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Intensive Cultural Resources Survey of the 6.4-acre Bonnie Reid Tract, Sugar Land, Fort Bend County, Texas

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Intensive Cultural Resources Survey of the 6.4-acre Bonnie Reid Tract, Sugar Land, Fort Bend County, Texas

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Intensive Cultural Resources Survey of the 6.4-acre Bonnie Reid Tract, Sugar Land, Fort Bend County, Texas

By:

Jeffrey D. Owens, Kathryn Nunez, and Jesse O. Dalton



Texas Antiquities Permit No. 9478
BOA207-11456

Prepared for:



Berg-Oliver Associates, Inc.
Houston, Texas

Prepared by:



Horizon Environmental Services, Inc.
Austin, Texas

June 2020

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Texas Antiquities Permit No. 9478

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MANAGEMENT SUMMARY

Horizon Environmental Services, Inc. (Horizon) was selected by LJA Engineering, Inc. (LJA) on behalf of Fort Bend Levee Improvement District (LID) No. 7 to conduct an intensive cultural resources inventory and assessment of the 2.6-hectare (6.4-acre) Bonnie Reid tract in western Sugar Land, Fort Bend County, Texas. The tract is located at the southwestern corner of the intersection of Pecan Grove and Sartartia Road within an older rural residential subdivision surrounded by modern residential subdivisions. A small homestead complex owned and occupied by William and Bonnie Reid until recently is located in the north-central portion of the tract. For purposes of the cultural resources survey, the project area was considered to consist of the entire 2.6-hectare (6.4-acre) tract. The proposed tract would be developed into a storm water detention pond, and the maximum depth of impacts is anticipated to be 3.0 to 4.5 meters (10.0 to 15.0 feet) below surface.

The proposed undertaking would be sponsored by Fort Bend LID No. 7, a political subdivision of the state of Texas; as such, the project would fall under the jurisdiction of the Antiquities Code of Texas. As the proposed project represents a publicly sponsored undertaking, the project sponsor is required to provide the Texas Historical Commission (THC), which serves as the State Historic Preservation Office (SHPO) for the state of Texas, with an opportunity to review and comment on the project's potential to adversely affect historic properties listed on or considered eligible for listing on the National Register of Historic Places (NRHP) under the NHPA and/or for designation as State Antiquities Landmarks (SAL) under the Antiquities Code of Texas. At this time, no federal jurisdiction has been identified for the project.

On June 10 and 11, 2020, Horizon archeologists Jesse Dalton and Jared Wiersema, under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive cultural resources survey of the project area to locate any cultural resources that potentially would be impacted by the proposed undertaking. The survey was conducted under Texas Antiquities Permit No. 9478. Horizon's archeologists traversed the project area on foot and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. The project area is situated on the northern terraces of the Brazos River. Vegetation across the majority of the project area consists of an expansive, manicured grassy lawn dotted with occasional live oak trees associated with the Reid homestead in the north-central portion of the tract. The southern portion of the project area is heavily overgrown with dense brambles, vines, and tall grasses. Prior to the purchase and development of the property by the Reid family in

1970, the parcel was part of a larger farm and was characterized by active agricultural fields. Additional disturbances associated with residential landscaping were observed in the north-central portion of the tract surrounding the Reid homestead. Ground surface visibility was generally low (<20%) due to dense vegetative ground cover.

In addition to pedestrian walkover, the Texas State Minimum Archeological Survey Standards (TSMASS) require a minimum of two shovel tests per 0.4 hectare (1.0 acre) for projects measuring 10.1 hectares (25.0 acres) or less in size plus one additional shovel test per 2.0 hectares (5.0 acres) beyond the first 10.1 hectares (25.0 acres). As such, a minimum of 13 shovel tests would be required within the 2.6-hectare (6.4-acre) project area. However, the project area is situated on the terraces of the Brazos River and is characterized by the Pledger clay soil unit, a Quaternary-age clayey alluvial sediment with the potential to contain archeological deposits at depths exceeding those that can be reached in shovel tests. As such, Horizon conducted subsurface survey investigations by means of backhoe trenching rather than shovel testing. The TSMASS call for excavation of one backhoe trench per two shovel tests; as such, a minimum of seven backhoe trenches would be required within the 2.6-hectare (6.4-acre) project area. Horizon excavated a total of seven backhoe trenches during the survey, thereby meeting the TSMASS requirements for a project area of this size.

Backhoe trenches revealed relatively consistent stratigraphic profiles consisting of a surficial black clay horizon that probably represents a former plowzone underlain by clay sediments ranging in hue from yellowish-red to brownish-red extending to the bases of the trenches. Calcium carbonate filaments increased in density with depth, suggesting that the clayey soil profile has remained relatively stable and been undergoing pedogenetic development for some time. While the full depth of alluvial sediments was not necessarily penetrated in backhoe trenches, the lack of any inclusions or anomalies suggestive of prehistoric cultural activity in trenches suggests that trenching was capable of adequately penetrating sediments with the potential to contain prehistoric and historic-age cultural resources.

One newly recorded archeological site, 41FB365, was documented during the cultural resources survey of the Bonnie Reid tract. Site 41FB365 consists of a cluster of late 20th-century buildings located on a small rural residential tract at the corner of Pecan Grove and Sartartia Road in Sugar Land, Fort Bend County, Texas. The homesite was the residence of William and Bonnie Reid, who moved to Sugar Land from Oklahoma after getting married in 1960 to start a family. Currently, the homestead consists of four buildings, including a single-story, brick-clad house (Resource A); an open-bay garage with an attached storage shed (Resource B); a well pump house (Resource C); and a small equipment shed (Resource D). The only historic-age structure on the site is the house, which was constructed in 1970, and the various outbuildings were constructed over the following decade. No other historic-age structures are present on the site, and no archeological deposits associated with any historic-age occupations of the property were observed during the survey. Based on the largely modern character of the architectural features on the homestead, a lack of significant historical associations, and the absence of archeological deposits, the site is recommended as ineligible for inclusion in the NRHP and for designation as an SAL.

Based on the results of the survey-level investigations documented in this report, no potentially significant cultural resources would be affected by the proposed undertaking. In accordance with 36 CFR 800.4, Horizon has made a reasonable and good-faith effort to identify historic properties within the project area. No cultural resources were identified within the project area that meet the criteria for designation as SALs according to 13 TAC 26 or for inclusion in the NRHP under 36 CFR 60.4. Horizon recommends a finding of “no historic properties affected,” and no further archeological work is recommended in connection with the proposed undertaking. However, human burials, both prehistoric and historic, are protected under the Texas Health and Safety Code. In the event that any human remains or burial objects are inadvertently discovered at any point during construction, use, or ongoing maintenance in the project area, even in previously surveyed areas, all work should cease immediately in the vicinity of the inadvertent discovery, and the THC should be notified immediately. Following completion of the project, project records will be permanently curated at the Texas Archeological Research Laboratory (TARL).

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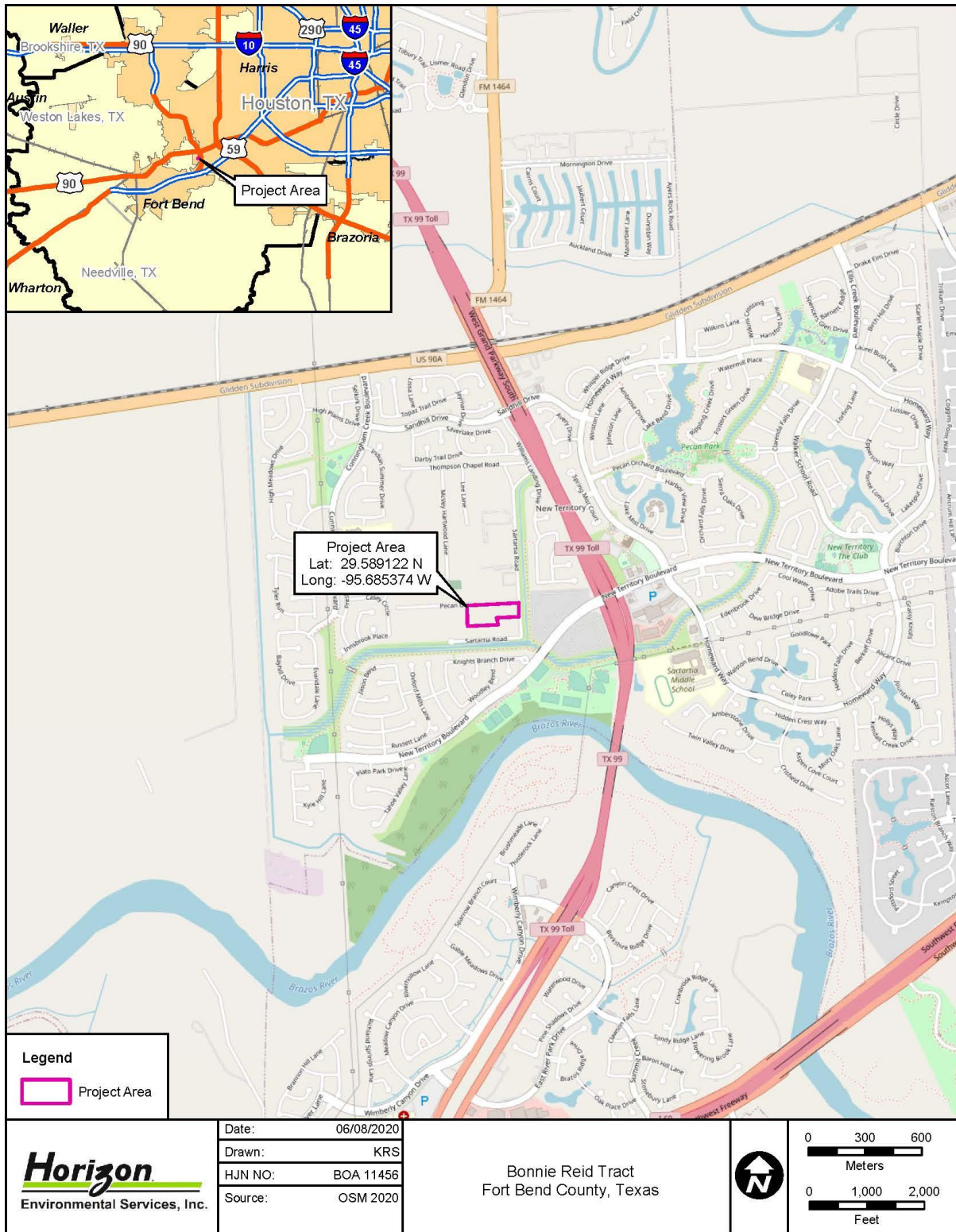
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1.0 INTRODUCTION

Horizon Environmental Services, Inc. (Horizon) was selected by LJA Engineering, Inc. (LJA) on behalf of Fort Bend Levee Improvement District (LID) No. 7 to conduct an intensive cultural resources inventory and assessment of the 2.6-hectare (6.4-acre) Bonnie Reid tract in western Sugar Land, Fort Bend County, Texas. The tract is located at the southwestern corner of the intersection of Pecan Grove and Sartartia Road within an older rural residential subdivision surrounded by modern residential subdivisions (Figures 1 to 3). A small homestead complex owned and occupied by William and Bonnie Reid until recently is located in the north-central portion of the tract. For purposes of the cultural resources survey, the project area was considered to consist of the entire 2.6-hectare (6.4-acre) tract. The proposed tract would be developed into a storm water detention pond, and the maximum depth of impacts is anticipated to be 3.0 to 4.5 meters (10.0 to 15.0 feet) below surface.

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Berg-Oliver11456 - Bonnie Reid Tract\Graphics\BOA-11456-001\AR_01A_Vicinity.mxd

Figure 1. Vicinity Map of Project Area

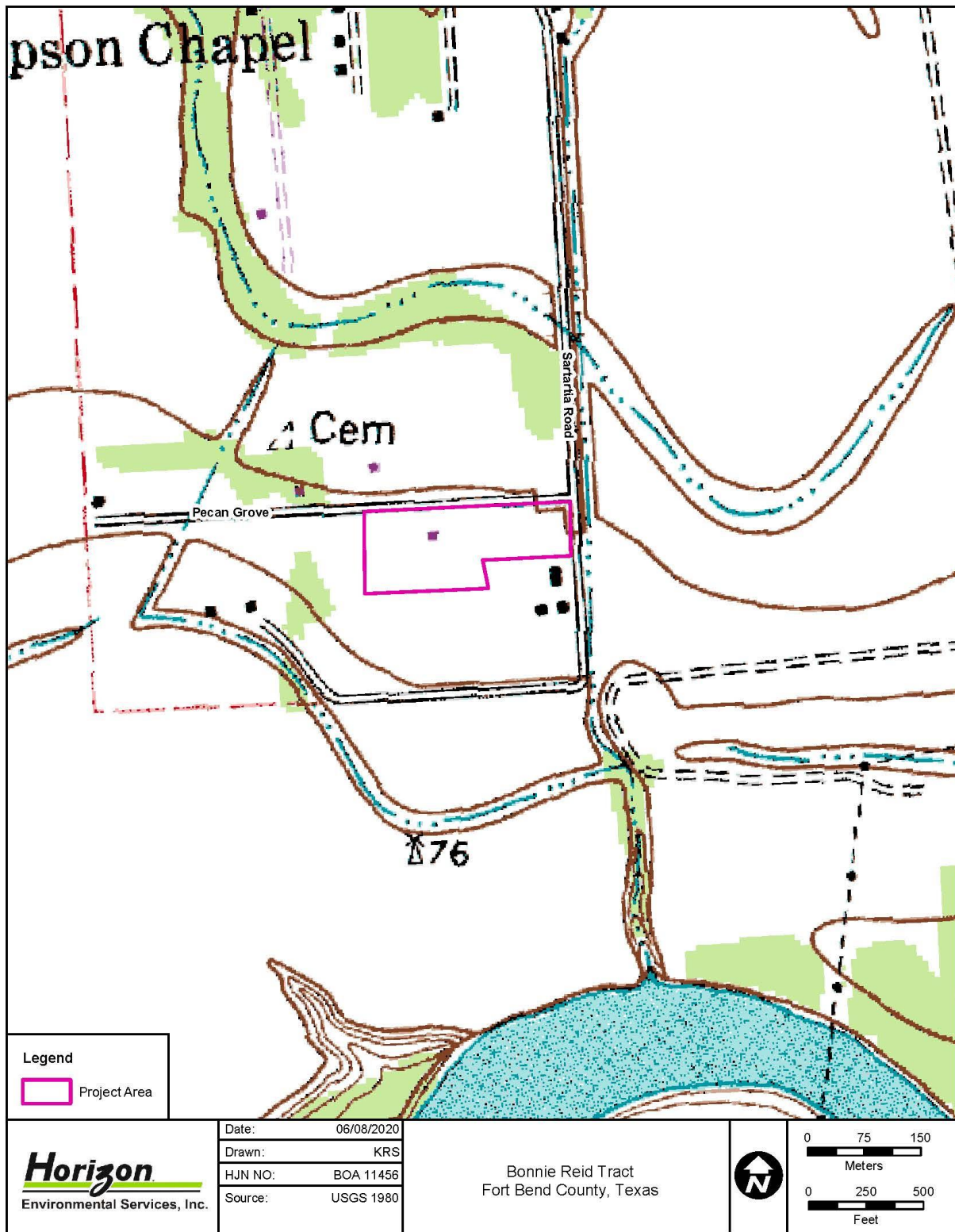


Figure 2. Location of Project Area on USGS Topographic Quadrangle

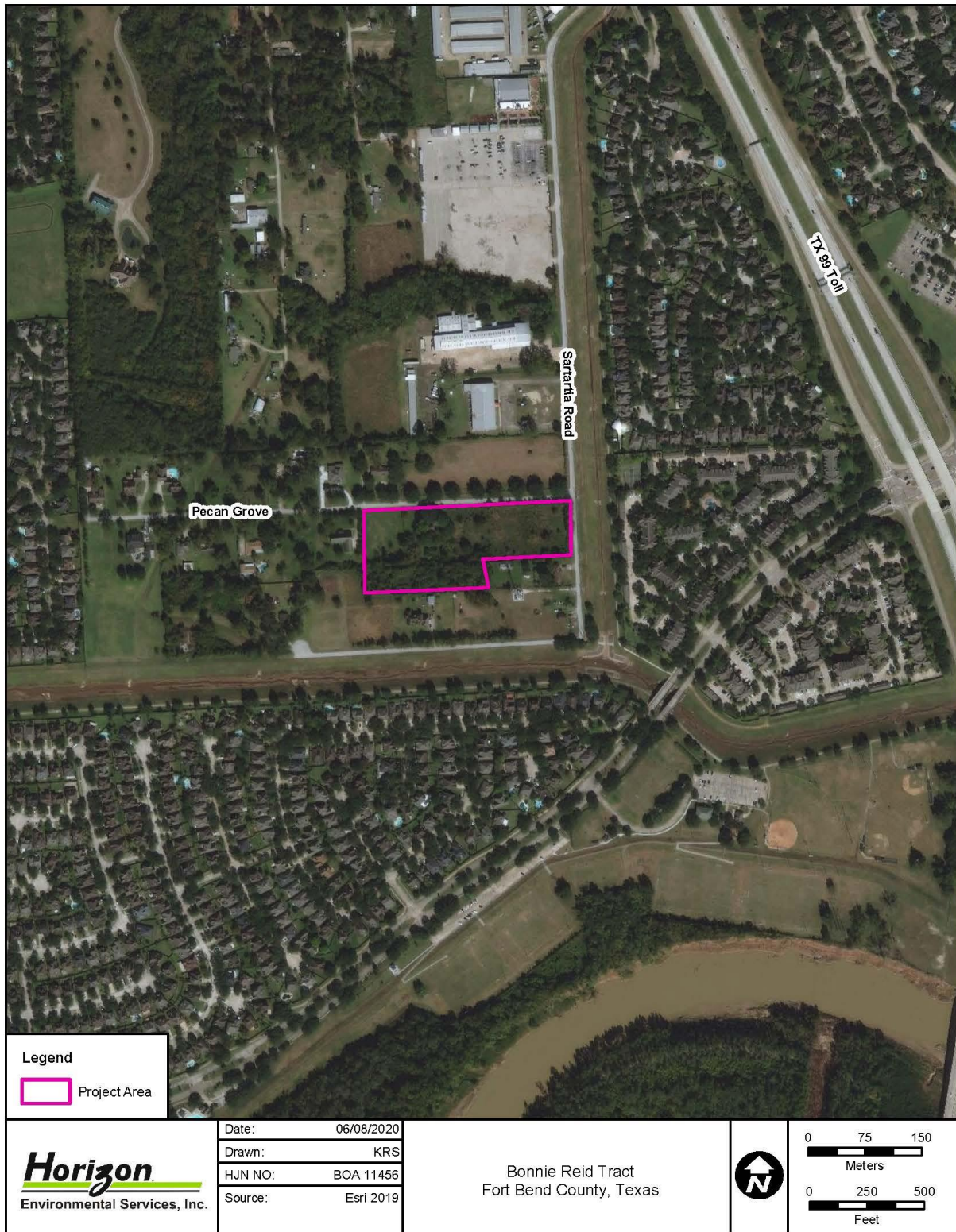


Figure 3. Location of Project Area on Aerial Photograph

Following this introductory chapter, Chapters 2.0 and 3.0 present the environmental and cultural backgrounds, respectively, of the project area. Chapter 4.0 describes the results of background archival research, and Chapter 5.0 discusses cultural resources survey methods. Chapter 6.0 presents the results of the cultural resources survey, and Chapter 7.0 presents cultural resources management recommendations for the project. Chapter 8.0 lists the references cited in the report. Appendix A summarizes backhoe trench data.

2.0 ENVIRONMENTAL SETTING

2.1 PHYSIOGRAPHY AND HYDROLOGY

The project area is located in southwestern Sugar Land approximately midway between Sugar Land and Richmond in northeastern Fort Bend County, Texas. Fort Bend County is situated on the Gulf Coastal Plain in southeastern Texas about 104.6 kilometers (65.0 miles) inland from the Gulf of Mexico shore. The Gulf of Mexico represents a structural basin formed by lithosphere deformation. The Texas Coastal Plain, which extends as far north as the Ouachita uplift in southern Oklahoma and westward to the Balcones Escarpment, consists of seaward-dipping bodies of sedimentary rock, most of which are of terrigenous clastic origin, that reflect the gradual infilling of the basin from its margins (Abbott 2001). The region is underlain by rocks and unconsolidated sediments that are quite young in a geological sense, ranging from modern to Miocene in age. These consist predominantly of a series of fluviodeltaic bodies arranged in an offlapped sequence, with interdigitated and capping eolian, littoral, and estuarine facies making up a relatively minor component of the lithology. Major bounding disconformities between these formations are usually interpreted to represent depositional hiatuses that occurred during periods of sea level low stand. The oldest rocks in this fill are of Late Cretaceous age. As a result of the geometry of basin filling, successively younger rock units crop out in subparallel bands from the basin margin toward the modern coastline.

The project area is situated on the northern floodplain and terraces of the Brazos River, and the river channel meanders eastward approximately 0.6 kilometer (0.4 mile) south of the project area. No natural waterways traverse the project area, and elevations within the project area are relatively flat, averaging approximately 22.3 meters (73.0 feet) above mean sea level (amsl). The Brazos River flows generally southeastward across the Texas Coastal Plain, discharging into the Gulf of Mexico near Freeport in Brazoria County.

2.2 GEOLOGY AND GEOMORPHOLOGY

Geologically, the project area is underlain by the Holocene-age Alluvium formation (Qal) (Barnes 1982; USGS 2020). This formation consists of clay, silt, sand, gravel, and organic matter that form a variety of floodplain, terrace, meander belt, and backswamp environmental settings. Soils within the project area consist of Pledger clay, a clayey alluvial deposit of Quaternary age characteristic of floodplains in Southeast Texas (Table 1; Figure 4) (NRCS 2020).

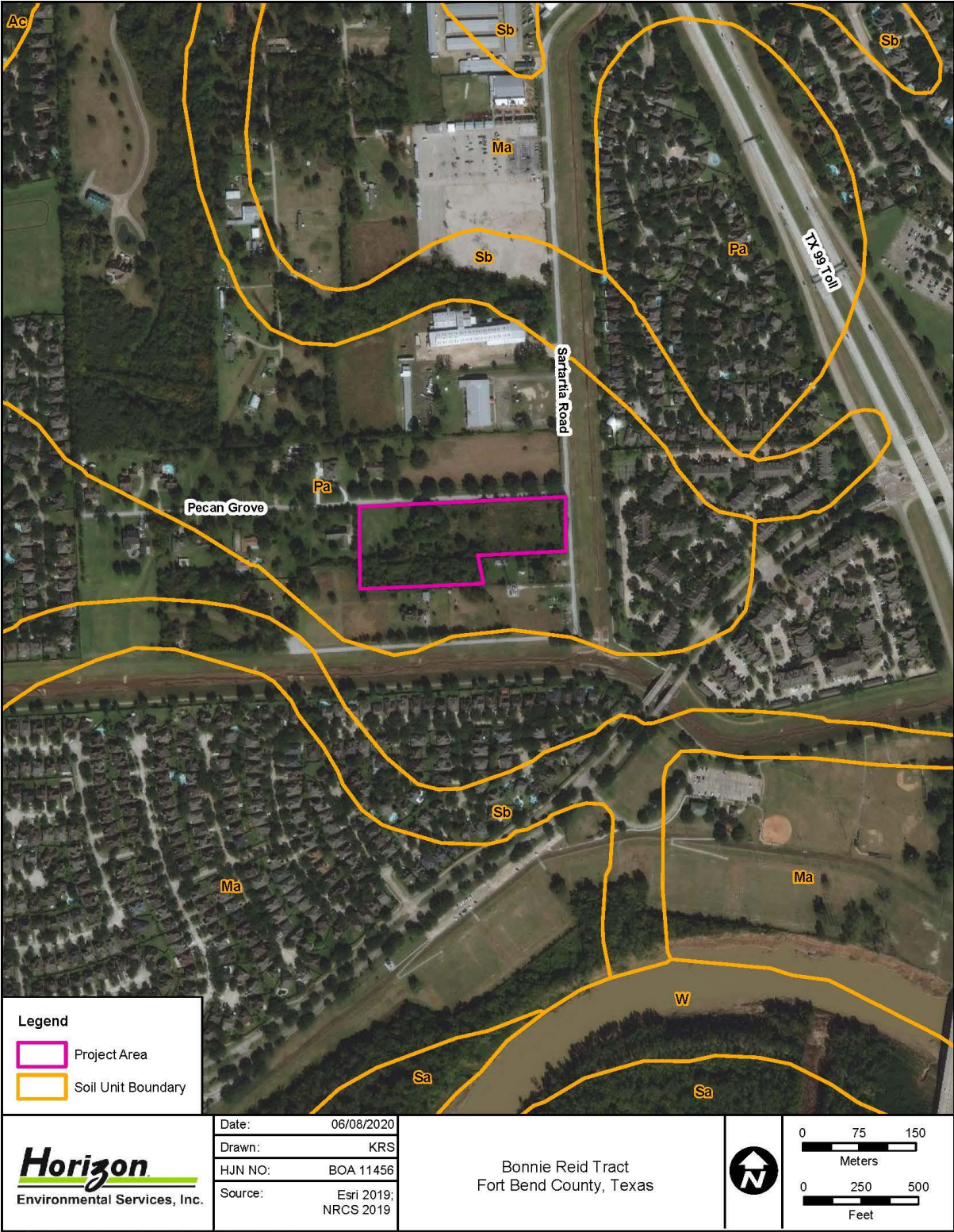


Figure 4. Soils Mapped within Project Area

Table 1. Summary of Mapped Soils within Project Area

NRCS Soil Code	Soil Name	Parent Material	Typical Profile (inches)
Pa	Pledger clay, 0 to 1% slopes, rarely flooded	Quaternary age clayey alluvium on floodplains	0-17: Clay (A) 17-52: Clay (Bss) 52-67: Silty clay (Bkss1) 67-80: Silty clay (Bkss2)

Source: NRCS (2020)

NRCS = Natural Resources Conservation Service

2.3 CLIMATE

Evidence for climatic change from the Pleistocene to the present is most often obtained through studies of pollen and faunal sequences (Bryant and Holloway 1985; Collins 1995). While the paleoclimatic history of the coastal region remains unclear, Bryant and Holloway (1985) present a sequence of climatic change for nearby east-central Texas that includes three separate climatic periods—the Wisconsin Full Glacial Period (22,500 to 14,000 B.P.), the Late Glacial Period (14,000 to 10,000 B.P.), and the Post-Glacial Period (10,000 B.P. to present). Evidence from the Wisconsin Full Glacial Period suggests that the climate in east-central Texas was considerably cooler and more humid than at present. Pollen data indicate that the region was more heavily forested in deciduous woodlands than during later periods (Bryant and Holloway 1985). The Late Glacial Period was characterized by slow climatic deterioration and a slow warming and/or drying trend (Collins 1995). In east-central Texas, the deciduous woodlands were gradually replaced by grasslands and post oak savannas (Bryant and Holloway 1985). During the Post-Glacial Period, the east-central Texas environment appears to have been more stable. The deciduous forests had long since been replaced by prairies and post oak savannas. The drying and/or warming trend that began in the Late Glacial Period continued into the mid-Holocene, at which point there appears to have been a brief amelioration to more mesic conditions lasting from roughly 6,000 to 5,000 B.P. Recent studies by Bryant and Holloway (1985) indicate that modern environmental conditions in east-central Texas were probably achieved by 1,500 years ago.

The modern climate of the upper Texas coast, including the region surrounding Houston, is classified as subtropical humid (Abbott 2001; Larkin and Bomar 1983), forming a transitional zone between the humid southeastern US and the semiarid to arid west. The climate reflects the influences of latitude, low elevation, and proximity to the Gulf of Mexico, which combine with the urban heat island formed by the tremendous concentration of asphalt and concrete to give the Houston area a notorious modern climate that is oppressively warm and moist throughout much of the year. As a result of proximity to the Gulf and the abundance of surface water, humidity in the early morning can approach 100% even on cloudless summer days, and it often exceeds 50% even on the warmest afternoons. Largely as a consequence of the relatively high humidity characteristic of the region, temperature patterns exhibit a moderate annual range and a modest diurnal range that increases slightly with distance from the coast. Average monthly high temperature ranges from a low of 17 to 19°Celsius (°C) (59 to 63°Fahrenheit [°F]) in January to a

high of 38 to 40°C (89 to 96°F) in August. Average monthly lows range from 4 to 9°C (38 to 47°F) in January to 25 to 29°C (72 to 79°F) in July and August. Annually, average low temperatures range from 15 to 21°C (56 to 65°F), and average high temperatures range from 27 to 29°C (75 to 79°F) (Abbott 2001; Larkin and Bomar 1983).

The region experiences two precipitation peaks throughout the year (Abbott 2001; Mowery et al. 1960). The first occurs in the late spring (i.e., May to June) due to the passage of infrequent cold fronts that spawn chains of powerful frontal thunderstorms. The second occurs in the late summer to early autumn (i.e., August to September) due to the incidence of tropical storms and hurricanes from the Atlantic and, occasionally, Pacific oceans. In contrast, winter and early spring are relatively dry, and high summer rainfall is dominated by convectional thunderstorms that are relatively brief and localized, albeit frequently intense. Average annual precipitation varies from a low of approximately 101.6 centimeters (40.0 inches) to a high of more than 132.1 centimeters (52.0 inches). Average monthly precipitation varies from less than 5.1 to 7.6 centimeters (2.0 to 3.0 inches) in March to more than 19.1 centimeters (7.5 inches) occurring locally on the coast during September. Almost all of the measurable precipitation falls as rain—snowfall is extremely rare, occurring in measurable amounts in only 1 in 10 years.

2.4 FLORA AND FAUNA

Fort Bend County is situated near the southeastern edge of the Texas biotic province (Blair 1950), an intermediate zone between the forests of the Austroriparian and Carolinian provinces and the grasslands of the Kansas, Balconian, and Tamaulipan provinces. Some species reach the limits of their ecological range within the Texas province. McMahan et al. (1984) further define four broad communities that characterize that portion of the Texas biotic province that lies on the Gulf Coastal Plain: (1) coastal marsh/barrier island, (2) coastal prairie, (3) coastal gallery forest, and (4) pine-hardwood forest (cf. Abbott 2001:24-26).

The coastal marsh/barrier island category includes well-drained, sandy, coastal environments and saline and freshwater wetlands in the coastal zone (Abbott 2001:24). Marsh vegetation is typical of areas that are seasonally wet and have substrates composed primarily of sands and silts, clays, or organic decomposition products. Vegetation assemblages are strongly controlled by texture, salinity, frequency and duration of inundation, and depth of the seasonal water table. Sandy, relatively well-drained, freshwater environments are typically dominated by little bluestem, switchgrass, Florida paspalum, and brownseed paspalum. Wetter environments are often dominated by marshhay cordgrass, seashore saltgrass, saggittaria, bulrushes, smooth cordgrass, seashore paspalum, seashore dropseed, olney bulrush, saltmarsh bulrush, saltmarsh aster, longtom, sprangletop, burhead, arrowhead, coastal waterhyssop, needlegrass rush, and other sedges and rushes. Slightly higher, better-drained environments are characterized by taxa like seashore saltgrass, seashore paspalum, gulfdune paspalum, shoregrass, gulf cordgrass, red lovegrass, bushy sea-oxey, and glasswort. A variety of fauna are characteristic of the shore zone. Important larger taxa include raccoon, nutria, alligators, turtles, swamp rabbit, and many birds, including ducks, geese, herons, and many smaller species. Aquatic taxa, including a wealth of fish and shellfish adapted to brackish to hypersaline conditions, are also important in the coastal zone.

The coastal prairie category consists primarily of grasses with minor amounts of forbs and woody plants in areas that are not saturated on a seasonal basis (Abbott 2001:24-26). This community is characteristic of upland areas and grades into the pine-hardwood forest to the north and east and into the coastal marsh/barrier island to the south. A wide variety of grasses are found in the prairie environments, but the principal taxa include big bluestem, little bluestem, indiagrass, eastern grama, switchgrass, brownseed paspalum, sideoats grama, silver bluestem, buffalograss, threeawn, and Texas wintergrass. Common forbs include Maximilian sunflower, Engelman daisy, blacksalmon, penstemon, dotted gayfeather, bundleflower, yellow neptunia, snoutbean, prairie clover, tickclover, wildbean, western indigo, paintbrush, bluebonnet, ragweed, croton, milkweed, vetch, verbena, and winecup. Woody plants occurring in the coastal prairie include mesquite, honey locust, huisache, eastern baccharis, sesbania, live oak, elm, hackberry, bumelia, and coralberry. The frequency of trees increases dramatically as the coastal prairie grades into the pine-hardwood forest, forming an open woodland environment with common stands of hardwood trees and occasional pines. The coastal prairie is home to a diverse fauna, including coyote, white-tailed deer, skunks, cottontail rabbit, many small rodents, amphibians and reptiles, and a variety of permanent and migratory birds. Bison and pronghorn were also present at various times in the past.

The coastal gallery forest consists of diverse, principally deciduous, trees and associated understory in floodplains and streams that traverse the outer coastal plain (Abbott 2001:26). Important taxa include water oak, pecan, poplar, American elm, cedar elm, sugarberry, ash, loblolly pine, water oak, post oak, cherrybark oak, mulberry, swamp chestnut oak, willow oak, sweetgum, hawthorn, dogwood, hickory, bois d'arc, sassafras cypress, willow, cottonwood, and sumac. Shrubs and vines such as mustang grape, greenbrier, yaupon, coralberry, possumhaw, elderberry, honeysuckle, dewberry, and blackberry are common in the understory, as are grasses such as little bluestem, big bluestem, and indiagrass. The fauna of the gallery forest include white-tailed deer, opossum, raccoon, squirrel, turkey, a variety of small mammals and rodents, turtles, snakes, and many birds. Black bear was also present at various times in the past, and a number of fish and a few varieties of shellfish are present in the streams.

The pine-hardwood forest is characterized by a mix of coniferous and deciduous trees, including longleaf pine, shortleaf pine, loblolly pine, post oak, red oak, white oak, blackjack oak, willow oak, and live oak (Abbott 2001:26). Riparian environments often support larger deciduous trees like pecan, cottonwood, hickory, beech, and American elm. Understory vegetation varies from relatively open to quite dense, and consists of shrubs, vines, forbs, and young trees. Common shrubs include acacia, yaupon, mayhaw, wild persimmon, myrtle, greenbrier, Virginia creeper, blackberry, dewberry, trumpet vine, gourd, and poison ivy. A variety of fauna is also present, including white-tailed deer, opossum, raccoon, squirrel, rabbit, mink, skunk, various small rodents, turtles, reptiles, and many different birds. Black bear was also present at times in the past, and bison and pronghorn were occasionally present in the transition zone to the coastal prairie environment.

According to Mowery et al. (1960), about 95% of the upland vegetation consisted of coarse bunchgrasses when Fort Bend County was first settled. However, many of the original bunchgrasses have been eliminated by heavy grazing over the past 20 or 30 years, and the

vegetation is now of much lower quality. Introduced plants such as bermudagrass, dallisgrass, and burclover are now common in many pastures.

3.0 CULTURAL BACKGROUND

The project area is located within the Southeast Texas archeological region. In broad terms, much of the archeological record in Southeast Texas represents an interface between the Southern Great Plains and the Southeastern Woodlands (Aten 1983, 1984; Patterson 1995; Story 1990). Further distinctions are often made between the inland and coastal margin subregions of Southeast Texas. These two subregions are somewhat culturally distinct, and the inland subregion has a much longer chronological record. The coastal margin of Southeast Texas comprises a zone about 25.7 kilometers (16.0 miles) inland from the coast that covers the area influenced by Gulf tidal flows on the salinity of streams, lakes, and bays. Considerable ecological variability characterizes this subregion, including woodlands, coastal prairie, lakes, wetlands, marine coastline, and barrier islands. The inland subregion also encompasses considerable ecological diversity, including mixed woodlands, coastal prairies, and dense piney woods.

In discussions of the prehistory of Texas, Fort Bend County is often treated as part of a cultural transition zone. Following Patterson (1995), Southeast Texas is defined as a 21-county area (including Fort Bend County) that lies between the Colorado River on the west and the Sabine River on the east, extending about 199.5 kilometers (124.0 miles) inland from the coastline. Archeological research has shown that it is especially important to consider the archeology of Fort Bend and Austin counties together with the eastern part of Wharton County, as this seems to be an area in which much mixing of technologies occurred, and it has a distinctive Late Archaic mortuary tradition as well.

The human inhabitants of Southeast Texas practiced a generally nomadic hunting and gathering lifestyle throughout all of prehistory. While many of the same labels are used to denote Southeast Texas cultural/chronological periods, the timeframe and cultural characteristics of Southeast Texas culture periods are often different than in neighboring regions. For instance, the Archaic and Late Prehistoric time periods are different in Central and Southeast Texas, and Central Texas lacks the Early Ceramic period that has been defined for Southeast Texas.

Mobility and settlement patterns do not appear to have changed markedly through time in Southeast Texas. Inland sites are usually found near a water source, usually exhibit evidence of reoccupation through time, have well-defined intrasite activity areas, tend not to be associated with satellite activity sites or separate base camps, and exhibit a range of subsistence-related activities. Inland sites tend to contain modest pottery assemblages, fired clay balls (at some sites), abundant lithic material, and an absence of shell tools. Coastal sites tend to consist of

multicomponent *Rangia* shell middens that contain few lithics, oyster shell tools, large quantities of pottery (in later cultural components), and numerous bone tools.

3.1 PALEOINDIAN PERIOD (CA. 10,000 TO 5,000 B.P.)

The initial human occupations in the New World can now be confidently extended back before 10,000 B.C. (Dincauze 1984; Haynes et al. 1984; Kelly and Todd 1988; Lynch 1990; Meltzer 1989). Evidence from Meadowcroft Rockshelter in Pennsylvania suggests that humans were present in Eastern North America as early as 14,000 to 16,000 years ago (Adovasio et al. 1990), while more recent discoveries at Monte Verde in Chile provide unequivocal evidence for human occupation in South America by at least 12,500 years ago (Dillehay 1989, 1997; Meltzer et al. 1997). Most archeologists have historically discounted claims of much earlier human occupation during the Pleistocene glacial period. However, recent investigations of the Buttermilk Creek Complex in Bell County, Texas, have raised the possibility that a pre-Clovis culture may have been present in North America as early as 15,500 years ago (Waters et al. 2011).

The earliest generalized evidence for human activities in Southeast Texas is represented by the PaleoIndian period (10,000 to 5,000 B.C.) (Patterson 1995). This stage coincided with ameliorating climatic conditions following the close of the Pleistocene epoch that witnessed the extinction of herds of mammoth, horse, camel, and bison. Cultures representing various periods within this stage are characterized by series of distinctive, relatively large, often fluted, lanceolate projectile points. These points are frequently associated with spurred end scrapers, graters, and bone foreshafts.

PaleoIndian groups are often inferred to have been organized into egalitarian bands consisting of a few dozen individuals that practiced a fully nomadic subsistence and settlement pattern. Due to poor preservation of floral materials, subsistence patterns in Southeast Texas are known primarily through the study of faunal remains. Subsistence focused on the exploitation of plants, small animals, fish, and shellfish, even during the PaleoIndian period. There is little evidence in this region for hunting of extinct megafauna, as has been documented elsewhere in North America. Rather, a broad-based subsistence pattern appears to have been practiced during all prehistoric time periods.

In Southeast Texas, the PaleoIndian stage is divided into two periods based on recognizable differences in projectile point styles (Patterson 1995). These include the Early PaleoIndian period (10,000 to 8,000 B.C.), which is recognized based on large, fluted projectile points (i.e., Clovis, Folsom, Dalton, San Patrice, and Big Sandy), and the Late PaleoIndian period (8,000 to 5,000 B.C.), which is characterized by unfluted lanceolate points (i.e., Plainview, Scottsbluff, Meserve, and Angostura).

3.2 ARCHAIC PERIOD (CA. 5,000 B.P. TO A.D. 100)

The onset of the Hypsithermal drying trend signals the beginning of the Archaic stage (5,000 B.C. to A.D. 100) (Patterson 1995). This climatic trend marked the beginning of a significant reorientation of lifestyle throughout most of North America, but this change was far less pronounced in Southeast Texas. Elsewhere, the changing climatic conditions and corresponding

decrease in the big game populations forced people to rely more heavily upon a diversified resource base composed of smaller game and wild plants. In Southeast Texas, however, this hunting and gathering pattern is characteristic of most of prehistory. The appearance of a more diversified tool kit, the development of an expanded groundstone assemblage, and a general decrease in the size of projectile points are hallmarks of this cultural stage. Material culture shows greater diversity during this broad cultural period, especially in the application of groundstone technology.

Traditionally, the Archaic period is subdivided into Early, Middle, and Late subperiods. In Southeast Texas, the Early Archaic period (5,000 to 3,000 B.C.) is marked by the presence of Bell, Carrollton, Morrill, Trinity, Wells, and miscellaneous Early Stemmed projectile points. The Bell point is the only type in this period that is closely associated with the Southern Plains. Many of the latter point types continue into the Middle Archaic period (3,000 to 1,500 B.C.) and several new types appear, including Bulverde, Lange, Pedernales, Williams, Travis, and probably the Gary-Kent series. The Late Archaic period (1,500 B.C. to A.D. 100) is characterized by Gary, Kent, Darl, Yarbrough, Ensor, Ellis, Fairland, Palmillas, and Marcos points.

In the western part of inland Southeast Texas, a Late Archaic mortuary tradition developed in the lower Brazos and Colorado river valleys and in the intervening area (Hall 1981; Patterson 1995). Organized burial practices actually started during the Middle Archaic period, but reached full development in the Late Archaic with the use of exotic grave goods such as boatstones and bannerstones (probably used as atlatl weights), stone gorgets, corner-tang knives, stingray spines, shark teeth, and marine shell beads and pendants. Other burial practices included the systematic orientation of burial direction, body position, use of red ochre, and use of locally made grave goods, such as longbone implements and bone pins. Most burials are found in extended supine position, though some extended prone and bundle burials are also known. Burial direction is usually consistent within single sites but varies from site to site. Patterson et al. (1993) report that at least 11 sites are associated with this mortuary tradition in Austin, Fort Bend, and Wharton counties.

3.3 EARLY CERAMIC PERIOD (A.D. 100 TO 600)

The use of pottery did not start uniformly throughout Southeast Texas. Pottery manufacture appears to have diffused into this region from adjacent regions, primarily from the east along the coastal margin. Aten (1983:297) argues that pottery was being manufactured on the coastal margin of the Texas-Louisiana border by about 70 B.C., in the Galveston Bay area by about A.D. 100, in the western part of the coastal margin by about A.D. 300, and in the Conroe-Livingston inland area by about A.D. 500. The practice of pottery manufacture appears to have progressed first along the coastal margin and then moved inland (Patterson 1995). Southeastern Texas ceramic chronologies are best known in the Galveston Bay area, where Aten (1983) established a detailed chronological sequence.

The earliest ceramic periods in the Galveston Bay and neighboring Sabine Lake areas appear to be approximately contemporaneous with the earliest ceramic periods of the lower Mississippi Valley (Aten 1984). Early assemblages contain substantial quantities of Tchefuncte ceramics. In the Sabine Lake region, grog-tempered varieties of Baytown Plain and Marksville

Stamped are common, while grog-tempered ceramics do not occur in the Galveston Bay area 128.7 kilometers (80.0 miles) to the west until several hundred years later. With the principal exception of a few Tchefuncte ceramic types, other southern Louisiana ceramics are not found on the Gulf coast west of the Sabine Lake area.

Goose Creek sandy-paste pottery was used throughout Southeast Texas and somewhat farther north in the Early Ceramic, Late Prehistoric, and the early part of the Historic periods (Aten 1984; Patterson 1995; Pertulla et al. 1995). The Goose Creek series is the primary utility ware throughout the prehistoric sequence in Southeast Texas, though it gives way to Baytown Plain for about 200 years during the transition between the Late Prehistoric and Historic periods before once again becoming predominant into the Historic period (Aten 1984). A minor variety, Goose Creek Stamped, occurs only in the Early Ceramic period (Aten 1983). Three other minor pottery types—Tchefuncte (Plain and Stamped), Mandeville, and O’Neal Plain *variety Conway* (Aten 1983)—were used only during the Early Ceramic period. The Mandeville and Tchefuncte types are characterized by contorted paste and poor coil wedging. Mandeville has sandy paste (like Goose Creek), while Tchefuncte paste has relatively little sand. Given their technological similarities, Mandeville and Tchefuncte may represent different clay sources rather than distinct pottery types (Patterson 1995). The bone-tempered pottery that characterizes ceramic assemblages elsewhere in Texas is not common in Southeast Texas.

3.4 LATE PREHISTORIC PERIOD (A.D. 600 TO 1500)

The onset of the Late Prehistoric period (A.D. 600 to 1500) (Patterson 1995) is defined by the appearance of the bow and arrow. Elsewhere in Texas, pottery also appears during the Late Prehistoric period, but, as already discussed, ceramics appear earlier in Southeast Texas. Along the coastal margin of Southeast Texas, use of the atlatl (i.e., spearthrower) and spear was generally discontinued during the Late Prehistoric period, though they continued to be used in the inland subregion along with the bow and arrow through the Late Prehistoric period (Ensor and Carlson 1991; Keller and Weir 1979; Patterson 1980, 1995; Wheat 1953). In fact, Patterson (1995:254) proposes that use of the bow and arrow started in Southeast Texas as early as the end of the Middle Archaic period, using unifacial arrow points that consisted of marginally retouched flakes. In contrast, Prewitt (1981) argues for a generalized date of adoption of the bow-and-arrow hunting system at about the same time (ca. A.D. 600) in Central and Southeast Texas. In Southeast Texas, unifacial arrow points appear to be associated with a small prismatic blade technology. Bifacial arrow point types include Alba, Catahoula, Perdiz, and Scallorn. A serial sequence for these point types has not been established in Southeast Texas, though Scallorn points appear to predate Perdiz points throughout the rest of Texas.

Grog- (crushed sherd) tempered pottery was used in the Late Prehistoric and Protohistoric periods in Southeast Texas. The grog-tempered varieties include San Jacinto Plain and Baytown Plain *variety Phoenix Lake*. San Jacinto pottery contains a relatively small proportion of small-sized temper, while Baytown Plain has larger amounts of sherd pieces that are often visible on vessel surfaces. As previously mentioned, sandy-paste Goose Creek pottery remained in use throughout the Late Prehistoric period. Rockport Plain and Asphalt Coated pottery from the

Central Texas Coast (Ricklis 1995) are found at a few sites in Southeast Texas during the Late Prehistoric and Protohistoric periods.

3.5 PROTOHISTORIC PERIOD (A.D. 1500 TO 1700)

For the most part, Protohistoric and early Historic Indian sites in Southeast Texas have not been articulated with the ethnographic record (Story 1990:258). Similarly, reconciling the ethnographic record to prehistoric Indian groups in this region is problematic. Late Prehistoric and Historic population movements further complicate this issue. Aten (1983) has reconstructed the territories of native groups present in this region in the early 18th century, including the Akokisa, Atakapa, Bidai, Coco (Karankawa?), and Tonkawa. The presence of the Tonkawa in Southeast Texas may be due to their rapid expansion from Central Texas in the 17th and 18th centuries (Newcomb 1993:27). The Karankawa Indians are thought to have occupied the coastal margin of this region as far east as Galveston Island and the corresponding mainland (Aten 1983). Judging by the scarcity of Rockport pottery on sites east of the San Bernard River, the ethnic association of the Karankawa Indians with the Coco tribe may be in doubt.

Protohistoric and Historic Indian sites may not be systematically recognized as such because few aboriginal artifact types changed from the Late Prehistoric to the Historic periods (Patterson 1993; 1995). Only a few non-European artifact types are useful in identifying Historic Indian sites, including Bulbar Stemmed and Guerrero arrow points and possibly Fresno and Cuney points after A.D. 1500 (Hudgins 1986). Historic period Indian sites are usually identified by the presence of glass and metal artifacts, gunflints, and European types of pottery.

3.6 HISTORIC PERIOD (A.D. 1700 TO PRESENT)

The first European incursion into what is now known as Texas was in 1519, when Álvarez de Pineda explored the northern shores of the Gulf of Mexico. In 1528, Álvar Núñez Cabeza de Vaca crossed South Texas after being shipwrecked along the Texas Coast near Galveston Bay. However, European settlement did not seriously disrupt native ways of life until after 1700. The first half of the 18th century was the period in which the fur trade and mission system, as well as the first effects of epidemic diseases, began to seriously disrupt the native culture and social systems. This process is clearly discernable at the Mitchell Ridge site, where the burial data suggest population declines and group mergers (Ricklis 1994), as well as increased participation on the part of the Native American population in the fur trade. By the time that heavy settlement of Texas began in the early 1800s by Anglo-Americans, the indigenous Indian population was greatly diminished. The Alabama-Coushatta Indians who currently reside in Southeast Texas are migrants who were displaced from the east in the late 18th to early 19th centuries (Newcomb 1961).

In the early part of 1822, Stephen F. Austin resumed his deceased father Moses' enterprise of settling colonial Anglo-American families in Texas as a part of an *empresario* grant under the authorization of the Mexican government. This grant would allow 300 families to obtain documents to permit them to settle farms and ranches across central and southeast Texas. In November 1821, a large party of colonists sailed on a 30-ton schooner named the *Lively* and headed for the mouth of the Colorado River (Long 2010). However, bad weather blew the ship

off course, and the crew mistook the mouth of the Brazos River for the Colorado and landed (Long 2010). A small faction of this original colony progressed some 144.8 kilometers (90.0 miles) up the Brazos River and established themselves on a bluff near a river bend (Ott 2010). There, these erstwhile settlers constructed a two-room cabin; in time, the settlement grew and became collectively known as Fort Bend (Ott 2010). Two years later in 1824, these colonists officially received grants from the Mexican government; 53 of the 297 grants were given to colonists that lived near the area of present-day Fort Bend County (Ott 2010).

From the mouth of the Brazos to Baffin Bay, including the areas settled by the new colonists at Fort Bend, lived the indigenous people collectively known as the Karankawas (Newcomb 1961; Ott 2010). The Karankawas were composed of nomadic groups of hunter-gatherers and fishers that were ethnically tied to both a common linguistic stock and an identifiable archeological complex (Ricklis 2013). They manufactured a distinctive style of ceramics, called Rockport ware, and practiced also had a highly developed basketry industry (Newcomb 1961). Rockport ware typically contains a sandy paste and is may have a stylistic relationship with the Upper Texas coast ceramic style, Goose Creek (Ricklis 2013). From the 17th to 19th centuries, the Spanish documented at least five subgroups in official state documents—the Cocos, the Carancaguases, the Cujanes, the Coapites, and the Copanes (Ricklis 2013). In 1528, members of Narvaez’s expedition identified the Karankawas as the occupants of Malhado, or the Isle of Misfortune, and Cabeza de Vaca lived among the Karankawas for several years after his ill-fated ship wreck (Lipscomb 2010). During de Vaca’s tenure with the Upper Coast Cocos, his account documents that they traded asphaltum, shark’s teeth, marine shell, and smoked fish with the interior natives in exchange for maize, hides, flint, and red ochre (Himmel 2016). By the turn of the 18th century, the Cocos were trading extensively with both the Spanish and the French for European trade goods (Himmel 2016). A few armed skirmishes were documented by the early settlers at Fort Bend, but by 1850, the Karankawas, decimated by disease, disenfranchised by the mission system, and hunted by Texas colonists, were pushed all the way south to Mexico and no longer occupied the area now known Fort Bend and Galveston counties (Himmel 2016; Ott 2010). By 1891, the tribe was completely extinct.

One of the first major towns in present-day Fort Bend County, Richmond, was established by an act of the Congress of the Republic of Texas in May 1837 (Ott 2010). The town was named after Richmond, Virginia, by business entrepreneurs Robert Eden Handy and William Lusk (Ott 2010). Shortly after Texas gained its Independence in 1837, Fort Bend County was officially carved from Austin, Brazoria, and Harris counties, and the first chief justice was appointed, Wylly Martin, a veteran from the War of 1812 (Cutrer 2010; Ott 2010). In 1838, Richmond was chosen as the county seat.

Several merchants and business entrepreneurs were instrumental to the formation of the economic foundations of Fort Bend County. These included Nathaniel Felton Williams and his brother Samuel May Williams, who developed a very successful cotton, corn, and sugar plantation on Oyster Creek (Henson 2010). This plantation, outfitted with a raw-sugar mill and cane-sugar refinery, would become the oldest extant and continuously operated business in Texas, known today as the Imperial Sugar Company (Kleiner 2010). Jane Long established a boarding house in Richmond in 1837 and sold a large plot of land to Mirabeau B. Lamar in 1851, where he built a

large plantation the same year (Ott 2010). Part of General Antonio Lopez de Santa Anna's army marched through and plundered the area known as Thompson's Ferry just before the infamous Battle of San Jacinto in 1836 (Ott 2010). The local residents evacuated their homes and ranches to seek safety as the Mexican army pursued the members of the newly appointed Texas Congress, an action that became known as the Runaway Scrape (Covington 2010). Upon their return, the civilians found their homes pillaged and burned and their livestock scattered or harvested by Santa Anna's army.

Fort Bend County prospered during the 1840s and 1850s, having shifted from a subsistence farming-based economy to utilizing a slave-labor based plantation economy that focused on cash crops. With the advent of the first railroad infrastructure in the state, which was laid down by the Buffalo Bayou, Brazos, and Colorado Railway in 1853, a navigable channel was created from Buffalo Bayou through Stafford's Point all the way to Galveston, opening the doors for a fluid exchange of economic goods with the entire South (Ott 2010). As a result, the town of Richmond became an agricultural hub for the entire lower Brazos River valley, exporting cotton, sugar, and corn to ports in Galveston (Ott 2010). The backbone of the South's antebellum economy was free slave labor, and Fort Bend County was no exception. By 1845, the county had one of the largest slave populations in the state (1,172), and by 1860, Fort Bend County had a black majority with 4,127 slaves and 2,016 whites (Ott 2010). This free labor work force maintained more than 159 farms, including 12,000 acres producing cotton and 1,000 acres producing sugar cane (Ott 2010). When the ballot to secede from the Union was voted upon in 1861, 468 white men voted for secession and 0 voted to stay in the Union (Ott 2010). Many citizens, including almost every able-bodied man in the county, volunteered for the Confederate cause and joined regiments such as the Fourth Texas Regiment of Hood's Texas Brigade, Company H, and Terry's Texas Rangers; by the end of the war, more than three-quarters of the volunteer soldiers would be killed or wounded in action (Ott 2010).

Although located far from the front lines of the Civil War, Fort Bend County's economy suffered tremendous hardships during the Reconstruction period following the war. The Republican-controlled government during the 1870s included several African-American office holders, and the ex-slave population outnumbered the whites almost two to one (Ott 2010). The local white elites only gained the majority of elected positions in the 1880s during the onset of the violent conflict known as the Jaybird-Woodpecker War of 1888 to 1889 (Ott 2010). This brief conflict divided the community in half, with one interest, the Jaybirds, composed of about 90% of the whites living in Fort Bend County, and the other interest, the Woodpeckers, composed of African-Americans who were ex-political officials during the Reconstruction period (Yelderman 2010). After a peaceful election brought a Democratic defeat, a violent battle took place between the two belligerents, and the Houston Light Guards and Texas Rangers were called in to declare martial law (Yelderman 2010). Several people were killed on both sides, and the result was a Woodpecker majority that dominated the political affairs in Fort Bend County until 1970 (Yelderman 2010). In opposition, the Jaybird Democratic Organization of Fort Bend County was organized and adopted a mission statement that proposed to be the "protection of the white race" (Ott 2010). From 1889 onward, the Jaybird Democratic Organization stifled the African-American vote by taking back the local power structure and marginalizing their voice as an ethnic group (Ott 2010).

The technological boom of the railroad system spread its dendritic infrastructure across the county by the 1880s. At the junction of the Gulf, Colorado, and Santa Fe line and the Galveston, Harrisburg, and San Antonio (formerly the Buffalo Bayou, Brazos, and Colorado) line, approximately 1.6 kilometers (1.0 mile) west of the town of Richmond, was a headquarters called Rosenberg that served the interests of the developers of the New York, Texas, and Mexican Railway in 1882 (Ott 2010). Several independent lines spread across agricultural communities and farmlands of the county, such as the San Antonio and Aransas Pass and the Texas and New Orleans rail lines (Ott 2010).

Central European immigrants arrived to pursue socioeconomic and political refuge from their turbulent homelands. These ethnic groups were composed of Germans, Austrians, and Bohemian agrarians, and they brought with them distinct cultural influences in architecture and cuisine as well as various religious denominations. Many practiced Catholicism and different sects of Orthodox Christianity, adding to the diverse pallet of an existing Anglo-Protestant majority. These immigrants comprised 10% of the new settlers to the county from 1890 to 1900 (Ott 2010). By the turn of the century, the Fort Bend County population had grown from 9,380 people in 1890 to 16,538 in 1900. Numerous immigrant-founded towns sprouted up around Fort Bend County throughout the 1890s, many of which still exist today, including Beasley, Needville, and Orchard.

Land developers purchased tracts near the first stop at Stafford's Point directly off the Buffalo Bayou, Brazos, and Colorado Railway, and the town of Missouri City sprang into existence in the year 1894. Shortly after, the tri-county town Katy (spanning portions of Fort Bend, Waller, and Harris counties) was established due to its convenient location adjacent to the Missouri, Kansas, and Texas Railroad (Ott 2010). In 1907, the Imperial Sugar Factory purchased the old Oyster Creek plantation once owned by the Williams brothers, making it the only cane-sugar refinery in the state (Ott 2010). From 1930 to 1940, the Fort Bend County population grew by mere 10%, from 29,718 to 32,963. The next decade would see the county's only negative growth rate in its entire history with a -6% decline over the course of 10 years, from 32,963 in 1940 to 31,056 in 1950. The effects of the second World War and urbanization during this period contributed to this decline.

Numerous natural resources are found in Fort Bend County; including sulfur, sodium, and limestone, in addition to high concentrations of oil and gas. The first commercially producing oil well was established by the Gulf Oil Company at Blue Ridge in 1919 followed by another discovery at Big Creek in 1922 (Ott 2010). Additionally, oil fields were discovered by the Gulf Oil Company in Orchard in 1926 and near Katy by the Humble Oil Company (now ExxonMobil Corporation) in 1935 (Ott 2010). The mid-1950s saw an average of 30,000 barrels of oil per day, and with the demand caused by the gas shortages in the 1970s, 40 new crude oil wells were established in Fort Bend County between 1976 and 1977 (Ott 2010). By the late 20th century, oil businesses were the top three taxpayers in the county—Exxon, Gulf, and the Houston Lighting and Power Company (Ott 2010).

Since the 1840s, Fort Bend County's economy has rested primarily upon the shoulders of the ranching and farming communities. With the influx of a largely agrarian Eastern European immigrant movement to the region in the 1880s and 1890s, the county's agricultural promise was

rescued from the demise of the antebellum era plantation economy and shepherded into a tenant-based share-cropping and family farm system. The number of farms grew—in 1890, the county had 995 farms, and this increased to 2,365 farms in 1900 (Ott 2010). Every decade subsequently, the number of farms in the county multiplied, but this followed a trend of more and more share-cropping tenants working the farms. In 1910, 61% of the farmers in the county were tenants, and by 1925, 72% of the 3,659 farmers were tenants or sharecroppers (Ott 2010). This trend was the result of several factors, including the Brazos River flood of 1899, the hurricane of Galveston in 1900, statewide recessions, and adverse weather (Ott 2010). By the mid-1950s, farm tenantry began to phase out and full ownership of farms began to rebound resulting from a post-World War II urbanization movement. As a consequence, the number of commercial farms began to decline. In the 1974 Census of Agriculture, 546 of the 1,304 farms in Fort Bend County made less than \$2,500 in cash sales for that year (Ott 2010). Among these cash crops were beef cattle, goats, poultry, cotton, sorghum, and rice (Ott 2010). Cattle breeds included Angus, Red Angus, Hereford, Charolais, Limousin, Brahman, Brangus, Santa Gertrudis, and Simbrah. Sorghum, a cheaper alternative to sugar as well as a fodder for animal food and an ingredient for alcoholic fermentation, has been a staple to the local economy with favorable marketing prices and steady revenues. Based on the 2007 Census of Agriculture, there were 1,404 farms in Fort Bend County operating on over 382,740 acres. Crop sales provided more than \$80,323,000 in revenue, and livestock sales provided more than \$14,170,000 in average income.

Today, two main railroad systems cut through Fort Bend County, the Southern Pacific and the Santa Fe. Additionally, there are two motor-freight commercial lines and a number of private and commercial airports and helipads, including the Sugar Land Regional Airport, Houston-Southwest Airport, Ward Airpark Airport, Aviasud Airpark Airport, the Polly Ryon Memorial Hospital Heliport, and the Sugar Grove Heliport. Several major highways run through Fort Bend County, including Interstate Highway (IH) 59, IH 10, State Highway (SH) 6, and SH 36. The Fort Bend Country Community Center offers event spaces, and the Fort Bend County Fairgrounds, operating since 1933, has grown into one of the largest county fairs in the state and offers a barbeque cookoff, a lawn tractor race, livestock shows and auction, rodeo, and live music entertainment. Honoring and commemorating the heritage of the county's Eastern European roots, the annual Czech Kolache-Klobase Festival is held every year in East Bernard. Other cultural festivals and celebrations include the Chinese New Year and Cinco de Mayo.

4.0 ARCHIVAL RESEARCH

Prior to initiating fieldwork, Horizon personnel reviewed the THC's online *Texas Archeological Sites Atlas* (TASA) and *Texas Historic Sites Atlas* (THSA) databases, the National Park Service's (NPS) online *National Register Information System* (NRIS), and the Texas State Historical Association's (TSHA) *The Handbook of Texas Online* for information on previously recorded archeological sites and previous archeological investigations conducted within a 1.6-kilometer (1.0-mile) radius of the project area. Based on this archival research, 24 previously recorded archeological sites and three cemeteries are located within a 1.6-kilometer (1.0-mile) radius of the project area (Figure 5; Table 2) (NPS 2020; THC 2020). No documented cultural resources, including any historic properties listed on the NRHP and/or designated as SALs, are located within or immediately adjacent to the boundaries of the project area.

Examination of historical US Geological Survey (USGS) topographic maps dating from 1957 to the present and aerial photographs dating from 1953 to the present indicate that a small homestead of potentially historic age (i.e., 50 years of age or older) is located within the boundaries of the project area (NETR 2020). USGS maps dating from 1981 onwards and aerial photographs dating from 1983 onwards depict a small farmstead composed of one to two structures within the approximate center of the project area. These structures do not appear on an earlier aerial photograph dating to 1968; as such, they were constructed between 1968 and 1983 and therefore could be of historic age. Fort Bend County Appraisal District records indicate that the house on this homestead was constructed in 1970. As such, this homestead was recorded as archeological site 41FB365 and is described in detail in Chapter 6.0 of this report. Prior to establishment of this homestead in 1970, the project area was part of a larger farm and had been used for agricultural purposes since at least the mid-20th century.

Based on the TASA database, one prior cultural resources survey has been conducted within the limits of the project area. This survey consisted of a general reconnaissance of a large area along the Brazos River conducted in 1988, though limited information is available on the TASA database about this survey. As such, while the project area was previously surveyed at the reconnaissance-level, this level of survey intensity would not be considered adequate to meet current survey requirements.

Aboriginal cultural resources are commonly encountered in deep alluvial sediments adjacent to major streams in southeast Texas. Based on the physiographic setting of the project

SENSITIVE ARCHEOLOGICAL SITE LOCATION INFORMATION OMITTED

Figure 5. Locations of Known Cultural Resources within 1.0 Mile of Project Area

Table 2. Summary of Known Cultural Resources within 1.0 Mile of Project Area

Site No./Name	Site Type	NRHP/SAL Eligibility Status ¹	Distance/Direction from Project Area	Potential to be Impacted by Project?
Archeological Sites				
41FB162	Historic-age homestead (undetermined historic)	Undetermined	0.9 mile northeast	No
41FB163	Historic-age homestead (20th century)	Undetermined	0.9 mile northeast	No
41FB164	Historic-age former homestead (probably 20th century)	Undetermined	0.7 mile northeast	No
41FB165	Historic-age farmstead (early to mid-20th century)	Undetermined	0.6 mile northeast	No
41FB166	Historic-age homestead (20th century)	Undetermined	0.6 mile northeast	No
41FB167	Historic-age homestead (20th century)	Undetermined	0.5 mile southeast	No
41FB168	Historic-age former homestead (20th century)	Undetermined	0.3 mile south-southeast	No
41FB169	Historic-age farmstead (20th century)	Undetermined	0.3 mile east-northeast	No
41FB170	Historic-age farmstead (20th century)	Undetermined	0.4 mile northeast	No
41FB171	Historic-age farmstead (20th century)	Undetermined	0.4 mile northeast	No
41FB172	Historic-age homestead (20th century)	Undetermined	0.5 mile northeast	No
41FB173	Historic-age homestead (20th century)	Undetermined	0.6 mile northeast	No
41FB174	Historic-age homestead (20th century)	Undetermined	0.6 mile northeast	No
41FB175	Historic-age dairy farm (20th century)	Undetermined	0.6 mile northeast	No
41FB176	Historic-age former homestead (late 19th to early 20th centuries)	Undetermined	0.7 mile north	No
41FB177	Historic-age dairy farm and sugar plantation (late 19th to mid-20th centuries)	Undetermined	0.7 mile northeast	No

Table 2. Summary of Known Cultural Resources within 1.0 Mile of Project Area (cont.)

Site No./Name	Site Type	NRHP/SAL Eligibility Status ¹	Distance/Direction from Project Area	Potential to be Impacted by Project?
41FB178	Historic-age former homestead (20th century)	Undetermined	0.7 mile southwest	No
41FB179	Historic-age homestead (20th century)	Undetermined	0.6 mile northeast	No
41FB180	Historic-age homestead (20th century)	Undetermined	0.5 mile southeast	No
41FB193	Historic-age trash dump (early to mid-20th century)	Undetermined	0.4 mile northeast	No
41FB194	Historic-age trash dump (early to mid-20th century)	Undetermined	0.4 mile east-southeast	No
41FB235	Historic-age artifact scatter (undetermined historic)	Determined ineligible	0.8 mile south	No
41FB236	Historic-age agricultural or industrial facility (undetermined historic)	Determined ineligible	0.8 mile south	No
41FB240	Aboriginal lithic scatter (undetermined prehistoric)	Determined ineligible	0.6 mile south	No
Cemeteries				
41FB242	Cemetery	Determined ineligible	0.9 mile southeast	No
Thompson's Chapel Cemetery (FB-C125)	Cemetery	N/A	320.0 feet northwest	No
Watkins Cemetery (FB-C129) (41FB181)	Cemetery	Historic Texas Cemetery	0.4 mile southeast	No

¹ *Determined eligible/ineligible* = Site determined eligible/ineligible by SHPO
Undetermined = Eligibility not assessed or no information available

NRHP National Register of Historic Places

SAL State Antiquities Landmark

SHPO State Historic Preservation Office

area on the floodplain and terraces of the Brazos River and the presence of clayey alluvial soils of Holocene age, the project area was considered to possess moderate to high potential for aboriginal archeological resources, potentially at substantial depth below surface. Historic-age

cultural resources may occur in any physiographic setting and tend to be observable on the modern ground surface. Based on the presence of at least one structure of historic age within the boundaries of the project area, the project area was considered to possess high potential for at least one historic-age architectural resource, though given the largely modern occupation of the site, the potential for historic-age archeological deposits was considered to be low.

5.0 SURVEY METHODOLOGY

On June 10 and 11, 2020, Horizon archeologists Jesse Dalton and Jared Wiersema, under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive cultural resources survey of the project area to locate any cultural resources that potentially would be impacted by the proposed undertaking. The survey was conducted under Texas Antiquities Permit No. 9478. Horizon's archeologists traversed the project area on foot and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. The project area is situated on the northern terraces of the Brazos River. Vegetation across the majority of the project area consists of an expansive, manicured grassy lawn dotted with occasional live oak trees associated with the Reid homestead in the north-central portion of the tract (Figures 6 to 7). The southern portion of the project area is heavily overgrown with dense brambles, vines, and tall grasses (Figure 8). Prior to the purchase and development of the property by the Reid family in 1970, the parcel was part of a larger farm and was characterized by active agricultural fields. Additional disturbances associated with residential landscaping were observed in the north-central portion of the tract surrounding the Reid homestead. Ground surface visibility was generally low (<20%) due to dense vegetative ground cover.

In addition to pedestrian walkover, the Texas State Minimum Archeological Survey Standards (TSMASS) require a minimum of two shovel tests per 0.4 hectare (1.0 acre) for projects measuring 10.1 hectares (25.0 acres) or less in size plus one additional shovel test per 2.0 hectares (5.0 acres) beyond the first 10.1 hectares (25.0 acres). As such, a minimum of 13 shovel tests would be required within the 2.6-hectare (6.4-acre) project area. However, the project area is situated on the terraces of the Brazos River and is characterized by the Pledger clay soil unit, a Quaternary-age clayey alluvial sediment with the potential to contain archeological deposits at depths exceeding those that can be reached in shovel tests. As such, Horizon conducted subsurface survey investigations by means of backhoe trenching rather than shovel testing (Figure 9). The TSMASS call for excavation of one backhoe trench per two shovel tests; as such, a minimum of seven backhoe trenches would be required within the 2.6-hectare (6.4-acre) project area. Horizon excavated a total of seven backhoe trenches during the survey, thereby meeting the TSMASS requirements for a project area of this size (Figure 10).

Backhoe trenches were excavated using a standard-sized backhoe with a 0.6-meter- (2.0-foot-) wide bucket with a flat-edged cleanout to the lesser of a target depth of 3.0 meters (10.0 feet) below surface, deposits that substantially pre-date the Holocene, deposits that represent facies beneath which archeological potential is minimal, or to a natural obstruction



Figure 6. Overview of Central Portion of Project Area (Facing East)



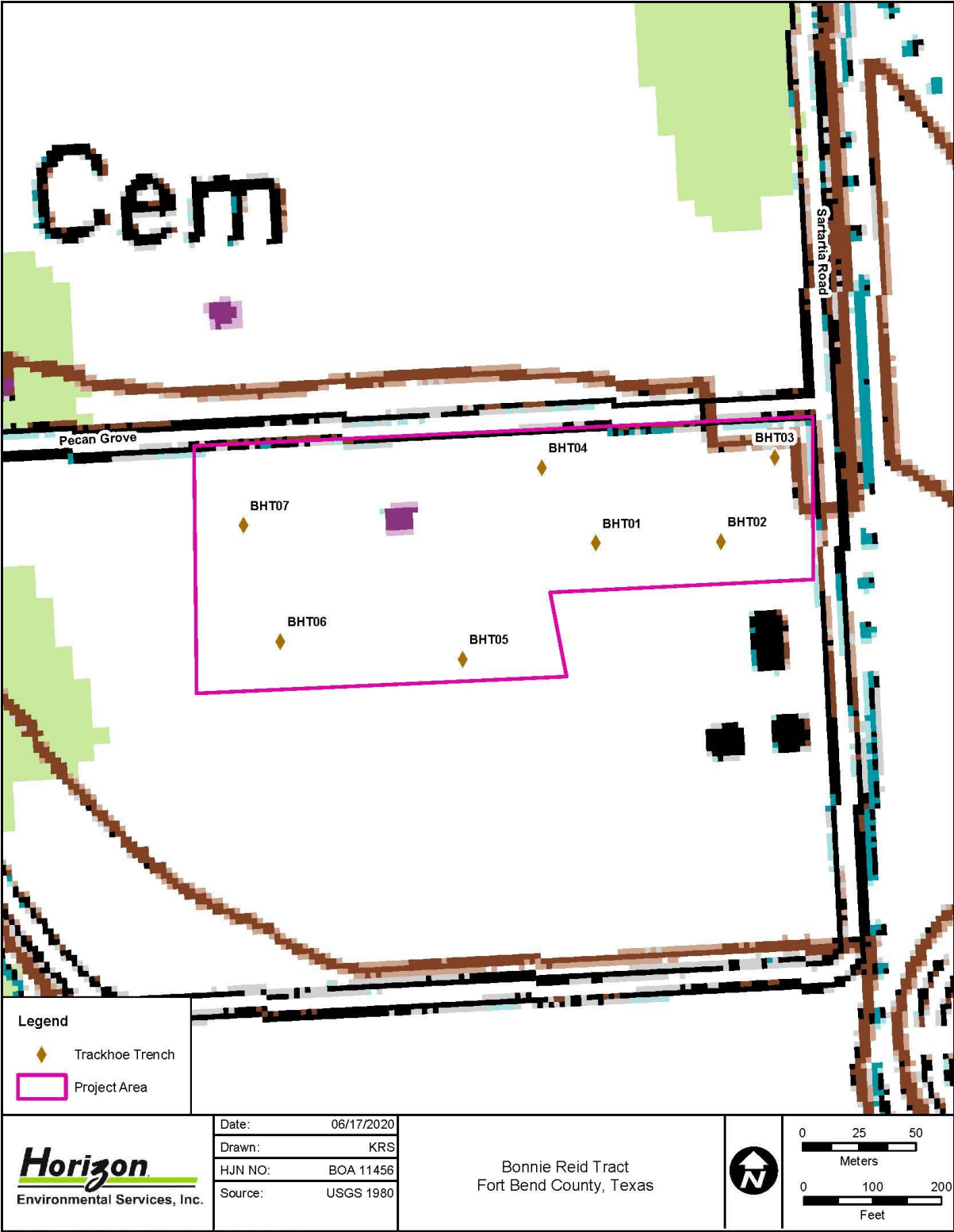
Figure 7. Overview of Western Portion of Project Area (Facing South)



Figure 8. Overview of Southern Portion of Project Area (Facing West)



Figure 9. View of BHT07 Excavation Underway within Project Area (East)



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Figure 10. Locations of Backhoe Trenches Excavated within Project Area

preventing further excavation, such as the water table or impenetrable soils, gravels, or bedrock. In practice, trenches measured 5.0 to 6.0 meters (16.4 to 19.7 feet) in length. During trench excavations, soil “lifts” (i.e., thin, subhorizontal layers) measuring approximately 10.0 centimeters (3.9 inches) in thickness were removed from across the entire trench, and the emerging trench walls and floor were thoroughly inspected for evidence of artifacts, cultural features, or anomalous soil horizons that may suggest the presence of buried land horizons potentially associated with prehistoric cultural occupations. A sample of backfill removed from each trench was screened through 6.35-millimeter (0.25-inch) hardware cloth during trench excavation. A minimum of one 5.0-gallon bucket from every third backhoe bucket load was screened, though all backfill from selected soil horizons was screened if the potential for subsurface archeological deposits was judged to be high. Following completion of each trench excavation, a 1.0-meter- (3.3-foot-) wide section of one trench wall was scraped down with a flat-bladed shovel to expose a clear stratigraphic profile for inspection and photography. A standard backhoe trenching form was completed for each trench detailing soil characteristics, stratigraphy, and the presence or absence of cultural materials. Color digital photographs were taken of each trench and profile exposure. After recording was completed, each trench was immediately backfilled and the ground surface was restored as closely as possible to its original condition. At no time was an open trench left unattended. The Universal Transverse Mercator (UTM) coordinates of each backhoe trench were determined using hand-held Garmin eTrex Global Positioning System (GPS) devices using the North American Datum of 1983 (NAD 83). Specific shovel test data are presented in Appendix A.

Backhoe trenches revealed relatively consistent stratigraphic profiles consisting of a surficial black clay horizon that probably represents a former plowzone underlain by clay sediments ranging in hue from yellowish-red to brownish-red extending to the bases of the trenches. Calcium carbonate filaments increased in density with depth, suggesting that the clayey soil profile has remained relatively stable and been undergoing pedogenetic development for some time. While the full depth of alluvial sediments was not necessarily penetrated in backhoe trenches, the lack of any inclusions or anomalies suggestive of prehistoric cultural activity in trenches suggests that trenching was capable of adequately penetrating sediments with the potential to contain prehistoric and historic-age cultural resources.

One newly recorded archeological site, 41FB365, was documented during the cultural resources survey of the Bonnie Reid tract. A standard site recording form was used to record pertinent information on location, physiographic setting, and local environmental characteristics; types and quantities of artifacts observed; distribution and densities of artifacts; artificial and natural impacts; and the condition of surface and subsurface archeological deposits. A scaled sketch map was drawn that illustrates site boundaries; locations of shovel tests, cultural features, and/or material concentrations; as well as notable features of the landscape. The site was thoroughly photo-documented using color digital photography, and a photographic log was maintained of all photographs taken. Based on the information recorded on the standard archeological site recording forms in the field, a *Texas Archeological Data Site Form* was completed by Horizon’s laboratory personnel using the most current version of the Texas Archeological Research Laboratory’s (TARL) *TexSite* archeological data collection software. The completed *TexSite* form was submitted to TARL, and a permanent site trinomial was obtained.

The survey methods employed during the survey represented a “reasonable and good-faith effort” to locate significant archeological sites within the project area as defined in 36 CFR 800.3. Following completion of the project, project records will be permanently curated at TARL.

6.0 RESULTS OF INVESTIGATIONS

One newly recorded archeological site, 41FB365, was documented during the cultural resources survey of the Bonnie Reid tract. Site 41FB365 consists of the late 20th- to early 21st-century homestead of William and Bonnie Reid. This site is discussed in more detail below.

6.1 SITE 41FB365 (WILLIAM AND BONNIE REID HOMESTEAD)

General Description

Site 41FB365 consists of a cluster of late 20th-century buildings located on a small rural residential tract at the corner of Pecan Grove and Sartartia Road in Sugar Land, Fort Bend County, Texas (Figures 11 to 13). The homesite was the residence of William and Bonnie Reid, who moved to Sugar Land from Oklahoma after getting married in 1960 to start a family. Currently, the homestead consists of four buildings, including a single-story, brick-clad house; an open-bay garage with an attached storage shed; a well pump house; and a small equipment shed. The only historic-age structure on the site is the house, which was constructed in 1970, and the various outbuildings were constructed over the following decade. The homestead is accessed via a short gravel driveway that enters the property from Pecan Grove to the north. Vegetation on the site consists primarily of short, manicured lawn grasses and several large live oak trees, though areas surrounding the structures have become somewhat overgrown with weeds, vines, and hackberry saplings. Elevations across the site are relatively flat, averaging approximately 22.3 meters (73.0 feet) amsl.

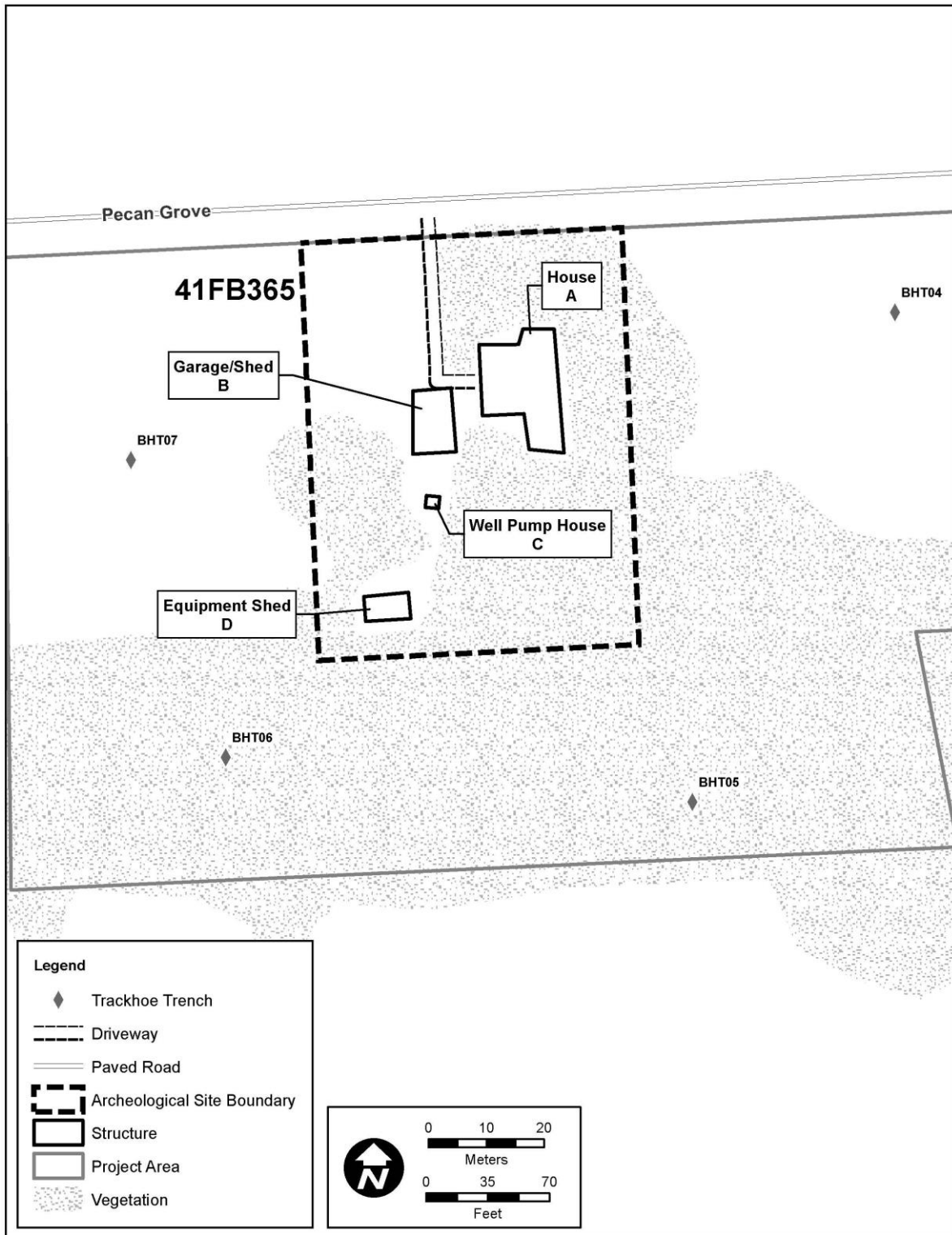
Horizontal and Vertical Extents of Cultural Resources

Based on the extent of standing architectural features on the site, site 41FB365 measures approximately 61.0 meters (200 feet) east to west by 79.2 meters (260.0 feet) north to south, though the Reids owned the entire 6.4-acre tract on which the homestead sits.

The site contains abundant modern domestic materials associated with the late 20th- to early 21st-century occupation by the Reid family, though no cultural materials of historic age were observed on the site. The majority of these materials were stuffed into the various storage sheds present on the site, and a large pile of black plastic garbage bags is present in the yard behind the house, suggesting an attempt has been made recently to clean out the house. No shovel tests were excavated on the site. As the occupation of site 41FB365 occurred largely during the

SENSITIVE ARCHEOLOGICAL SITE LOCATION INFORMATION OMITTED

Figure 11. Location of Site 41FB365 on USGS Topographic Quadrangle



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Figure 12. Sketch Map of Site 41FB365



Figure 13. Overview of Site 41FB365 (Facing South)

modern era, with the exception of the year in which the house was built (i.e., 1970), the site was considered to possess minimal potential to contain historic-age archeological deposits; as such, no shovel tests or backhoe trenches were excavated on the site.

Observed Cultural Features

A total of four standing structures were recorded on site 41FB365, including a single-story, brick-clad house (Resource A); an open-bay garage with an attached storage shed (Resource B); a well pump house (Resource C); and a small equipment shed (Resource D). Wood-frame and chicken-wire fencing encloses the domestic area of the property on the eastern, southern, and western sides.

Resource A—House (ca. 1970)

Resource A is a single-story, brick-clad house that was constructed in 1970 according to Fort Bend County Appraisal District records and corroborated by architectural details (Figures 14 to 18). The house has an L-plan with the two wings oriented east to west and north to south, joining at the northeastern corner. The structure has a hipped roof on the longer section and a front-gabled roof on the projecting “ell.” A concrete slab foundation supports the house. Composite shingles clad the roof. Different configurations of aluminum-framed windows are found on the house, including two-over-two sashes, six-over-six sashes, and sliding, two-light windows. The front entrance, found on the northern façade, is off-centered and recessed. A covered porch extends along the northern (front) façade of the house west of the front door, and



Figure 14. Northern Façade of Resource A (House) on Site 41FB365 (Facing South)



Figure 15. Front Porch on Resource A (House) on Site 41FB365 (Facing East)



Figure 16. Southern Façade of Resource A (House) on Site 41FB365 (Facing Northeast)



Figure 17. Southeastern Corner of Resource A (House) on Site 41FB365 (Facing Northwest)



Figure 18. Eastern Façade of Resource A (House) on Site 41FB365 (Facing Southwest)

a wood-frame side porch or storage area extends from the western wing of the house that contains a couple of refrigerators and stacks of boxes. The house encompasses 175.9 square meters (1,893.0 square feet) and is in fair condition.

Resource B—Garage and Shed (ca. 1975)

Resource B is a wood-frame garage and shed located to the west of the house (Figures 19 to 22). The garage portion of the structure is composed of a standing-seam metal roof supported on a wood frame with an open bay facing north toward the driveway that enters the property from Pecan Grove. The rear, or southern side, of the structure consists of an enclosed, board-and-batten-clad storage shed accessed via a single-entry door in the carport. Wooden shelving covers the walls in the interior of the shed, and the structure is crammed full of domestic objects.

Resource C—Well Pump House (ca. 1975)

Resource C is a small well pump house that shelters a water tank located a short distance south of Resource B (the garage and shed) (Figures 23 to 24). The small structure is square in footprint with a front gable roof. Board-and-batten siding clad the frame structure. A wood floor supported on sill plates supports the small structure. A single entrance door provides access on the eastern side of the structure. The building is in fair condition.



Figure 19. Overview of Resource B (Garage/Shed) on Site 41FB365 (Facing West)



Figure 20. Front of Resource B (Garage/Shed) on Site 41FB365 (Facing South)



Figure 21. Entry to Enclosed Portion of Resource B (Garage/Shed) on Site 41FB365 (Facing Southwest)



Figure 22. Interior of Enclosed Storeroom of Resource B (Garage/Shed) on Site 41FB365



Figure 23. Resource C (Pump House) on Site 41FB365 (Facing West)



Figure 24. Resource C (Pump House) on Site 41FB365 (Facing North)

Resource D—Equipment Shed (ca. 1975)

Resource D is an equipment storage shed located in the southwestern corner of the domestic area of the property (Figures 25 to 28). The building is sheltered with a front-gabled, low-sloped roof clad in corrugated metal. The structural components are composed of milled lumber framing, with hewn posts supporting the central roof-ridge beam. Some of the roof rafters extending from the central ridge appear to be repurposed lumber. Wire nails secure the lumber members together. The structure is accessed via an open bay on the eastern side. The structure has been used to store various pieces of outdoor equipment, including a rider lawn mower, propane tanks and gas cans, sawhorses, an equipment dolly, chains, ropes, and tools.

Observed Cultural Resources

Abundant modern domestic debris is present on site 41FB365 associated with the recent occupation by the Reid family. Most of this material is crammed into the various storage sheds on the property. A large pile of filled black plastic trash bags is present in the back yard behind the house, suggesting that an attempt has been made to clean out the property. No historic-age cultural materials aside from some of the construction materials used on the house (Resource A) were observed on the site.

Historical Research

The subject parcel encompasses 2.6 hectares (6.4 acres) at the southwestern corner of the intersection of Pecan Grove and Sartartia Road in Sugar Land. The parcel is part of an older,

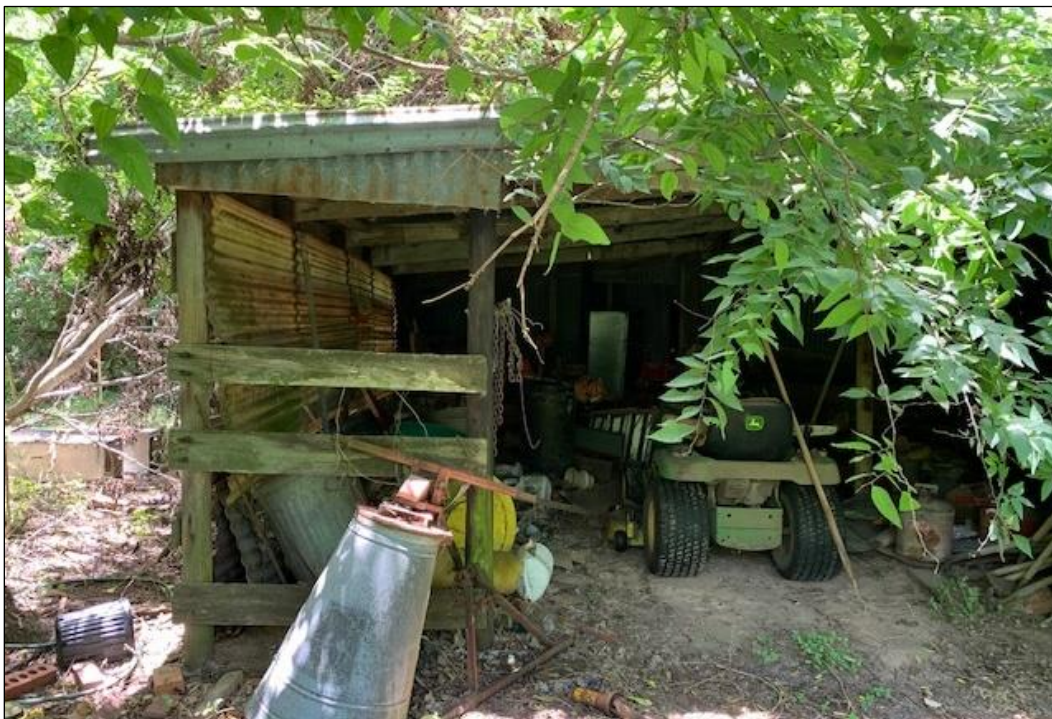


Figure 25. Front of Resource D (Equipment Shed) on Site 41FB365 (Facing West)



Figure 26. Interior of Resource D (Equipment Shed) on Site 41FB365 (Facing Northwest)



Figure 27. Rear of Resource D (Equipment Shed) on Site 41FB365 (Facing Northeast)



Figure 28. Side of Resource D (Equipment Shed) on Site 41FB365 (Facing North)

late 20th-century rural residential subdivision currently surrounded by modern housing subdivisions. The parcel is part of the original Jesse H. Cartwright 1,711.0-hectare (4,228.0-acre) parcel that was patented in 1828 (Texas GLO 2020).

Jesse H. Cartwright is described as a public official, early settler, and one of Stephen F. Austin's Old Three Hundred (TSHA 2020). He was born about 1787 in Nashville, Tennessee, and he moved to Texas from Woodville, Mississippi, in 1825. The census of March 1826 listed him as a farmer and stock raiser aged between 25 and 40. Cartwright's title to a league and a labor of land now in Fort Bend and Lavaca counties was granted on March 31, 1828. In 1830, he built his home on the Samuel Isacks league at the head of Oyster Creek. Cartwright presided over the August 1830 election of electors for choosing the state governor and vice governor. As second regidor at San Felipe de Austin in December 1830, he was on a committee to examine the validity of land titles in Austin's first colony. Cartwright, along with Randolph Foster and William Walker, apparently served on a procurement committee during the early stages of the Texas Revolution, for on October 11, 1835, Richard Royster Royall requested that the trio bring lead and powder to San Felipe for the use of the Texas army. In June 1836, Cartwright was a realtor and advertised lots in Fayetteville, to be located on Round Lake, on the eastern side of the Brazos River. He tried, unsuccessfully, to make this town the county seat of Fort Bend County in 1838. In October 1836, Cartwright represented Harrisburg County in the House of the First Congress. About 1841, he sold most of his Fort Bend County holdings and moved west to the Guadalupe River. He died on March 11, 1848. There is no evidence that Cartwright lived on the

tract represented by the current project area, and no cultural materials pre-dating the late 20th-century occupation by William and Bonnie Reid were observed during the current survey.

Examination of a historical aerial photograph dating to 1953 indicates that this parcel consisted of cultivated fields and was likely part of a larger farm at this time (NETR 2020). There are no structures visible within the project area during this period. A USGS topographic map dating to 1958 also does not indicate the presence of any buildings within the project area during this time period, and Pecan Grove Road had not yet been established at this time. The 1968 aerial photograph also does not show any structures on the property, though Pecan Grove had been constructed by this time. The next available aerial image is from 1983, at which time a house and outbuildings are visible within the project area. Fort Bend County Appraisal District records indicate that the house was constructed in 1970 on the property (FBCAD 2020). The original owners of this 2.6-hectare (6.4-acre) parcel were William G. (“Billy Gene”) and Bonnie Reid. After getting married in 1960, the couple moved to Sugar Land, Texas, from Oklahoma and started a family. William passed away in 2011 after a long career in the oil and gas industry (Legacy.com 2020). The parcel was sold by Bonnie Reid to Fort Bend LID No. 7 in 2020.

Summary and Recommendations

Site 41FB365 consists of a cluster of late 20th-century buildings located on a small rural residential tract at the corner of Pecan Grove and Sartartia Road in Sugar Land, Fort Bend County, Texas. The homesite was the residence of William and Bonnie Reid, who moved to Sugar Land from Oklahoma after getting married in 1960 to start a family. Currently, the homestead consists of four buildings, including a single-story, brick-clad house (Resource A); an open-bay garage with an attached storage shed (Resource B); a well pump house (Resource C); and a small equipment shed (Resource D). The only historic-age structure on the site is the house, which was constructed in 1970, and the various outbuildings were constructed over the following decade. The homestead is accessed via a short gravel driveway that enters the property from Pecan Grove to the north.

The identified architectural resources are all associated with the occupation of the Reid family beginning in the 1970s. Prior to their occupation, this parcel consisted of cultivated fields associated with a larger farm. Agriculture and the oil and gas industry were typical land uses during the early development of Fort Bend County. The proximity to the Brazos River and its tributaries likely encouraged the settlement and establishment of farms in the area. This rural parcel and the ca. 1970s resources are associated with a time when agricultural properties began to subdivide into smaller parcels as people were drawn to the area for opportunities in the oil and gas industries. This was a typical practice and not necessarily specific to the region. The project area property is therefore not known to have an association with specific historically important events. For consideration of eligibility for inclusion in the NRHP under Criterion A, individual properties should have strong historical associations with important trends and events in the past. Therefore, the resources on site 41FB365 are recommended as ineligible for listing on the NRHP under Criterion A.

The parcel was part of a larger land grant originally granted to Jesse Cartwright in the 1820s. Cartwright owned numerous plots of land in the area and was considered a real estate

agent. However, he did not live on the subject parcel, and no 19th-century resources were identified within the project area during the survey. The structures identified on the property are consistent with resources that support rural domestic life with access to the city center of Sugar Land on land carved out of cultivated agricultural fields. William and Bonnie Reid were the first known occupants of this parcel. This family of Fort Bend County is not known to be of particular historical importance. As the property is not known to be associated with an important person or family, site 41FB365 is recommended as ineligible for inclusion in the NRHP under Criterion B.

The resources on the property are typical examples of utilitarian structures and a Ranch-style-inspired house found in rural areas of the county. Overall, the buildings were not constructed according to any unique or distinct architectural styles or designs; as such, site 41FB365 is recommended as ineligible for listing on the NRHP under Criterion C.

Finally, no archeological deposits of historic age were documented on the parcel. As such, site 41FB365 has no potential to contribute information about the historical past and is recommended as ineligible for inclusion in the NRHP under Criterion D.

7.0 SUMMARY AND RECOMMENDATIONS

7.1 CONCEPTUAL FRAMEWORK

The archeological investigations documented in this report were undertaken with three primary management goals in mind:

- Locate all historic and prehistoric archeological resources that occur within the designated survey area.
- Evaluate the significance of these resources regarding their potential for inclusion in the NRHP and for designation as SALs.
- Formulate recommendations for the treatment of these resources based on their NRHP and SAL evaluations.

At the survey level of investigation, the principal research objective is to inventory the cultural resources within the project area and to make preliminary determinations of whether or not the resources meet one or more of the pre-defined eligibility criteria set forth in the state and/or federal codes, as appropriate. Usually, management decisions regarding archeological properties are a function of the potential importance of the sites in addressing defined research needs, though historic-age sites may also be evaluated in terms of their association with important historic events and/or personages. Under the NHPA and the Antiquities Code of Texas, archeological resources are evaluated according to criteria established to determine the significance of archeological resources for inclusion in the NRHP and for designation as SALs, respectively.

Analyses of the limited data obtained at the survey level are rarely sufficient to contribute in a meaningful manner to defined research issues. The objective is rather to determine which archeological sites could be most profitably investigated further in pursuance of regional, methodological, or theoretical research questions. Therefore, adequate information on site function, context, and chronological placement from archeological and, if appropriate, historical perspectives is essential for archeological evaluations. Because research questions vary as a function of geography and temporal period, determination of the site context and chronological placement of cultural properties is a particularly important objective during the inventory process.

7.2 ELIGIBILITY CRITERIA FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES

Determinations of eligibility for inclusion in the NRHP are based on the criteria presented in 36 CFR §60.4(a-d). The four criteria of eligibility are applied following the identification of relevant historical themes and related research questions:

The quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- a. [T]hat are associated with events that have made a significant contribution to the broad patterns of our history; or,
- b. [T]hat are associated with the lives of persons significant in our past; or,
- c. [T]hat embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,
- d. [T]hat have yielded, or may be likely to yield, information important in prehistory or history.

The first step in the evaluation process is to define the significance of the property by identifying the particular aspect of history or prehistory to be addressed and the reasons why information on that topic is important. The second step is to define the kinds of evidence or the data requirements that the property must exhibit to provide significant information. These data requirements in turn indicate the kind of integrity that the site must possess to be significant. This concept of integrity relates both to the contextual integrity of such entities as structures, districts, or archeological deposits and to the applicability of the potential database to pertinent research questions. Without such integrity, the significance of a resource is very limited.

For an archeological resource to be eligible for inclusion in the NRHP, it must meet legal standards of eligibility that are determined by three requirements: (1) properties must possess significance, (2) the significance must satisfy at least one of the four criteria for eligibility listed above, and (3) significance should be derived from an understanding of historic context. As discussed here, historic context refers to the organization of information concerning prehistory and history according to various periods of development in various times and at various places. Thus, the significance of a property can best be understood through knowledge of historic development and the relationship of the resource to other, similar properties within a particular period of development. Most prehistoric sites are usually only eligible for inclusion in the NRHP under Criterion D, which considers their potential to contribute data important to an understanding of prehistory. All four criteria employed for determining NRHP eligibility potentially can be brought to bear for historic sites.

7.3 ELIGIBILITY CRITERIA FOR LISTING AS A STATE ANTIQUITIES LANDMARK

The criteria for determining the eligibility of a prehistoric or historic cultural property for designation as an SAL are presented in Chapter 191, Subchapter D, Section 191.092 of the Antiquities Code of Texas, which states that SALs include:

Sites, objects, buildings, artifacts, implements, and locations of historical, archeological, scientific, or educational interest including those pertaining to prehistoric and historical American Indians or aboriginal campsites, dwellings, and habitation sites, their artifacts and implements of culture, as well as archeological sites of every character that are located in, on, or under the surface of any land belonging to the State of Texas or to any county, city, or political subdivision of the state are state antiquities landmarks and are eligible for designation.

For the purposes of assessing the eligibility of a historic property for designation as an SAL, a historic site, structure, or building has historical interest if the site, structure, or building:

1. [W]as the site of an event that has significance in the history of the United States or the State of Texas;
2. [W]as significantly associated with the life of a famous person;
3. [W]as significantly associated with an event that symbolizes an important principle or ideal;
4. [R]epresents a distinctive architectural type and has value as an example of a period, style, or construction technique; or,
5. [I]s important as part of the heritage of a religious organization, ethnic group, or local society.

The Antiquities Code of Texas establishes the THC as the legal custodian of all cultural resources, historic and prehistoric, within the public domain of the State of Texas. Under Part II of Title 13 of the Texas Administrative Code (13 TAC 26), the THC may designate a historic building, structure, cultural landscape, or non-archeological site, object, or district as an SAL if it meets at least one of following criteria:

- A. [T]he property is associated with events that have made a significant contribution to the broad patterns of our history, including importance to a particular cultural or ethnic group;
- B. [T]he property is associated with the lives of persons significant in our past;
- C. [T]he property embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. [T]he property has yielded, or may be likely to yield, information important in Texas culture or history.

Furthermore, the THC may designate an archeological site as an SAL if the site meets one or more of the following criteria:

1. [T]he site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information;
2. [T]he site's archeological deposits and the artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interests of the site;
3. [T]he site possesses unique or rare attributes concerning Texas prehistory and/or history;
4. [T]he study of the site offers the opportunity to test theories and methods of preservation, thereby contributing to new scientific knowledge; or,
5. [T]he high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to ensure maximum legal protection, or alternatively further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected.

7.4 SUMMARY OF INVENTORY RESULTS

On June 10 and 11, 2020, Horizon archeologists Jesse Dalton and Jared Wiersema, under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive cultural resources survey of the project area to locate any cultural resources that potentially would be impacted by the proposed undertaking. The survey was conducted under Texas Antiquities Permit No. 9478. Horizon's archeologists traversed the project area on foot and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. The project area is situated on the northern terraces of the Brazos River. Vegetation across the majority of the project area consists of an expansive, manicured grassy lawn dotted with occasional live oak trees associated with the Reid homestead in the north-central portion of the tract. The southern portion of the project area is heavily overgrown with dense brambles, vines, and tall grasses. Prior to the purchase and development of the property by the Reid family in 1970, the parcel was part of a larger farm and was characterized by active agricultural fields. Additional disturbances associated with residential landscaping were observed in the north-central portion of the tract surrounding the Reid homestead. Ground surface visibility was generally low (<20%) due to dense vegetative ground cover.

In addition to pedestrian walkover, the TSMASS require a minimum of two shovel tests per 0.4 hectare (1.0 acre) for projects measuring 10.1 hectares (25.0 acres) or less in size plus one additional shovel test per 2.0 hectares (5.0 acres) beyond the first 10.1 hectares (25.0 acres). As such, a minimum of 13 shovel tests would be required within the 2.6-hectare (6.4-acre) project area. However, the project area is situated on the terraces of the Brazos River and is characterized by the Pledger clay soil unit, a Quaternary-age clayey alluvial sediment with the potential to contain archeological deposits at depths exceeding those that can be reached in shovel tests. As such, Horizon conducted subsurface survey investigations by means of backhoe trenching rather than shovel testing. The TSMASS call for excavation of one backhoe trench per two shovel tests; as such, a minimum of seven backhoe trenches would be required within the

2.6-hectare (6.4-acre) project area. Horizon excavated a total of seven backhoe trenches during the survey, thereby meeting the TSMASS requirements for a project area of this size.

Backhoe trenches revealed relatively consistent stratigraphic profiles consisting of a surficial black clay horizon that probably represents a former plowzone underlain by clay sediments ranging in hue from yellowish-red to brownish-red extending to the bases of the trenches. Calcium carbonate filaments increased in density with depth, suggesting that the clayey soil profile has remained relatively stable and been undergoing pedogenetic development for some time. While the full depth of alluvial sediments was not necessarily penetrated in backhoe trenches, the lack of any inclusions or anomalies suggestive of prehistoric cultural activity in trenches suggests that trenching was capable of adequately penetrating sediments with the potential to contain prehistoric and historic-age cultural resources.

One newly recorded archeological site, 41FB365, was documented during the cultural resources survey of the Bonnie Reid tract (Table 3). Site 41FB365 consists of a cluster of late 20th-century buildings located on a small rural residential tract at the corner of Pecan Grove and Sartartia Road in Sugar Land, Fort Bend County, Texas. The homesite was the residence of William and Bonnie Reid, who moved to Sugar Land from Oklahoma after getting married in 1960 to start a family. Currently, the homestead consists of four buildings, including a single-story, brick-clad house (Resource A); an open-bay garage with an attached storage shed (Resource B); a well pump house (Resource C); and a small equipment shed (Resource D). The only historic-age structure on the site is the house, which was constructed in 1970, and the various outbuildings were constructed over the following decade. No other historic-age structures are present on the site, and no archeological deposits associated with any historic-age occupations of the property were observed during the survey. Based on the largely modern character of the architectural features on the homestead, a lack of significant historical associations, and the absence of archeological deposits, the site is recommended as ineligible for inclusion in the NRHP and for designation as an SAL.

7.5 MANAGEMENT RECOMMENDATIONS

Based on the results of the survey-level investigations documented in this report, no potentially significant cultural resources would be affected by the proposed undertaking. In

Table 3. Summary of Cultural Resources Recorded During Survey

Permanent Trinomial	Temp. Site No.	Cultural Affiliation	Site Type	Recommended NRHP/SAL Eligibility	Recommendations
41FB365	BR-01	Historic-age to modern (late 20th to early 21st centuries)	Homestead	Ineligible	No further work

¹ Eligibility recommendations apply only to the portions of sites and features within the project area. Site and feature areas outside the project area were not evaluated.

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accordance with 36 CFR 800.4, Horizon has made a reasonable and good-faith effort to identify historic properties within the project area. No cultural resources were identified within the project area that meet the criteria for designation as SALs according to 13 TAC 26 or for inclusion in the NRHP under 36 CFR 60.4. Horizon recommends a finding of “no historic properties affected,” and no further archeological work is recommended in connection with the proposed undertaking. However, human burials, both prehistoric and historic, are protected under the Texas Health and Safety Code. In the event that any human remains or burial objects are inadvertently discovered at any point during construction, use, or ongoing maintenance in the project area, even in previously surveyed areas, all work should cease immediately in the vicinity of the inadvertent discovery, and the THC should be notified immediately. Following completion of the project, project records will be permanently curated at TARL.

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APPENDIX A:

Backhoe Trench Data

Table A-1. Backhoe Trench 1 (BHT-1)

Trench No.: BHT-1
UTM Coordinates¹: 240004 E, 3276265 N
Comment: BHT-1 was oriented west to east. The trench measured 6.0 meters (19.7 feet) in length and was excavated on a terrace of the Brazos River in the central portion of the project area to examine potential alluvial soils.

Zone	Depth (cmbs)	Description	Cultural Materials
1	0-35	Black clay; very sticky, plastic, hard consistency; blocky subangular structure; weak-moderate reaction; rootlets (20%); gradual lower boundary	None
2	35-80	Dark grayish-black clay; very plastic, very sticky, very hard consistency; blocky subangular structure; weak-moderate reaction; gradual lower boundary	None
3	80-100	Yellowish-red clay; very sticky, plastic, hard consistency; blocky subangular structure; weak-moderate reaction; gradual lower boundary; few fine CaCO ₃ inclusions	None
4	100-140	Dark yellowish-red clay; very sticky, friable, very plastic; very hard consistency; blocky subangular structure; weak-moderate reaction; gradual lower boundary; few fine CaCO ₃ inclusions	None
5	140-190+	Brownish-red clay; very sticky, very hard, very plastic consistency; blocky subangular structure; weak reaction; few CaCO ₃ inclusions	None

¹ All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

UTM = Universal Transverse Mercator



Figure A-1. Overview of BHT-1 (Facing East)



Figure A-2. South Wall Profile of BHT-1

Table A-2. Backhoe Trench 2 (BHT-2)

Trench No.: BHT-2
UTM Coordinates¹: 240055 E, 3276260 N
Comment: BHT-2 was oriented west to east. The trench measured 6.0 meters (19.7 feet) in length and was excavated on a terrace of the Brazos River in the eastern portion of the project area to examine potential alluvial soils.

Zone	Depth (cmbs)	Description	Cultural Materials
1	0-15	Black clay; very sticky, very hard, very firm, plastic consistency; blocky subangular structure; moderate reaction; rootlets (30%); gradual lower boundary	None
2	15-85	Very dark gray clay; very firm, very hard, very sticky, very plastic consistency; blocky subangular structure; weak-moderate reaction; gradual lower boundary	None
3	85-120	Yellowish-red clay; very firm, very hard, very sticky, very plastic consistency; blocky subangular structure; weak reaction; gradual lower boundary; few fine CaCO ₃ inclusions	None
4	120-160+	Brownish-red clay; very firm, very hard, very sticky, very plastic consistency; blocky subangular structure; weak reaction, common fine CaCO ₃ inclusions	None

¹ All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

UTM = Universal Transverse Mercator



Figure A-3. Overview of BHT-2 (Facing East)



Figure A-4. South Wall Profile of BHT-2

Table A-3. Backhoe Trench 3 (BHT-3)

Trench No.: BHT-3
UTM Coordinates¹: 240083 E, 3276302 N
Comment: BHT-3 was oriented north to south. The trench measured 6.0 meters (19.7 feet) in length and was excavated on a terrace of the Brazos River in the eastern portion of the project area to examine potential alluvial soils.

Zone	Depth (cmbs)	Description	Cultural Materials
1	0-30	Black clay; very firm, very hard, very sticky, plastic consistency; blocky, fine, weak structure; weak reaction; gradual lower boundary; rootlets (30%)	None
2	30-75	Very dark gray fine clay; very firm, very hard, very sticky, plastic consistency; blocky, fine, weak structure; weak reaction; gradual lower boundary	None
3	75-130	Yellowish-red fine clay; very firm, very hard, very sticky, very plastic; blocky, fine, weak structure; weak reaction; gradual lower boundary; few fine CaCO ₃ inclusions	None
4	130-200+	Brownish-red fine clay; very firm, very hard, very sticky, very plastic; blocky, fine, weak structure; weak reaction; common fine CaCO ₃ inclusions	None

¹ All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

UTM = Universal Transverse Mercator



Figure A-5. Overview of BHT-3 (Facing North)



Figure A-6. East Wall Profile of BHT-3

Table A-4. Backhoe Trench 4 (BHT-4)

Trench No.: BHT-4
UTM Coordinates¹: 239980 E, 3276303 N
Comment: BHT-4 was oriented west to east. The trench measured 5.0 meters (16.4 feet) in length and was excavated on a terrace of the Brazos River in the north-central portion of the project area to examine potential alluvial soils.

Zone	Depth (cmbs)	Description	Cultural Materials
1	0-30	Black clay; very hard, very firm, very sticky, plastic consistency; blocky subangular structure; medium reaction; gradual lower boundary; rootlets (30%)	None
2	30-85	Very dark gray clay; very hard, very firm, very sticky, plastic consistency; blocky subangular structure; medium reaction; gradual lower boundary	None
3	85-105	Yellowish-red fine loamy clay; friable, soft, sticky, plastic consistency; crumbly, granular, weak structure; weak reaction; gradual lower boundary; few fine CaCO ₃ inclusions	None
4	105-180	Brownish-red fine loamy clay; firm, slightly hard, sticky, plastic consistency; blocky, fine, weak structure; weak reaction; gradual lower boundary; few fine CaCO ₃ inclusions	None
5	180-190+	Brownish-red clay; very hard, very firm, very sticky, very plastic consistency; blocky, weak, subangular structure; weak reaction, few fine CaCO ₃ inclusions	None

¹ All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

UTM = Universal Transverse Mercator



Figure A-7. Overview of BHT-4 (Facing West)



Figure A-8. South Wall Profile of BHT-4

Table A-5. Backhoe Trench 5 (BHT-5)

Trench No.: BHT-5
UTM Coordinates¹: 239940 E, 3276220 N
Comment: BHT-5 was oriented west to east. The trench measured 5.0 meters (16.4 feet) in length and was excavated on a terrace of the Brazos River in the south-central portion of the project area to examine potential alluvial soils.

Zone	Depth (cmbs)	Description	Cultural Materials
1	0-40	Black clay; friable, soft, very sticky, plastic consistency; crumbly, medium weak structure; fine-medium size; weak reaction; gradual lower boundary; rootlets (30%)	None
2	40-100	Very dark greenish-gray fine clay; very firm, very hard, very sticky, very plastic; blocky, fine, weak structure; fine size; weak reaction; gradual lower boundary	None
3	100-125	Brownish-red clay; very firm, very hard, very sticky, plastic consistency; blocky, weak structure; weak reaction; fine-medium size; lower gradual boundary; few fine CaCO ₃ inclusions	None
4	125-165	Light brownish-red loamy clay; friable, soft, slightly sticky, plastic consistency; crumbly, coarse, weak structure; fine-medium size; weak reaction; gradual lower boundary; common CaCO ₃ inclusions	None
5	165-175+	Brownish-red fine clay; very firm, very hard, very sticky, very plastic consistency; blocky, fine, weak structure; fine size; weak reaction; common fine CaCO ₃ inclusions	None

¹ All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

UTM = Universal Transverse Mercator



Figure A-9. Overview of BHT-5 (Facing West)



Figure A-10. South Wall Profile of BHT-5

Table A-6. Backhoe Trench 6 (BHT-6)

Trench No.: BHT-6
UTM Coordinates¹: 239860 E, 3276232 N
Comment: BHT-6 was oriented west to east. The trench measured 5.0 meters (16.4 feet) in length and was excavated on a terrace of the Brazos River in the southwestern portion of the project area to examine potential alluvial soils.

Zone	Depth (cmbs)	Description	Cultural Materials
1	0-20	Light reddish-brown clay; friable, soft, slightly sticky; slightly plastic; crumbly, medium, moderate structure; medium reaction; gradual lower boundary; rootlets (30%)	Defunct 4.0-inch PVC pipe at 10 cmbs in western portion of trench running northwest to southeast
2	20-25	Reddish-brown clay; friable, slightly hard, slightly sticky, slightly plastic consistency; crumbly, medium, moderate structure; weak reaction; abrupt lower boundary; few fine CaCO ₃ inclusions	None
3	25-60	Greenish-gray fine clay; very firm, very hard, very sticky, plastic consistency; blocky, fine, weak structure; weak reaction; abrupt lower boundary	None
4	60-90	Reddish-gray fine clay; friable, firm, hard, sticky, slightly plastic, blocky, crumbly, medium, weak structure; weak reaction; abrupt lower boundary	None
5	90-130	Gray sandy clay loam; friable, soft, loose, non-sticky, non-plastic consistency; granular, crumbly, fine, weak structure; weak reaction; abrupt lower boundary	None
	130-160+	Dark red clay; hard, firm, sticky, plastic consistency; blocky, fine, weak structure; weak reaction; common CaCO ₃ inclusions	None

¹ All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

PVC = Polyvinyl chloride

UTM = Universal Transverse Mercator



Figure A-11. Overview of BHT-6 (Facing West)



Figure A-12. South Wall Profile of BHT-6

Table A-7. Backhoe Trench 7 (BHT-7)

Trench No.: BHT-7
UTM Coordinates¹: 239846 E, 3276284 N
Comment: BHT-7 was oriented north to south. The trench measured 5.0 meters (16.4 feet) in length and was excavated on a terrace of the Brazos River in the northwestern portion of the project area to examine potential alluvial soils.

Zone	Depth (cmbs)	Description	Cultural Materials
1	0-25	Dark reddish-brown fine clay; friable, loose, slightly sticky, slightly plastic consistency; crumbly, medium, moderate structure; weak reaction; gradual lower boundary; rootlets (30%)	None
2	25-65	Medium reddish-brown clay; firm, slightly hard, sticky, plastic consistency; crumbly, coarse, weak structure; gradual lower boundary	None
3	65-155	Dark reddish-gray clay; very firm, very hard, very sticky, very plastic consistency; blocky, fine, weak structure; weak reaction; clear lower boundary	None
4	155-180+	Dark grayish-red clay; very firm, very hard, very sticky, very plastic; blocky, very fine, weak structure; weak reaction; common CaCO ₃ inclusions	None

¹ All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

UTM = Universal Transverse Mercator



Figure A-13. Overview of BHT-7 (Facing North)



Figure A-14. West Wall Profile of BHT-7