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Texas Antiquities Permit No. 8932

Prepared for:
SMC Consulting, Inc. and the Harris County MUD No. 502

Acacia HERITAGE CONSULTING

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Acacia Heritage Consulting Report No. 1

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ABSTRACT

This report presents the results of an archeological survey of a proposed detention basin and outflow structures along Cypress Creek in Harris County, Texas. The project was sponsored by the Harris County Municipal Utility District (MUD) 502, and required consultation with the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. This necessitated compliance with Section 106 of the National Historic Preservation Act (Section 106) and the Antiquities Code of Texas (ACT). Acacia Heritage Consulting conducted the archeological survey under Texas Antiquities Permit No. 8932. The survey involved visual inspection and subsurface testing in the form of 10 shovel tests and 4 backhoe trenches. Archeologists documented no artifacts or cultural material in any of the subsurface tests. No cultural material was observed on the surface either. Approximately one third of the project area was previously disturbed from vegetation clearing and soil borrowing, possibly to create an expedient flood detention basin. This report recommends that no further archeological work is warranted prior to construction of the Towne Lake detention basin and outfall.

No artifacts were collected. All notes and records will be curated at the Center for Archaeological Studies in San Marcos.

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1. INTRODUCTION AND MANAGEMENT SUMMARY

The Harris County Municipal Utility District (MUD) 502 and the City of Houston are proposing drainage and outfall improvements along Cypress Creek near US Highway 290 and Barker-Cypress Road. The improvements consist of a detention basin and outfall sewer along Cypress Creek (**Figure 1**). The project is being conducted for flood control through Harris County MUD 500, which administers and manages projects for MUD 502, and the City of Houston and requires consultation with the United States Army Corps of Engineers (USACE). Therefore, it would be subject to Section 106 of the National Historic Preservation Act (Section 106) and the Antiquities Code of Texas (ACT). Work was conducted under Texas Antiquities Permit No 8932.

The Area of Potential Effects (APE) for the project is defined as the footprint of the undertaking plus any listed or eligible National Register non-archeological properties on directly adjacent tracts. The footprint of the proposed undertaking is approximately 23 acres and the maximum depth of impact for the detention basin and outfalls is about 10 feet. As there are no listed NRHP-properties or properties greater than 50 years in age within the footprint or on adjacent tracts, the cultural resources survey focused on the footprint itself.

Archeologists conducted a visual inspection of the APE, plus subsurface testing following the minimum standards set for by the Council of Texas Archeologists (CTA). Those standards currently call for one subsurface test every two acres for projects 10-100 acres in size. Acacia archeologists excavated 10 shovel tests and four backhoe trenches throughout the APE. No cultural material was observed in either shovel tests or backhoe trenches and no new sites were recorded anywhere within the APE.

Visual inspection determined that approximately one-third of the APE is disturbed from previous soil borrowing to a depth of at least 70 centimeters (2 ft) below the surface, obviating the need for shovel testing in that portion of the project. The remainder of the APE was heavily vegetated with a mix of mature trees and a dense understory of both native and invasive species. This understory vegetation was so thick that it impeded mobility around the property and reduced ground surface visibility to nothing. Nonetheless, given that no cultural material was observed in shovel tests and backhoe trenches, this report recommends that no further work is warranted prior to construction of the proposed detention basin and outfall.

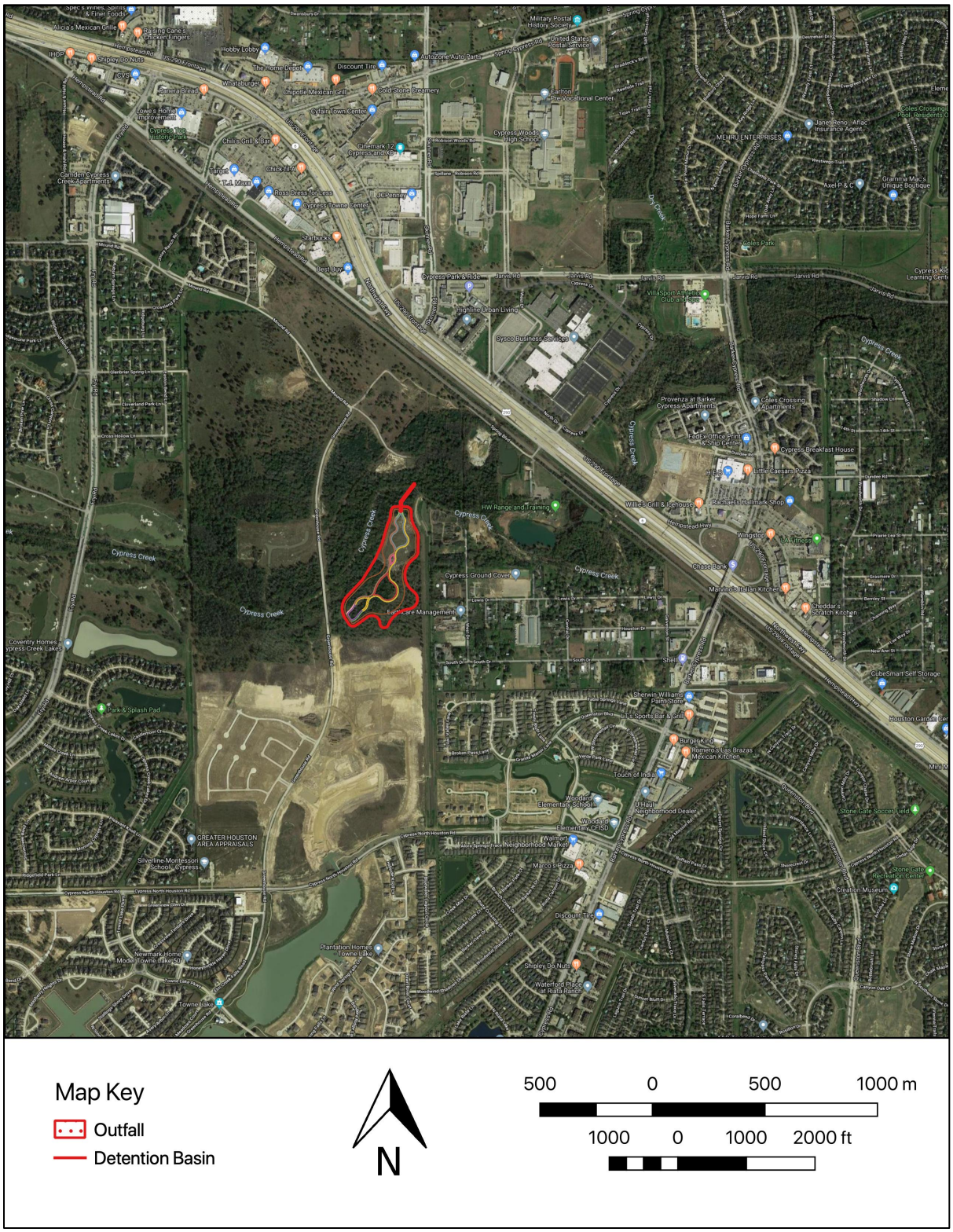

Figure 1. Project location near Cypress, in Harris County, Texas

Survey work was conducted over the course of one day on June 21, 2019, with approximately 18 person hours expended. Rachel Feit served as Principal Investigator with Will Pratt assisting. The remainder of this report includes 6 chapters. Chapter 2 documents the natural setting and affected environment; Chapter 3 offers a brief cultural background for this area. Chapter 4 describes the methods used during the course of the survey and Chapter 5 details the results of field investigations. Chapter 6 summarizes the conclusions and recommendations.

2. SITE SETTING AND ENVIRONMENT

The project is located about 25 miles from downtown Houston in a rapidly developing suburban area. It was open prairie or lightly wooded for much of the twentieth century, with a few rural residences built along West Drive starting in the 1960s and early 1970s. Many of these were replaced by industrial and commercial complexes in the 1990s. During Hurricane Harvey of 2017, this area was completely inundated from floodwaters coming from Cypress Creek. As a result, virtually all of the smaller remaining rural residences were demolished and currently there are no buildings greater than 50 years in age in or directly adjacent to the proposed drainage outfall and detention basin. At the time of survey, the Towne Lake residential community was under construction on the properties directly south of the detention basin and outfall area.

The project falls within the Northern Humid Gulf Coastal Prairies, a sub region of the Western Gulf Coastal Plain ecoregion (Omernik and Griffith 2009). This ecoregion is characterized by its grassland potential and relatively flat topography. However, much of the coastal prairies have been modified for crops, rangeland, pasture, or urban land uses. Topographically, the Western Gulf Coastal Plains ecoregion is relatively flat with the plains becoming older and more irregular further inland, while the Northern Humid Gulf Coastal Prairies are characterized as a gently sloping coastal plain (Omernik and Griffith 2009).

Historically, natural vegetation was dominated by grasslands punctuated by isolated oak mottes or maritime woodlands. Grasses include little bluestem (*Schizachyrium scoparium var. frequens*), yellow Indiangrass (*Sorghastrum nutans*), brownseed paspalum (*Paspalum plicatulum*), gulf muhly (*Muhlenbergia capillaries*), and switchgrass (*Panicum virgatum*). Trees common to this Northern Humid Gulf Coastal Prairies consist of live oak (*Quercus virginiana*), southern red cedar *(Juniperus virginiana var. silicicola*), Durand white oak (*Quercus sinuate*), sugarberry (*Anaqua; Ehretia anacua*), pecan (*Carya illinoinensis*), and gum bumelia (*Sideroxylon lanuginosum*). Loblolly pine (*Pinus taeda*) occurs near the transition to the South Central Plains ecoregion. Today, invasive species such as the Chinese tallow tree (*Sapium sebiferum*) and Chinese privet (*Ligustrum sinese*) are prevalent in parts of this subregion (Omernik and Griffith 2009; Stahl and McElvaney 2012; Texas A&M 2008).

Overstory vegetation observed within the APE included mainly mature Elm, Hackberry, and Cypress. The dense understory vegetation in between was characterized by thorny small trees, Yaupon holly, Chinese tallow, blackberry, palmetto, and grape vines.

The project area slopes gently upward to the north, from an elevation of about 139 feet to 142 feet above mean sea level (amsl). The project area runs into Cypress Creek and will run roughly parallel to a channelized drainage. Geologically, the area is characterized by Quaternary-age clay, silt, and sand of the Lissie Formation (BEG 1992). Soils within the project area entirely consist of Snakecreek fine sandy loam (0-1% slopes, occasionally to frequently flooded). This soil is made up of Holocene loamy alluvium (USDA-NRCS 2019).

The Houston Potential Archeological Liability Map (PALM), which assesses the geoarcheological potential for buried pre-contact deposits, depicts the project area mostly within Map Units 2 and 1 (**Figure 2**). The PALM recommends that Map Unit 2 has potential for shallowly buried archeological sites in areas that have not already been modified through farming. Shovel testing is recommended in these areas. Map Unit 1 has potential for deeply buried archeological resources and in these areas the PALM recommends mechanical trenching (Abbott 2001).

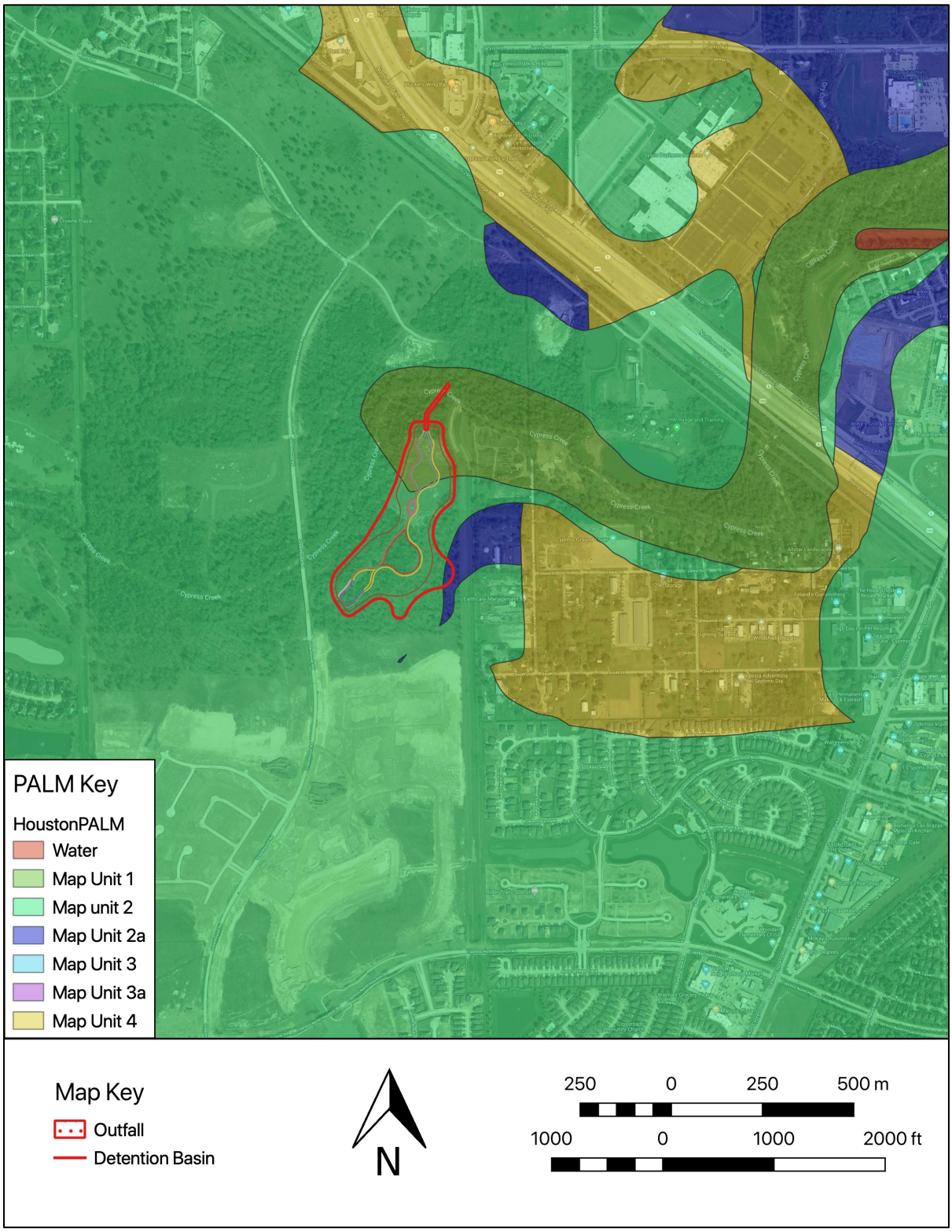

Figure 2. Project area with Houston PALM overlay.

3. CULTURAL BACKGROUND

Harris County falls within the Upper Texas Coast, which is part of the Southeast Texas archeological region (Perttula 2004). The Southeast Texas archeological region spans from the Sabine River to the Brazos Delta, and extends inland on the coastal plain for approximately 200 miles. The majority of what archeologists know about the prehistory of this region comes from sites along the coast and sites near and within major metropolitan areas. From these sites several key sources of literature have developed a prehistoric chronology for the region, including: Aten (1979, 1983); Ensor (1991); Kidder (2002); and Ricklis (1994, 2004). These sources generally agree that, except for minor changes in tool technology, pre-contact period Native American lifeways probably remained relatively constant for the 10,000 or so years prior to first European contact. Native American culture was characterized by small bands of semi-mobile hunter-gatherers that generally followed streams and waterways in their seasonal movement. Nonetheless the pre-contact period is generally divided into four subperiods based on identified changes in tool technology, subsistence focus, mobility, and mortuary patterns.

Paleoindian (ca. 11,500–8000 Years Before Present [BP])

Traditionally, the Paleoindian period is the earliest recognized occupation in North America. The initial occupants of Southeast Texas travelled many miles across large areas following migrations of now extinct Pleistocene megafauna (Moore 1994). Archeologists generally assume that Paleoindian lifeways in Southeast Texas mirrored those in other parts of Texas. Paleoindians manufactured distinct, large lanceolate points that are commonly fluted. These points include Clovis, Plainview, Golondrina, Meserve, Scottsbluff, and Angostura projectile points. Increasing data from archeological investigations suggest that Paleoindian subsistence was broad-based and included a variety of large and small game, as well as many different plant resources. Although the Paleoindian archeological record along the Southeastern Texas coast is known mostly through isolated finds, a few patterns can be discerned. First, the use of high-grade lithic material in Paleoindian lanceolate point production indicates a non-geographically tethered and highly mobile lifeway. Second, based on the current data, it appears Paleoindian cultures preferred locations along major streams and likely Pleistocene coastline settings. Since the Pleistocene/early Holocene sea level was approximately 100 meters lower than present day, many intact Paleoindian sites would now be submerged (Bousman et al. 2004; Ricklis 1994, 2004). However, one significant inland site to be recently investigated is the Dimond Knoll site (41HR796) along Cypress Creek.

Archaic (ca. 8000–1500 BP)

As with the Paleoindian components, few well-stratified sites dating to the Archaic Period have been excavated in Southeast Texas, which has left the archeological record incomplete. Nonetheless, the Archaic is "generally defined by pre-or non-horticultural adaptations and pre-ceramic and pre-bow-and-arrow hunting technologies" (Ricklis 2004:184). As with the Paleoindian period, Archaic period groups relied on diverse subsistence strategies that were practiced along a migratory seasonal round focused on procuring locally specific flora and fauna along coastal areas and inland riverine settings (Ricklis 1994). The most notable manifestation of cultural change between the Paleoindian and Early Archaic period can be seen in lithic technologies. Early Archaic groups adapted to the altered climate by expanding their tool kit. Compared to the Paleoindian period, the Early/Middle Archaic assemblage is dominated by smaller points that Ensor (1991) classified as being within the expanded haft cluster. This "cluster" of points spans 4,000 years from approximately 5000–1000 BC (6,950–2,950 BP) and include Bell, Andice, and Early Triangular points (Texas Beyond History 2019).

During the Middle Archaic, it is believed that population levels began to rise from relatively low densities during the Early Archaic due to the change from a cold and moist climate to a warmer and drier climate. Middle Archaic groups intensified efforts to capitalize on marine resources; in particular shellfish and fish. Numerous coastal shell midden sites have been discovered along with fishing implements including bone fishhooks, plummets, and net sinkers (Aten 1983). Axes, nutting stones, and grinding tools from more inland sites indicate that Middle Archaic groups were also well suited for utilizing hardwood forest resources as well. Points from this period include Palmillas, Yarbrough, Kent, Elam, and Carrolton.

The Late Archaic (1000 BC–AD 400 or 2,950–1,550 BP) corresponds to the most recent period of sea level rise, which created the modern coastline. The warmer, drier climate likely resulted in a population increase across Texas. The greater population densities may have also facilitated long-distance trading between regions, including the Lower Mississippi Valley. Subsistence economies established earlier in the Archaic Period continued during the Late Archaic and relied on repetitive exploitation along a seasonal circuit. Late Archaic points include Morhiss, Ensor and Godley types (Driver 2009; Ensor 1991; Ricklis 2004).

Woodland Period (1500–1250 BP)

The introduction of ceramics into the Archaic tool kit signaled a transition to what several archeologists have called a "Woodland" occupation in southeast Texas. The Woodland tag placed by earlier archeologists like Aten and

Shafer was to illustrate affinities to the cultural material observed in the southeastern United States, in particular the Lower Mississippi Valley (Moore 1990, 1995; Perttula 2004). However, Dee Ann Story argued that there are too many differences between southeast United States Woodland groups and those occupying the Texas coastal region at the same time. Thus, Story coined the term "Mossy Grove" to describe the Woodland period of occupation along the coast and inland within southeast Texas (Story 1990). According to Story (1990:256) "Mossy Grove can be viewed as both a general and cultural pattern, as well as a regional tradition that partly parallels development of the Caddoan tradition to the north. And, like the Caddoan tradition/culture, it encompasses the archeological remains of what were surely different ethnic (and possibly even linguistic) groups."

Although the manufacturing of pottery did not appear uniformly across the region (on theTexas–Louisiana border around 2000 BP, Galveston Bay at about 1850 BP, and the western coastal margin around 1650 BP along the coast near Galveston Bay and Sabine Lake) the Early Ceramic period of southeast Texas generally coincides with Early Ceramic periods in the Lower Mississippi Valley. Tchefuncte, grog-tempered Baytown Plain, and Marksville Stamped are common among the earliest Ceramic assemblages (Peyton 2007). However, the Goose Creek Plain variety is a utilitarian ware that dominates the archeological ceramic record during the later Woodland period. Initially, Goose Creek ceramics were constructed using a sandy paste, with little to no additional temper. Later, grog and bone tempers were added.

Late Prehistoric (1250–490 BP)

Radical technological change and stylistic modifications in ceramics mark the change from the Woodland to the Late Prehistoric Period. Eastern influences in pottery making such as grog and bone tempering, as well as elaborate decorations become more common (Ricklis 2004). Eighteen different styles of ceramics, based on temper, paste, and design, have been documented along the Texas coast in a Late Prehistoric context (Aten 1984). The Late Prehistoric Period in Texas brought intensified group dynamics as well. The bow and arrow was introduced around 1450 BP, although it did not replace the atlatl, but overlapped it. The introduction of the bow and arrow resulted in smaller, lighter projectile points. Common stone points recovered from Late Prehistoric Period sites include Perdiz, Alba, and Catahoula. Groups within this period continued the hunter-gatherer lifeways established long ago, with focus on coastal and riverine resources (Moore 1995; Ricklis 1994). There is increasing evidence for longer occupations designed to exploit and even cultivate certain seasonal resources, and greater territoriality among native groups. Aten (1983) suggests that smaller bands would have likely joined other bands to form larger communities during the winter months and then disperse back into smaller bands along the seasonal round (Ricklis 1994).

Contact Period (490 BP-Present day)

Around the time the first Europeans landed on the Texas coast, the region was largely the domain of the Karankawa, a tribe that still made seasonal migrations from the coast to inland regions. During the winter months the Karankawa would camp along the bays and estuaries, where they fished and collected shellfish, while in spring and summer they would move inland to hunt buffalo, deer, and other terrestrial animals, and forage for roots and plant resources. The project area falls at the most inland extent of the Karankawa's range. Father inland, groups from Central Texas dominated (Texas Beyond History 2019).

Beginning in the middle part of the nineteenth century Anglo and German settlers moved into northwest Harris County. The community of Cypress emerged in the 1870s and 1880s as a small farming and ranching settlement dominated by rice and dairy farming. Cypress' social center was a one-room school house and a dance hall, built in 1878 and then rebuilt of tin after a fire claimed it around 1887. The community received a boost in 1904, when oil drillers accidentally hit a warm artesian spring near Cypress Creek a few miles outside the community center. This spring was developed as the Houston Hot Wells Sanatorium and Hotel, located less than a mile from the project area (Smith 2010). Cypress, however, remained a small farming community until the middle of the twentieth century when development from Houston turned this area into a suburb.

Archeological Sites Near the Project Area

Background research for this project consisted of an online records search through the Texas Historical Commission's Archeological Sites Atlas (Atlas; 2019), and a review of historic period maps and aerial photographs. Research found that three archeological surveys were previously conducted within one kilometer (0.62 mile) of the APE. None of these surveys overlap with the project area. There are six archeological sites within a kilometer of the APE (**Figure 3**). There are no RTHLs, sites listed on the NRHP, or SALs recorded nearby.

Of the six archeological sites documented within a kilometer of the project area, all of them were documented in the 1970s, and none of them are located within or immediately adjacent to the project footprint. They are:

- 41HR329 is a lithic scatter including two projectile points, a biface fragment, and five flakes eroding out of a bulldozed cut. The site recorder noted that the site location was also used as a trash dump for a nearby shooting range in the mid-twentieth century.

- 41HR330 is a non-diagnostic lithic scatter eroding out a pond bank. Since soils in the site area had been significantly disturbed, it is possible that the scatter is out of it original context.

- 41HR332 consists of two isolated flakes, which were documented eroding from a cut bank of Cypress Creek.

- 41HR381 is a mid-twentieth century cemetery. The cemetery was unfenced and overgrown at the time it was recorded. Most grave markers were small temporary metal placards. Recorders believed that there is potential for unmarked graves to be present.

- 41HR395 is the historic Hot Well Sanatorium, which consisted of a hotel and three hot water pools built after the artesian spring was discovered by wildcatters in 1904 (**Figure 4**). The hotel building burned down sometime before the site was recorded, and historic artifacts were noted by the property owners. The remnants of the hotel structure was bulldozed. The site records note that the property has been altered significantly over the years. Currently the old Hot Well resort area has gridded streets with residences and warehouses built in the 1980s or later.

- 41HR399 is the old Houston and Central Texas Railroad bed. The railway operated between the late nineteenth century and mid-twentieth century.

One other important site, which is greater than a kilometer from the project area but is close enough to warrant mention is the Dimond Knoll Site (41HR796), located along Cypress Creek about four miles (7.7 km) west. Discovered and excavated in 2012/2013 prior to construction of the Grand Parkway (SH 99), the site is a stratified prehistoric habitation site representing occupation and use during most of the last millennium. The site contains a diversity of tool types, pottery and several human burials, which emphasize the importance of this particular locale to pre-contact peoples. Most importantly it is one of the few sites in the Houston area to have intact buried Early Archaic and Paleoindian remains, the analysis of which will contribute greatly to better understanding lifeways of those periods.

Given that the current APE is within a similar setting on Cypress Creek, archeological investigations were considered warranted prior to construction.

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Figure 3. Project area in relation to nearby archeological sites.

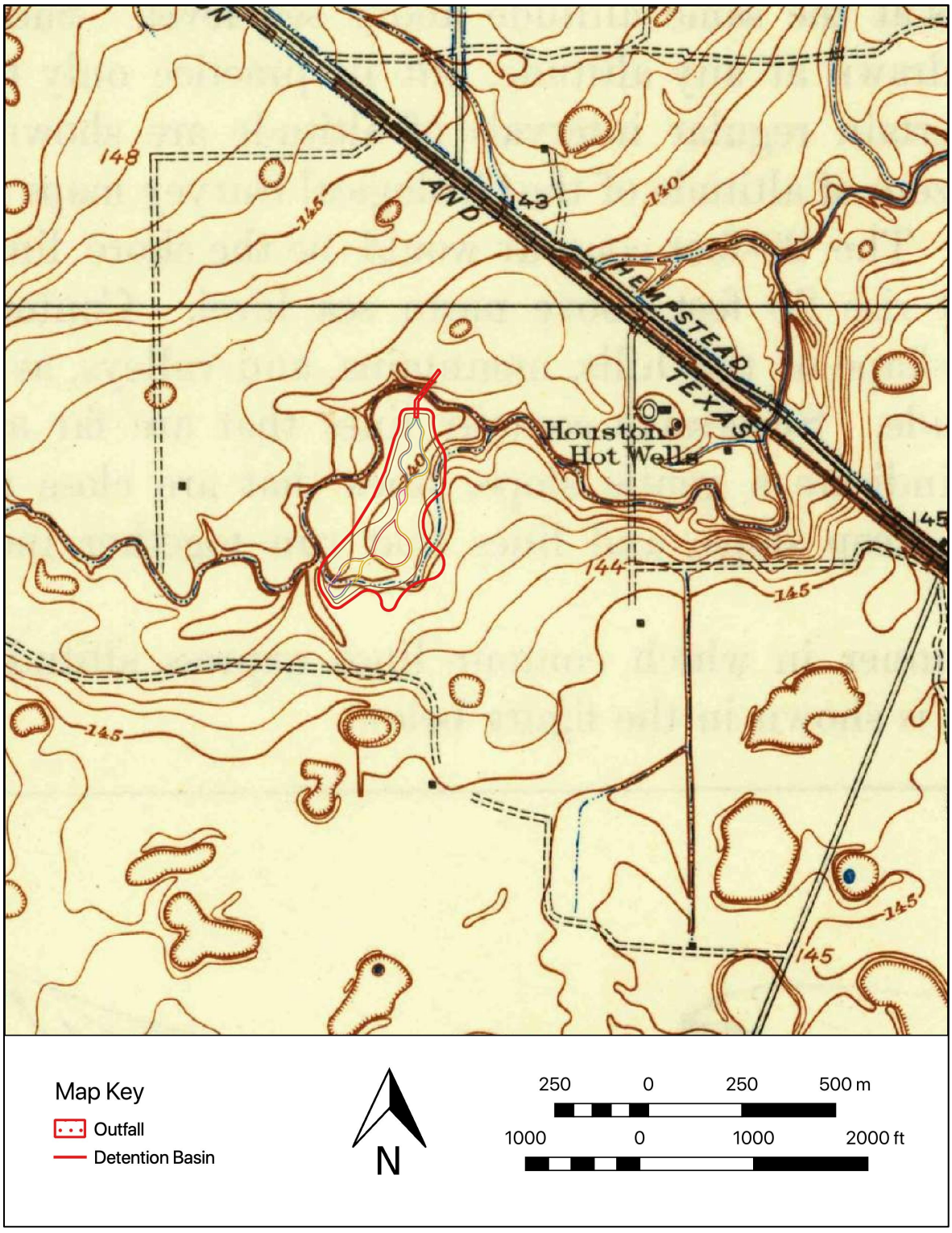

Figure 4. 1918 topographical map depicting the project location and the old Houston Hot Wells.

4. METHODS

Based on the gathered background information, the project area was thought to have high potential for prehistoric archeological sites, and such sites could be deeply buried along Cypress Creek. Therefore, Acacia proposed visual inspection, shovel testing and backhoe trenching within the APE to determine whether any archeological sites are present. The archeological survey conformed to the minimum standards and guidelines for archeological surveys adopted by the Texas Historical Commission. These standards recommend one test every two acres for surveys of less than 100 acres in size.

Archeologists walked and visually inspected the entire-acre 23-acre APE, making notes of surface or near surface archeological features. Shovel testing was conducted at a rate of one test every two acres within the footprint of the proposed improvements, in all areas with potential to contain buried cultural resources. Approximately 12 shovel tests were proposed, with additional tests excavated, if needed, to define archeological site limits. However, upon visiting the project area, investigators found that approximately a third of the APE was heavily disturbed from previous soil mining or possibly construction of an expedient flood detention pond (**Figure 5**). Therefore, shovel testing in this area was not warranted. In the end investigators dug a total of 10 shovel tests in the remaining 16 undisturbed acres. Shovel tests were excavated to 80 centimeters, ancient clay or extremely compact soil, whichever was encountered first.

Additionally, Acacia excavated four backhoe trenches within the APE along the margins of Cypress Creek where there is greatest potential for deeply buried archeological deposits. Trenches were excavated with a Bobcat mini excavator equipped with a two-foot blade at first, but then switched to a four-foot flat blade to get wider exposures. Excavators scraped a 1-2 meter (m) wide section of each trench down to examine the profiles and search for cultural material.

Soil from all shovel tests was screened through 1/4-inch wire mesh. A representative sample of each soil zone observed in backhoe trenches was screened in the same manner. All trenches and shovel tests were completely backfilled and compacted once field recording was complete.

Acacia proposed to field-record any artifacts observed during the survey and return them to their find location. However, no artifacts or cultural material of any sort was found during the course of the survey.

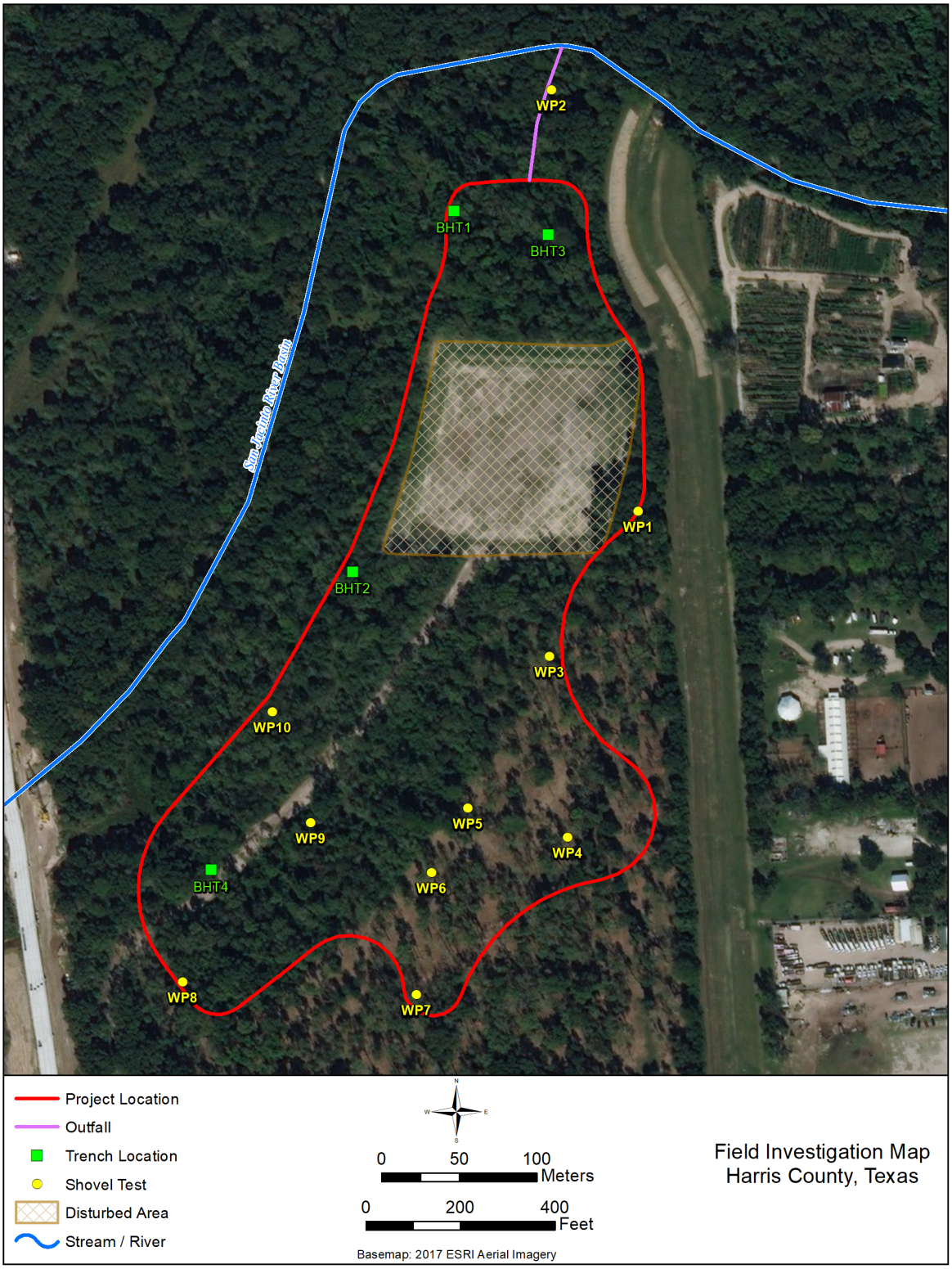

Figure 5. Shovel test and trench locations within the project area.

5. RESULTS OF FIELD INVESTIGATIONS

Results of Pedestrian Inspection and Shovel Testing

The project area is heavily vegetated, accessed by a dirt road from Greenhouse Road to the southwest. The dirt access road leads to an approximately 8-acre clearing within the APE. This clearing has been completely stripped of vegetation and the upper 70 cm (2 ft) of topsoil has been completely removed- either the result of soil borrowing, or possibly construction of an expedient flood detention basin (**Figure 6**). Google Earth imagery from 2017, taken just after Hurricane Harvey shows that this area was completely inundated by floodwaters after that rain event, so it is not unreasonable to presume that this property has been serving as ad hoc flood detention for some time (**Figure 7**). Investigators walked this cleared area and found no evidence of any archeological material on its surface. Shovel testing in this area was deemed unwarranted due to the depth of impacts from the soil borrowing.

Acacia's survey consisted of pedestrian inspection of the entire APE supplemented with 10 shovel tests and four mechanical trenches in non-impacted portions of the project area. The undisturbed portion of the APE is thickly vegetated and viney, making maneuvering through it extremely difficult (**Figure 8**). Ground surface visibility was zero in these areas, so the survey relied entirely on shovel tests and backhoe trenches to assess the presence/absence of cultural material.

Investigators excavated shovel tests throughout the vegetated portion of the APE spaced at regular intervals (Appendix A). The depth of tests varied from 25 to 80 centimeters below the surface. A typical soil profile contained pale brown (10YR 6.5/1) sandy loam to depths of about 70-80 cmbs. Below this mottled sandy clay loam belonging to the Lissie Formation was encountered.

Figure 6. The disturbed, bladed portion of the project area, facing west.

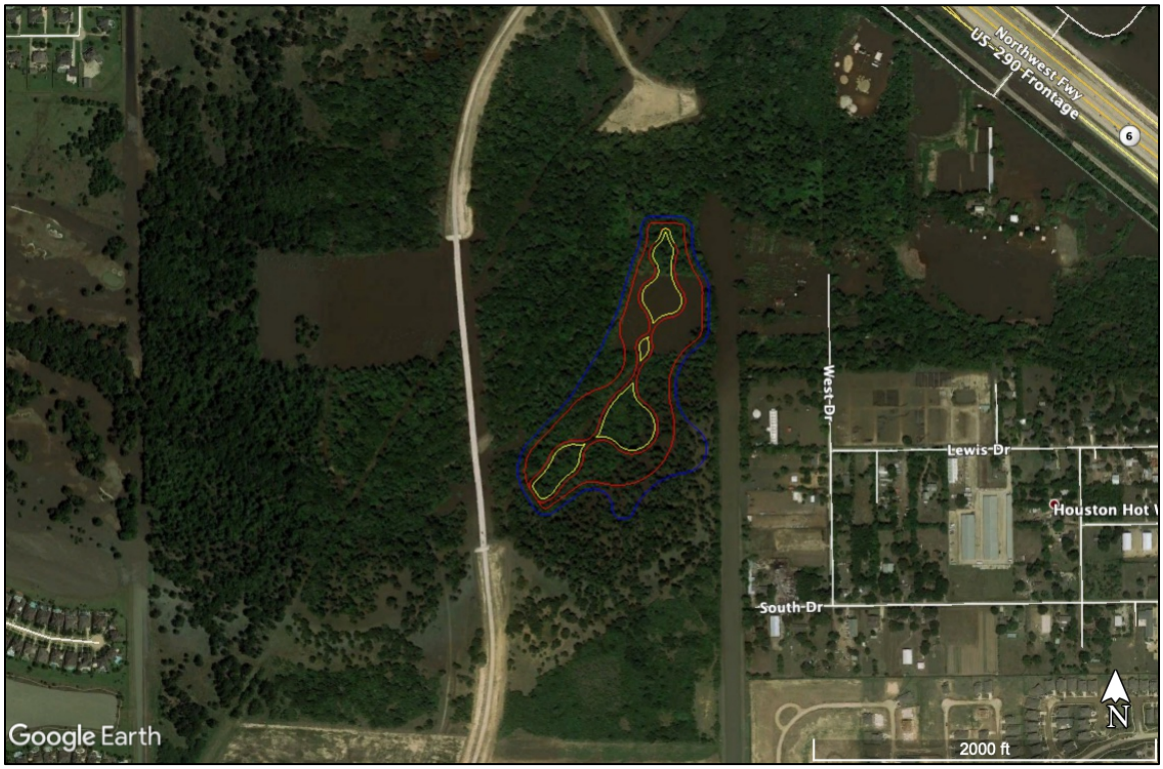

Figure 7. Google Earth aerial photograph taken in August 2019 after Hurricane Harvey.

Figure 8. Typical view of impenetrable undergrowth in the project area.

Trenching

Four trenches were excavated during the survey (**Table 1**). These trenches were placed along the outfall line and along the eastern margin of the APE, closest to Cypress Creek. Due to the thick understory, backhoe trenching in these areas required extensive vegetation clearing before it was even possible to dig trenches. Using a grappling bucket and the front dozer blade of a Bobcat mini excavator, vines and understory vegetation was cleared mechanically.

All trees with trunk diameters greater than five inches were left in place.

The four trenches revealed similar profiles consisting of about 30 cm of loose fine sandy loam over more compact fine sandy clay loam. This typically transitioned to a mottled orange and pale brown clay loam of the Lissie Formation found at about one meter below the ground surface. Trench 2 was the deepest of all four trenches, extending to 140 cmbs. The soil profile of this trench differed slightly from the others in that it contained a zone of compact sandy clay loam mixed with rounded calcium carbonate concretions

(**Figure 9**). Trench 3 was the shallowest of all the trenches, encountering mottled sandy clay sediments of the Lissie formation at a depth of 65 cmbs (**Figure 10)**

Trench No	UTM Northing/ Easting	Max Length (m)	Depth (cmbs)	Soil Description	Notes
1	3316961/240476	8.2	0-30	loose sandy loam, 5YR 5/4 pale brown	Very rooty
			30-70	fine sandy loam, 7.5YR 6/3 pale yellow brown	
			70-94	silty clay, mottled 7.5YR 6/3 with 7/5YR 6/8	
			94-110	clay loam, very mottled 7.5YR 6/3 with 7/5YR 6/8	Pleistocene Lissie formation
2	3316718/240421	6.2	0-30	fine sandy loam, 7.5YR 6/3 pale yellow brown	Rooty
			30-50	compact sandy clay loam, occasional charcoal, 7.5YR 6/3	
			50-110	Very compact clay loam, 7/5YR 5/3	CaCo3 concretions interspersed in this level
			110-140	Very compact clay, mottled pale brown and orange, 7.5YR 5/3 with 7.5 YR 5/6	Pleistocene Lissie formation
3	3316927/240561	7.1	0-25	Fine sandy loam, 7.5YR 5/3 pale yellow brown	
			25-60	Fine sandy loam with weakly laminated layers of sand and silt, 7.5YR 6/3	
			60-70+	Fine sandy clay, very compact, mottled yellow brown and orange. 7/5YR 6/3 and 7.5YR 5/8	Pleistocene Lissie formation
4	3316532/240317	6.4	0-25	very loose fine sandy loam, pale brown 7.5YR 5/3	Very rooty
			25-90	Compact sandy clay loam, 7.5YR 5/4 yellowish brown	
			90-125	Very compact sandy clay loam, increasing mottling with depth, 7.5YR 6/3	

No cultural material was observed in any of the trench profiles or in any material screened.

Figure 9. Trench 2 South wall profile.

Figure 10. Trench 3 east wall profile.

6. CONCLUSIONS AND RECOMMENDATIONS

Acacia heritage Consulting conducted an archeological survey of 23 acres along Cypress Creek in Harris County, Texas. The survey was conducted for compliance with Section 106 and the ACT under Permit No. 8932 prior to construction of a detention basin and outfall. Archeologists visually inspected the APE and excavated 10 shovel tests and four mechanical trenches. The survey found that approximately one-third of the APE is heavily disturbed by mechanical excavation and soil borrowing. The remaining project area is thickly vegetated and was considered to have high potential for buried archeological resources. However, no artifacts or cultural materials of any kind were encountered during subsurface testing. No new archeological sites were documented within the APE and there are no previously recorded sites. This report recommends that no further work is warranted prior to construction of the proposed detention basin and outfall.

No artifacts were collected during the survey and all notes and records will be permanently curated at the Center for Archaeological Studies in San Marcos in compliance with the terms of Permit No 8932.

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APPENDIX A- SHOVEL TEST LOGS

Shovel Test No	Northing	Easting	Depth (cmbs)	Soil Description	Cultural Material Notes
WP1	3316743	240613	0-15 15-70	10YR 3/2 Compact Sandy loam 10YR 6/2 Compact Sandy loam	term. @ very compact soil
WP2	3317020	240569	0-45	10 YR 5/2 Compact sandy loam	term. @ very compact soil
WP3	3316655	240544	0-20 20-30	10 YR 5/2 Compact sandy loam 10YR 7.5/1Very compact sandy loam	term. @ very compact soil
WP4	3316538	240548	0-80	10YR 5/2 Sandy loam	
WP5	3316561	240485	0-25 25-30	10YR 5.5/2 Sandy loam 10YR 7.5/1Very compact sandy loam	term. @ very compact soil
WP6	3316521	240459	0-40	10YR 4/2 Compact sandy loam	term. @ very compact soil
WP7	3316443	240444	0-15 15-60 60-70	10YR 6.5/1 Sandy loam 10YR 6.5/1 Sandy clay loam 10YR 6.5/1 Compact sandy loam with weak CaCo3 development	term. @ very compact soil
WP8	3316461	240294	0-50	10YR 5.5/2 Sandy loam	term. @water table
WP9	3316558	240383	0-25	10YR 4/2 Silty loam with numerous roots	term. @ impenetrable roots
WP10	3316631	240363	0-25 23-35	10YR 5.5/2 Compact sandy loam 10YR 7.5/1 Very compact sandy loam	term. @ very compact soil