in HemisFair Park. In addition, the contract called for the same work to be performed on the three lots proposed for the relocation of these historic structures (Johnson and Cox 1995). The three structures under research for this project (Wietzel House, Amaya House, and O.K. Bar) were relocated and preserved as a group of structures in the so-called "historic triangle" (Johnson and Cox 1995:5). Archival research showed the Wietzel and Amaya houses were the first structures to be built at their present locations, with both houses being built sometime between 1865 and 1873. The earliest date for the O.K. Bar building is 1896 based on the 1896 Sanborn map (Johnson and Cox 1995:18). As for the lots, only one had a substantial structure on it, a building made of adobe that had disappeared during widening of S. Alamo Street in 1966-1967 (COSA Resolution 66-2212). Any other structures would have been insubstantial and demolished for HemisFair. Johnson and Cox left open the possibility that buried structures like cisterns, privies, support buildings, burials, or other significant historic items may exist beneath the surface of these lots (Johnson and Cox 1995:18). CAR recommended monitoring but no testing or excavation during relocation of the structures.

In 1996, COSA contracted with CAR for an archival study and archaeological assessment of the area affected by expansion of the Convention Center in HemisFair Park (Johnson et al. 1997). The project collected lot histories for the affected area and provided additional data, photographs, and revised relocation sites for the three standing structures reported in Johnson and Cox (1995). While this archival research failed to identify archaeological resources sufficient to warrant intensive investigation in the affected area, CAR recommended limited additional investigation in the short-term and offered three options for conducting future research in the area (Johnson et al. 1997:56).

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Chapter 5: Field and Laboratory Methods

Antonia L. Figueroa

Field Methods

In January 2015, a team of CAR archaeologists was assembled to fulfill the requirements for three archaeological subprojects: Yanaguana Garden, Historic Homes, and Internal Streets. Construction activities for each subproject involved three separate general contractors and a multitude of subcontractors. As the project progressed, the need for daily field monitoring was intermittent, and gaps of days or even weeks in monitoring took place. However, during episodes of particularly intense ground disturbance, as many as three archaeologists worked simultaneously. At other times, when the pace was slower, one archaeologist would cover several activities. CAR staff routinely attended weekly project meetings to discuss construction progress and review proposed activities for the following week.

In preparation for the project, and as the work evolved, CAR staff referenced and consulted the recommendations set forth by PAI (Dase 2013; Fields and Dase 2014). CAR also relied on the 1896 and 1912 Sanborn maps, a series of circa 1960 aerial photos (UTSA ITC), and COSA's plat and survey books from the late nineteenth and early twentieth century.

Standard monitoring forms were completed on a daily basis. CAR staff included a lab-based GIS/Illustrator who downloaded and managed the Trimble® GPS data. Features were documented using standard archaeological procedures, including completion of feature forms, measured drawings, and photographs. CAR staff recorded all artifacts, ecofacts, and associated samples with appropriate provenience information and transported them to the CAR laboratory for processing and curation preparation.

In addition to archaeological monitoring, archaeologists excavated shovel tests and a test unit to locate and document subsurface cultural deposits during the Historic Homes subproject. Shovel tests were approximately 12 in. in diameter and excavated to depths of up to 24 in. below the ground surface, terminating before that depth if excavators encountered bedrock, disturbances, sterile sub-soil, or the water table. Shovel tests were excavated in 4-in. arbitrary levels at the Smith House excavations and 8-in. arbitrary levels for the Kohler House and Espinoza House investigations. All soil matrix was screened through ¼-inch hardware cloth.

All encountered artifacts were recovered with appropriate provenience for laboratory processing, analysis, and curation. A shovel test form was completed for every excavated shovel test. Data collected from each shovel test included the final excavation depth, a tally of all materials recovered from each 4-in. level, and a brief soil description (texture, consistency, Munsell color, and inclusions). CAR staff recorded the location of every shovel test with a GPS unit and sketched it onto aerial maps as a backup to GPS provenience information. Additional observations were included on the standard shovel test form. Excavators recorded natural stratigraphic levels when possible and refilled the hole with the screened soil.

CAR staff excavated a 20-x-20-in. test unit south of a concrete structure with a hand pump on the west side of the Pereida House to determine if the structure was a cistern or well. CAR staff excavated the test unit in five 4-in. level increments for more rigorous control. All completed levels were documented using standard excavation forms and photographs.

Laboratory Methods

Throughout the project, the analysis and organization of records, artifacts, and daily logs was ongoing. All records generated during the project were prepared in accordance with federal regulations (36 CFR Part 79) and THC requirements for State Held-in-Trust collections. Field forms were printed on acid-free paper and completed with pencil. Artifacts collected during monitoring were brought to the CAR laboratory, washed, air-dried, and stored in 4-mil,a zip-lock, archival-quality bags. Material needing extra support was double-bagged, and acid-free labels were placed in all artifact bags. Each laser-printed label contained provenience information and a corresponding lot number.

Where necessary, artifacts were separated by class and stored in acid-free boxes that were labeled with standard tags. All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper and placed in archival-quality page protectors. All recovered artifacts and project-related materials, including the final report, will be permanently stored at the CAR curation facility. In consultation with the THC and the COSA OHP and subsequent to proper analyses and/or quantification, artifacts possessing little scientific value may be discarded at a later date, pursuant to Chapter 26.27 (g)(2) of the Antiquities Code of Texas.

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Chapter 6: Investigations at Yanaguana Garden

C. Stephen Smith and Clinton M. M. McKenzie

CAR monitored construction activities within the Yanaguana Garden area (Figure 6-1) from January to September in 2015. Twelve (12) work tasks required monitoring, including removing modern features, excavations for the sanitary sewer, and the installation of telecommunication lines and power cables. During the course of work, CAR staff located and documented 17 features, labeled numerically in order of discovery (Table 6-1, Figure 6-2). CAR staff assigned Feature 15 in the field, but shortly after determined it not to be a feature. The majority of features consisted of twentieth-century trash deposits or structural elements ranging from the late nineteenth to the twentieth century. The most significant features were the Acequia Madre de Valero (41BX8) and a late nineteenth-century privy vault. This chapter presents the field activities and associated features, followed by a discussion of the collected artifacts.

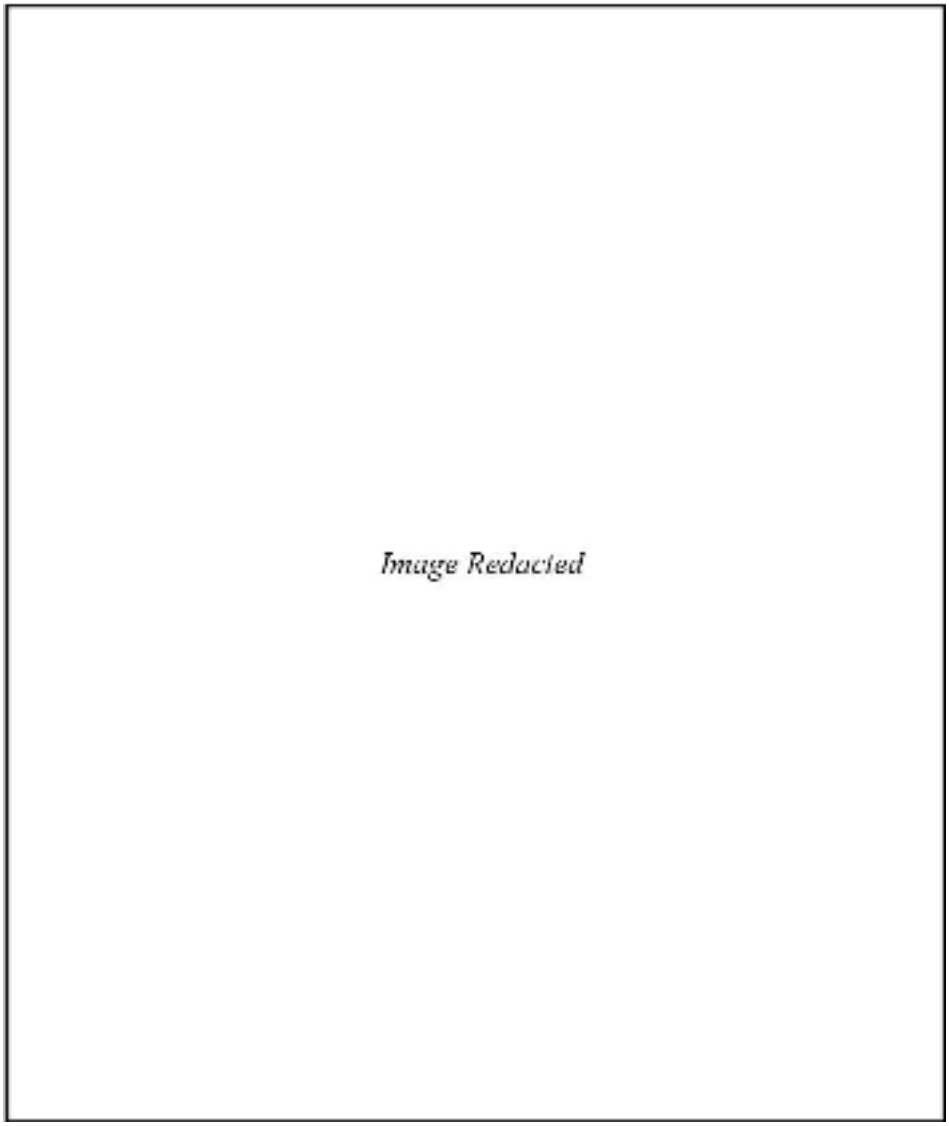

Figure 6-1. Recorded sites in the Yanaguana Garden APE based on Texas Archaeological Sites Atlas (THC 2017) on Esri aerial imagery, NAD 83 UTM Zone 14N.

Table 6-1. List of Features from Yanaguana Garden APE

Feature	Location	Why Exposed	Type
1	SW section-OK Bar	Utility Trench	Historic trash pit (late 19th - early 20th century)
2	NE section-Pergola	Pergola footer	Wooden structure
3	NE section-Pergola	Pergola footer	Historic trash pit (late 19th - early 20th century)
4	NE section-Pergola	Pergola footer	Historic scatter (20th century)
5	Splash Pad	Splash pad excavation	Historic trash pit (post-1939)
6	North Central-Dynamo	Utility Trench	Foundation stones
7	Central-Pereida House	Pergola footer	Limestone blocks
8	Central-Pereida House	Pergola footer	Historic trash pit (late 19th - early 20th century)
9	SW section-OK Bar	Utility Trench	Acequia Madre de Valero
10	Magik Theatre Area	Utility Trench	Trash pit (20th century)
11	Magik Theatre Area	Utility Trench	Trash (20th century)
12	North Central-Dynamo	Dynamo footer	4-x-4 post w/Portland cement (modern)
13	NE section	WiFi Trench	Foundation stones
14	NE section	WiFi Trench	Cobble surface
16	Eager House	Utility Trench	Stone debris (1820-1900)
17	Eager House	Utility Trench	19th-century privy (1870s-1910)
18	Splash Pad	Excavation	Acequia Madre de Valero

Removal of Modern Features

CAR began monitoring at Yanaguana Garden in January 2015 during the removal of several modern/non-historic features such as concrete curbs, paving, sidewalks, walls, landscaping, and abandoned underground utilities. As noted in the introduction, PAI completed some of this work prior to CAR assuming responsibility for the project (Fields et al. 2015). The area in close proximity to the Eager House (41BX587) was especially affected by the demolition of sidewalks, curbs, and low walls. Most excavations and ground disturbances during this construction activity were less than 18 in. deep. Generally, exposed soils consisted of bedding sand, caliche base, and/or top soil. CAR staff observed no diagnostic historic artifacts during removal of non-historic features.

Sanitary Sewer

PAI also monitored the sanitary sewer and storm drain trenching. The entire project area was crisscrossed with numerous existing sewer and storm drain lines; however, five features (Features 1, 10, 11, 16, and 17) were identified during this work. CAR was also aware that one section of the proposed new sewer line intersected the alignment of the Acequia Madre de Valero (41BX8). The 24-in. sanitary sewer line was 13-16 ft. below the graded surface, and the trench was approximately 3 ft. wide. The line intersected the path of the *acequia* at the southwest quadrant of the project area. In consultation with the City Archaeologist and the THC, it was determined to avoid the feature as the City was committed to protecting and preserving the *acequia* throughout the project area. As a result, extensive efforts were undertaken to avoid any adverse impacts to the *acequia*. Contractors employed a horizontal thrust boring technique to prevent any impact on the *acequia* (Figure 6-3). Unlike horizontal directional boring, horizontal thrust boring requires large entry and exit pits to accommodate boring equipment. In this case, these pits were approximately 26-29 ft. long and 10-13 ft. wide. CAR staff monitored the excavation of these pits.

Feature 1

Contractors exposed a historic trash pit feature along the east wall of the storm drain trench (Figure 6-4). Feature 1 extended from approximately 2.6-5 ft. below the current grade and appeared to be about 3 ft. in diameter. The feature consisted of a burn pit containing bone, clear bottle glass, and whiteware, and it dated to the late nineteenth or early twentieth century. Feature 1 was impacted by construction trenching, and it appeared very similar and perhaps related to another nearby trash pit excavated by PAI (Fields et al. 2015). After consulting with the City Archaeologist and the THC, it was determined to document the feature before allowing work to continue in the area. CAR staff took photographs, obtained GPS locational data, and completed standard forms for the feature, but they did not collect any of the artifacts observed in Feature 1.

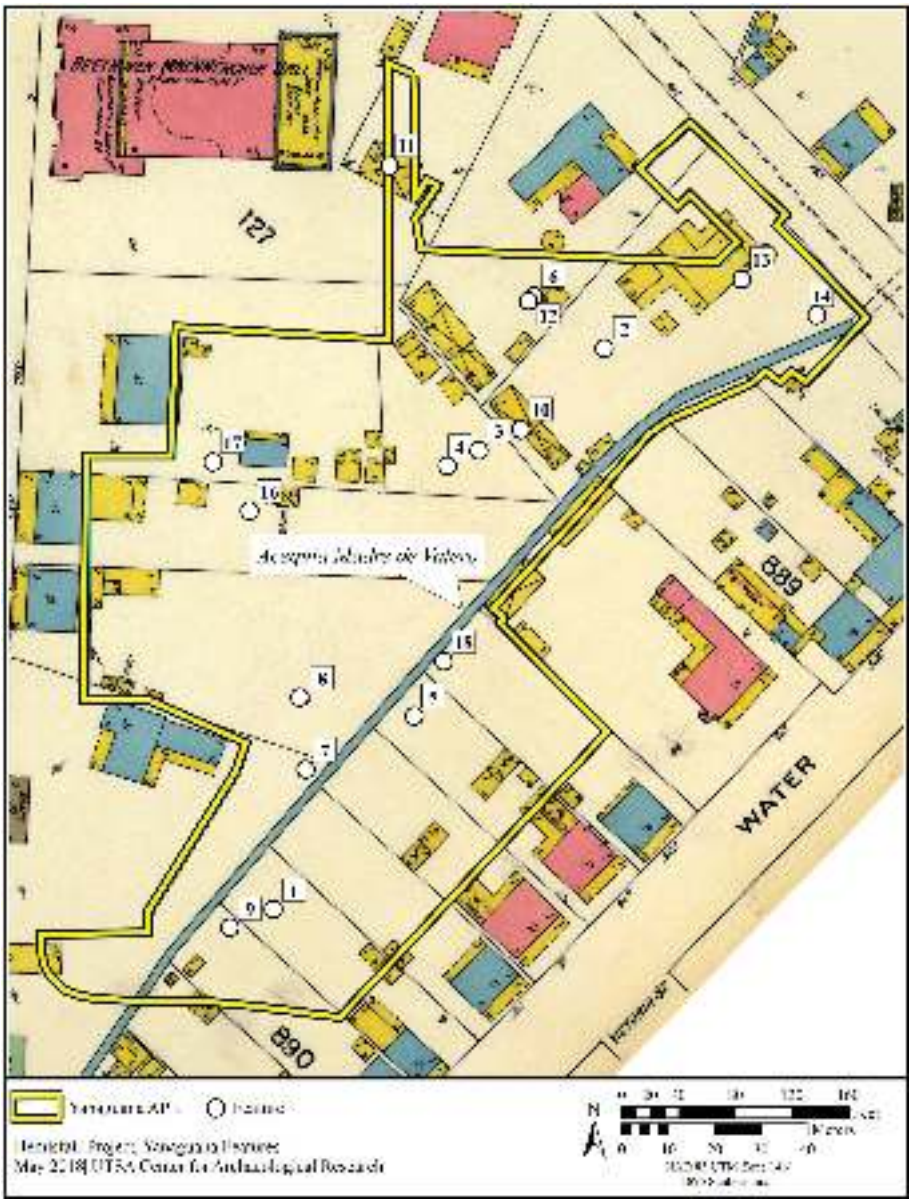

Figure 6-2. 1896 Sanborn Fire Insurance Map *(Sanborn 1896) overlaid with features documented in the Yanaguana Garden APE; note the Acequia Madre de Valero in blue.*

Feature 10

Central Electric exposed a trash pit in the Yanaguana Garden area. The contractor's trench was narrow, roughly 10-12 in. wide, and shallow at less than 18 in. deep. Contractors encountered Feature 10, an area of darker soil, at about a depth of 1 ft. (Figure 6-5). Contained within this darker matrix, archaeologists found a machine-made, soda-water bottle and unidentified metal. The darker soil containing these artifacts was small, approximately 2 ft. long or less. Feature 10 appeared roughly oblong; however, excavation exposed an insufficient portion of the feature to determine with confidence the shape and extent. Due to their twentieth-century association, no artifacts were collected from this feature. Because Feature 10 appeared relatively recent and construction work did not severely impact it, archaeologists recorded the feature, and then contractors continued the utility line construction.

Feature 11

Contractors exposed an area containing historic material during excavation of a utility trench in the Magik Theatre parking lot (Figure 6-6). Feature 11 contained clear, machine-made, bottle glass and one small piece of plain white earthenware. The large feature extended to a length of approximately 4 ft., was about 16 in. thick, and began at a depth of approximately 1 ft. below the existing grade. Due

Figure 6-3. Entry pit for horizontal thrust boring.

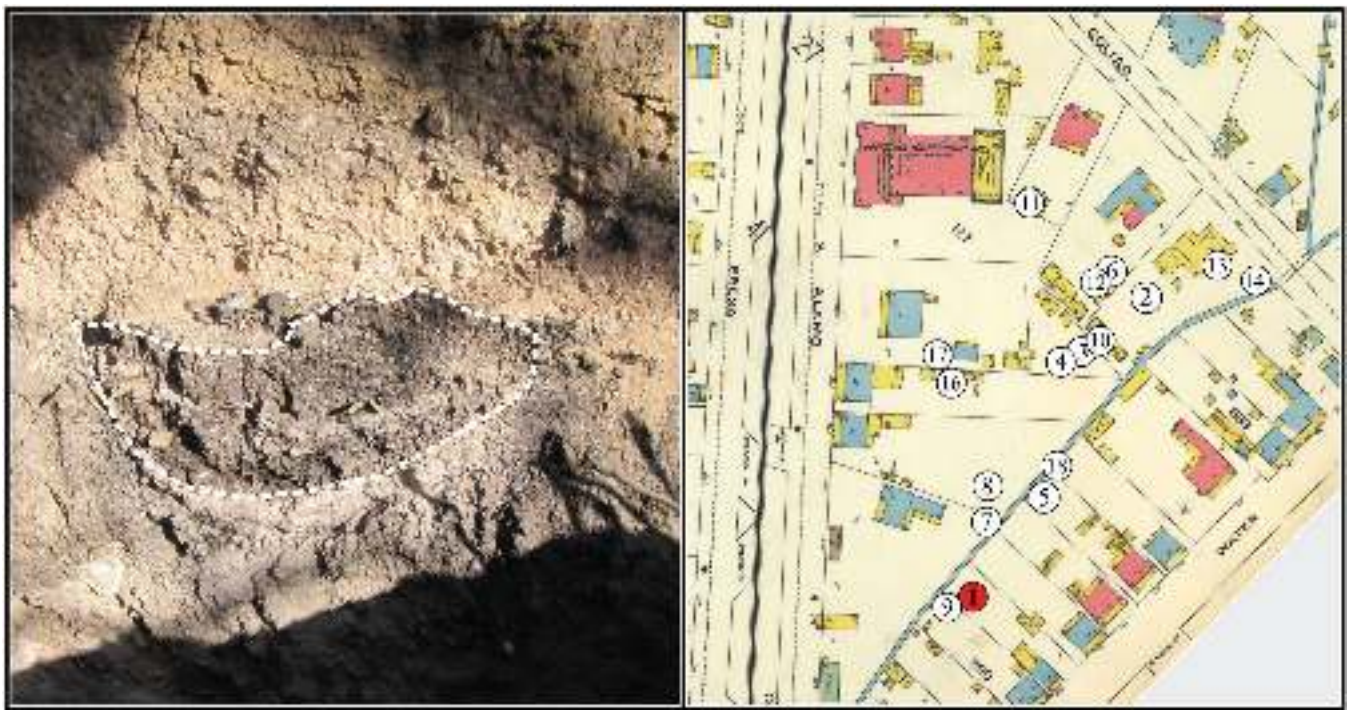

*Figure 6-4. Left: Feature 1, historic trash pit (outlined in white). Right: location of Feature 1 on 1896 S*anborn Fire Insurance Map *(Sanborn 1896).*

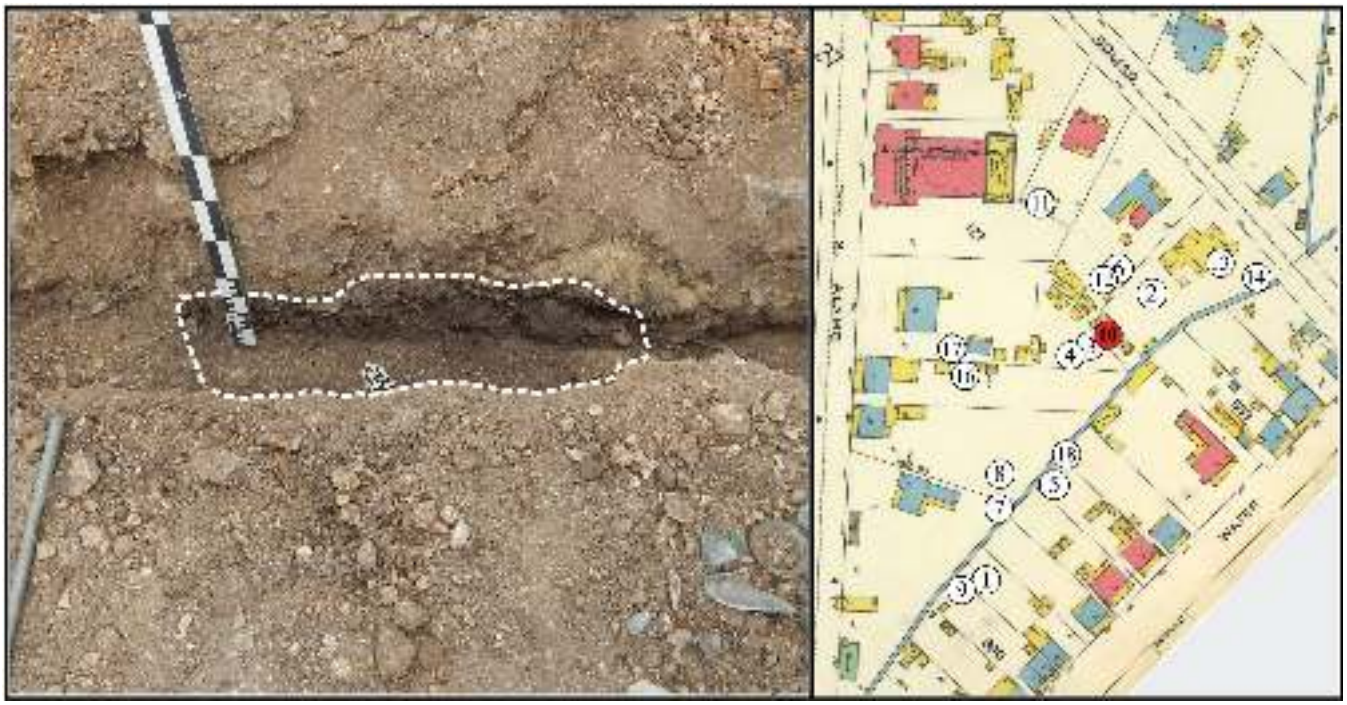

Figure 6-5. Left: Feature 10, trash pit (outlined in white). Right: location of Feature 10 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

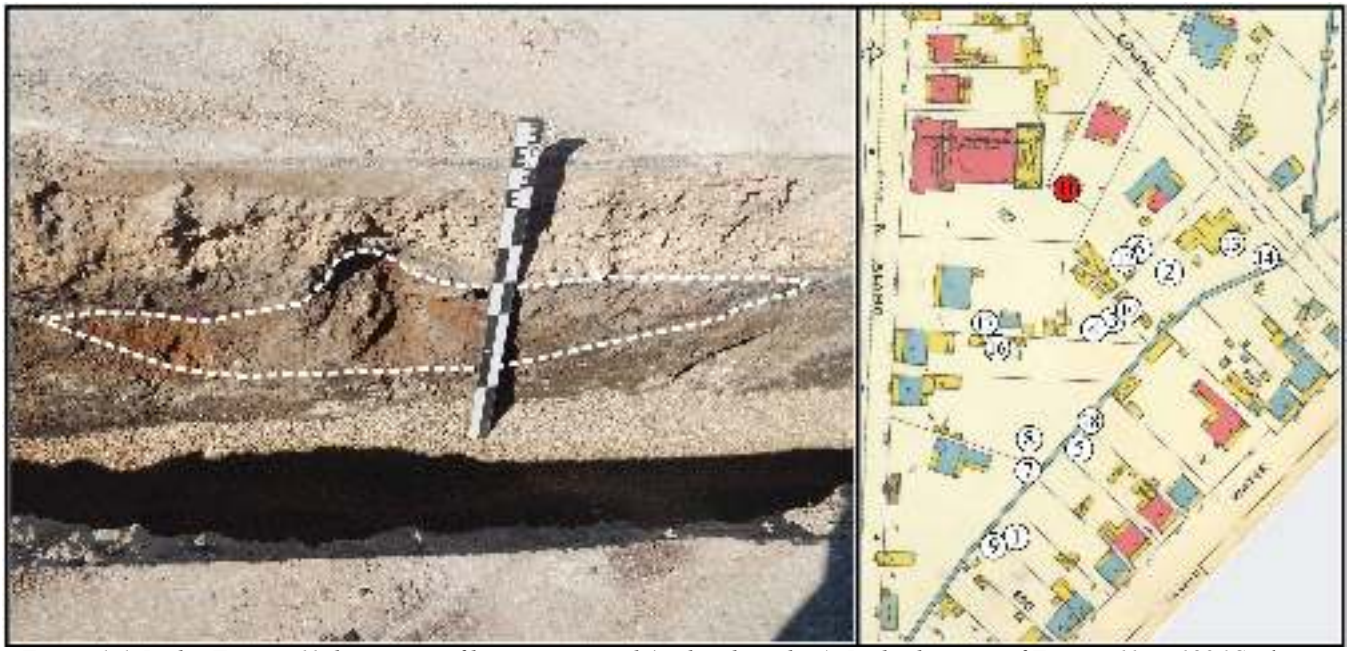

Figure 6-6. Right: Feature 11, large area of historic material (outlined in white). Right: location of Feature 11 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

to the scarcity of artifacts, the lack of integrity, and apparent twentieth-century date, contractors continued excavating this trench and installing pipe immediately after archaeologists recorded the feature.

Feature 16

Contractors exposed Feature 16 in the central part of the Yanaguana Garden APE. Feature 16 was about 3 ft. across and 3 ft. deep, and it contained bricks, stones, tiles, and other pieces of apparent building materials (Figure 6-7). Artifacts collected included the base of a yellowware plate, an amber bottle missing its neck with "1413 170" stamped on the base, and a green glass container with a push-up base (Table 6-2). Based on the artifacts recovered, Feature 16 dates to the late nineteenth century. The trench appeared to clip the southernmost edge of Feature 16, leaving the bulk of the feature undisturbed. A thin layer of ashy soil was at the top of Feature 16, and the artifact-bearing deposits began beneath this ashy layer. Wet weather hindered documentation of the feature, but after delays, CAR staff completed documentation. Since there were no further plans to impact the feature, contractors finished their work and backfilled the trench.

Feature 17

Contractors excavated a sewer line trench southeast of the Eager House (41BX587), exposing a rock wall and sediments containing historic artifacts. Archaeologists recorded the wall and associated artifacts as Feature 17 (Figure 6-8). CAR staff temporarily halted construction in this trench upon discovery of the feature and notified the City Archaeologist and the THC, who required more complete documentation of this feature, including scaled profile drawings, GPS locational data, and hand excavation to probe the depth of the structure. Archaeologists excavated the feature to a depth of slightly more than 5 ft. before reaching its terminal depth (Figure 6-9). Excavations revealed Feature 17 is a rectilinear, fully stone-

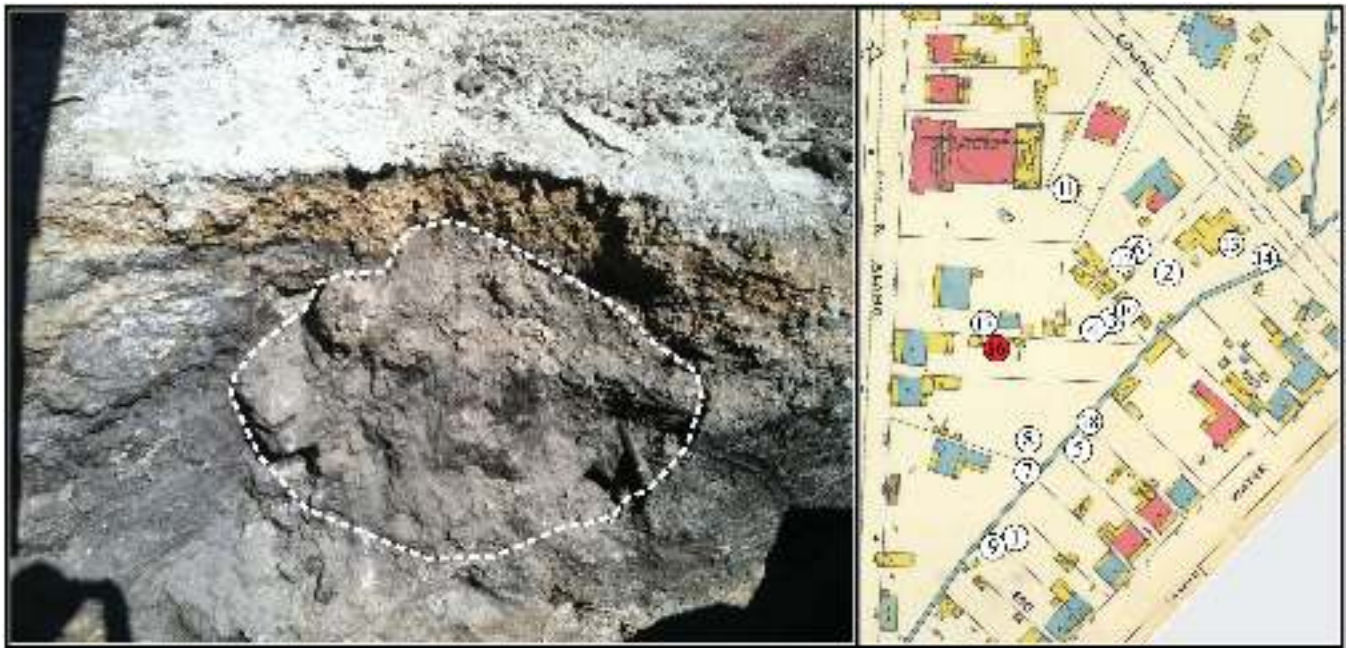

Figure 6-7. Left: Feature 16, concentration of building material (outlined in white). Right: location of Feature 16 on 1896 Sanborn Fire Insurnace Map *(Sanborn 1896).*

Table 6-2. Artifacts from Feature 16

Superclass	Class	Count	Comments
Glass	Container	1	Amber bottle (missing neck) stamped "1413 170" on base
Glass	Container	1	Green kick-up base insufficient sample to date
Ceramics	Earthenware	1	Base of yellowware plate

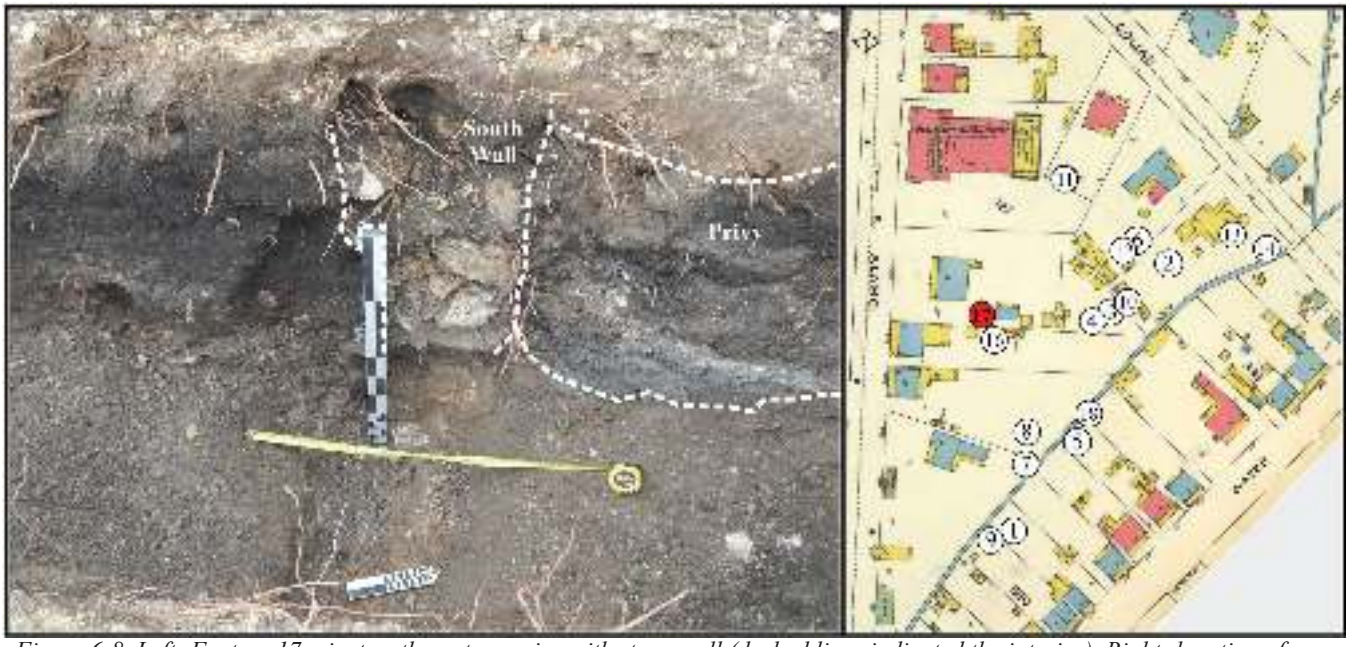

Figure 6-8. Left: Feature 17, nineteenth-century privy with stone wall (dashed lines indicated the interior). Right: location of Feature 17 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

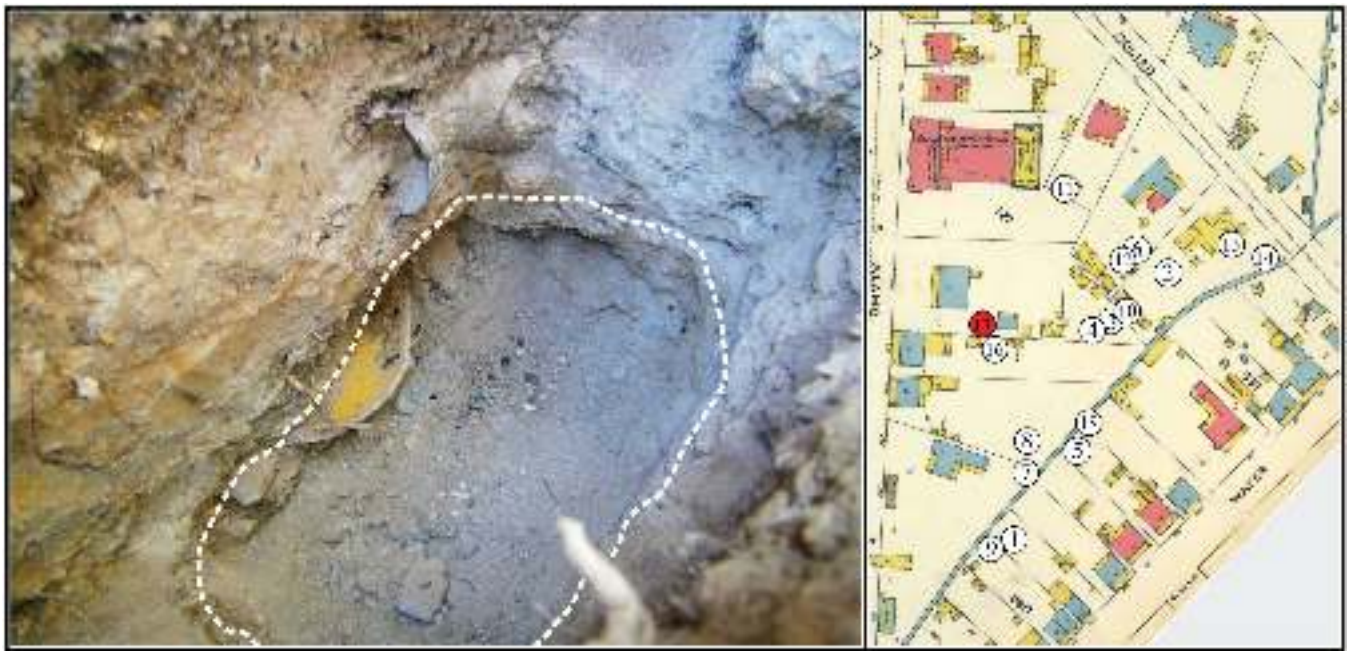

Figure 6-9. Left: terminal depth of Feature 17 (outlined in white); note the charcoal and yellowware. Right: location of Feature 17 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

lined privy that was subsequently repurposed as an ad hoc residential trash dump associated with the Eager homestead. The bottom of Feature 17 was earth with no prepared floor, consistent with privy construction. Figure 6-10 shows the west wall of the privy.

Artifacts recovered from Feature 17 were consistent with a date range from the last quarter of the nineteenth century into the first decade of the twentieth century (Table 6-3). Date ranges were inferred from temporally diagnostic ceramics and glass.

Splash Pad

In February 2015, the contractor graded and installed spray equipment, water walls, drainage, and lighting for the Splash Pad. The course of the Acequia Madre de Valero (41BX8) crossed through the Splash Pad area. Therefore, the THC and City Archaeologist required hand excavation over the *acequia*. During their excavation at the Splash Pad, contractors encountered a stone alignment. The archaeologist temporarily halted construction work and excavated a small trench to permit documentation of these stones. CAR determined that the stones represented the *acequia*'s eastern

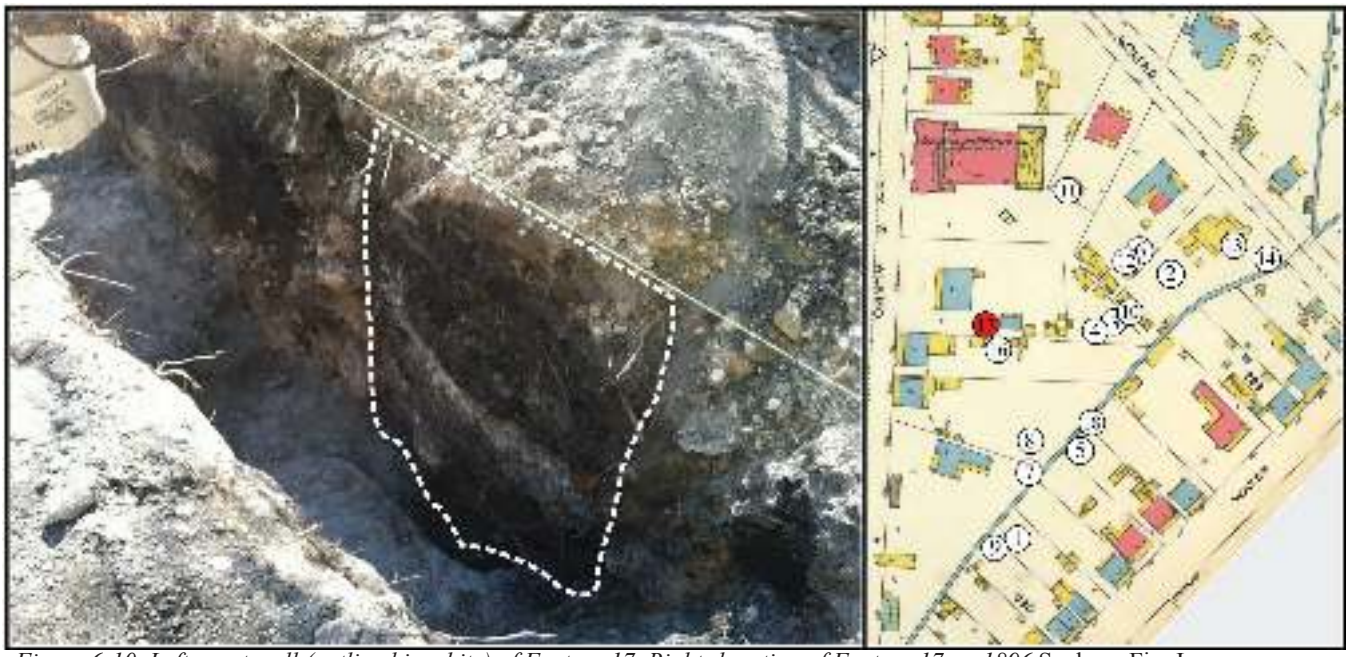

Figure 6-10. Left: west wall (outlined in white) of Feature 17. Right: location of Feature 17 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Table 6-3. Artifacts from Feature 17

Superclass	Class	Count	Comments
Ceramic	Earthenware	1	Rockingham glaze doorknob
Ceramics	Earthenware	2	Refined earthenware plate, 1840-1900s
Ceramics	Earthenware	1	Ironstone/refined earthenware serving plate, "_& G Meakin"
Ceramics	Porcelain	9	Undecorated white porcelain
Ceramics	Porcelain	2	Undecorated white porcelain (nearly complete plates)
Construction Materials	Brick	3	Yellow Mexican Brick "M. Valdez Corado"
Construction Materials	Other	1	Mortar
Glass	Container	1	Amber cylindrical molded Lea & Perrin's sauce bottle "LEA & PERRI_" on the body, and "A C B Co" Aire & Calder Bottle Co. on base

Table 6-3. Artifacts from Feature 17, continued....

Superclass	Class	Count	Comments
Glass	Container	2	Amber snuff bottle, machine made
Glass	Container	1	Molded amber bottle with lady's leg neck, 1890-1915
Glass	Container	1	Amber medicine bottle "Patd. May 12 68 Dr. S. Pitcher's Castoria Boston, Mass."
Glass	Container	2	Aqua cylindrical base of jar container
Glass	Container	1	Aqua cylindrical bottle with parallel sides and a wide mouth (incomplete) CBM embossed on base – possibly Crosse Blackwell London
Glass	Container	1	Aqua cylindrical jar top
Glass	Container	3	Aqua French Square molded bottle with applied lip
Glass	Container	2	Aqua bottle with "Made by Gravitating Stoppers New York John Matthews " on base, "F. Bachrach San Antonio Texas" on body
Glass	Container	15	Aqua Mason jar "Patented Nov 30th 1858"
Glass	Container	1	Aqua bottle with "Hegeman & Co. Chemist" on body
Glass	Container	1	Blue rim fragment
Glass	Container	1	Clear medicine bottle embossed "P Moller QL Jecor Gador ver Christiania"
Glass	Container	1	Clear ball extract bottle "E.R. Durkee & Co. New York"
Glass	Container	2	Clear bottle stoppers small and round
Glass	Container	1	Clear cologne bottle "Murray & Lanman Florida Water Druggist New York"
Glass	Container	1	Clear cork top medicine bottle with embossing "C. T. Hurlburt"
Glass	Container	1	Clear bottle embossed "Dr. Sanford Liver Invigorator New York"
Glass	Container	1	Clear handblown, mouth wider than body, and cylindrical in shape
Glass	Container	2	Clear ink bottle, cylindrical conical sides double ring finish
Glass	Container	2	Clear molded bottle
Glass	Container	1	Clear neck fragment
Glass	Container	1	Clear pressed glass fruit or salad bowl with pleated bands
Glass	Container	1	Clear small molded bottle with round base and narrow neck remnant of applied handle, possible perfume bottle
Glass	Container	1	Three part machine made bottle with cork topper
Glass	Container	1	Square (in cross section) hand blown bottle
Glass	Container	1	Dark brown three part mold w/applied lip
Lithics	Other	4	Gray slate
Metal	Nail	1	Cut nail
Metal	Nail	1	Nail or stake
Metal	Unknown	1	Unknown
Organic	Faunal Bone	2	Capra hircus rib
Organic	Faunal Bone	1	Unmodified Bone
Organic	Modified Bone	4	Modified bone (polished or sawed)
Organic	Modified Bone	1	Bone handle
Personal	Personal Item	1	Ceramic button
Personal	Personal Item	1	Shell button
Personal	Toys	1	German transparent swirl marble

wall (see Feature 18). CAR staff recorded the feature, and the wall was covered with 6 in. of sand before pad equipment was placed atop the feature. The *acequia* was protected and preserved in place.

Subsequent to the contractor installing the Splash Pad equipment, it was discovered that the sediment beneath the pad would have to be removed and replaced with select construction fill. Since this proposed excavation would have severely impacted the *acequia*, work was halted until an alternate plan could be devised. In May 2015, archaeologists were asked to mark the approximate outer edge of the *acequia* walls. CAR staff located the eastern wall of the *acequia* using historic maps and GPS data and confirmed the location on-the-ground. Archaeologists estimated the width of the *acequia* feature based on finds recorded during the nearby Internal Streets excavations and added an additional 2-ft. buffer. CAR staff marked both the east and west boundaries with T-posts and red warning tape (Figure 6-11). Prior to additional work, the general contractor added another 2-ft. buffer on both sides of the protective barrier. The *acequia* was protected and preserved in place. The trench barriers were excavated and infilled with cement. In the second week of May, contractors excavated the matrix outside these concrete barriers in the footprint of the pad to a depth of approximately 5 ft. (Figure 6-12). Excavations were monitored, but archaeologists did not observe any artifacts or features.

Feature 18

As noted, contractors exposed the east wall of the Acequia Madre de Valero (41BX8), during hand excavation in the Splash Pad area. Feature 18 consists of a north-south stone alignment of the *acequia* (Figure 6-13). Contractors first encountered these stones at a depth of about 3 ft. below the graded surface. The City Archaeologist was notified and visited the feature, confirming the feature represented a small section of the upper stonework of the *acequia*'s east wall. To avoid impacting the *acequia* wall, the construction plan was altered to decrease the diameter of the pipe installed over the feature from 8 in. to 4 in. The smaller diameter permitted the pipe to pass over the top of the feature without impacting it. Furthermore, the contractor placed a protective layer of sand above the feature wall, and the depth of the excavation was reduced over the *acequia*. Following documentation of Feature 18, work continued at the Splash Pad, and the *acequia* wall was preserved in place.

Figure 6-11. T-post barrier marking the pathway of the Acequia Madre de Valero (41BX8).

Figure 6-12. Excavation of Splash Pad.

Figure 6-13. Left: Feature 18, eastern wall (outlined in white) of the Acequia Madre de Valero (41BX8) in Splash Pad area. Right: location of Feature 18 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

During documentation of Feature 18, archaeologists retrieved a sample of representative and unusual artifacts from the area in and around the feature (Table 6-4). These artifacts consisted of glass, ceramics, and unidentified metal. Archaeologists also collected a metal token stamped with "Eagle Pass Club 12 1/2." These artifacts are temporally diagnostic of the last quarter of the nineteenth century.

CAR staff only documented the portion of the east wall of the *acequia* exposed within the narrow trench excavated by the contractor. The actual width of the wall most likely matches a portion of the wall exposed in E. Nueva Street during the Internal Streets subproject. In that excavation, a portion of both the west and east walls were exposed, revealing that the *acequia* walls were approximately 18 in. wide.

Feature 5

A shallow, historic trash pit was exposed during grading in the Splash Pad area. Feature 5 appeared scattered, with artifacts occurring only in a narrow band of burned soil and ash. Artifacts first appeared about 10-12 in. below the graded surface and continued to about 16-18 in. below the graded surface. Items collected from Feature 5 included a clear glass bottle sherd from a Grapette Soda bottle (Table 6-5). This bottle style was manufactured after 1939 until circa 1950 (Grapette Collector's Club 2017); therefore, Feature 5 postdates 1939 with a terminal date sometime around 1950. Because of the late date and indistinct boundaries of this small trash pit feature, CAR staff performed no further work on Feature 5 and grading continued in the Splash Pad area.

Perimeter Barriers

In mid-June 2015, contractors began excavating two perimeter barriers encircling the entire Splash Pad area. These barriers were excavated approximately 5 ft. deep and 1.5 ft. wide around the outer edge of the Splash Pad and were infilled with flowable fill (a weak, runny concrete mix). All of this work was monitored, and archaeologists did not observe any features or artifacts during this excavation.

Pump House

Contractors excavated a pit approximately 20 ft. across and 5.5 ft. deep to house a pump for water-spray equipment for the Splash Pad. The upper foot of this pit was construction

Table 6-4. Artifacts from Feature 18

Superclass	Class	Count	Comments
Ceramic	Porcelain	1	Molded cup handle
Ceramic	Earthenware	1	Undecorated ironstone/refined earthenware base
Ceramics	Semi-Porcelain	1	Undecorated bisque base
Ceramics	Earthenware	1	Rim/base molded
Ceramics	Porcelain	1	Japanese Blue Phoenix Ware saucer fragment
Ceramics	Stoneware	1	Bristol exterior with Albany slip exterior
Construction Materials	Brick	1	Red
Glass	Chimney	1	Clear glass
Glass	Container	1	Clear base, embossed w/diamond and oval entwined with I in center Owens Illinois Glass Company, 1929-1950s
Glass	Container	1	Clear rim/neck
Glass	Container	4	Clear bottle body fragments
Glass	Container	1	Cobalt blue bottle base
Glass	Container	2	Milk glass base "Genuine Boy(d)" Mason Jar lid liner manufacturer mark absent, 1 body fragment of same
Metal	Other	1	Pipe with screw threads
Metal	Nail	1	Nail or stake
Organic	Faunal Bone	1	Bovinae Molar
Organic	Faunal Bone	1	Bovid bone fragment
Personal	Token	1	Stamped "Eagle Pass Club 12 1/2" (1866-1900)

Table 6-5. Artifacts from Feature 5

Superclass	Class	Count	Comments
Ceramics	Earthenware	1	European Earthenware
Ceramics	Semi-porcelain	1	Semi-porcelain Spark Plug "RAJAH"
Ceramics	Stoneware	1	Brown salt-glazed Stoneware rim
Ceramics	Semi-porcelain	1	Semi-porcelain with exterior blue slip
Glass	Container	1	Aqua bottle with label intact
Glass	Container	1	Cobalt blue fragment
Glass	Container	2	Clear Grapette Soda Bottle
Glass	Container	1	Clear narrow neck/rim "machine made" bottle
Glass	Container	1	Green wine bottle base
Glass	Container	1	Gray fragment
Metal	Other	1	Lettered Plaque "A Rest"

fill, beneath the fill was a layer of intact dark clay (10YR 2/1) about 2.3-3.3 ft. thick, and underneath the clay was caliche (Figure 6-14). The area had been previously disturbed by utility construction (Figure 6-15). No features or artifacts were noted.

Communication Lines/Electrical Lines

Trenches for communication lines (Wi-Fi lines) and electrical lines, including wiring for tree lights, were excavated over much of the project area. These lines were typically excavated to approximately 18 in. deep and were relatively narrow, about 1 ft. wide. In some cases, conduits were bundled together to follow a common course, and trenches were widened to approximately 3-4 ft. to accommodate the additional conduits. During the course of this work, four features were recorded. The most significant of these occurred in the southwest section of the APE. It was determined that the stones (Feature 9) most likely represented a portion of the east wall of the Acequia Madre de Valero (41BX8). Based on this finding, the contractor altered the construction plans to avoid impacting the *acequia*. The other three features consisted of foundation stones (Features 6 and 13) located in the northern part of the project area and a large cobbled surface (Feature 14) that was located in the northeastern portion of the project area.

Feature 9

In a utility trench at the far southern extent of the Yanaguana Garden APE, Central Electric exposed a square-cut limestone block approximately 1 ft. below the graded surface (Figures 6-16 and 6-17). To afford a better view of the stone, an area about 30 in. wide and approximately 35 in. long was excavated by hand. The block had been square cut on two sides with one side rough cut. This block rested on stones set in a sandy mortar. This mortared stone construction starts at about 20 in. below the graded surface. Archaeologists hand excavated around the rubble to a depth of about 30 in. to confirm rubble continued to the bottom of the cut limestone block. Given the construction and location of this feature, it was determined likely to be the eastern wall of the Acequia Madre de Valero (41BX8). The City Archaeologist agreed with the interpretation of the deposits during a site visit.

In consultation, it was determined clearance above the feature was sufficient to continue the utility trench without impacting the feature's integrity. A layer of sand was placed on top of Feature 9 as a protective measure before installing the line. No artifacts were collected in or around Feature 9. One square-cut nail (1880s-1900s) was noted, and Feature 9 was preserved in place.

Feature 6

During utility trenching, contractors exposed large, cut limestone blocks apparently belonging to the foundation of a house (Figure 6-18). Historic maps indicated a foundation once existed in the area just southeast of the Kampmann-Halff House. CAR staff had not been notified of this work, and upon arrival at the site, the archaeologist noticed the two stones lying on the surface next to the backhoe and saw a third stone hoisted inside a backhoe bucket. The work had exposed four other stones in the trench (Figure 6-18). The contractor encountered these blocks about 1 ft. below the graded surface. While the contractor continued utility trenching in other nearby areas, CAR consulted with the City Archaeologist.

Archaeologists established an elevation measurement at the ground surface of a nearby pecan tree. The stones sat

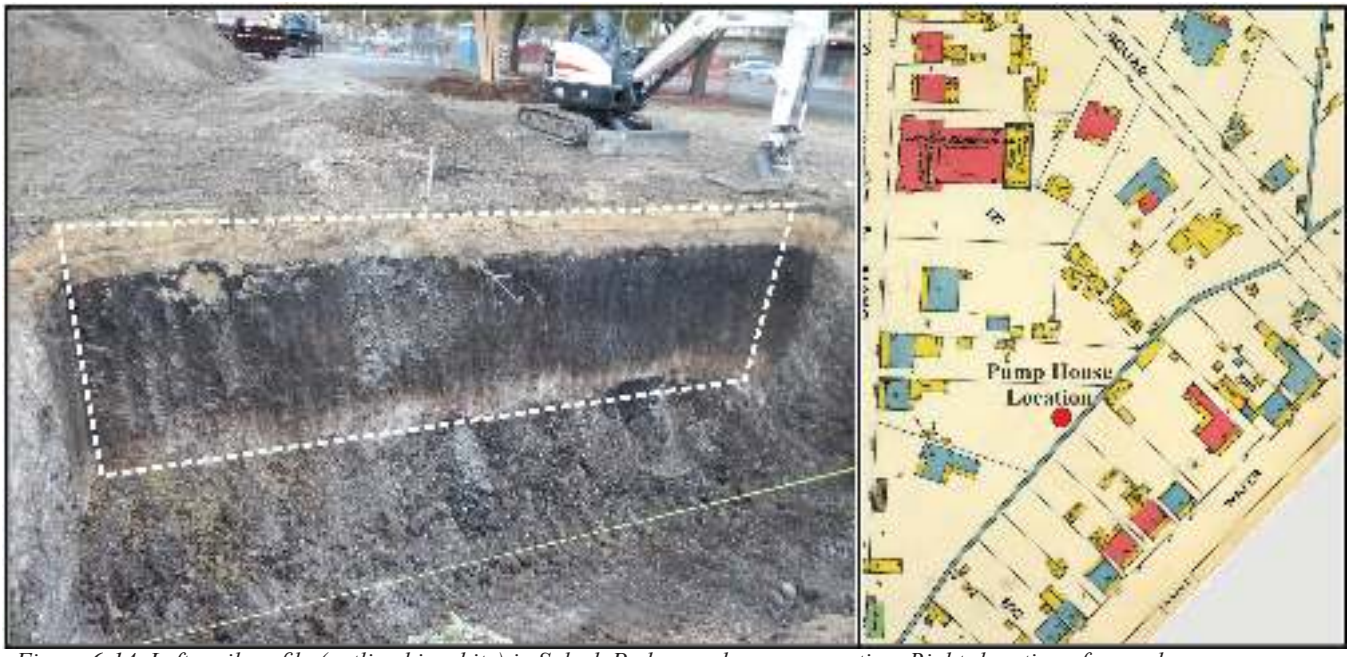

Figure 6-14. Left: soil profile (outlined in white) in Splash Pad pump house excavation. Right: location of pump house on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Figure 6-15. Large utility disturbance (outlined in white) in the east profile of Splash Pad pump house excavation.

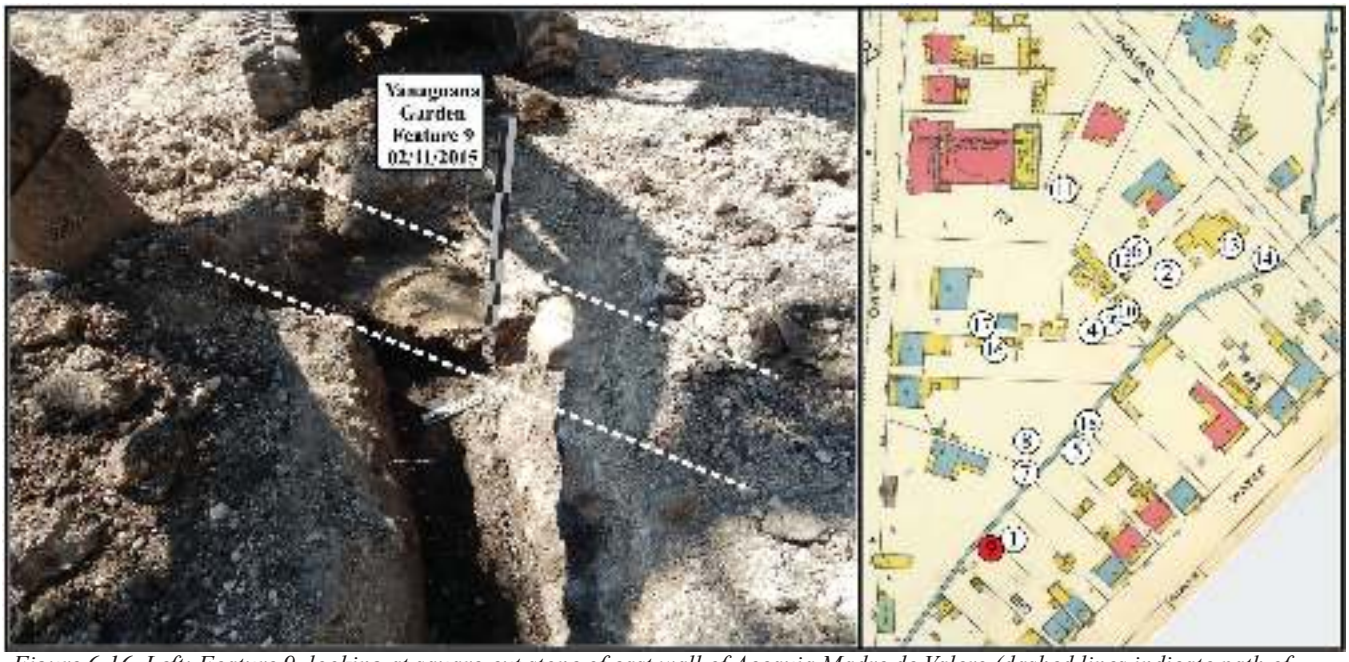

Figure 6-16. Left: Feature 9, looking at square-cut stone of east wall of Acequia Madre de Valero (dashed lines indicate path of acequia*). Notice the grading of this area. The depth of intact soil on right indicates approximately 2 ft. of the surface was previously removed. Right: location of Feature 9 on 1896* Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

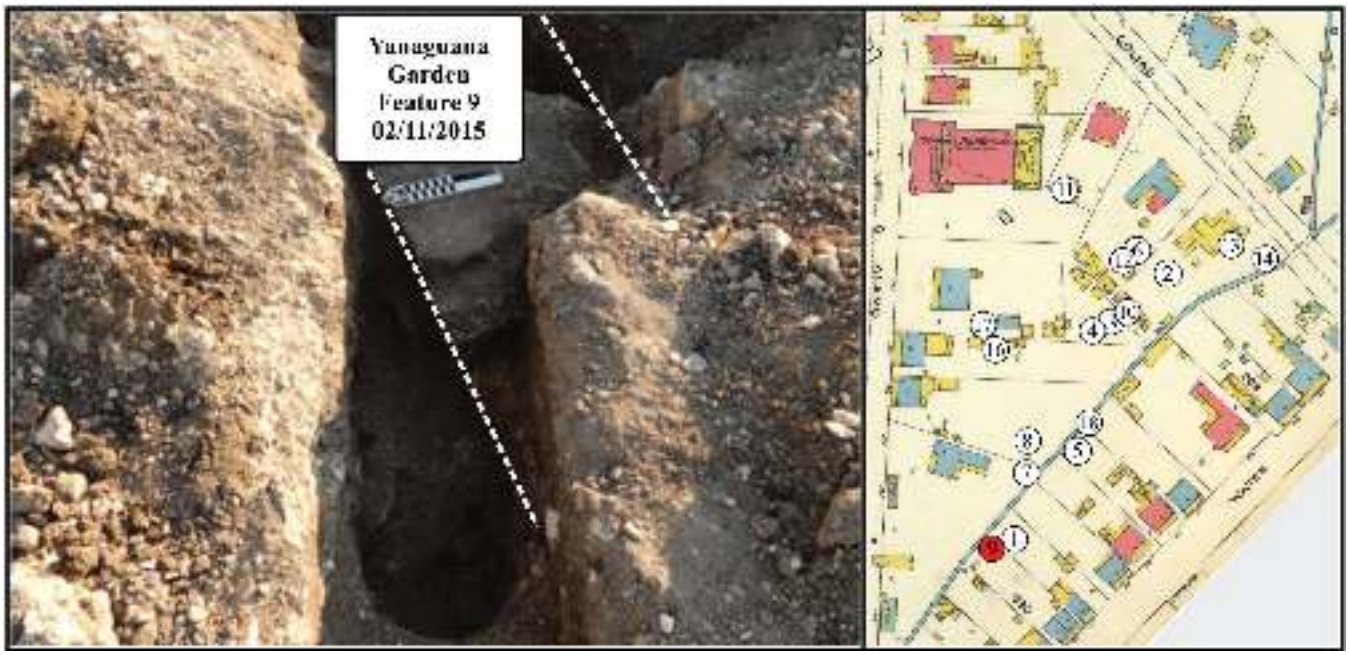

Figure 6-17. Left: Feature 9, view of square-cut top stone of Acequia Madre de Valero with mortared rubble beneath (dashed lines indicate path of acequia*). Right: location of Feature 9 on 1896* Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

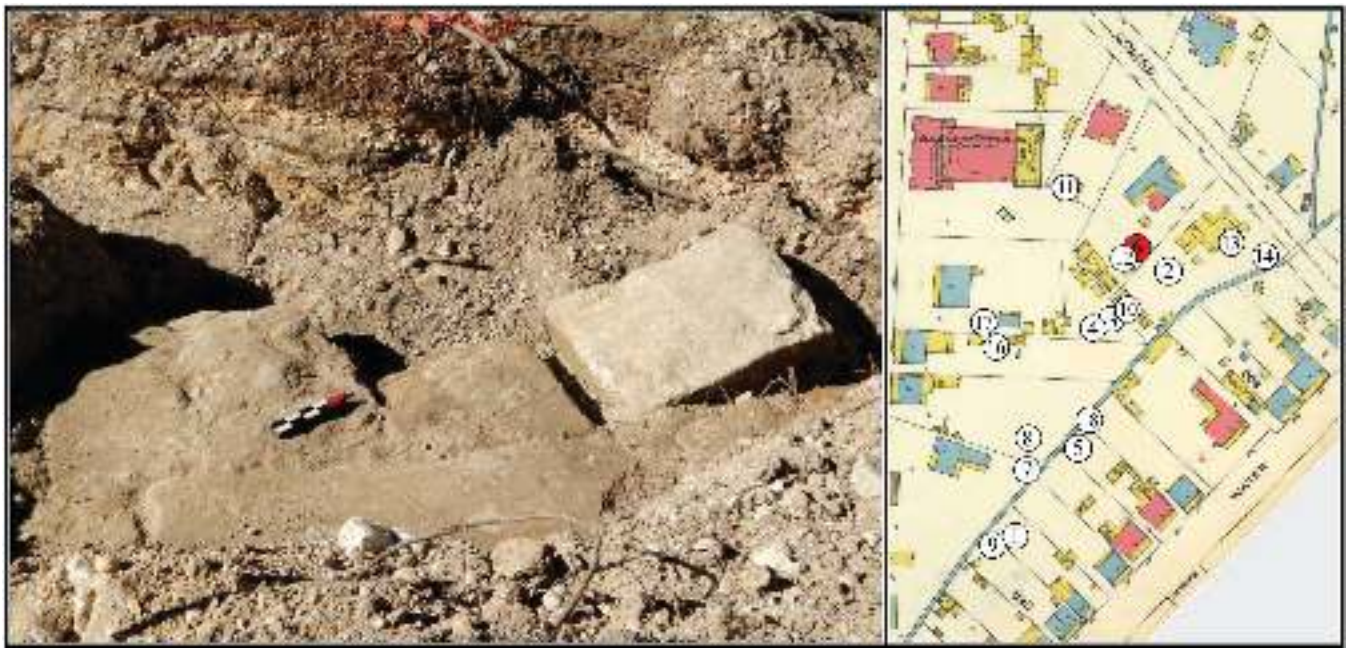

Figure 6-18. Left: Feature 6, stone foundation. Right: location of Feature 6 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

approximately 2 ft. below the surface at this marker. CAR staff skimmed the overburden to expose two additional foundation stones. The largest of these stones was 3.5-x-1.5-x-0.5 ft. Archaeologists documented this feature using GPS, photography, and scaled drawings. Contractors made small adjustments in the path of the trench to avoid interference with Feature 6 that preserved and protected the feature in place.

Feature 13

Central Electric excavated a Wi-Fi trench in the far north end of the Yanaguana Garden APE, exposing Feature 13 (Figure 6-19). The trench was approximately 2 ft. deep and about 2 ft. wide. Shortly after beginning the trench, the contractor encountered several large limestone blocks immediately in the pathway of the Wi-Fi trench. Historic maps suggest the position of these blocks corresponds with a historic house that once existed in this location (see Figure 6-2). This structure was removed during the urban renewal project that preceded development of the area for the 1968 World's Fair. It was also clear from excavations that the structure had been previously compromised by an underground utility (Figure 6-19). Since avoidance was not possible and displacement of stones was minimal, work continued after archaeologists completed documentation of the structure.

Feature 14

In the northern Yanaguana Garden APE, contractors excavated a roughly north-south trench for Wi-Fi lines. At about 4 ft. below the graded surface, the contractor encountered a level of cobbled pavement set in mortar. Archaeologists designated the cobblestone area as Feature 14 (Figure 6-20). Feature 14 was approximately 26 ft. from the reconstructed *acequia* (see Chapter 4). After consultation with the City Archaeologist, CAR staff bisected the feature near its southern end to better understand the width of the feature.

Archaeologists exposed Feature 14 across an area approximately 8 ft. (north-south) by 16 ft. (east-west). A previously excavated manhole located approximately 8 ft. west of the trench likely truncated the west side of the feature. Based on the bisected portion to the east of the trench, the feature appears to continue to the edge of the reconstructed *acequia*. It was unclear if excavations exposed the entirety of Feature 14. In addition, numerous utility excavations in the past severely compromised the feature's integrity. Contractors did not need to excavate into the feature further. Archaeologists completed documentation and Feature 14 was preserved in place. The function of the Feature 14 cobbled surface is currently unknown. However,

Figure 6-19. Feature 13, large limestone blocks corresponding to location of a historic home (previous utility in upper right). Scale is metric.

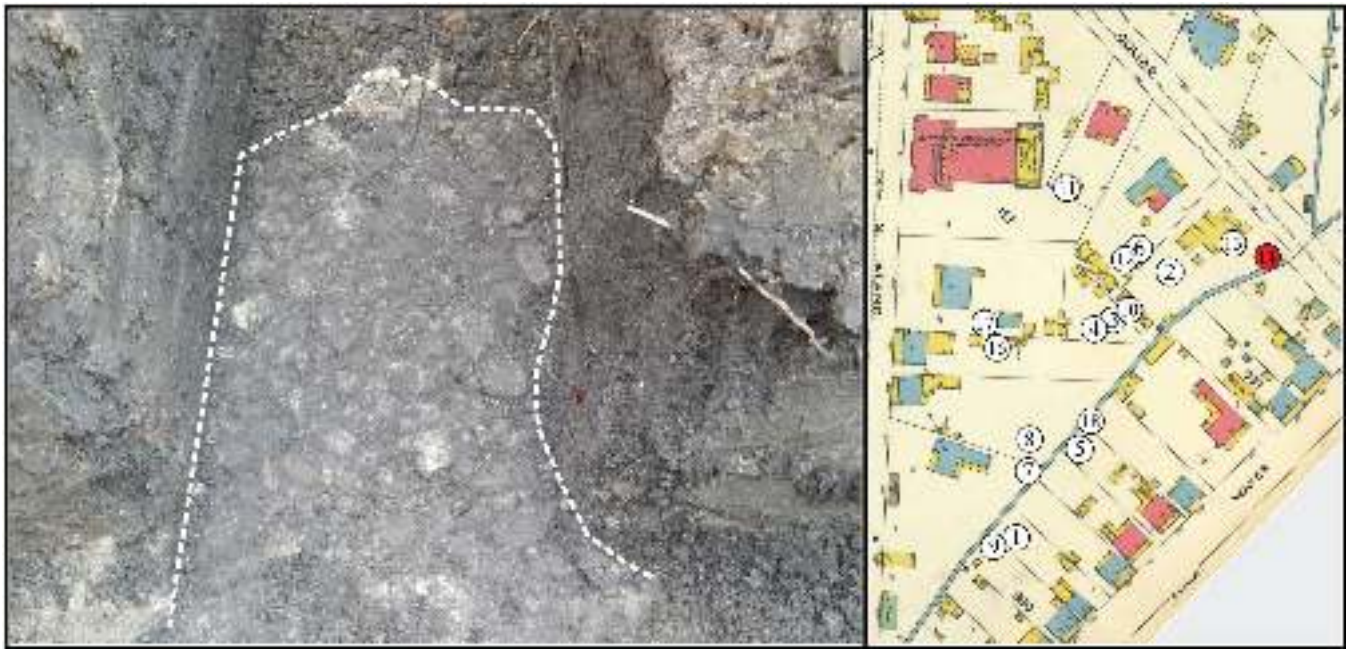

Figure 6-20. Left: Feature 14, mortared cobblestone area (outlined in white). Right: location of Feature 14 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

its location adjacent to the *acequia*, and linear alignment along its course, may indicate a buried road surface that gave access to the outbuildings along the south line of the property. These buildings are clearly shown in the 1892, 1896, 1904, and 1911 Sanborn maps as carriage or "auto-houses." The possibility also exists that the feature may be associated with the Acequia Madre de Valero (41BX8) or possibly with the Camino de la Bahia.

Lamp Poles

Contractors excavated 30 holes to accommodate lamppost piers with a power auger. These holes were 18 in. in diameter and approximately 8 ft. deep. Excavation work was monitored by examining the spoil piles as they accumulated and visually inspecting the profiles of the excavated auger holes. Only a few pieces of modern cultural materials were observed (none were collected), and no features were discovered in any of the auger hole profiles following excavation. No historic or prehistoric cultural materials were encountered during these excavations. A lack of finds is consistent with the disturbance of upper deposits associated with construction activities during the nineteenth and twentieth centuries, particularly during HemisFair.

Tree Planting

In order to plant trees, contractors excavated three holes, approximately 15 ft. in diameter and 5-6 ft. deep. CAR staff monitored the work. No cultural resources were encountered during these excavations.

Pergola Footers

Contractors excavated 22 footers for the Pergola, a horizontal trelliswork supported on hoops and to be covered with vines. Excavation for these footers, along the length of the north-south promenade, used a track mini-excavator. Excavation penetrated approximately 1 ft. below the finished grade, which was a depth of about 12-18 in. beneath the initially graded surface, depending upon the location of the particular footer. The length and width of these footers were either 4-x-8 ft. or 5-x-19 ft. Given how shallow these excavations were, it was not surprising that most of the matrix encountered during these excavations was disturbed and typically consisted of construction fill. Nonetheless, five features (Features 2, 3, 4, 7, and 8) were identified during these excavations.

Feature 2

Garza Construction exposed what appeared as a series of burned wooden floor joists running in a north-south alignment during the Pergola footer excavations (Figure 6-21). This feature appeared at approximately 18 in. below the graded surface. Feature 2 sits in a fine, dark, ashy soil with a layer of white caliche-like floor. Feature 2 might be burned remains of a wooden framed house that Sanborn historic maps indicate once existed between the Kampmann-Halff House and the *acequia*. However, the GPS location of the feature does not correspond exactly with the map, leaving open the possibility that the structure predates the earliest available Sanborn map. Archaeologists noted no artifacts within Feature 2. The burned wooden features occurred at the terminal depth of the footer. Once it was determined the construction work would cover and protect Feature 2, and no impact would result from the proposed construction work, CAR staff recorded the feature and construction activity resumed in the area.

Feature 3

Garza Construction exposed Feature 3 in a Pergola footer excavation at a depth of about 18 in. below the graded surface. The feature emerged near the terminal depth of the construction excavation and continued to approximately 22-24 in. below the graded surface (Figure 6-22). In plan view, Feature 3 was roughly circular and approximately 2 ft. in diameter.

Several artifacts were recovered from Feature 3, including cut nails, whiteware sherds, glass fragments, and a gray salt-glazed stoneware sherd (Table 6-6). Based on the presence of these artifacts and an intact medicine bottle made of clear glass, Feature 3 dates to the late nineteenth or very early twentieth century (1880-1915). CAR staff documented the trash pit before contractors continued setting the footer.

Feature 4

Garza Construction exposed a very small scatter of historic artifacts during a Pergola footer excavation. The vertical and horizontal boundaries of Feature 4 were unclear. Artifacts noted in the field included badly corroded wire nails and clear bottle glass. The contents of Feature 4, like Feature 3, date to the late nineteenth or early twentieth century. Archaeologists recorded the location using GPS and completed the feature form before construction continued.

Feature 7

In another Pergola footer location, Garza Construction exposed the edge of the foundation of a structure (Figure 6-23). The foundation's edge consisted of limestone blocks and caliche base that extended approximately 3.5 ft. in length. The stones first appeared about 1 ft. below the graded surface and rested upon a caliche base at about 1.5 ft. below the graded surface. Archaeologists probed the caliche base

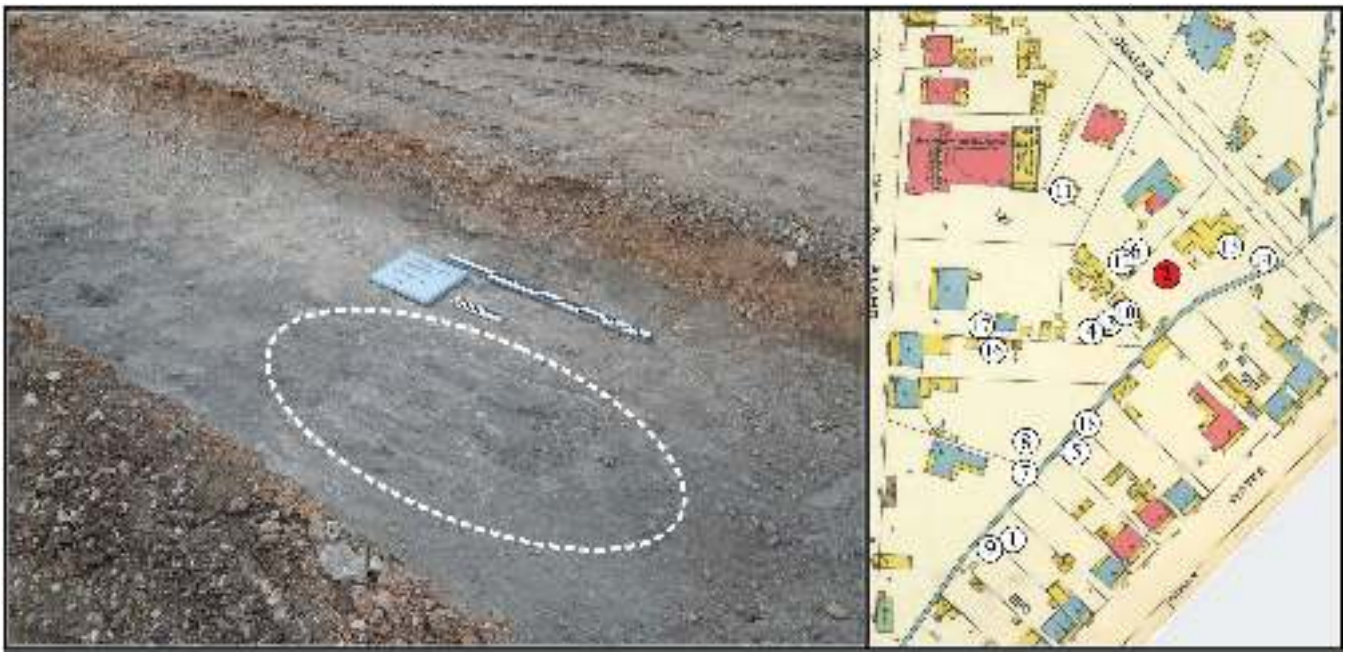

Figure 6-21. Left: Feature 2 (outlined in white), possible burned wooden floor joists. Right: location of Feature 2 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

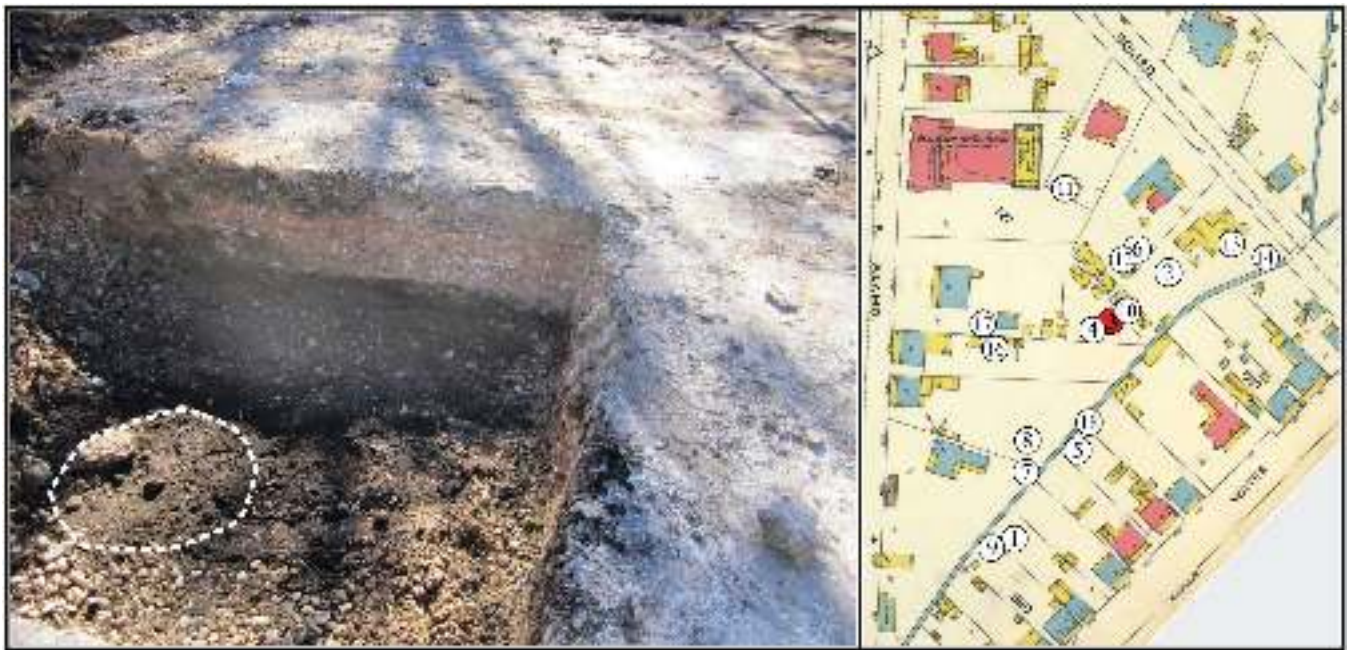

Figure 6-22. Left: Feature 3 (outlined in white), trash pit. Right: location of Feature 3 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Table 6-6. Artifacts from Feature 3

Superclass	Class	Count	Comments
Ceramics	Earthenware	1	Terracotta flower pot base
Ceramics	Earthenware	1	Refined Earthenware base
Ceramics	Earthenware	1	Refined Earthenware body with blue color, possibly hand painted
Ceramics	Stoneware	1	Salt glazed brown Stoneware
Ceramics	Earthenware	1	Yellowware
Glass	Container	1	Aqua neck fragment
Glass	Container	1	Clear, whole medicine bottle
Metal	Nails	2	Cut square nails - corroded

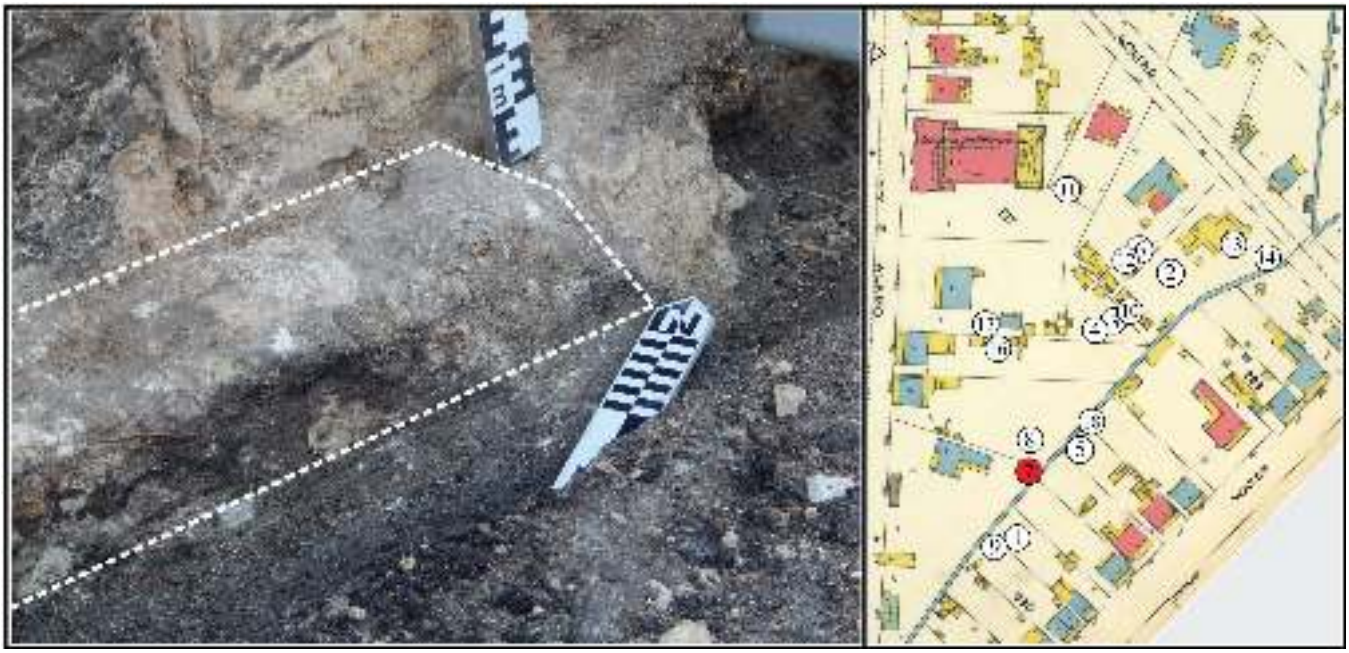

Figure 6-23. Left: Feature 7 (outlined in white), caliche blocks. Scale is metric. Right: location of Feature 7 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

about 6 in. and discovered the base continued beyond that depth. Because excavation for the footer was complete, the archaeologist ceased investigations. CAR staff did not find any artifacts associated with Feature 7, so a more precise construction attribution date beyond the archival documents was not possible. Contractors covered the limestone blocks and the caliche base with sand and proceeded without impacting Feature 7.

Feature 8

Contractors exposed a concentration of historic material recorded as Feature 8 (Figure 6-24). The historic material was clustered in loose soil and ash. Feature 8 was roughly oval in shape (28 in. long and 22 in. across), about 8 in. thick, and approximately 1 ft. beneath the graded surface. Directly underneath a layer of artifacts was a burned layer about 2 in. thick. A single square cut nail emerged from the small collection of material, as well as a round wire nail and a large metal spike/stake (Table 6-7). In addition, a piece of emerald green container glass from a Congress and Empire Springs Company mineral water bottle that dates to 1880 to 1885 was present in the feature (Lindsey 2010). The artifact assemblage from Feature 8 clearly dates the feature to the late nineteenth century.

Dynamo Footers

In mid-February 2015, contractors excavated 18 foundation footers for the Dynamo, a double tower net- climbing structure in the Yanaguana Garden. They dug all footers approximately 3 ft. deep using a mini-track backhoe. Dynamo footers

Figure 6-24. Left: Feature 8 (outlined in white), concentration of historic trash. Right: location of Feature 8 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896). Scale is metric.*

Table 6-7. Artifacts from Feature 8

Superclass	Class	Count	Comments
Construction Materials	Brick, Red	1	Red embossed brick
Glass	Container	3	Blue molded container/vessel
Glass	Container	1	Green Sarasota Springs Mineral water Bottle "Congress & Empire Springs Co."
Metal	Nail	1	Square cut nail
Metal	Unknown	1	Cast iron
Metal	Fasteners	2	Screw with washer
Metal	Fasteners	3	Bolts
Metal	Unknown	1	Cylindrical – possibly a section of pipe
Metal	Nail	1	Wire nail
Metal	Unknown	1	Copper
Metal	Farm/Ranch/Tack	1	Stake
Organic	Faunal Bone	1	Bovid phalange
Organic	Faunal Bone	1	Handsaw cut bovid
Metal	Other Personal Items	1	Skeleton Key

conformed to three different sizes: 9-x-5 ft., 6-x-7 ft., and 5-x-5 ft. All matrix that contractors encountered appeared to be construction fill. CAR staff documented a single feature (Feature 12) during these excavations.

Feature 12

Premier Construction exposed a vertical, wooden, 4-x-4 ft. post set in a cement compound (Portland cement ca. 1880-present) during excavation of a Dynamo footer. Designated Feature 12, archaeologists found no artifacts in or around the post. The feature extended from just below the surface to the terminal depth of the footer excavation. Given its presence and the condition of the buried posts, Feature 12 was not very old. After this determination and requisite documentation, it was agreed to remove the feature and complete work in the area.

Boomerang Footers

CAR monitored the boring of 34 circular footers approximately 2 ft. in diameter and 2 ft. deep. These were infilled with concrete to act as footers for the Boomerang, a horizontal net-climbing structure. All matrix encountered was construction fill, and no artifacts or features were encountered.

Grading

The entire Yanaguana Garden APE was graded. Depth of grading varied, but no features or historic artifacts were observed during this construction task.

Artifacts from Yanaguana Garden

CAR staff collected artifacts from the Yanaguana Garden APE based on their potential significance and diagnostic characteristics. This section provides a general description and analysis of artifacts recovered from six features (Features 3, 5, 8, 16, 17, and 18) in the APE. The artifacts are discussed on a feature-by-feature basis and not by level within the specific features. In this section, only artifacts from the superclass categories of ceramics, glass, metal, shell, are discussed.

Ceramics

Ceramic artifacts identified during field investigations and subsequent analyses were critical to determining the date of each feature. The classes of ceramics in this assemblage are fully representative of the mid-to-late nineteenth century and indicative of the change from agricultural to residential use occurring in the area between circa 1850 and 1900. Ceramic types recovered include earthenware, stoneware, porcelain, semi-porcelain, ironstone, and unattributed whitewares.

Earthenware, stoneware, and porcelain are the most commonly represented wares in the ceramic assemblage from the Yanaguana Garden (Table 6-8). The majority of recovered ceramic sherds (n=15, 48.4 percent) came from the stone-lined Eager privy (Feature 17). This feature also produced more than 90 percent of the porcelain. One piece of earthenware, considered among these totals, was a Rockingham glaze doorknob.

Porcelain

Porcelain, including the Japanese porcelain sherd, is the largest category of ceramics (n=13) at Yanaguana Garden. Porcelain is vitreous, or glassy, in appearance and always translucent when held up to strong light. This is a result of the mineralogical composition of porcelain, which is composed of refined earth with an admixture of kaolinite or a closely associated mineral. When fired at temperatures of 1,200 to 1,400 °C, kaolinite vitrifies into the mineral mullite, creating a ceramic with glass-like properties (Burton 1906:11-12).

While porcelain originated in mainland China, the method of production had spread across much of the rest of the industrialized world by the late nineteenth century. The manufacturing origin of the porcelains from this collection cannot be determined, except for the single sherd of Japanese porcelain, which is a saucer fragment of Blue Phoenix Ware (Figure 6-25). The sherd of Blue Phoenix dates to the very late nineteenth century to pre-World War II (Kovels 2017). The remaining 12 sherds are all undecorated or simply have a gilded rim. These porcelain sherds had no distinguishing characteristics or makers' marks that allow attribution of origin. Eleven (11) of the porcelain sherds came from Feature 17, the Eager privy. One molded cup handle and the Japanese porcelain saucer fragment came from Feature 18.

Stoneware

Stonewares are vessels produced from natural, local clays, i.e., they are not "refined" or "fine" clays such as are found with refined earthenwares or porcelains. Stonewares are non-permeable with pastes ranging in color entirely dependent on local clay source color and firing, which occurs between 1,200 and 1,390 °C (Greer 1981:15). Stonewares are further visually distinguishable by their colored slip and glazes, which range from cream to brown to yellow and white. Salt glaze is a common treatment in stoneware and produces an orange peel-like texture under a clear vitreous glaze. CAR

Table 6-8. Ceramic Artifacts Recovered from Yanaguana Garden

Feature	Earthenware	Stoneware	Semi-porcelain	Porcelain	Total
3	4	1	0	0	5
5	1	1	2	0	4
16	1	0	0	0	1
17	4	0	0	11	15
18	2	1	1	2	6
Total	**12**	**3**	**3**	**13**	**31**
% of All Artifacts	**38.70%**	**9.70%**	**9.70%**	**41.90%**	

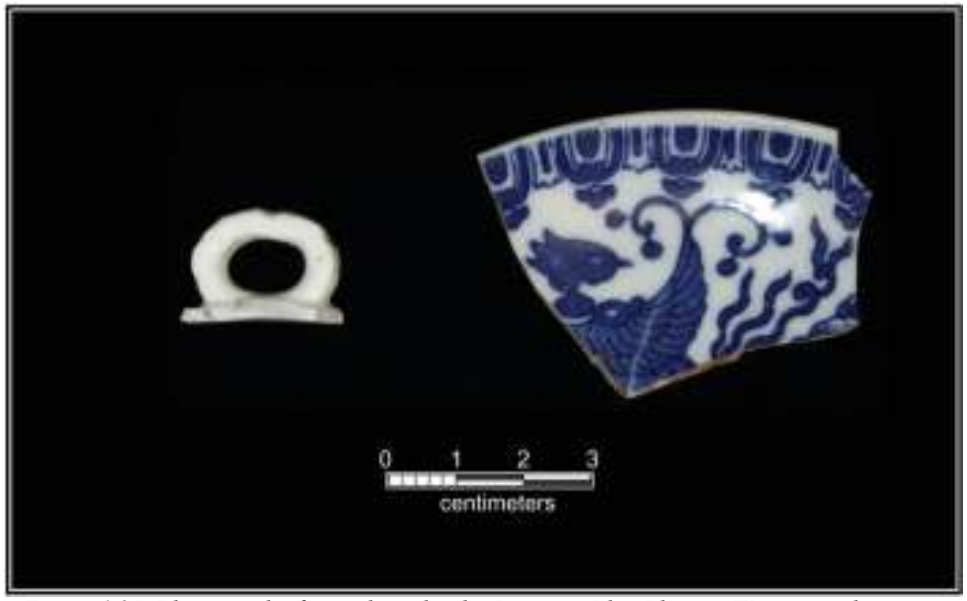

Figure 6-25. Photograph of porcelain sherds, Japanese Blue Phoenix Ware on right.

staff recovered three stoneware sherds from Yanaguana Garden. One salt-glazed, brown, stoneware sherd came from Feature 3. Feature 5 produced a rim of salt-glazed brown stoneware. A sherd of Bristol exterior with Albany Slip exterior came from Feature 18.

Earthenwares and Refined Earthenwares

As their name implies, earthenwares are ceramics formed from earth, in particular clay. The distinction between earthenwares and refined earthenwares is a result of the treatment and production of the clay from which a vessel is formed. Regular earthenwares consist of clays that come from their natural state or those that are only minimally modified prior to being used to create ceramic forms and vessels. Refined earthenwares originated in England in the mid-eighteenth century and represent major modification of the clays, often drying and milling the clay to a high degree of fineness as well as adding additional components to enhance various attributes such as strength and durability (Aultman et al. 2013:6).

In the Yanaguana Garden APE, Feature 3 produced the largest number (n=4) of earthenware sherds, including a terra-cotta flowerpot base sherd, a refined earthenware base sherd, a refined earthenware body sherd with blue color (possibly hand-painted), and a yellowware sherd (Figure 6-26). Feature 5 produced a base sherd, and a yellowware plate was collected from Feature 16. CAR recovered an ironstone, or refined earthenware, serving plate bearing the mark "_& G Meakin" from Feature 17. The figure of a lion and unicorn are positioned at opposite ends of Royal Arms. Research showed the missing letter is a "J". *Godden's Encyclopedia of British Pottery and Porcelain Marks* shows the serving plate dates to 1890 or later (Godden 1964:427). A Rockingham glaze doorknob was also recovered from Feature 17. Feature 18 produced a single sherd of undecorated ironstone and a molded piece (rim/base) of earthenware.

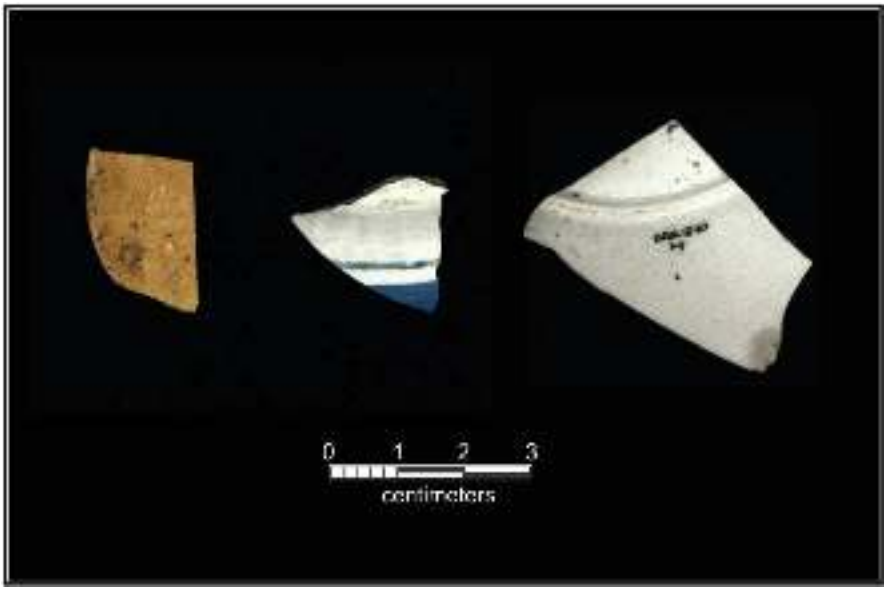

Figure 6-26. Photograph of earthenware sherds from Feature 3.

Semi-porcelain

CAR only recovered three pieces of semi-porcelain from the Yanaguana Garden APE. This included a semi-porcelain insulator, a sherd with an exterior blue slip from Feature 5, and an undecorated base sherd from Feature 18 (Figure 6-27).

Glass

Behind ceramics, glass artifacts were most helpful in determining the date of features. CAR collected 53 pieces of glass from Yanaguana Garden, including container glass (n=52) and chimney glass (n=1). Table 6-9 presents glass recovered by feature. Several interesting pieces of glass were identified in Feature 17. An aqua colored container embossed with the words "Patd. May 12 68 Dr. S. Pitcher's Castoria Boston, Mass." is a hand-blown baby medicine bottle and dates from the years 1868-1877 (Griffenhagen and Bogard 1999). A Ball extract bottle embossed with the words "E.R. Durkee & Co. New York" dates from the 1890 to the mid-1910s (Lindsey 2010).

The collection of glass included two beer bottles bearing the marking "F. Bachrach San Antonio Texas." Felix and Adolph Bachrach at the Bee Candy Manufacturing Company in San Antonio produced these during the late nineteenth through the early twentieth century, as they are listed in the 1890 and 1905-1906 City Directories.

CAR staff recovered glass from six features (Table 6-9). As expected, the Feature 17 trash-filled privy produced the majority (n=49) of glass recovered at Yanaguana Garden. Aqua glass is the most common, making up 37.8 percent (n=28) of the overall assemblage, followed by clear glass at 35.1 percent (n=26). Olive green, gray, brown and cobalt blue glass were the least common glass recovered with one piece of glass each in the assemblage. More than 90 percent (n=26) of the aqua glass recovered came from Feature 17. Feature 3 and Feature 5 each produced a single piece of aqua glass. About one-third of the glass recovered from Feature 17 is clear glass.

Personal

Personal artifacts are those individual items used by or found on a person. Four personal artifacts were recovered from the Yanaguana Garden area: a marble, two buttons, and a drink token.

Glass Marble

The marble is a German Transparent Swirl recovered from Feature 17 (Figure 6-28). German glass marbles were produced sporadically until 1846, when Germany began making marbles for exportation (Zapata 1997:110). The importation of German glass marbles increased until 1902, when M.F. Christensen of Akron, Ohio, patented the first marble-making machine. Later, World War I stanched the importation of German marbles (Baumann 1970). Sears catalogs continued advertising handmade marbles until 1923, but they were likely leftover pre-war stock (Zapata 1997:110).

The marble's composition is not the only way to confirm its age. The method of manufacture also offers clues to a marble's age. Handmade marbles display two irregular spots at opposite ends of the marble. The spots are produced when

Figure 6-27. Photograph of semi-porcelain sherd from Feature 18.

Table 6-9. Glass Artifacts Recovered from Yanaguana Garden

Glass Color	Feature 3	Feature 5	Feature 8	Feature 16	Feature 17	Feature 18	Total
Aqua	1	1	0	0	26	0	28
Clear	1	3	0	0	15	7	26
Emerald Green	0	0	1	1	1	0	3
Olive Green	0	1	0	0	0	0	1
Gray	0	1	0	0	0	0	1
Blue	0	0	3	0	1	0	4
Brown	0	0	0	0	1	0	1
Milk	0	0	0	0	0	2	2
Cobalt Blue	0	0	0	0	0	1	1
Amber	0	1	0	1	5	0	7
Total	**2**	**7**	**4**	**2**	**49**	**10**	**74**
% of All Artifacts	**2.70%**	**9.50%**	**5.40%**	**2.70%**	**66.20%**	**13.50%**	

the marble is cut from a glass rod and ground to a rough finish. Machine-made marbles lack these irregular spots and display cutting and grinding marks at only one end (Baumann 1970; Zapata 1997:110). Additionally, they are more opaque than handmade ones (Zapata 1997:111). According to these indicators, the marble recovered from Feature 17 dates from 1846 to the early 1900s (Figure 6-28).

Buttons

Buttons offer clues to their age and the social and economic standing of their owner. The materials from which buttons can be fashioned varies, and buttons come in several types and sizes (Meissner 1997:119). CAR archaeologists collected one ceramic button and one shell button from Feature 17 (Figure 6-28). Neither button has distinguishing characteristics that might provide a more refined estimated date of manufacture.

Metal

CAR staff collected a metal token stamped "Eagle Pass Club 12½" from Feature 18 (Figure 6-29). Research indicated the beverage token was redeemable for 12 ½ cents at a nineteenth-century drinking establishment in Eagle Pass, Texas. The token from Feature 18 likely dates to between 1866 and 1890 (Leonard 1986).

Figure 6-28. Photograph of personal items (marble on left, buttons on right) from Feature 17.

Figure 6-29. Eagle Pass Club token recovered from Feature 18 (enlarged to show detail).

Chapter 7: Investigations at Historic Homes

Antonia L. Figueroa

Archaeological work on the Historic Homes subproject involved shovel testing and monitoring activities at six historic properties (Figure 7-1), including the Halff House (41BX578), Kampmann-Halff House (41BX586), Smith House (41BX589), Pereida House (41BX591), Koehler House (41BX592), and Espinoza House (41BX593). All of these homes are depicted on the 1896 and 1912 Sanborn maps (Figure 7-2). All of these residences were constructed in the latter half of the nineteenth century, beginning with the Smith House circa 1857. As these historic homes are listed

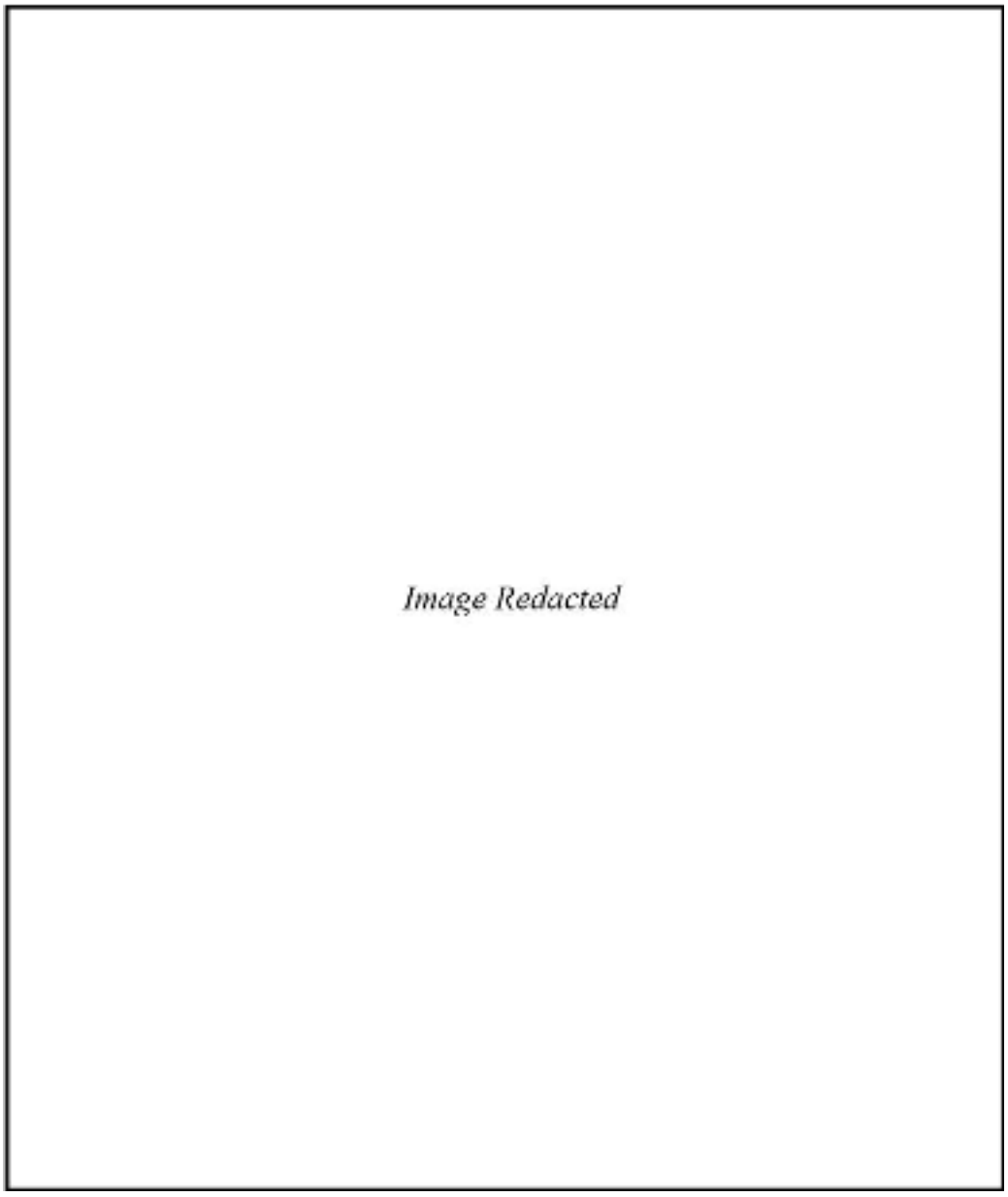

Figure 7-1. Locations of previously recorded historic properties in the Historic Homes APE based on the Texas Archaeological Sites Atlas (THC 2017). Esri aerial imagery, NAD 83 UTM Zone 14N.

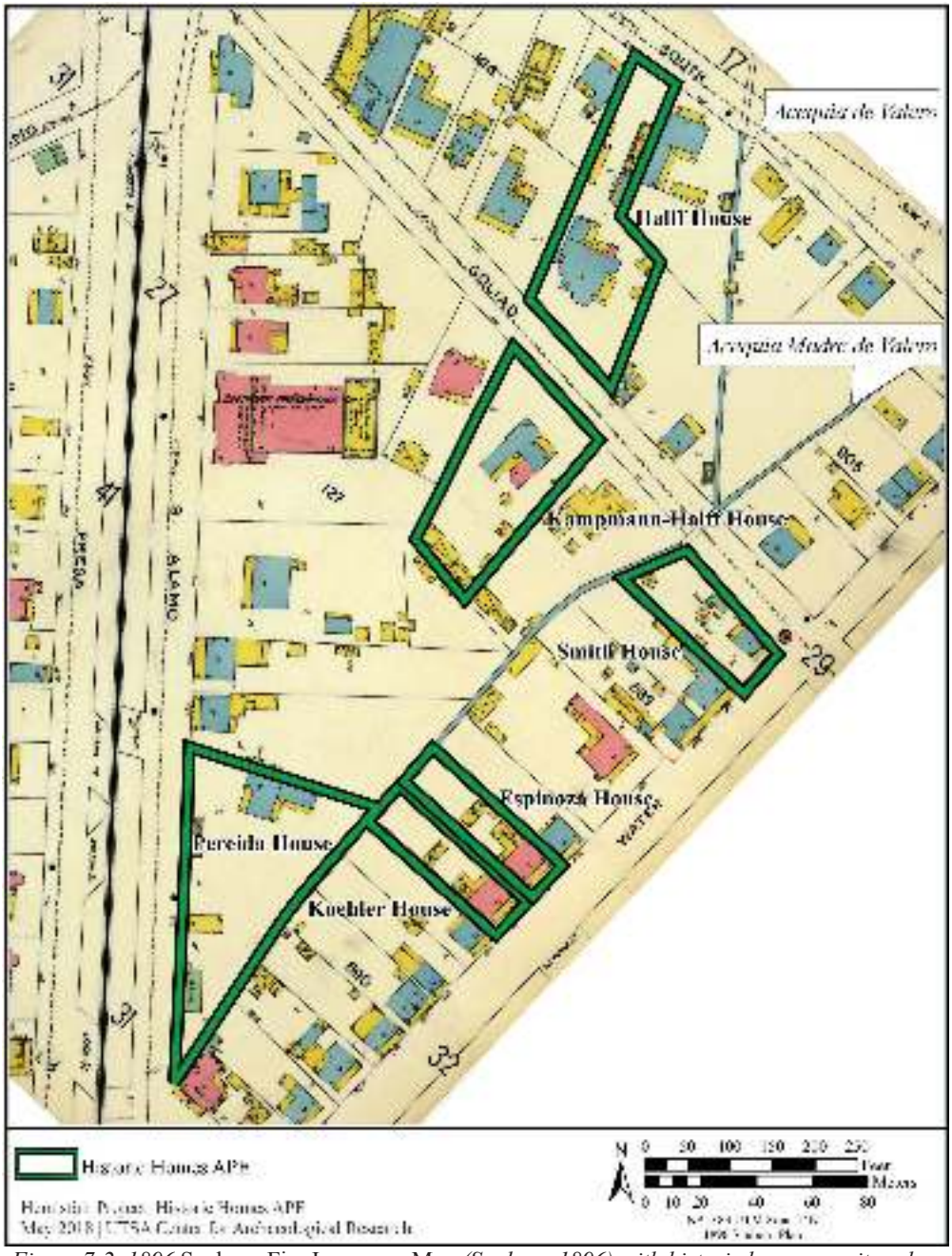

Figure 7-2. 1896 Sanborn Fire Insurance Map *(Sanborn 1896) with historic homes monitored or investigated, including the associated lots (outlined in green).*

State Antiquities Landmarks (SALs), the THC and COSA requested CAR staff to monitor any ground disturbance activities near these structures in order to identify and document any associated features.

During fieldwork, CAR primarily focused on monitoring construction-related excavations in undisturbed areas. No construction work was initially planned for the Smith House; however, a series of deep trenches excavated near the house to address issues with the structure's foundation prompted further archaeological monitoring work. A change in construction plans prompted the addition of limited shovel testing and monitoring associated with 73 pier locations to support decking between the Espinoza House (41BX593) and the Koehler House (41BX592).

Smith House (41BX589)

Archaeological shovel testing associated with the Smith House (41BX589) began in late January 2015. The Smith

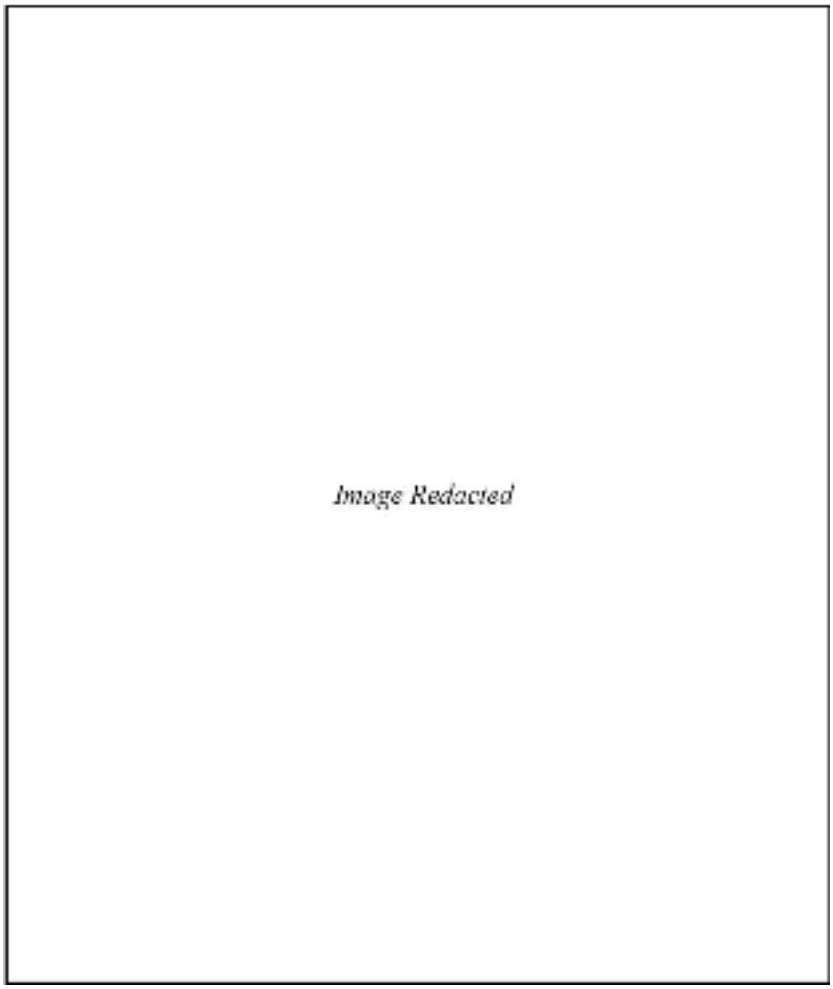

Figure 7-3. Shovel tests excavated at the Smith House (41BX589) on 2013 aerial imagery, NAD 83 UTM Zone 14N.

House is located at the southwest corner of E. Nueva Street and Hemisfair Way. The home was constructed circa 1857 (Fox and Cox 1990:25). The house is a contributing property of the locally designated and NRHP-eligible HemisFair '68 Historic District, and it is a SAL. Previous archaeological excavations at the site (Fox and Cox 1990) suggest areas around the structure have potential for intact features.

Shovel Tests

CAR proposed nine shovel tests (STs) for the Smith House (41BX589) area, but underground utilities prevented two from being excavated. The remaining seven shovel tests were excavated around the perimeter of the house (Figure 7-3). Four shovel tests (STs 1-4) were placed on the northeast side of the house, and three (STs 5-7) on the southwest side. All in were 4-in. levels.

Trench Excavations

Construction activities at the Smith House (41BX589) called for the excavation of 2-ft. wide and 4- to 6-ft. deep trenches along all four sides of the structure. CAR archaeologists monitored the excavations conducted with a mini-excavator and hand digging around the outside of the house. The entire perimeter of the building was excavated in order to expose the foundation for mortaring. Excavations for the foundation began in late January 2015 and lasted around three weeks. The mini-excavator was required to stay at least 1 ft. from the building, so a portion of the trenches was excavated by hand (Figure 7-4). Trenches ended up being 4-6 ft. long, 3 ft. wide, and 5 ft. deep (to the bottom of the house foundation). Trenches were dug around the perimeter of the house, with each spaced 5 ft. apart. After masons mortared sections, they were backfilled, and a new a section was opened.

Figure 7-4. Mechanical excavations on the east corner of the Smith House (41BX589).

Figure 7-5. Hand excavations on east elevation of the Smith House (41BX589).

CAR staff also monitored the removal of a large tree stump encountered during excavations along the northeastern side of the house. Excavations on the eastern corner of the structure (Figure 7-5) encountered utilities just northwest of the house. Portions of this area were disturbed, but undisturbed soil close to the base of the house foundation was a black (10YR 2/1) clay. Hand excavations for a gas line and other utilities took place on the eastern corner of the house. At 16 in. below the surface, a wooden post reinforced by concrete, possibly part of a decorative fence post, was found adjacent to the utilities. In consultation with the City Archaeologist, CAR staff documented the post and left it in place.

Trench excavations along the southeast side of the Smith House exposed the foundation at 6 ft. below the surface. The last activity at the Smith House (41BX589) included grading and excavations associated with the installation of a concrete pad for a rear addition to the house. CAR staff monitored the excavation of three trenches 35 in. wide and 31 in. deep.

Koehler House (41BX592) and Espinoza House (41BX593)

As noted, additional work was required to support proposed decking between the Espinoza House (41BX593) and the Koehler House (41BX592). The two structures, NCB 890 Lots 8 and 9, were formerly addressed as 529 and 533 Water Street. These structures are SALs and contributing properties of the locally designated and NRHP-eligible HemisFair '68 Historic District. The limited shovel testing and monitoring was associated with the installation of 73 concrete pier locations. Twenty-seven (27) shovel tests were excavated in advance of construction in 8-in. levels. Sixteen (16) were positive for cultural material (Figure 7-6). The possible cannon ball that was given to CAR staff during this phase was brought back to the lab for further inspection. CAR staff concluded it was not a cannonball, but rather unidentified metal that was probably associated with ironworks activities that once occurred on this property.

Monitoring of Pier Excavations and Trenching

CAR staff also conducted spot monitoring of auger drilling associated with the piers for the deck at the Espinoza House (41BX593) and Koehler House (41BX592). Both 18- and 24-in. auger bits were attached to a Bobcat® Skid-Steer Loader and used to drill the pier holes 8 ft. deep (Figure 7-7). This work continued into July 2015.

CAR staff also monitored the excavation of four trenches associated with the deck construction between the two houses (Figure 7-8). The trenches were 24 in. wide and 42 in. deep. A

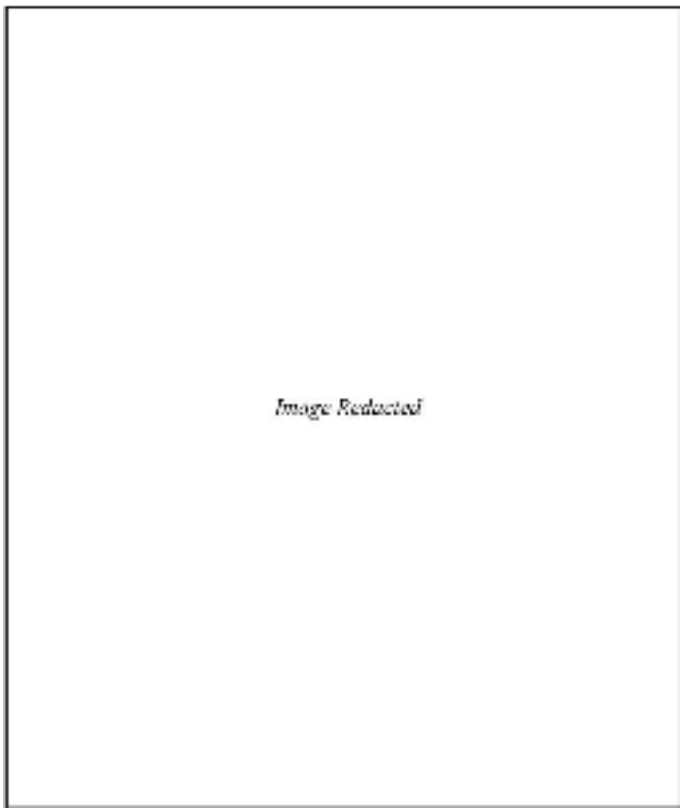

Figure 7-6. Pier locations for deck and shovel tests, discussion of collections based on property line.

Figure 7-7. Spot monitoring the excavation of piers at the Koehler (41BX592) and Espinoza (41BX593) houses.

Figure 7-8. Four trenches excavated between the Koehler (41BX592) and Espinoza (41BX593) houses (facing east).

few artifacts, consisting of white earthenware, were observed during trenching, but none were collected. In order to tie in existing water lines to service the houses, the construction crew also excavated behind the two houses. These trenches measured between 10 and 12 in. wide and between 12 and 24 in. deep. Several utility lines were encountered, but no archaeological material was observed.

Plumbing Utilities

Excavations were conducted for the installation of a plumbing utility line associated with sump pumps at the Koehler (41BX592) and Espinoza (41BX593) houses. Seven small trenches were excavated with a mini-excavator (Figures 7-9 and 7-10). All trenches were 12 in. wide and 20 in. deep. At the Koehler (41BX592) and Espinoza (41BX593) houses, three trenches were excavated northwest of the house and porch area. No artifacts or archaeological features were observed.

Halff House (41BX578) and Kampmann-Halff House (41BX586)

Plumbing Utilities

Two trenches for plumbing utilities were excavated west of the Halff House (41BX578), as well as at the Kampmann-Halff House (41BX586). CAR staff also monitored excavations for a sump pump in the basement of each house. No cultural material was observed during monitoring.

Spot monitoring for the auger drilling associated with the piers for the deck began in early June 2015 and was completed in early July 2015. An 18-in. auger bit was attached to a Bobcat® Skid-Steer Loader and used to drill the pier holes. Artifacts were present near the Espinoza House (41BX593), which had also been indicated during shovel testing. Late nineteenth- and early twentieth-century materials were observed, but none were collected.

Pereida House (41BX591)

Test Unit

In April 2015, a 20-x-20 in. test unit was placed adjacent to and south of a concrete structure with a hand pump on the west side of the Pereida House (41BX591) to determine if the structure was a cistern or well (Figures 7-11 and 7-12). A photo taken of the historic property in the 1890s, addressed as 502 S. Alamo Street, NCB 27, Lot 13, shows the concrete structure with hand pump (Figure 7-13).

Artifacts from Historic Homes

CAR staff only collected artifacts from shovel testing excavations during the Historic Homes subproject. Artifacts from the Historic Homes section will be discussed at the site level by superclass and provenience, followed by a discussion of the horizontal and vertical distributions, and then at the individual class and artifact level as warranted. Superclass categories represented in the total assemblage are ceramics, construction material, glass, metal, faunal bone, and plastic.

Figure 7-9. Excavations for water lines at the Espinoza House (41BX593).

Figure 7-10. Trenches excavated for water lines to service the Koehler House (41BX592) and the Espinoza House (41BX593), facing south.

Figure 7-11. Well at the Pereida House (41BX591).

Figure 7-12. Test Unit 1 excavated at adjacent to the well at the Pereida House (41BX591). Scale is metric.

Figure 7-13. Photograph from the 1890s showing the well at the Pereida House, 41BX591 (courtesty of UTSA Special Collections, General Photograph Collection, 090-0629).

Smith House (41BX589)

As noted, seven shovel tests (STs) were excavated around the perimeter of the Smith House (41BX589). Six of the shovel tests were positive for cultural material (Table 7-1). As indicated in Table 7-1, the majority of material was recovered from 12 in. or greater below the surface. Modern material and gravel were observed in ST 1 and ST 4. Later, trenching around the perimeter of the house uncovered various disturbances from old utility lines.

The artifact counts were so scant that all of the artifacts will be discussed together. The recovered glass (n=3) consisted of two clear shards and a single light olive shard with no distinguishing manufacturing or use characteristics. The single fragment of plastic is twentieth or twenty-first century. The metal recovered consist of a single wire and a single square cut nail as well as two post-1982 heavily corroded zinc alloy United States pennies. The assemblage dates from the mid-to-late nineteenth through the close of the twentieth century.

The artifact assemblage recovered from the Smith House (41BX591) shovel tests is small but does allow for limited interpretation based on distribution, context, and content. The near lack of cultural materials in the upper 12 in. is most likely indicative of fill being brought in and placed around the Smith House (41BX591). This relatively sterile fill caps lower deposits. However, these lower deposits themselves are heavily disturbed and mixed with modern cultural materials (the post-1982 pennies and single fragment of plastic). The numerous utility lines observed during monitoring are representative of the disturbances surrounding the perimeter of the Smith House (41BX591).

Koehler House (41BX592) and Espinoza House (41BX593)

These two historic homes are presented sequentially as the undertaking affected both properties, which adjoin one another along the west side of Hemisfair Way. Twenty-seven (27) shovel tests were excavated prior to drilling 73 auger holes needed for the installation of deck piers that span the area between the historic Koehler (41BX592) and Espinoza (41BX593) houses on Hemisfair Way. A further extension of piers is to the northwest of the Espinoza House (41BX593). The pier plan and shovel tests are shown in Figure 7-2. The 27 shovel tests are discriminated between the two lots, with 11 on the Koehler lot and 16 on the Espinoza lot. Sixteen of the 27 shovel tests had positive results for buried cultural materials with the preponderance coming from the Koehler lot (eight of 11 positive) while only seven of 16 shovel tests returned positive for the Espinoza lot. Table 7-2 enumerates the 11 positive shovel tests from the Koehler House (41BX592).

There is high horizontal distribution of artifacts across the site. Further, vertical distribution of artifact frequency increases with depth (see Table 7-3).

Cultural material recovered from shovel tests at the Koehler House (41BX592) included 135 artifacts: 5 ceramics, 24 faunal bone specimens, 10 glass shards, 95 metal objects, and a single fragment of slate.

Artifacts from the Koehler House (41BX592)

Metal (n=95), consisted primarily of nails or nail fragments (n=56), the majority of which were so corroded that discrimination between cut and wire was not possible. However, eight are cut nails and three wire. A single strap fragment was also recovered. The balance of the metal category (n=39) consisted of unidentifiable ferrous metal fragments. The identifiable recovered metal artifacts are congruent with the archival history of the property spanning the period of the mid-to-late nineteenth century into the early twentieth as exhibited by the combination of both square cut nails and wire nails.

A variety of glass shards were recovered (n=10). Six of the 10 were fragments of flat window glass. The remaining four specimens were shards of bottle glass in various colors (clear,

Table 7-1. Positive Shovel Test Results by Artifact Class and Level at the Smith House (41BX589)

Shovel Test	Level	Depth Below the Surface (in.)	Depth Below the Surface (cm)	Plastic	Glass	Metal	Level Total
1	4	12-16	30-40	1	1		2
2	4	12-16	30-40			1	1
2	5	16-20	40-50		1		1
4	1	0-4	0-10		1		1
5	6	20-24	50-60			1	1
6	6	20-24	50-60			1	1
7	4	12-16	30-40			1	1
Total				**1**	**3**	**4**	**8**

Table 7-2. Positive Shovel Test Results by Artifact Class and Level at the Koehler House (41BX592)

Shovel Test	Level	Depth below the Surface (in.)	Depth below the Surface (cm)	Ceramics	Faunal Bone	Glass	Metal	Slate	Level Total
1	1	0-8	0-20			1	2		3
1	3	16-24	40-60	1			1		2
3	3	16-24	40-60		3				3
4	1	0-8	0-20			1	1		2
4	2	8-16	20-40			1	2		3
4	3	16-24	40-60		4	1	3		8
5	3	16-24	40-60	1	4		9		14
6	1	0-8	0-20				11		11
6	2	8-16	20-40	1	5	2	10		18
22	2	8-16	20-40				15		15
22	3	16-24	40-60	2	2	1	16	1	22
23	1	0-8	0-20				1		1
23	2	8-16	20-40			2	7		9
23	3	16-24	40-60		3		3		6
24	2	8-16	20-40			1			1
24	3	16-24	40-60				8		8
25	2	8-16	20-40		1	1	6		8
25	3	16-24	40-60		2	1			3
Sub-Total				**5**	**24**	**10**	**95**	**1**	
Total									**135**

Table 7-3. Vertical Distribution of Artifacts by Shovel Test and Level at the Koehler House (41BX592)*

Shovel Test Level	1	2	3	4	5	6	7	8	19	22	23	24	25
1	X			X		X	X				X		
2				X		X	X			X	X	X	X
3	X		X	X	X		X	X		X	X	X	X

*X indicates the presence of cultural materials within the shovel test and level

aqua, brown, and olive). With the exception of a single clear bottleneck, the recovered glass was small and fragmentary and lacked additional diagnostic characteristics to more specifically define manufacturing and use dates. The colors of glass are broadly time diagnostic and representative of the same period as recovered metal and ceramic artifacts, broadly from the mid-nineteenth century through the early twentieth century.

Ceramics (n=5) dating from the mid-to-late nineteenth and extending into the early twentieth century were also encountered (Table 7-2). All five of the ceramic sherds recovered were English whitewares. These included the base of a Pearlware chamber pot base sherd recovered from ST 5, Level 3, and three sherds of white Ironstone recovered singly from STs 1, 6, and 22. All were from Level 2 or Level 3 depths.

Faunal bone (n=24) was recovered from all shovel test levels (1-3) with the greatest amount (n=19) coming from Level 3. Much of the faunal bone (n=23) was fragmentary and lacked diagnostic morphology that prevented the assignation of specific taxonomic classification. Relative size of the vertebrate elements recovered allowed the assignation a few of the specimens to either large or medium mammal classifications (n=2). Further, two elements exhibited saw cut marks. Overall, the faunal remains are only broadly time diagnostic with the saw cut specimens indicative of post-1865.

One piece of slate was encountered in Level 3 of ST 22. This slate fragment appears to be a writing slate rather than a roofing slate based on its thickness.

The vertical distribution of artifact frequency increases with depth, but horizontal distribution is greatly reduced compared to the adjacent Koehler property (Table 7-3).

Artifacts from the Espinoza House (41BX593)

Cultural material recovered from shovel tests at the Espinoza House (41BX593) included 52 artifacts: five ceramics, 12 faunal bone specimens, five glass shards, and 30 metal objects (Tables 7-4 and 7-5).

Metal (n=30), consisted entirely of unidentified ferrous metal (n=15) and cut or wire nails or nail fragments (n=15). Five of the nail or nail fragments were cut nails, and three were wire nails. The balance of the nails (3) was indeterminate. The identifiable recovered metal artifacts were congruent with the archival history of the property spanning the mid-to-late nineteenth century into the early twentieth century as exhibited by the combination of both square cut nails and wire nails.

Only five glass shards were recovered. One was a shard of flat window glass. The remaining four specimens were shards of bottle glass (two clear and two brown). The clear shard is from a very small container. The two brown shards appear to come from the same container as they have the same thickness and patina and were both recovered from ST 26, Level 2. The colors of glass are only broadly time diagnostic and representative of nineteenth through the twentieth century (Dillon 1958; Lindsey 2010; New York Herald, Inc. 1910). The recovered glass falls within the same mid-nineteenth to early twentieth century associations as the recovered metal and ceramic artifacts.

Ceramics (n=5) dating from the mid-to-late nineteenth and extending into the early twentieth century were also

Table 7-4. Positive Shovel Test Results by Artifact Class and Level at the Espinoza House (41BX593)

Shovel Test	Level	Depth below the Surface (in.)	Depth below the Surface (cm)	Ceramics	Faunal Bone	Glass	Metal	Level Total
7	1	0-8	0-20		1		1	2
7	2	8-16	20-40			1	10	11
8	3	16-24	40-60	1				1
9	2	8-16	20-40				1	1
9	3	16-24	40-60	2				2
10	2	8-16	20-40		3			3
12	2	8-16	20-40			1		1
12	3	16-24	40-60		6			6
26	2	8-16	20-40		2	3	3	8
26	3	16-24	40-60	2			14	16
27	1	0-8	0-20				1	1
Sub-Total				**5**	**12**	**5**	**30**	
Total								**52**

Table 7-5. Vertical Distribution of Artifacts by Shovel Test and Level at the Espinoza House (41BX593)*

Shovel Test Level	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	26	27
1	X																X
2	X		X	X		X										X	
3	X	X	X			X										X	

*X indicates the presence of cultural materials within the shovel test and level

encountered (Table 7-4). Three of the ceramic sherds recovered were English whitewares, including a single sherd from the base of a Pearlware plate or bowl and a single sherd of undecorated white Ironstone. Both of these sherds were recovered from ST 9, Level 3. The other two sherds were from an orange-brown lead glazed vessel and recovered from ST 26, Level 3. Lead glazes have a long span of use from the Spanish Colonial through the nineteenth and into the twentieth century. Considering that both cut and wire nails were recovered from the same level it is most probable that these two specimens are of mid-to-late nineteenth century in age.

Faunal bone (n=12) was only recovered from shovel test Levels 2 and 3 with the greatest amount (n=6) coming from Level 3. Like the specimens recovered from the Koehler House (41BX592) rear yard, much of the faunal bone from the Espinoza House (41BX593) rear yard was also fragmentary and lacking diagnostic morphology, preventing specific taxonomic classification. A single element exhibited a saw cut mark. As with the Koehler House (41BX592) faunal remains, those recovered from the Espinoza House (41BX593) are also broadly time diagnostic with the saw cut specimen indicative of post-1865.

Discussion of the Artifacts from the Koehler House (41BX592) and Espinoza House (41BX593)

Despite being directly adjacent to one another, the artifact distributions and densities between the two sites are comparatively distinct. The Koehler House (41BX592) rear yard is significantly more artifact rich than the Espinoza House (41BX593) rear yard as demonstrated by comparison of the artifact tables. A common factor between the sites is the relative lack of cultural materials in the upper 8 in. and the increasing density of the same at depth. While some mixing is clearly present across both sites, the clear trend is for a lack of cultural materials closer to the surface and increasing densities at greater depths. The distribution differences between the two adjoining sites may be explained by long-term differences in the use of the rear yards or by differential impacts to the Espinoza rear yard not experienced in the Koehler yard. Future work in either of these rear yards could potentially answer these questions through linear trenching or unit excavation to observe depositional sequences across both rear yards.

Pereida House (41BX591)

On the west side of the Pereida House (41BX591), CAR excavated one 20-x-20 in. test unit adjacent to a concrete structure with a hand pump to determine if it was a cistern or well. The test unit was excavated on the south side of the concrete structure in five levels of 4-in. increments. One wire nail was present in Level 1 (Table 7- 6). Faunal bone, glass, and nails were present in Level 2. In Level 3 of the test unit, limestone was present at 12 in. below the datum in the northern and eastern portions.

Excavations continued in the southwest corner to 20 in. below the datum. Excavations determined that the construction was a well. Small amounts of glass, metal, and brick were encountered in the remaining levels of the test unit (see Table 7-6). The limited artifact assemblage and their distribution are not particularly useful for any greater interpretation than that they are consistent with the age and occupational history of the subject property

Table 7-6. Cultural Material Recovered from the Pereida House (41BX591)

Level	Brick	Faunal Bone	Flat Glass	Cut Nails	Wire Nails	Total
1					1	1
2		2	2	1		5
3	1		1			2
4				2		2
Total	**1**	**2**	**3**	**3**	**1**	**10**

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Chapter 8: Investigations at Internal Streets

José E. Zapata

Monitoring for the Internal Streets subproject began in late January 2015 and was completed in February 2017. The geographical extent of the Internal Streets APE consisted of approximately 2 acres, primarily along former Water and Goliad streets, with some areas extending away from the street right-of-ways (ROW; Figure 8-1). As previously noted, Goliad Street, as it appears on Sanborn maps, was previously known as Camino de la Bahia. The street is now known as E. Nueva Street, and Water Street is now Hemisfair Way.

Eight construction tasks were monitored during the course of the Internal Streets subproject. Removal of non-historic features, such as curbs, bollards, walks, and brick paving was completed within the first few weeks. This preliminary work was followed by wide-ranging trenching and the installation of utilities, such as storm, sanitary sewer, water, and gas lines, as well as electric and communication duct banks. Trenching in the Internal Streets APE was extensive and conducted over a 26-month period. The depth and scale of the trenching

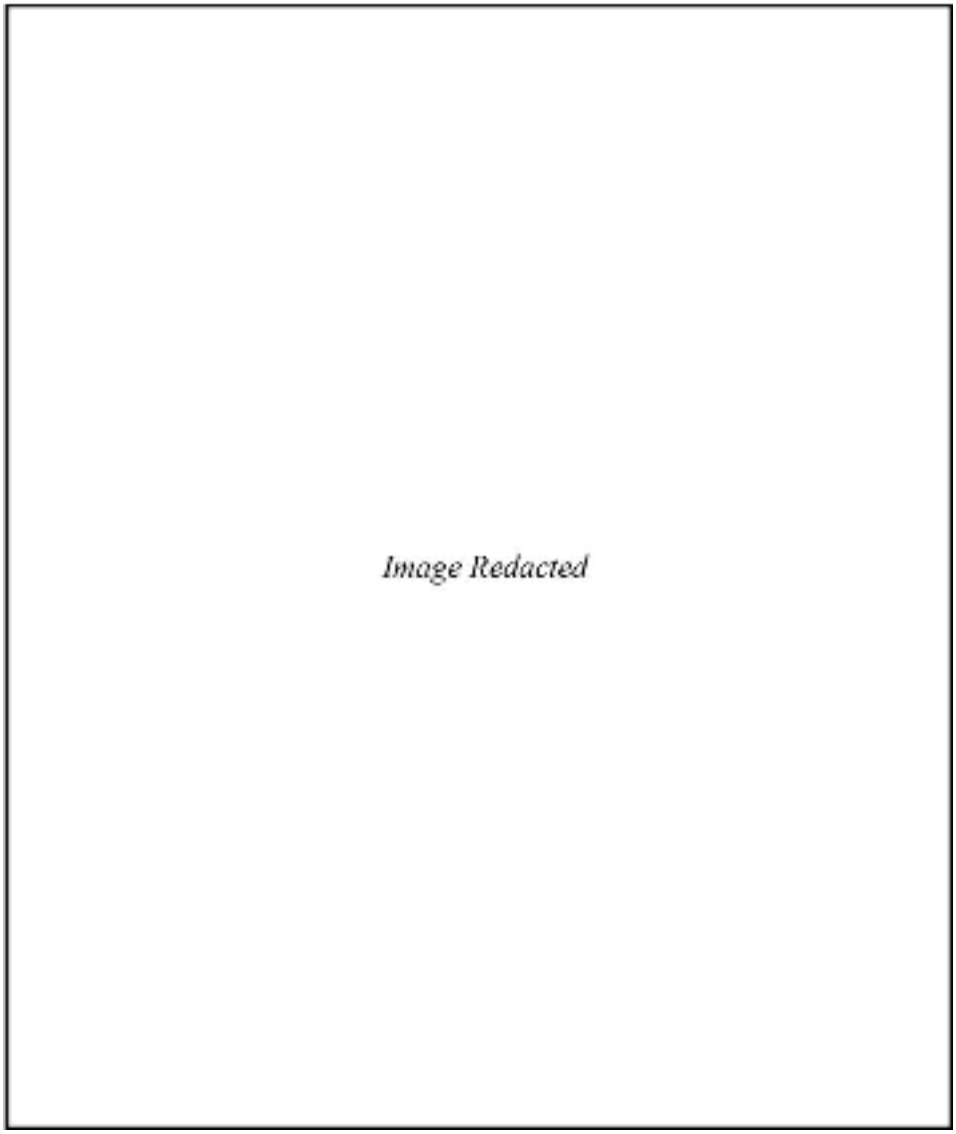

Figure 8-1. Internal Streets APE (blue) on Esri aerial imagery, NAD 83 UTM Zone 14N.

varied greatly by location. In some cases, trenching extended to no more than 2 ft. below the surface, while in other cases, the trenches were 22 ft. deep. The width of the trenches were just as varied, ranging between 1 ft. and 10 ft., but the amount of existing disturbance, due to recurring site development (circa 1964-1985), was significant.

Toward the end of the project, monitoring work covered boring and trenching associated with the installation of traffic and pedestrian signals in addition to monitoring the installation of an electrical conduit behind the Kush House (41BX579). The final two construction tasks requiring monitoring related to water and electric stub-outs from the APE into the Hemisfair Way parking lot.

During fieldwork, CAR staff observed and documented 15 features in the Internal Streets APE (Table 8-1). All features were documented using standard archaeological procedures, including completion of feature forms, measured drawings, and photographs. In addition, a Trimble® GPS unit was used to record the features. The GPS data were used to overlay the features on a georeferenced 1896 Sanborn map (Figure 8-2). A variety of non-diagnostic glass, metal fragments, and construction rubble was observed and noted, but nothing was collected. As a result of monitoring efforts, and in spite of disturbed soils in many areas, CAR staff identified five house foundations, a well, a privy, and, most significantly, remnants of the Acequia Madre de Valero (41BX8). Features 10 and 13 are not included in the discussion, as they were determined not to be features after further study.

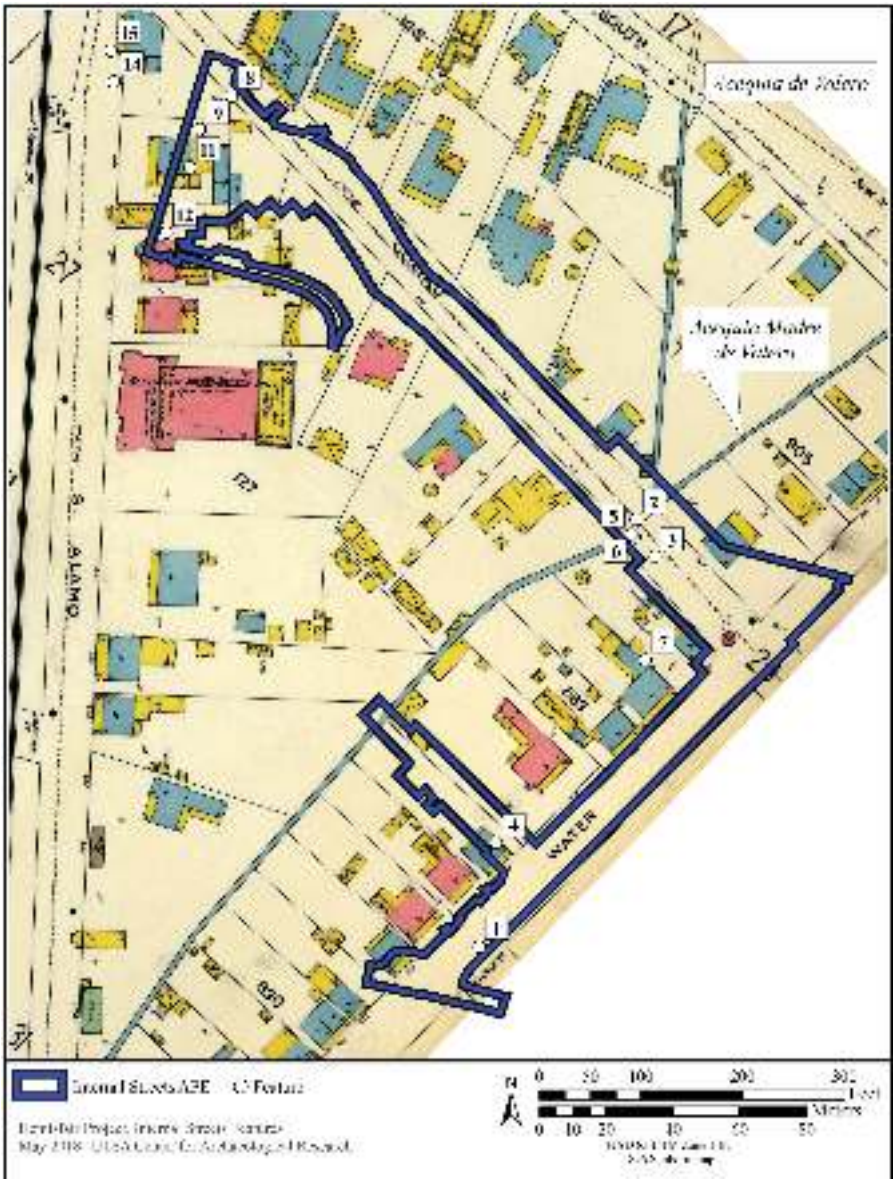

Figure 8-2. Recorded features from Internal Streets APE shown on georeferenced 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Table 8-1. List of Features from Internal Streets APE

Feature	Description	How Located	End Result
1	Brick-constructed manhole, early 20th century	Storm drain trench along Hemisfair Way	Partially razed then buried in concrete
2	Duct bank, early 20th century	Water line trench along E. Nueva St.	Impacted as a result of trenching
3	Faunal Bone concentration, butchered	Duct bank trenching	Impacted as a result of trenching; may relate a late-19th century "Sausage House" that operated behind the Smith House (41BX591)
4	Wall alignment (N-S), house foundation, exposed approx. 3 ft.	Storm drain trench lateral, off of Water St. and duct bank trenching	Secured trinomial designation: 41BX2123 (Zizik House site) constructed ca. 1866; portions of wall foundation in duct bank documented and removed
5	Grate drain, early 20th century	Water line trench along E. Nueva St.	Fully documented, then removed to make way for water line
6	Acequia Madre de Valero (41BX8)	Water line trench along E. Nueva St.	Fully documented, preserved and protected; *acequia* covered with landscape fabric and sand, then backfilled with clayey soil; storm drain was installed under the *acequia*; the water line was routed through a ca.1965 breach.
7	Wall alignment (E-W), house foundation; exposed approx. 4 ft.	Tree transplanting	Impacted as a result of excavation; secured trinomial designation: 41BX2124 (Gimbel House site) constructed ca.1856; portions of wall foundation in duct bank documented and removed
8	Previously disturbed wall, limestone blocks; exposed approx. 5 ft. of stone	Duct bank trenching	Based on GPS overlay on 1912 Sanborn, probable privy at rear of the Hoyer House, 318 S. Alamo St.; portions of wall foundation in duct bank documented and removed. Secured trinomial 41BX2246 (Hoyer House site)
9	Wall alignment (N-S), house foundation; approx. 7 ft. was discernable	Duct bank trenching	Based on GPS overlay on 1912 Sanborn, probable east elevation wall footing for 400-402 S. Alamo St.; portions of wall foundation in duct bank documented and removed
10	-	-	-
11	Brick and lumber concentration	Duct bank trenching	Based on GPS overlay on 1912 Sanborn, probable brick and wood structure located at 404 S. Alamo St.
12	Brick and lumber concentration	Duct bank trenching	Based on GPS overlay on 1912 Sanborn, probable well or cistern at north elevation wall of 410 S. Alamo St.
13	-	-	-
14	Wall alignment (N-S), caliche block house foundation, approx. 2 ft. was exposed	Installation of traffic and pedestrian control equipment	Overlay on 1912 Sanborn indicates this was in the middle of the street and likely predates 18th and 19th century street realignments
15	Wall fall (E-W), caliche block structure	Installation of traffic and pedestrian control equipment	Overlay on 1912 Sanborn indicates this was in the middle of the street, just north of Feature 14, may be late 18th- to early 19th-century construction; wall fall within the area impacted was documented and removed

CAR staff located one feature just north of the Koehler House (41BX592), and four features were present in an area off the southeast corner of S. Alamo Street and E. Nueva Street (Figure 8-2). An additional six features were located outside of previously identified areas of interest (Fields and Dase 2014:5-7), and CAR staff encountered remnants of the Acequia Madre de Valero (41BX8). Three features, partial wall alignments of historic home foundations, were registered as new sites (Figures 8-3 and 8-4) and assigned trinomials 41BX2123, 41BX2124, and 41BX2246.

Removal of Modern Features

Construction workers completed removal of modern features dating to the mid-to-late twentieth century in mid-March 2015. The work involved removing concrete curbs, paving (brick, concrete, and asphalt), sidewalks, bollards, benches, bike racks, lamps/wiring/foundations, landscaping, trees, signs, parking lot gates, and statuary (West Berlin Bear and Francisco Madero). Ground disturbance was minimal, less than 18 in. below the surface. For the most part, exposed

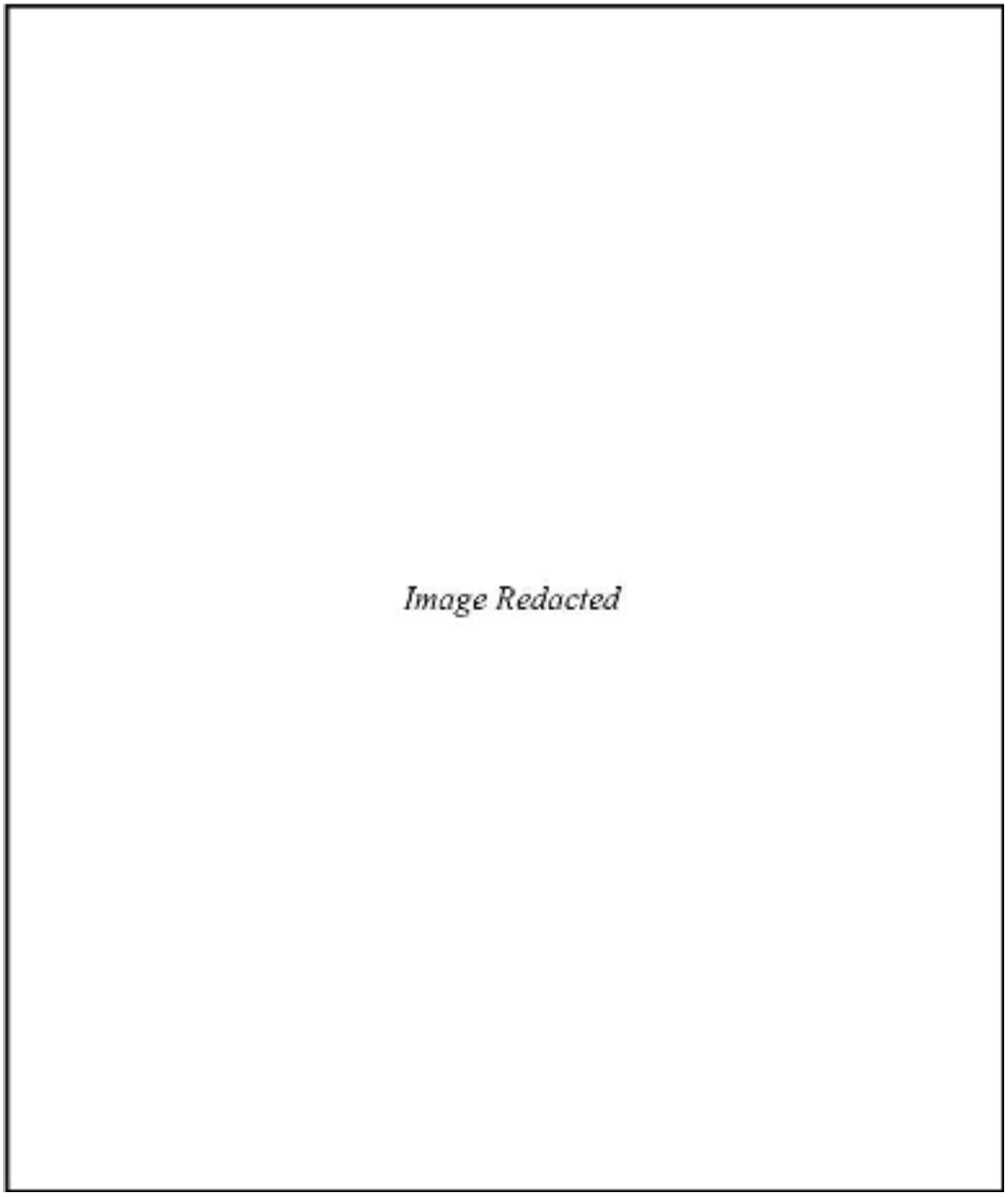

Figure 8-3. Newly recorded sites from the Internal Streets APE shown on Esri aerial imagery.

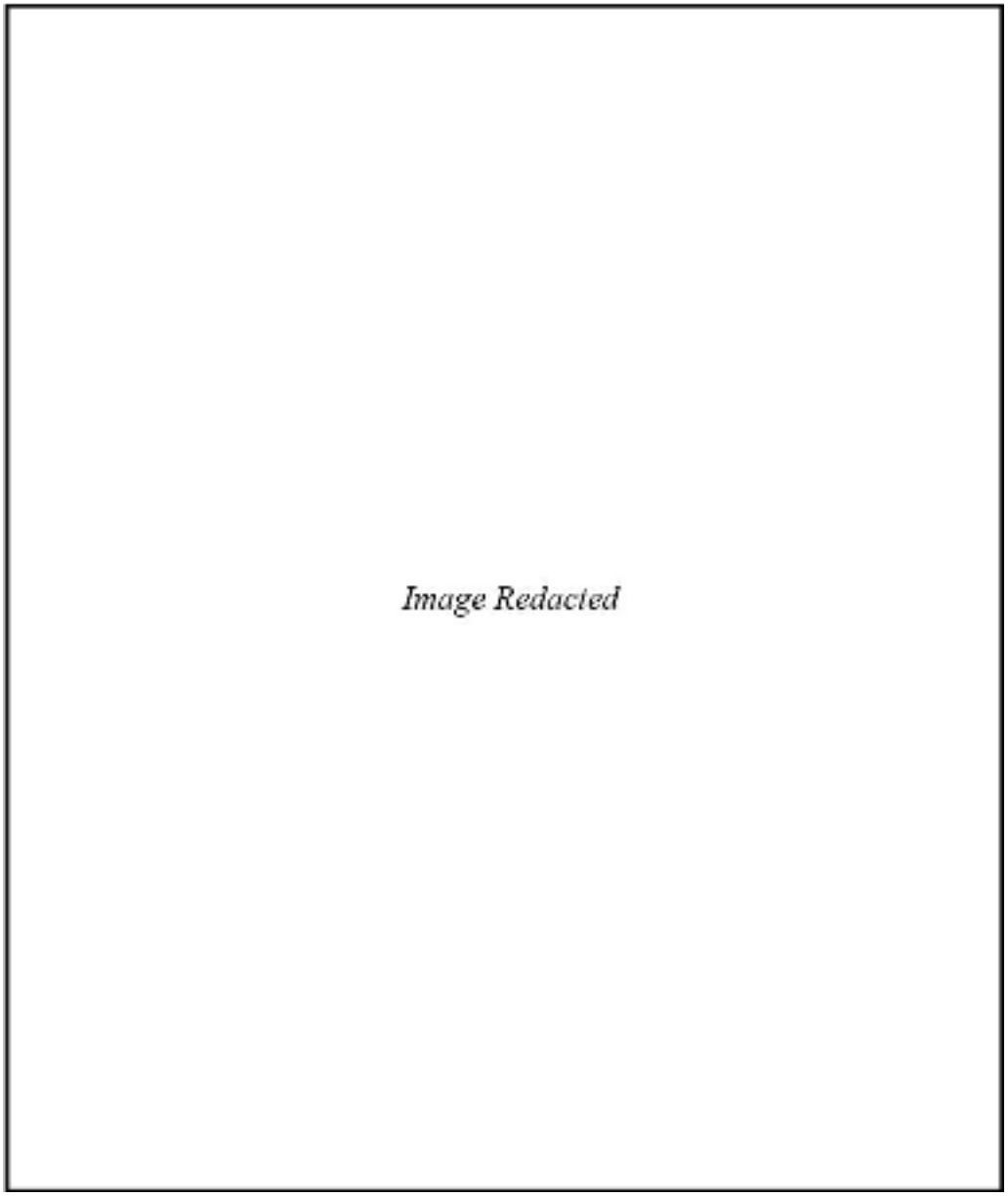

Figure 8-4. Newly recorded sites from the Internal Streets APE shown on satellite imagery georeferenced 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

strata consisted of bedding sand, caliche base, and/or top soil. Observed cultural material was modern, and none of the material was collected.

A component of the project was the removal of the entrance arch, clock tower, and fountain (Dase 2013:56-57; Figure 8-5). Ground disturbance was minimal when these were removed, but demolition of their concrete supports was more extensive (Figure 8-6). Completed in late February 2015, removal of the fountain's concrete base extended to about 2 ft. below the surface. The clock tower super-structure was then removed, as were the four above-ground concrete supports. However, demolition of the clock tower's below-ground concrete base was not carried out because it was set approximately at the center of E. Nueva Street, and work in the area would have impeded construction vehicle traffic. Additionally, an extensive network of buried utilities was known to exist beneath and around the tower's 3-ft. thick, 15-x-15 ft. base. In early March, removal of the entrance archway's concrete supports extended to about 5 ft. below

Figure 8-5. 1) entrance arch; 2) clock tower; and 3) fountain (images from Dase 2013).

Figure 8-6. Removal of 1) entrance archway (view south); 2) clock tower (view southwest); and 3) fountain (view west).

the surface. The exposed strata consisted of caliche base and dark clay. No significant finds were located during the work in these areas.

Demolition of the base of the clock tower began in May 2015 in order to expose additional utilities and/or features. The base was supported by four 18-in. diameter piers, which were offset at each corner and extended to an unknown depth. Demolition exposed an additional section of the *acequia*'s west wall (see Feature 6). The amount of ground disturbance necessary to remove the entrance archway, clock tower, and fountain extended 2-5 ft. below the surface, but these deeper impacts did not expose any cultural features.

Storm Drain

Contractors excavated and installed approximately 700 ft. of 36-in. storm drain along Hemisfair Way. Trenching extended to between 17 and 22 ft. below the surface, with the deepest impact being at the median of César Chávez Boulevard. Work began in February 2015 and continued to July 2015. The storm drain trench was initially about 8 ft. wide, but as a result of a continual collapse of the east wall, the trench was widened another 2 ft. Photos illustrate trenching along Hemisfair Way and typical wall collapse (Figure 8-7). This area contained an extensive amount of early to mid-twentieth-century utility trenching. This included an abandoned 18-in. sewer line at about 15 ft. below the surface and an abandoned 36-in. storm drain 1.5 ft. below the surface that extended to 4.5 ft. below the surface. Although the storm drain was supposed to continue to the west along E. Nueva Street, the work ceased for a few months while other utilities were installed and some of the abandoned lines removed along the route. As a consequence of probing for buried utilities along E. Nueva Street, remnants of the Acequia Madre de Valero (41BX8) were located, as indicated on the 1896 Sanborn map (see Feature 6 discussion).

In late July 2015, storm drain trenching stalled at the corner of Hemisfair Way and E. Nueva Street as an assortment of utilities were clustered in this general area, making it difficult to turn west onto E. Nueva Street. The storm drain installation resumed in early February 2016, at the west end of E. Nueva Street, about 100 ft. east of S. Alamo Street. The installation proceeded east along E. Nueva Street towards the Hemisfair Way juncture. A series of manholes and 24-in. concrete pipes were installed in this east-west run. The depth of the trenches was between 12 ft. and 18 ft., with the west end shallower than the east end. The work stopped and resumed several

Figure 8-7. Typical wall collapse of storm drain trench on Hemisfair Way, view south (right), and storm drain trench on Hemisfair Way (view southeast) to the immediate west of Adrian Spears Judicial Training Center (left).

times between February 2016 and August 2016, to allow for trenching and installation of additional infrastructure. The east-bound trenching and installation stopped 25 ft. short of the *acequia* crossing. As stated above, the location of the *acequia* had been identified earlier during the probing investigations for various utility locations.

Then, construction activities turned toward the east end of E. Nueva Street at the Hemisfair Way juncture. After extensive consultation with the City and contractors, the work then shifted west and again stopped 25 ft. short of the *acequia* crossing. Stopping short of the Acequia Madre de Valero (41BX8) created a protective buffer at both sides of the important historic landmark. The City undertook an extensive redesign of the project once it was known that remnants of the Acequia Madre de Valero (41BX8) were still present within the project area.

To further ensure that the *acequia* would not be compromised, the redesigned specifications called for a 36-in. diameter by 50-ft. long bore between 12 and 15 ft. beneath the *acequia* crossing and included the simultaneous installation of a steel casing (Figure 8-8). The 24-in. concrete storm drainpipe was then installed through the steel casing. This work was completed in early August 2016, with no adverse impact to the Acequia Madre de Valero (41BX8).

During monitoring along Hemisfair Way, CAR staff was aware of an east-west lateral depicted in the Rullman (1912) map of 1837 (see Figure 2-3). In an effort to locate the probable path of the *acequia* lateral, CAR staff georeferenced and overlaid the Rullman (1912) map on a 1964 City plat (COSA 1964; Figure 8-9). The results highlight the probable path of the *acequia* lateral as it cuts across, running diagonally through the project area. The path comes very close to delineating

Figure 8-8. Boring process to install storm drain underneath Acequia Madre de Valero (41BX8): 1) acequia *crossing, facing south; 2) boring pit, facing west; 3) boring and steel casing installation in progress, facing north; and 4) storm drain installation in progress, facing northwest.*

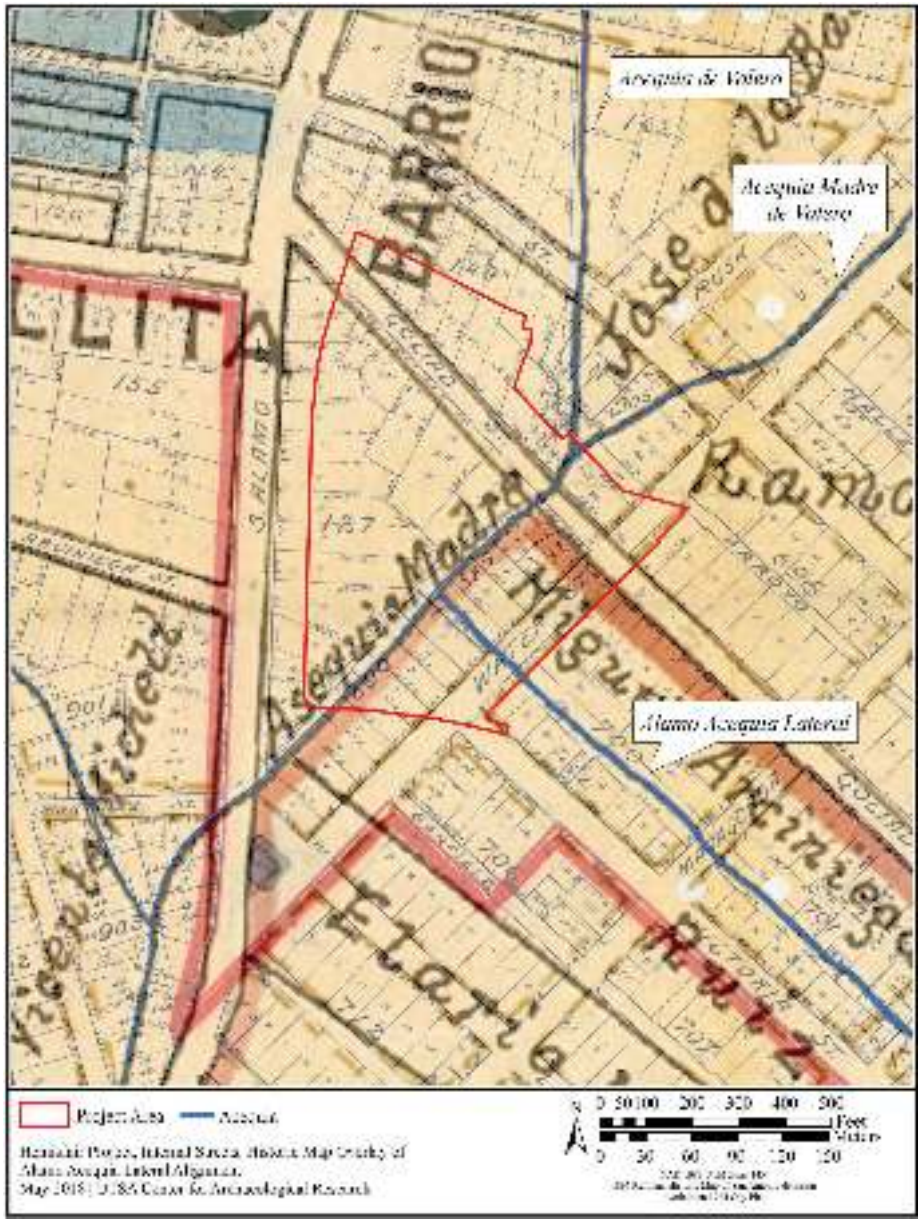

Figure 8-9. The Historic Map of Old San Antonio de Bexar in 1837 *by Rullman (1912) with 1964 City plat (COSA 1964); note Acequia Madre de Valero (41BX8) lateral.*

between NCB 889 and NCB 890 (Figure 8-9). The area along Hemisfair Way is about where the lateral would have crossed into NCB 700, where it likely delineated the lots in that NCB.

Monitoring of storm drain trenches along Hemsifair Way failed to locate evidence of the *acequia* lateral, as did monitoring of duct bank trenches. As already noted, the substrata along Hemisfair Way have been extensively impacted by the installation of storm drains and sewer lines, and likely destroyed evidence of the lateral. The area between Lot 10 NCB 890 and Lot 5 NCB 889 was not excavated during this project, so it may be that traces of the *acequia* lateral are extant along this area.

Feature 1

A large brick feature was exposed along the east wall of a storm drain trench within the ROW of Hemisfair Way, just north of E. César Chávez Boulevard. Upon closer examination, CAR staff noted that Feature 1 had a series of rungs imbedded in the brick-work (Figure 8-10). This indicated the feature was a manhole and apparently tied into an 18-in. clay sewer line. The sewer line was oriented north-south and appeared at about 14 ft. below the surface.

The brick used is "Laredo" brick, so called because it is a sandy paste brick produced in the Laredo/Webb County area

Figure 8-10. Feature 1, manhole at center of Hemisfair Way approximately 80 ft. north of E. César Chávez Boulevard.

and then shipped via rail to San Antonio (Fox and Cox 1990; Meissner 1997:233). This type of brick was used in great abundance in San Antonio beginning in 1877 with the arrival of the railroad. The use of this style of brick indicates the feature dates after 1877 and is most likely associated with water and sewer improvements of the late nineteenth and early twentieth century. A City of San Antonio plat dated June 4, 1964, shows the sewer line and manhole. The top 2-3 ft. of the manhole had been razed and backfilled into the hole, followed by a continuous layer of dark clay and cobbles.

Feature 4

A contractor's crew exposed large sandstone footers of a house foundation while probing for utilities north of the Koehler House (41BX592). In early July, another contracting crew exposed additional remnants of this wall foundation, while trenching and installing duct banks (Figure 8-11). Feature 4, registered as a new site and designated 41BX2123, likely relates to a historic home at 525 Water Street (NCB 890, Lot 10). The Zizik family owned this property between 1866 and 1947.

Duct Banks

The duct bank work began in mid-March 2015 and continued intermittently through September 2016. Duct bank work excavations and installations alternated between different streets. Numerous abandoned and live utilities were encountered, which made excavating and shoring a bit of a challenge. Additional duct bank work was completed along E. César Chávez Boulevard, west of Hemisfair Way, then north along Hemisfair Way.

Duct bank work took place over the full length of E. Nueva Street and Hemisfair Way, and approximately 140 ft. along the east side of S. Alamo Street. In addition, approximately 400 ft. of duct bank laterals were installed. Trenches were between 4 and 8 ft. wide and were between 4 and 14 ft. deep. A typical duct bank trench is shown in Figure 8-12. The amount of disturbance, and subsequent wall failure due to previously installed utilities, was greatest at the west end of E. Nueva Street (Figure 8-13).

Figure 8-11. Feature 4, wall footer (41BX2123) facing north (left) and south (right). Inset: location of Feature 4 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Figure 8-12. Duct bank work along Hemisfair Way (facing north).

Figure 8-13. Duct bank work along west end of E. Nueva Street (facing east); note the need for hand excavation due to the utility crossing.

Feature 3

Feature 3 was a concentration of butchered animal bone just north and to the rear of the Smith House (41BX589). A contractor crew excavating in order to install a duct bank junction box exposed the material. Feature 3 was likely a disturbed trash pit associated with the "Sausage Mfg & Smoke House" shown in the 1896 Sanborn at the rear of the Smith House (Figure 8-2).

Feature 8

While working at the far west end of E. Nueva Street, the contractor's crew exposed a 5-ft. long limestone block feature along the north wall of a duct bank trench. The cut limestone block feature extended from about 3 ft. below the surface to about 8 ft. below the surface (Figure 8-14). An examination of the 1896 Sanborn map indicated that this might be a small stone-constructed outbuilding, possibly a privy. The location of the feature was recorded with a Trimble® GPS unit, and the data was overlaid onto an 1896 Sanborn map (Figure 8-2). The GPS data confirmed that Feature 8 was the stone-constructed outbuilding at the rear of 318 S. Alamo Street, the Hoyer House. The Hoyer House site was assigned the trinomial 41BX2246. This area was heavily disturbed, as several utilities crisscrossed at varying depths (Figure 8-15). No cultural material was observed.

Feature 9

CAR staff located a stone alignment as a result of duct bank trenching along the east side of S. Alamo Street (Figure 8-16). Approximately 7 ft. of the stone alignment was discernible along the trench wall. The GPS data was overlaid onto a 1912 Sanborn map, which placed the feature at 400-402 S. Alamo Street (Figure 8-17). A brick building, labeled as a garage, was at this address, and the stone alignment was determined to be a portion of the east elevation wall foundation based on the placement of the find. Aside from lumber and brick fragments, no cultural material was observed.

Feature 11

As the duct bank work continued along the east side of S. Alamo Street, CAR staff identified and recorded Feature 11

Figure 8-14. Feature 8 (41BX2246, circled), probable stone-lined privy at the rear of 318 S. Alamo Street (refer to 1896 Sanborn map). Left: duct bank trench on E. Nueva Street, east of S. Alamo Street; note Feature 8 at center (facing northeast). Right: Close-up of Feature 8.

Figure 8-15. Left: duct bank trench north of Feature 8 (likely a privy); note area is heavily disturbed (facing northeast). Right: location of Feature 8 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Figure 8-16. Left: Feature 9 (circled in white), stone alignment in duct bank trench, along east side of S. Alamo Street (facing southwest). Right: location of Feature 9 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

(Figure 8-18). Excavated soils from the duct bank trench exhibited a heavy concentration of lumber and bricks. This feature was plotted with a GPS unit and the data was overlaid onto an 1896 Sanborn map, which placed the feature almost at center of a stone building at 404 S. Alamo Street (Figure 8-2). The rubble is likely the result of the razing of structures to make way for HemisFair. Aside from the lumber and bricks, no cultural material was observed.

Feature 12

Feature 12 was also located as a result of duct bank trenching along the east side of S. Alamo Street. As the crew neared a light pole, trenching slowed due to a heavy concentration of sand, which usually indicates the presence of buried utilities. Additional clearing by hand exposed the remnants of a bell-shaped brick feature that was possibly a well or cistern (Figure 8-19). The feature was first identified 2 ft. below the surface and continued to 6 ft. below the surface, which was the final depth of the duct bank trench. The diameter of the top portion of Feature 12 was 32 in., and it belled to 44 in. The feature had been previously backfilled with coarse sand and was void of any cultural material. This feature was plotted with the GPS unit, and the data was overlaid onto an 1896 Sanborn map, which placed the feature outside the north elevation wall of a brick structure located at 410 S. Alamo Street (Figure 8-2).

Water Line

Installation of a 12-in. water line began in mid-April 2015 and was completed in July 2015. The 12-in. water line ran almost the entire length of E. Nueva Street and included 10 lateral service lines totaling approximately 264 ft. An additional service line was installed in September 2016. The trenches were generally 6 ft. wide (benched for safety reasons) and 5 ft. deep. Numerous live and abandoned utilities were encountered during the trenching.

Trenching and installation began at the far west end of E. Nueva Street and moved east toward Hemisfair Way. Strata was heavily disturbed and contained a mix of sand, caliche base, and/or dark clay construction fill, beneath a 6-in. to 12-in. layer of asphalt and concrete pavement (Figure 8-20).

As directed by CAR staff, the work stopped about 25 ft. short of the probable *acequia* crossing, at which point the contractor hand excavated the area along the planned path of the water

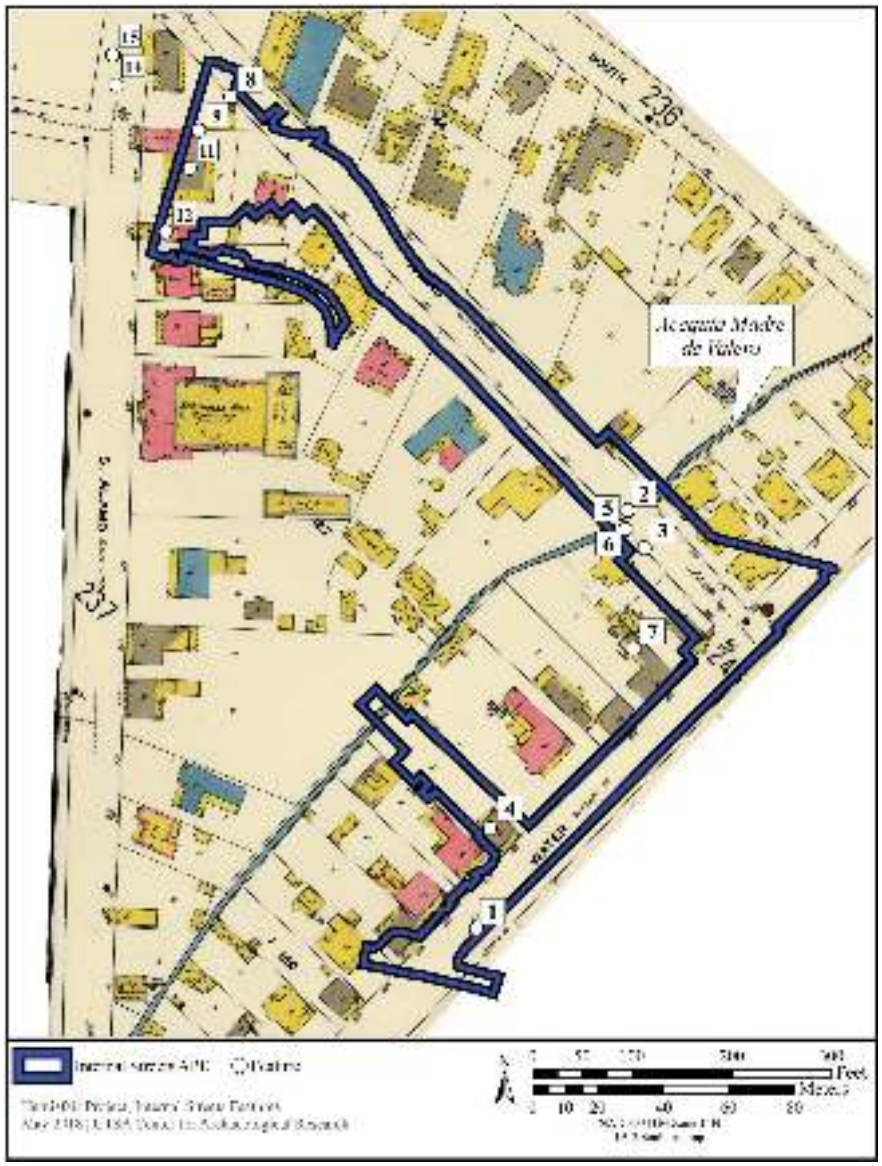

Figure 8-17. Recorded features from Internal Streets APE shown on georeferenced 1912 Sanborn Fire Insurance Map *(Sanborn 1912).*

line. An iron grate inlet and the east wall of the Acequia Madre de Valero (41BX8) were exposed in succession. The grate was recorded as Feature 5, and the *acequia* as Feature 6 (Figure 8-2).

After consulting with the City Archaeologist and the THC, it was agreed that a 20-ft. section of water line could be installed through a breached section of the Acequia Madre de Valero (41BX8) that had occurred most likely during the work done for the Hemisfair project or perhaps earlier. As a result of this work, CAR staff documented Features 2, 5, and 6.

Feature 2

This feature appeared to be a buff-colored stone alignment along E. Nueva Street that was exposed by contractors probing for utilities. What appeared to be stone was in fact a section of well-worn concrete pavement, 22.5-27.5 in. below the surface, which capped an abandoned 8-in. cast-iron water line.

Feature 5

CAR staff recorded Feature 5, a grate drain and brick constructed inlet, along the south side of E. Nueva Street. The feature was on the subdivided rear portion of NCB 889, Lot 1, formerly the Smith property, where the contractor was hand excavating in order to install a water line (Figure 8-2). CAR staff determined that the planned water line would cross through the path of the *acequia*, which is why the crew was hand excavating. Additional clearing of this area indicated that the abandoned storm drain inlet had been

*Figure 8-18. Left: Feature 11, heavy concentration of lumber and bricks; likely remnants of early building at 404 S. Alamo Street. Right: location of Feature 11 on 1896 S*anborn Fire Insurance Map *(Sanborn 1896).*

installed along the *acequia*'s west wall. The feature is likely associated with a late nineteenth- to early twentieth-century street drainage project.

Orientation of the storm drainpipe remnants indicated that the pipe was designed to collect water and drain to the northwest and across to the north side of E. Nueva Street. The brick utilized is imported red clay brick, but it had no other distinguishing characteristics (Figure 8-21). Based on the brick, Portland cement mortar, and stoneware clay pipe, the feature most likely dates to the late nineteenth or early twentieth century and may be associated with the construction of the Dewees home on the rear of NCB 889, Lot 1. Fragments of the clay pipe were visible in the excavated areas.

Feature 6

CAR staff located and partially exposed the east wall of the Acequia Madre de Valero (41BX8) soon after Feature 5 was located (Feature 8-22). Remnants of a north-south stone alignment were apparent as trenching by hand continued to the east. After consulting with the City Archaeologist, CAR staff was instructed to continue working with contractors to trace the east wall of the *acequia* to the north (Figure 8-23).

Excavations of a 35-ft. section of roadway started 7 ft. in front of the Amaya House and continued across to the north side of E. Nueva Street. Remnants of the east and west walls were exposed below this section of roadway. While most of the west wall of the *acequia* was missing at the south end of the exposed area, remnants of the west wall were located underneath the clock tower base. The clock tower was installed in 1988 and was supported by a 3-ft. thick concrete base (15-x-15 ft.). Water, sewer, and gas lines crisscrossed this area, so it was surprising to find an intact section of the *acequia*. Where extant, only the first two courses of stone were in place, and in some areas, only fragments of the first course remained (Figure 8-24). It was apparent that the *acequia* beneath the roadway had been backfilled with caliche and breached in several places as water, gas, and sewer utilities were installed during previous construction projects predating the current project and dating possibly as early as the turn of the century and mid-twentieth century. No cultural material was observed.

In late May 2015, the exposed *acequia* was fully documented, then backfilled. The feature was draped with two layers of landscape fabric and a 2-ft. layer of manufactured sand, and then it was topped with a layer of clayey soil (Figure 8-25). A section of plastic safety fencing was set atop the landscape fabric to mark the northern extreme of the feature. Plans for trenching and installation of infrastructure at the location of the *acequia* crossing were redesigned in order to avoid impacting the *acequia*. The Acequia Madre de Valero (41BX8) was therefore preserved in place and protected from any impacts by the current project.

Tree Transplantations

Transplanting of trees was completed between April 2015 and July 2015. Melchor Tree Farm excavated and bundled eight oak trees for relocation to the S. Alamo Street entrance. Six of

Figure 8-19. Feature 12, brick-lined well (circled). Top: duct bank along east side of S. Alamo Street (view south). Bottom: Close-up of Feature 12; note imbedded lamppost pier (view southwest). Inset shown location of Feature 12 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Figure 8-20. Water line trenching along E. Nueva Street, west of the acequia *crossing (facing southeast).*

Figure 8-21. Feature 5, grate drain along south side of E. Nueva Street (facing south); note alignment of early storm drainpipe (white dotted lines).

Figure 8-22. Left: water line install, south side of E. Nueva Street (facing west). Right: locations of Features 5 and 6 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Figure 8-23. Left: Feature 6 excavations; east wall of Acequia Madre de Valero (41BX8), facing north. Note the voids in wall alignment are from past construction projects. Right: location of Feature 6 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

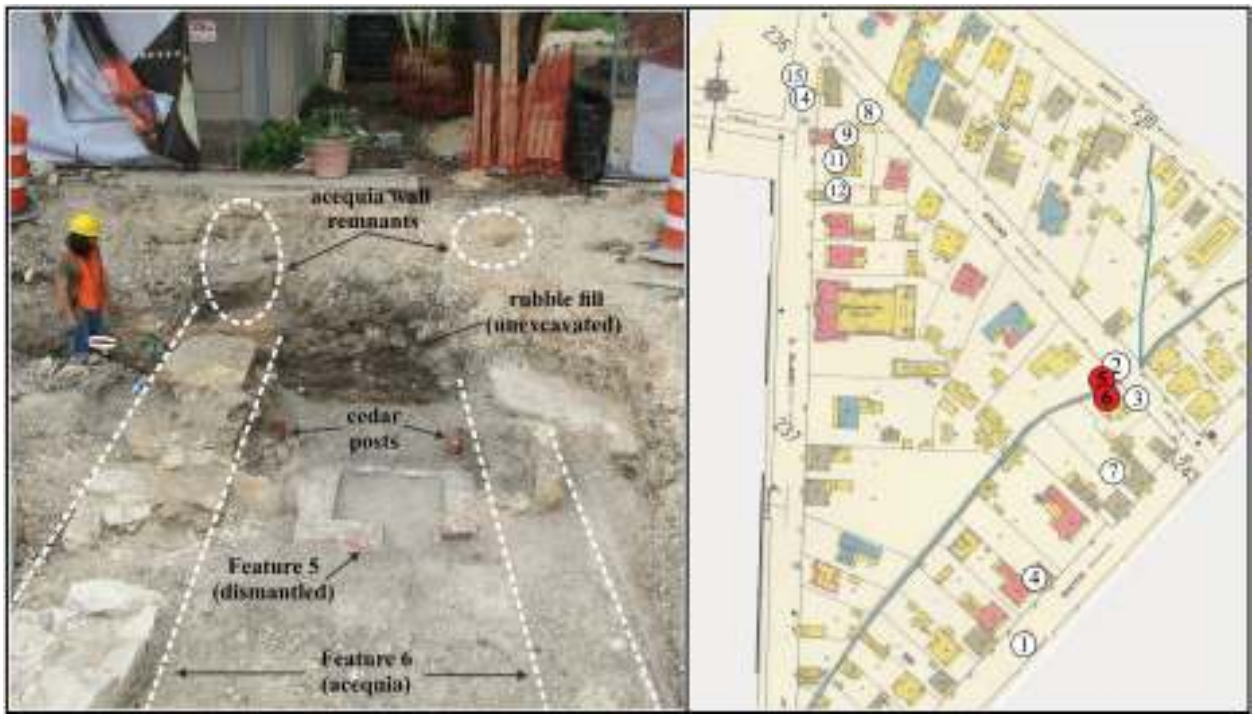

Figure 8-24. Left: Acequia Madre de Valero (41BX8) along south side of E. Nueva Street (facing south). Right: locations of Features 5 and 6 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Figure 8-25. Acequia Madre de Valero (41BX8), backfilling stages: 1) landscape fabric and sand covering acequia *walls; 2) additional layer of sand; 3) layer of clay fill; and 4) covering completed.*

the eight trees were in the area associated with the Hemisfair Way parking lot, north of E. César Chávez Boulevard. Another tree was located just west of the Kush House (41BX579), and the last tree was just east of the Smith House (41BX589). The tree east of the Smith House (41BX589) and along the street ROW had to be cut down because the roots were entangled in a cluster of active utility lines. A second tree to the south of the Smith House (41BX589) was left in place because the bundled root ball included a large wall foundation stone, and lifting caused the bundle to fail. This wall foundation was noted as Feature 7 and recorded as 41BX2124 (see Feature 7 discussion).

Tree transplanting typically required a 4-ft. deep and 4-ft. wide circular trench to be excavated around the tree. The tree crew would then cut diagonally towards the center of the tree and bundle the bulk in burlap (Figure 8-26). Construction rubble, abandoned utility lines, and an assortment of non-diagnostic glass and metal were observed in the trenches, but none was collected. The humus rich soils were heavily disturbed, as these trees had been transplanted from elsewhere a few years prior.

Excavation of transplanting pits at the S. Alamo Street entrance was completed with nothing of note observed. The pits were typically 5 ft. deep and 10 ft. in diameter.

Feature 7

Feature 7 was an east-west stone alignment located approximately 30 ft. south of the Smith House (41BX589). Approximately 4 ft. of the wall alignment was exposed by the

Figure 8-26. Typical tree transplanting: 1) trenched; 2) undercut; 3) balled; and 4) and burlaped (May 1, 2015).

Melchor Tree Farm crew while they were excavating around an oak tree scheduled for transplanting (Figure 8-27). The feature likely represents the north elevation wall footer of a stone structure at 505 Water Street. The stones were about 24 in. wide and extended 1 to 4 ft. below the surface. Aside from abandoned utilities (water and electric), CAR staff did not observe any cultural material. Attempts to move the tree failed because the tree roots were entangled in the stones, and the weight of the stones was causing the bundled root ball to fall apart. No cultural material was observed. The feature was registered as a new site and designated 41BX2124.

Installation of Electrical Service

Boring for the installation of a series of piers was completed between October and December 2015. These piers were for new vehicle and pedestrian crosswalk light fixtures on S. Alamo Street and E. Nueva Street. This work included monitoring at the northwest and southwest corners of S. Alamo Street and E. Nueva Street. Boring along the east side of S. Alamo Street was completed with nothing of significance to report.

At the request of COSA, CAR staff monitored additional activities related to the installation of electrical services just outside of the original APE. Work at the northwest corner exposed a wall foundation. Instead of boring in this location, a 3-x-4 ft. and 6-ft. deep pit was mechanically excavated. Remnants of a wall foundation of soft limestone was observed and recorded as Feature 14.

The last item monitored for the Internal Streets project was related to trenching for the installation of an electrical conduit along the northwest corner of S. Alamo Street and E. Nueva Street, adjacent to the southeast entrance to historic La Villita. This work was completed in early February 2017. The required trench was 18 in. wide, 36 in. deep, and 72 ft. long. The strata, underneath a 6-8 in. layer of concrete and

Figure 8-27. Feature 7, east-west stone alignment (circled); remnants of wall footers of early house at 505 Water Street (41BX2124), facing south. Inset shows location of Feature 7 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

caliche base, consisted of mixed deposits of dark clay and cobble with pockets of caliche. A few medium- to large-size pieces of concrete were in the mix. Caliche-constructed wall fall was observed at the south end of the trench and recorded as Feature 15.

Feature 14

This feature was located during excavations at the northwest corner of S. Alamo Street and E. Nueva Street. A 3-x-4 ft. and 6-ft. deep pit was excavated in order to install a pedestrian signal pole. In the process, a soft limestone, north-south wall alignment was exposed between 30 and 72 in. below the surface (Figure 8-28). This feature was also recorded with a GPS unit and the data was overlaid on the 1896 Sanborn map, which placed the feature just north of E. Nueva Street and in the middle of S. Alamo Street (Figure 8-2). Feature 14 may be associated with an early nineteenth-century cottage constructed in the emerging La Villita neighborhood and along the old Mission Road, present-day S. Alamo Street (Labadie et al. 1986:12-16). Alamo Street, or Camino de las Misiones, dates to the early eighteenth century and was the road that led from the Alamo (Mission San Antonio de Valero) to the other string of missions. This old road has been widened and realigned several times, which may account for the feature showing up in the middle of the 1896 road. No cultural material was observed.

Feature 15

Feature 15 was located within 20 ft. of Feature 14 during excavations along the northwest corner of S. Alamo Street and E. Nueva Street. An 18-in. wide, 36-in. deep, and 72-ft. long trench was excavated in order to install electrical conduit to service a pedestrian signal. A bed of soft caliche limestone was exposed between 30 and 38 in. below the surface (Figure 8-29). This feature was recorded using a GPS unit, and data was overlaid onto an 1896 Sanborn map (Figure 8-2). This placed the feature just north of E. Nueva Street and in the middle of S. Alamo Street. As in the case of Feature 14, this wall fall may be associated with an early nineteenth-century cottage constructed in the emerging La Villita neighborhood and razed in the late nineteenth century. It is described as wall fall, as opposed to a section of intact wall, since the stones are dispersed. No cultural material was observed.

Figure 8-28. Left: Feature 14, wall foundation (facing north). Right: location of the northwest corner of S. Alamo Street and E. Nueva Street (facing south).

Figure 8-29. Feature 15. Left: Image shows Feature 15 between 30 and 36 in. (west wall profile of trench). Right: Feature 15 at floor of trench. Scale is metric. Inset shows location of Feature 15 on 1896 Sanborn Fire Insurance Map *(Sanborn 1896).*

Gas Line

Trenching and installation of gas lines and service laterals along the length of E. Nueva Street was completed between October 2015 and January 2016. Trenching for the main line was no more than 2 ft. wide and 5 ft. deep, with the service laterals being no more than 12 in. wide and 18 in. deep.

The most archaeologically sensitive area was just north of Feature 6, the Acequia Madre de Valero (41BX8). Remnants of the *acequia*'s north-south alignment were extant along the south side of E. Nueva Street and continued approximately 35 ft. to the north side of the street. Historically, the *acequia* would have extended to the opposite side of the street and beyond, so trenching through this area proceeded cautiously.

CAR staff observed that deposits in the area just north of the Acequia Madre de Valero (41BX8) were heavily disturbed by the previous installation of utilities, such as chilled water lines and related utility vaults. A heavy concentration of flowable fill in this same area indicated the probability of additional buried utilities (Figure 8-30). Based on the concentration of buried utilities in this area, it was evident that the Acequia Madre de Valero (41BX8) in this general area had been destroyed (see Figure 2-5). No evidence of the *acequia* or cultural material was observed.

Sanitary Sewer Line

Trenching and installation of sanitary sewer lines and laterals along the length of E. Nueva Street was completed between June and July 2016. CAR staff did not monitor this work until the required trenching approached the path of the *acequia* since it had been established that there were no possible intact deposits in the path. As a result of earlier excavations through this culturally sensitive area, the redesigned sanitary sewer line plans called for removing the old line and installing a new line in its place. This work was somewhat similar to the water line install, in that it utilized a previously breached section of the *acequia* to install the new line.

The sewer line trenching and installation commenced at opposite ends of E. Nueva Street and worked toward the known path of the *acequia*. Manholes were installed 50 ft. apart and on either side of the *acequia*. Because the exact location of the *acequia* was known, mechanical trenching was allowed to proceed and expose the layer of sand and landscape fabric that had been placed over the area. Once the sand was exposed, the contractor excavated the area by hand and exposed the sewer line, which was removed, and the new line installed in its place. There was no adverse impact to the *acequia*.

Figure 8-30. Gas line install, north side of E. Nueva Street at acequia *crossing; note area is heavily impacted.*

Chapter 9: Summary and Recommendations

José E. Zapata

A great deal of time and effort went into this project, and the result in terms of the physical improvements to the site is remarkable. The Yanaguana Garden and Park is thriving, the restored Historic Homes are now, or will soon be, back in use. Owing to the cooperation of the various agencies, contractors, and stakeholders, CAR was able to effectively and successfully complete the archaeological work. The current work showed that extensive ground disturbing activities had previously occurred on the site. This disturbance can be attributed to work in the nineteenth century as well as to numerous building and infrastructure projects conducted throughout the twentieth century. Large amounts of fill material covered most of the site. The average depth of fill was 8-12 in., but in areas of previously excavated utilities the fill reached depths of up to 8 ft. The areas of heaviest disturbances were along the Hemisfair Way alignment where sewer and storm drain lines were buried up to 15 ft. However, the current work was able to document 31 features in various states of preservation. The 31 features included a late nineteenth-century privy and three new historic home sites (41BX2123, 41BX2124, and 41BX2246). CAR recommends none of the newly recorded sites are eligible for listing on the NRHP or as a SAL. Notably, three segments of the Acequia Madre de Valero (41BX8) were found and documented, and CAR recommends these existing sections of the Acequia Madre de Valero (41BX8) are eligible to the NRHP and as a SAL. The *acequia* and the majority of the features were left in place without negative impact to the cultural resources.

Two segments of the Acequia Madre de Valero (41BX8) were located in the Yanaguana Garden area, and an additional segment was found along E. Nueva Street. Dating to the early eighteenth century and serving as an irrigation canal for the farmlands of Mission San Antonio de Valero, the Acequia Madre de Valero (41BX8) was extremely important to San Antonio's early development. In order that it not be lost to posterity, and in case of future ground disturbance, the course of the *acequia* in the Yanaguana Garden has been marked with a series of pavers. The segment that runs beneath E. Nueva Street was protected by a layer of landscape fabric and sand and is preserved in place. The City of San Antonio redesigned the project when intact sections of the *acequia* were encountered in order to protect and preserve the *acequia* for future generations.

Past development projects and recent activities have clearly disturbed and/or caused considerable impacts across the project area. Still, current work demonstrated that undisturbed areas with intact archaeological features remain. Importantly, significant cultural resources persist in some areas at depths of around 12 in. below the surface. CAR recommends avoiding ground disturbance at depths greater than 12 in. below the surface along the path of the *acequia* and 18 in. below the surface in all other undisturbed areas. If ground disturbance is unavoidable, then CAR recommends monitoring of excavations or a comprehensive systematic effort to recover significant data.

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Year	Vol.: Page	Date	Instrument	Grantor	Grantee
1839	A2:227-229	2 November 1839	Deed	M.J. Bosque	F.A. Ruiz
1856	O1:172-173	13 June 1856	Deed	J. Riddle	J. Hoyer
1856	O1:462 28	28 August 1856	Deed	J. Riddle	E.K. Tynan
1857	P1:199-200	26 June 1857	Deed	J. Riddle	W. and E.K. Tynan
1857	P2:64-65	29 June 1857	Deed	S. Smith	J. Riddle
1857	P1:310-311	22 August 1857	Deed	J. Riddle	S. Smith
1863	T1:117-118	9 November 1863	Deed	City of San Antonio	B.R. Sappington
1865	T2:77-78	7 October 1865	Deed	J. Travieso	H. Gimbel
1866	T2:788-789	1 June 1866	Deed	A.Werner	I. Zizik
1879	V1:329-330	4 February 1870	Agreement	J.H. Kampmann	R. and S.E. Eager
1877	7:254-255	5 June 1877	Deed	A. Zander	L. Ohde
1881	A2:402-404	17 March 1881	Deed	J. Riddle	M. Arciñega
1882	20:556-557	27 January 1882	Deed	L. Ohde	A. Zander
1883	28:351-355	29 October 1883	Contract	G.F. Pereida	F.S. Geiger
1883	H:256	26 December 1883	Marriage Lic.	R.M. Pereida	A. Schuetze
1886	47:394-396	1 June 1886	Deed of Trust	F. Zander	W. Huppertz
1887	53:275-277	7 February 1887	Deed	A. Zander	F. Koehler
1890	D:568-570	10 July 1890	Mechanics Lien	F. Koehler	T.W. Carrico and Co.
1894	131:639-640	23 April 1894	Release of Lien	C. Kampmann	S.E. Eager
1896	155:356	17 October 1896	Deed	E.E. Tynan	E E. Schultze, Sr.
1901	195:317	1 May 1901	Deed	F. Koehler	H. Lang
1902	210:275	30 July 1902	Deed	F. Koehler	F.A. Piper
1903	226:225	23 December 1903	Deed	K. Tynan	M. Mathies
1907	267:315-316	6 August 1907	Deed	T. Gimbel	J.H. Kush
1913	423:333	16 September 1913	Deed	I. Campbell	E.E. Hilje
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Appendix A:
Images of Historic Properties, Past and Present

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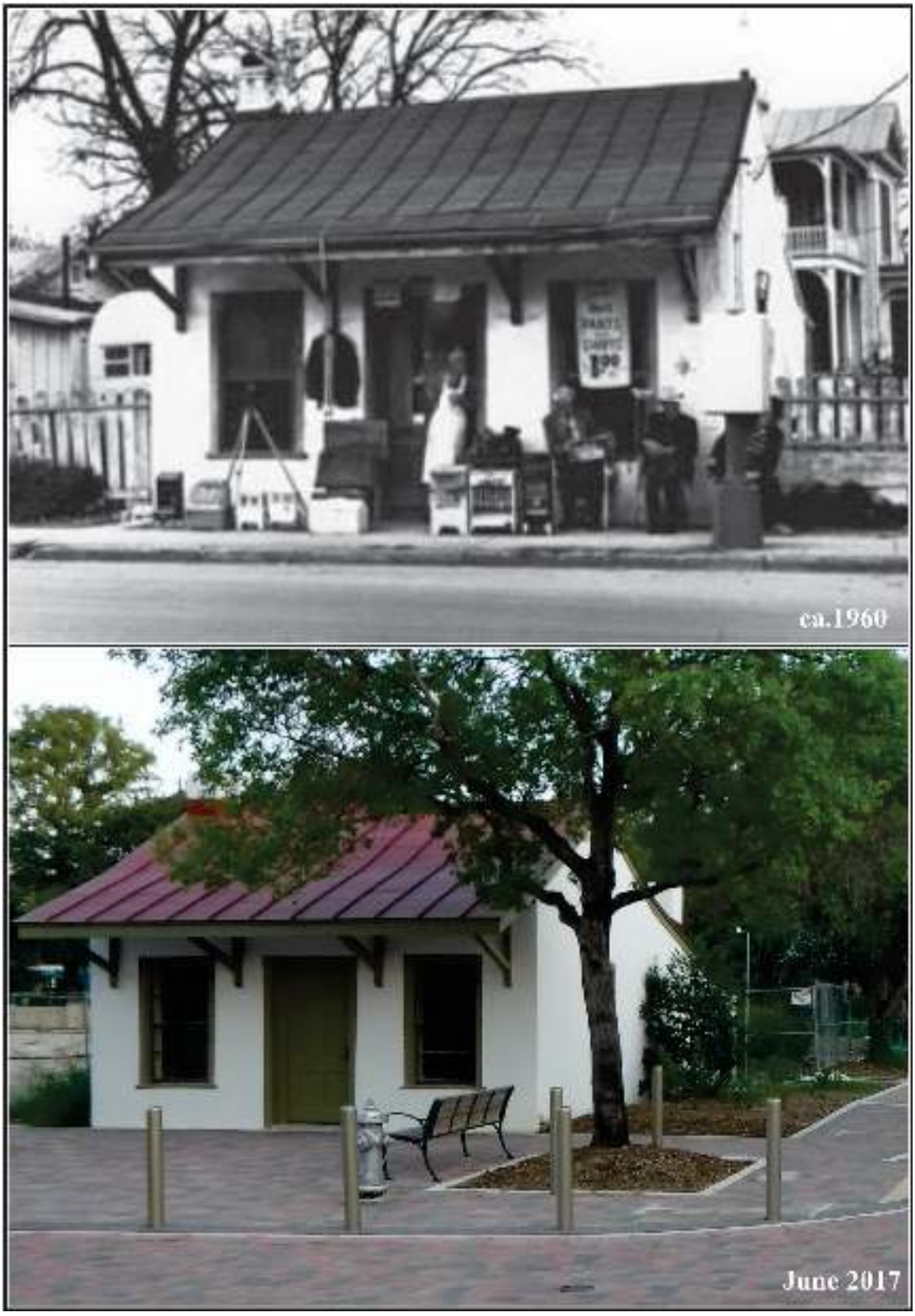

Figure A-1. Smith House (41BX589), caliche-block construction ca. 1855. Top photograph courtesy of the UTSA-ITC (RH 082-0573).

Figure A-2. Rafael Pereida House, (41BX591), construction 1883. Top photograph courtesy of the the UTSA-ITC (090-0629). On porch from left: Petronila "Nell" Pereida (1887-1978) and her mother Anna Schultze Pereida (1853-1920).

Figure A-3. Koehler House (41BX592), brick construction 1890. Top photograph courtesy of the UTSA-ITC (082-0605).

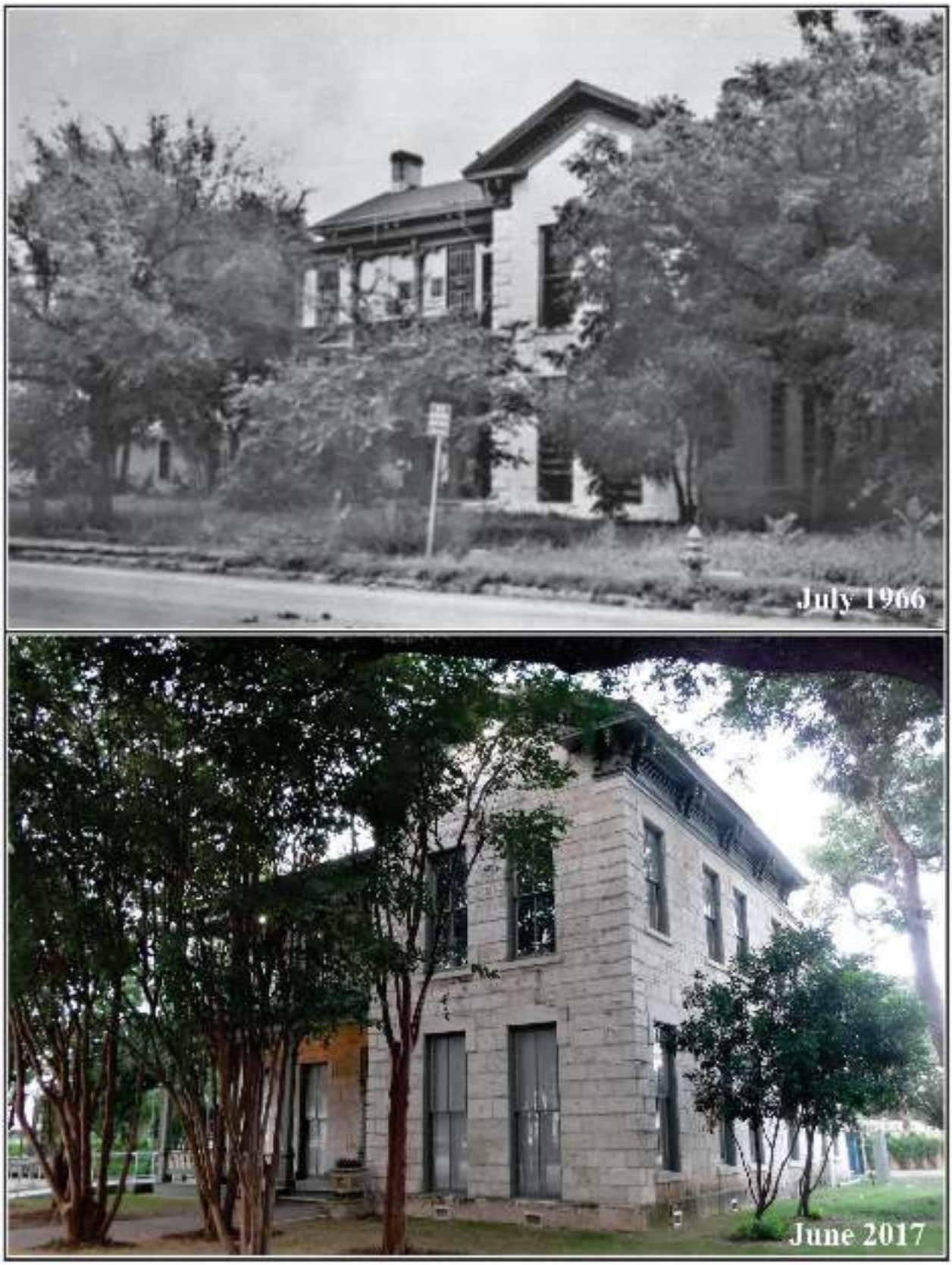

Figure A-4. Kampmann-Halff House (41BX586), limestone construction ca. 1875-1878. Top photograph courtesy of the UTSA-ITC (082-0597).

Figure A-5. Longini-Hermann House, brick and limestone construction ca. 1890. Top photograph courtesy of the UTSA-ITC (082-0596).

Figure A-6. Meyer Halff House, limestone construction ca. 1893. Top photograph courtesy of the the UTSA-ITC (082-0594).

Appendix B:
Project Area Photographs from Construction to Completion

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Figure B-1. E. Nueva Street entrance at S. Alamo Street, facing historic La Villita across the street (view northwest).

Figure B-2. E. Nueva Street entrance at S. Alamo Street, with historic Shultze Store in background (view northeast).

Figure B-3. Longini-Hermann House at rear of Eager House (41BX587), with Beethoven Hall (Magik Theatre) in background (view north).

Figure B-4. Patio area next to the Eager House (41BX587), view southwest.

Figure B-5. E. Nueva Street, west of Hemisfair Way, with Kampmann-Halff House (41BX586) at left (view west).

Figure B-6. Corner of Hemisfair Way and E. Nueva Street, with Smith House (41BX589) at left and Hilton Hotel in background at right (view west).

Figure B-7. Corner of E. Nueva Street and Hemisfair Way, with view of Kush House (41BX579) and partial view of the Tower of the Americas (view northeast).

Figure B-8. E. Nueva Street in front of the Mexican Cultural Institute, with partial view of the Tower of the Americas in background (view northeast).

Figure B-9. Corner of Hemisfair Way and E. Nueva Street, with Mexican Cultural Institute and the Hilton Hotel in background at right (view west).

Figure B-10. Reconstructed acequia *(view north).*

Figure B-11. Yanaguana Garden Pergola with Kampmann-Halff House (41BX586) at left (view north).