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Texas Antiquities Permit No. 8997
H438-190114

Prepared for:

City of Hutto
Williamson County, Texas

Prepared by:

Horizon Environmental Services, Inc.
Austin, Texas

August 2019

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MANAGEMENT SUMMARY

Horizon Environmental Services, Inc. (Horizon) was selected by Burditt Consultants, LLC on behalf of the City of Hutto, to conduct an intensive cultural resources inventory and assessment for the Houston Youth Soccer Association (HYSA) Texans at Riverwalk Parking Lot Project. The HYSA Texans at Riverwalk Park is an existing soccer field located northeast of the intersection of Farm-to-Market Road (FM) 685 and Riverwalk Drive in Hutto, Williamson County, Texas. The City of Hutto is proposing to purchase the soccer park from its current owners. No improvements are proposed to the soccer field itself, though the city is proposing to construct a parking lot on an approximately 1.3-hectare (3.3-acre) lot located off the northern side of Riverwalk Drive adjacent to the eastern side of the soccer field. As such, for purposes of the cultural resources survey, the project area is assumed to consist of the proposed parking lot tract, which covers an area of approximately 1.3 hectares (3.3 acres).

The proposed undertaking is being sponsored by the City of Hutto, a political subdivision of the state of Texas, and would utilize grant funding provided by the Texas Parks & Wildlife Department (TPWD). As both the city of Hutto and TPWD are political subdivisions of the state of Texas, the project would fall under the jurisdiction of the Antiquities Code of Texas (Natural Resources Code, Title 9, Chapter 191). At this time, no federal permits, licenses, or funds have been identified for the project. As the 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 considered eligible for designation as State Antiquities Landmarks (SAL).

On May 7, 2019, Horizon archeologists Emily McCurdy and Rachel Naasz conducted an intensive cultural resources survey of the project area. The survey was conducted under the overall direction of Jeffrey D. Owens, Principal Investigator, under Texas Antiquities Permit no. 8997. The purpose of the survey was to locate any significant cultural resources that potentially would be impacted by the proposed undertaking. Horizon's archeologists traversed the park and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. The project area is located on the upper terraces of Brushy Creek and exhibited signs of prior disturbances from grading, landscaping, periodic vegetation clear-cutting, and construction of a gravel driveway that provides access to the back side of the adjacent soccer field to the west. The field where the parking lot would be constructed appears to already be in

use as an informal parking lot for games at the adjacent park. Vegetation within the southern portion of the project area consists of manicured grasses, though the northern portion of the project area adjacent to Brushy Creek was densely overgrown in tall grasses and weeds and a line of deciduous trees lining the creek bank. The largely level, high terrace landform drops off sharply toward the creek, and no lower terraces are evident in this area. Visibility of the modern ground surface was generally poor due to vegetative ground cover (<20%).

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 project areas between 1.2 and 4.0 hectares (3.0 and 10.0 acres) in size. As such, a minimum of seven shovel tests would be required within the 1.3-hectare (3.3-acre) project area. Horizon excavated a total of 14 shovel tests during the survey, thereby exceeding the TSMASS for a project area of this size. Shovel testing typically revealed dense grayish-brown to gray silty loam overlying dense grayish-brown clay loam or black clay at depths ranging from 45.0 to 75.0 centimeters (17.7 to 29.5 inches) below surface. Sediments on the tract exhibited extensive signs of prior disturbance and compaction. It is Horizon's opinion that sediments with the potential to contain subsurface archeological deposits were fully penetrated and that the project area was adequately assessed for cultural resources.

One aboriginal expedient tool, a utilized chert flake, was observed in one shovel test at a depth of 30.0 centimeters (11.8 inches) below surface. Additional delineation shovel tests were excavated surrounding this initial positive shovel test, though no more cultural resources were observed. This lithic flake tool has been classified as an isolated artifact occurrence and was not recorded as an archeological site. While the presence of an aboriginal lithic artifact is broadly indicative of prehistoric activity dating to an undermined prehistoric timeframe within the project area, the artifact also may have been redeposited from somewhere nearby during prior construction activities on the tract. No further investigations are warranted in connection with this single artifact. No artifacts were collected during the survey. Following completion of the project, project records will be permanently curated at the Texas Archeological Research Laboratory (TARL).

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 State Antiquities Landmarks (SAL) according to 13 TAC 26 or for inclusion in the National Register of Historic Places (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 Texas Historical Commission (THC) should be notified immediately.

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1.0 INTRODUCTION

Horizon Environmental Services, Inc. (Horizon) was selected by Burditt Consultants, LLC on behalf of the City of Hutto, to conduct an intensive cultural resources inventory and assessment for the Houston Youth Soccer Association (HYSA) Texans at Riverwalk Parking Lot Project. The HYSA Texans at Riverwalk Park is an existing soccer field located northeast of the intersection of Farm-to-Market Road (FM) 685 and Riverwalk Drive in Hutto, Williamson County, Texas. The City of Hutto is proposing to purchase the soccer park from its current owners. No improvements are proposed to the soccer field itself, though the city is proposing to construct a parking lot on an approximately 1.3-hectare (3.3-acre) lot located off the northern side of Riverwalk Drive adjacent to the eastern side of the soccer field. As such, for purposes of the cultural resources survey, the project area is assumed to consist of the proposed parking lot tract, which covers an area of approximately 1.3 hectares (3.3 acres) (Figures 1 to 3).

The proposed undertaking is being sponsored by the City of Hutto, a political subdivision of the state of Texas, and would utilize grant funding provided by the Texas Parks & Wildlife Department (TPWD). As both the city of Hutto and TPWD are political subdivisions of the state of Texas, the project would fall under the jurisdiction of the Antiquities Code of Texas (Natural Resources Code, Title 9, Chapter 191). At this time, no federal permits, licenses, or funds have been identified for the project. As the 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 considered eligible for designation as State Antiquities Landmarks (SAL).

On May 7, 2019, Horizon archeologists Emily McCurdy and Rachel Naasz conducted an intensive cultural resources survey of the project area. The survey was conducted under the overall direction of Jeffrey D. Owens, Principal Investigator, under Texas Antiquities Permit no. 8997. The cultural resources investigation consisted of an archival review, an intensive pedestrian survey of the project area, and the production of a report suitable for review by the State Historic Preservation Officer (SHPO) in accordance with the THC's Rules of Practice and Procedure, Chapter 26, and the Council of Texas Archeologists (CTA) Guidelines for Cultural Resources Management Reports.

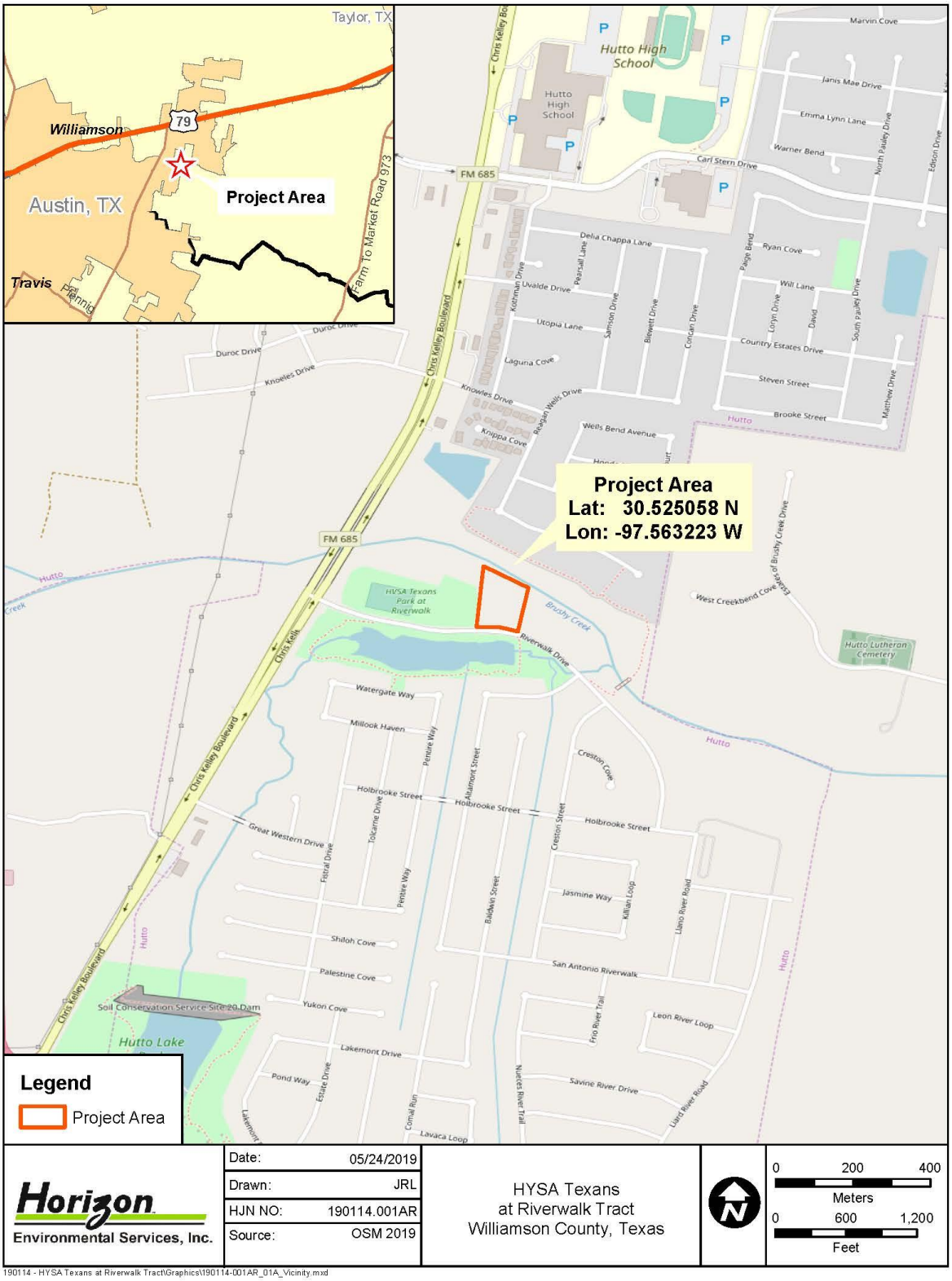

Figure 1. Vicinity Map of Project Area

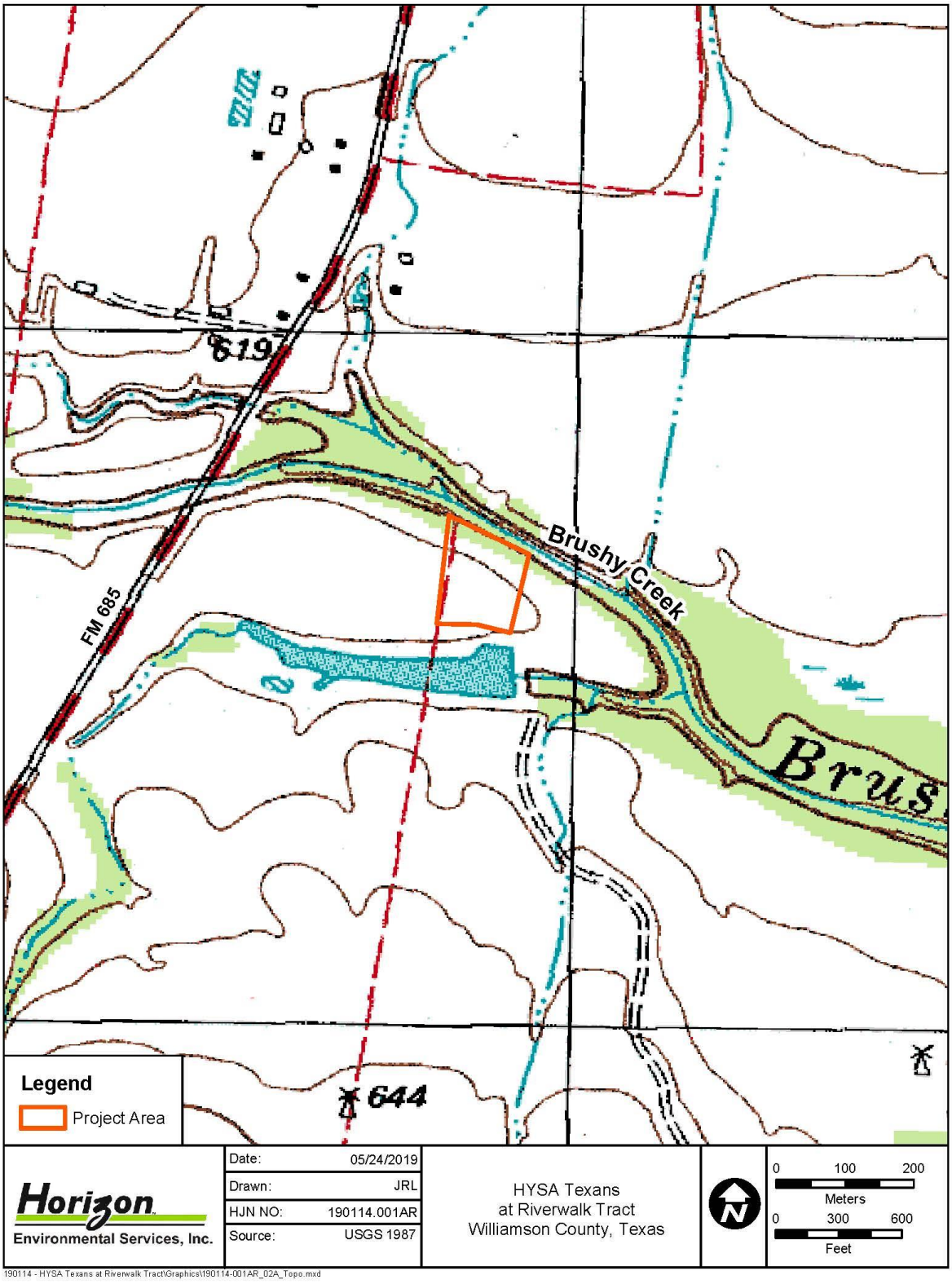

Figure 2. Location of Project Area on USGS Topographic Quadrangle

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, and Appendix A summarizes shovel test data.

2.0 ENVIRONMENTAL SETTING

2.1 PHYSIOGRAPHY AND HYDROLOGY

The project area is located in south-central Williamson County, Texas, just east of the boundary of three significant physiographic provinces—the Blackland Prairie, the Edwards Plateau, and the Gulf Coastal Plain. The Blackland Prairie, within which the project area is situated, is a narrow physiographic zone between the Edwards Plateau to the west and the Gulf Coastal Plain to the east. It is a low, rolling land that extends in a narrow band along the eastern edge of the Balcones Fault Zone from the Red River Valley in northeastern Texas to the southern edge of the Edwards Plateau. This is an area of low topographic relief and poor drainage in which water often ponds after rainstorms and streams flow at very gentle gradients. The Edwards Plateau and Balcones Escarpment are associated with a great fault system that arcs across Texas to form a distinct boundary between uplands composed primarily of limestone bedrock and lower plains composed mostly of softer rocks. In places, this boundary is marked by an abrupt scarp (the Balcones Escarpment) and in others by a more gradational ramp, but the entire length of this transition zone is a major ecotone in terms of topography, bedrock, hydrology, soil, vegetation, and animal life. The project area is situated on the southern upper terraces of Brushy Creek. Elevations are relatively flat within the project area, ranging only from approximately 182.9 to 185.9 meters (600.0 to 610.0 feet) above mean sea level (amsl).

Hydrologically, the project area is situated within the Brazos River basin. Drainage within the project area is to the north toward Brushy Creek. Brushy Creek flows generally northeastward to the San Gabriel River. The San Gabriel River flows eastward to its confluence with the Little River in Milam County, which in turn flows a short distance eastward and empties into the Brazos River. The Brazos River flows southeastwards across the Blackland Prairie and Gulf Coastal Plain, ultimately discharging into the Gulf of Mexico a short distance northeast of East Matagorda Bay.

2.2 GEOLOGY AND GEOMORPHOLOGY

Geomorphologically, the project area is on Quaternary-age alluvium (Qal), which is composed of clay, silt, sand, gravel, and organic matter (USGS 2019). Soils within the project area are composed of alluvium sediments of the Oakalla series, which typically consists of deep deposits of silty clay loam (Figure 4; Table 1) (NRCS 2019).

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)
Oa	Oakalla silty clay loam, 0 to 2% slopes, occasionally flooded	Loamy alluvium on floodplains	0-8: Silty clay loam (Ap) 8-23: Silty clay loam (Ak) 23-53: Silty clay loam (Bk1) 53-80: Silty clay loam (Bk2)
Of	Oakalla silty clay loam, 0 to 2% slopes, frequently flooded	Loamy alluvium on floodplains	0-8: Silty clay loam (Ap) 8-23: Silty clay loam (Ak) 23-53: Silty clay loam (Bk1) 53-80: Silty clay loam (Bk2)

Source: NRCS (2019)
NRCS = Natural Resources Conservation Service

In Central Texas, aboriginal cultural resources are commonly encountered adjacent to streams and springs as well as in upland settings. Historic-era resources may occur in virtually any physiographic setting but are most common in urban settings and in rural areas suitable for agriculture. Based on the physiographic setting of the project area a high terrace adjacent to Brushy Creek and the presence of Holocene-age alluvial soils, the project area has a high potential to contain aboriginal archeological deposits. The absence of historic-age structures within the project area or in the surrounding area suggests that a low potential exist for historic-age resources.

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). Bryant and Holloway (1985) present a sequence of climatic change for nearby east-central Texas from the Wisconsin Full Glacial period (22,500 to 14,000 B.P.) through the Late Glacial period (14,000 to 10,000 B.P.) to 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 6000 to 5000 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.

Williamson County is located within the south-central climatic division. The modern climate is typically dry to subhumid with long, hot summers and short, mild winters. The climate

is influenced primarily by tropical maritime air masses from the Gulf of Mexico, but it is modified by polar air masses. Tropical maritime air masses predominate throughout spring, summer, and fall. Modified polar air masses are dominant in winter and provide a continental climate characterized by considerable variations in temperature.

On average throughout the past century, precipitation and temperature in Texas manifest regional clines with mean annual precipitation totals declining regularly from east to west and mean annual temperature declining equally evenly from northwest to southeast (Larkin and Bomar 1983). In Central Texas, climate has fluctuated from subtropical humid to subtropical subhumid. Average annual precipitation totals 81.3 centimeters (32.0 inches) and temperature averages 67°F annually, ranging from 96°F in August (the warmest month) to 59°F in January (the coldest month). During this time, however, drier periods lasting from three to seven years, when total annual rainfall ranged from 30.5 to 63.5 centimeters (12.0 to 25.0 inches), were followed by abnormally wet years with 114.3 to 127.0 centimeters (45.0 to 50.0 inches) of rainfall.

Two annual precipitation peaks, which typically occur in May and September, are associated with frontal storms that form when southward-moving cool air masses collide with warm, moist air masses moving inland from the Gulf of Mexico (Bomar 1983; Carr 1967). The topographic discontinuity along the Balcones Escarpment lies directly in the path of the Gulf storm trace and increases the lift in convective storms to produce extreme amounts of rainfall. Two extreme examples are the excess of 91.4 centimeters (36.0 inches) of rain that fell within an 18-hour period in the vicinity of Thrall, Texas, in September 1921, and the 55.9 centimeters (22.0-inch) deluge that fell in less than three hours near O'Harris, Texas, in May 1935. Lower rainfall amounts are characteristic of winter and late summer. In winter, frontal storms pass so frequently that there is little time for moisture to increase, and prevailing upper-level winds from west to east often dominate over meridional flow, meaning that much of the available moisture is derived from the Pacific rather than from the Gulf of Mexico. In summer, cool fronts rarely penetrate the region, and rainfall occurs primarily as localized, thermal convective storms.

2.4 FLORA AND FAUNA

The project area is situated in the southwestern portion of the Texan biotic province (Blair 1950), an intermediate zone between the forests of the Austroriparian and Carolinian provinces and the grasslands of the Kansan, Balconian, and Tamaulipan provinces (Dice 1943). Some species reach the limits of their ecological range within the Texan province. The boundary, characterized as "approximate," between Blair's (1950) Texan and Balconian provinces passes through western Williamson County, west of the project area. Rainfall in the Texan province is barely in excess of water need, and the region is classified by Thornwaite (1948) as a C_2 (moist subhumid) climate with a moisture surplus index of from 0 to 20%.

Edaphic controls on vegetation types are important in the Texan biotic province, which is located near the border between moisture surplus and moisture deficiency. Sandy soils support oak-hickory forests dominated by post oak (*Quercus stellata*), blackjack oak (*Q. marilandica*), and hickory (*Carya buckleyi*). Clay soils originally supported a tall-grass prairie, but much of this soil type has been placed under cultivation. Dominant tall-grass prairie species include western wheatgrass (*Agropyron smithii*), silver beardgrass (*Andropogon saccharoides*), little bluestem

(*Andropogon scoparius*), and Texas wintergrass (*Stipa leucotricha*). Major areas of oak-hickory forest include the Eastern and Western Cross Timbers, and major tall-grass prairie areas include the Blackland, Grand, and Coastal prairies. Some characteristic associations of the Austroriparian province occur locally in the Texan province, such as a mixed stand of loblolly pine (*Pinus taeda*), blackjack oak, and post oak in Bastrop County, and a series of peat and bog marshes distributed in a line extending from Leon to Gonzales counties.

The fauna associated with this region are represented by a mixture of species from the Austroriparian, Tamaulipan, Chihuahuan, Kansan, Balconian, and Texan biotic provinces. At least 49 species of mammals occur in the Texan province, including Virginia opossum (*Didelphis virginiana*), eastern mole (*Scalopus aquaticus*), fox squirrel (*Sciurus niger*), desert pocket gopher (*Geomys breviceps*), fulvous harvest mouse (*Reithrodontomys fulvescens*), white-footed mouse (*Peromyscus leucopus*), hispid cotton rat (*Sigmodon hispidus*), eastern cottontail rabbit (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), white-footed mouse (*Peromyscus leucopus*), black-tailed jackrabbit (*Sylvilagus californicus*), ground squirrel (*Citellus tridecemlineatus*), white-tailed deer (*Odocoileus virginiana*), hispid pocket mouse (*Perognathus hispidus*), deer mouse (*Peromyscus maniculatus*), pygmy mouse (*Baiomys taylori*), 9-banded armadillo (*Dasypus novemcinctus*), and jaguar (*Felis onca*).

Both species of *Terrapene* known from the Austroriparian province—eastern box turtle (*T. Carolina*) and desert box turtle (*T. ornata*)—occur in the Texan biotic province. Sixteen species of lizards, including seven grassland and nine forest species, are also found, including green anole (*Anolis carolinensis*), eastern fence lizard (*Sceloporus undulates*), common ground skink (*Leiolopisma laterale*), glass snake (*Ophisaurus ventralis* [grassland species]), collared lizard (*Crotaphytus collaris*), Texas spiny lizard (*Sceloporus olivaceus*), Texas horned lizard (*Phrynosoma cornutum*), and Great Plains skink (*Eumeces obsoletus* [forest species]). Only 5 species of urodele fauna are known from this area, including small-mouthed salamander (*Ambystoma texanum*), tiger salamander (*Ambystoma tigrinum*), and eastern lesser siren (*Siren intermedia*), and the Texan province acts as a barrier to urodele distribution between the endemic Balconian province fauna to the west and the Austroriparian fauna to the east.

Anuran fauna is composed primarily of Austroriparian or otherwise widely distributed species, including eastern spadefoot toad (*Scaphiopus holbrookii*), Gulf Coast toad (*Bufo valliceps*), Woodhouse's toad (*Bufo woodhousii*), southern cricket frog (*Acris gryllus*), southern chorus frog (*Pseudacris nigrita*), gray tree frog (*Hyla versicolor*), green tree frog (*Hyla cinerea*), North American bullfrog (*Rana catesbeiana*), northern leopard frog (*Rana pipiens*), and narrow-mouthed toad (*Microhyla carolinensis*). Additional anuran species that fail to cross from the Texan into the Austroriparian province include pacific tree frog (*Pseudacris clarkia*), Strecker's chorus frog (*Pseudacris streckeri*), and striped whipsnake (*Microhyla olivacea*).

Other reptile and amphibian species common to this biotic zone include six-lined racerunner (*Aspidoscelis sexlineata*), rat snake (*Ptyas mucosus*), eastern hognose snake (*Heterodon platirhinos*), rough green snake (*Opheodrys aestivus*), copperhead (*Agkistrodon contortrix*), western diamondback rattlesnake (*Crotalus atrox*), Blanchard's cricket frog (*Acris crepitans*), diamondback water snake (*Nerodia rhombifer rhombifer*), and Houston toad (*Bufo houstonensis*). Common bird species include northern bobwhite (*Colinus virginianus*), eastern

meadowlark (*Sturnella magna*), mourning dove (*Zenaida macroura*), killdeer (*Charadrius vociferus*), field sparrow (*Spizella pusilla*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), belted kingfisher (*Ceryle alcyon*), and mockingbird (*Mimus polyglottos*). Small herds of bison and antelope were common during the late prehistoric and early historic periods, but these species are no longer native to this region (Jurney et al. 1989:13-14).

3.0 CULTURAL BACKGROUND

The project area is located within Prewitt's (1981, 1985) Central Texas Archeological Region. Prewitt demarcated the southeastern boundary of the Central Texas Archeological Region at the town of Bastrop in Bastrop County, which borders Travis County on the southeast. The indigenous human inhabitants of Central Texas practiced a generally nomadic hunting and gathering lifestyle throughout all of prehistory, and, in contrast to much of the rest of North America, mobility and settlement patterns do not appear to have changed markedly through time in this region.

3.1 PALEOINDIAN PERIOD (CA. 12,000 TO 8500 B.P.)

The initial human occupations in the New World can now be confidently extended back before 12,000 B.P. (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 presently discount claims of much earlier human occupation during the Pleistocene glacial period.

The earliest generalized evidence for human activities in Central Texas is represented by the PaleoIndian period (12,000 to 8500 B.P.) (Collins 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, gravers, 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 Central 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 throughout all prehistoric time periods. In Central Texas, the PaleoIndian stage is divided into two periods based on recognizable differences in projectile point styles. These

include the Early PaleoIndian period, which is recognized based on large, fluted projectile points (i.e., Clovis, Folsom, Dalton, San Patrice, and Big Sandy), and the Late PaleoIndian period, which is characterized by unfluted lanceolate points (i.e., Plainview, Scottsbluff, Meserve, and Angostura).

3.2 ARCHAIC PERIOD (CA. 8500 TO 1200 B.P.)

The onset of the Hypsithermal drying trend marks the beginning of the Archaic period (8500 to 1200 B.P.) (Collins 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 Central 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 Central 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. Changes in projectile point morphology are often used as markers differentiating these three subperiods, though other changes in material culture occurred as well. Perhaps most markedly, burned rock middens appear during the Middle Archaic subperiod, continuing into the Late Archaic subperiod, and large cemeteries appear during the Late Archaic subperiod. In addition, the increasing density of prehistoric sites through time is often considered to constitute evidence of population growth, though differential preservation probably at least partially accounts for the lower numbers of older sites.

3.3 LATE PREHISTORIC PERIOD (CA. 1200 TO 350 B.P.)

The onset of the Late Prehistoric period (1200 to 350 B.P.) (Collins 1995) is defined by the appearance of the bow and arrow. In Central Texas, pottery also appears during the Late Prehistoric period (though ceramics appear earlier in 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 of Southeast Texas along with the bow and arrow through the Late Prehistoric period (Patterson 1980, 1995; Wheat 1953). In Texas, unifacial arrow points appear to be associated with a small prismatic blade technology. The Late Prehistoric period is generally divided into two phases, the Austin and Toyah phases. Austin phase sites occur earliest to the north, which has led some researchers (e.g., Prewitt 1985) to suggest that the Austin-phase populations of Central Texas were migrants from the north, and lack the ceramic industry of the later Toyah phase.

3.4 HISTORIC PERIOD (CA. 350 B.P TO PRESENT)

The first European incursion into what is now known as Texas was in 1519, when Alonso 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 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 earliest known historical occupants of Williamson County were the Tonkawa Indians. The Tonkawa, whose tribal name is a Waco word, *tonkaweya,* meaning "they all stay together," were historically tied to Central Texas as early as the late 17th century (Jones 1969:65; Newcomb 1961:134). Their linguistic family was thought to be affiliated with Karankawa, Comecrudo, and Cotoname, all of which are associated with the Coahuiltecan language group (Swanton 1915, 1940); however, these three languages are extinct, and it is therefore difficult to establish relationships to Tonkawan (Jones 1969: 65). The Tonkawa are now thought to have been an amalgamation of several independent bands, which included the Tonkawa proper, the Mayeye, the Cava, the Cantona, the Emet, the Sana, the Toho, and the Tohaha Indians (Carlisle 2010).

The earliest account of the Tonkawa tribe was recorded by Francisco de Jesus Maria in 1691, when the Spanish friar documented them as enemies of the Hasinai Caddo (Hodge 1910:779). Several years prior to this in 1687, René-Robert Cavelier, Sieur de La Salle's party reportedly encountered a group known as the Meghy, which may have been the Mayeye (Jones 1969:66). The Tonkawa were composed mainly of nomadic hunter-gatherer bands based on kinship and clans, and their lineage was traced and inherited through matrilineal lines (Newcomb 1961:135). Their subsistence strategies were largely based on game, including bison, deer, fish, and turkey (Newcomb 1961:134-138). The Tonkawa may antedate the extermination of the bison on the southern plains and scholars have speculated about their possible relationship with the Toyah Focus of central Texas (Jelks 1962:99; Jones 1969:65), but recent evidence suggests they may have migrated to the Edwards Plateau region from the southern plains as late as the early 17th century (Carlisle 2010).

By the latter part of the 18th century, the Tonkawa had been decimated by European-introduced epidemics and constant warfare with their enemies, the Cherokee and Comanche. These cultural and societal impacts resulted in a rapid decline in their population numbers (Newcomb 1961:136). By the mid-19th century, the Tonkawa were missionized and were generally timid and friendly toward the early European settlers of Williamson County based on their common enmity with the Comanches to the west (Jones 1969:70). In 1849, the Tonkawa were blamed for horse and mule theft and for murdering several white citizens of Williamson County, and the tribe gathered its 650 people and moved to the upper Brazos region (Jones 1969:70). After this migration, an area consisting of 32,424 acres along the upper Brazos River was surveyed by the US government and officially designated as the Tonkawa Reservation from 1855 to 1859 (Jones 1969:70). The Tonkawa shared this parcel of land with the Caddo, Anadarko, Ioni, and numerous other tribes (Jones, 1969:70). During the late 1850s, the Tonkawa

aided the Texas Rangers and the Seventh US Infantry on scouting expeditions against the Kiowas, Kickapoos, and Comanches, though they were removed from Texas to an Indian Territory reservation in present-day Oklahoma by 1859 (Jones 1969:70-71).

The region that would become Williamson County was also associated with the historical Lipan Apaches and their enemies, the Comanches. Before the Spanish settled missions on the San Gabriel River in the 18th century, the Upper and Lower Lipan Apaches frequently ranged and hunted throughout this region. After the missions were established, they raided the newly founded Spanish settlements for horses and captives (Odintz 2010). The Comanches were considered a loose tribe of transitory bands, possibly of Northern Shoshone origin, and were the last to surrender to the US government (Newcomb 1961:156). They occupied parts of Williamson County until 1838 but continued to raid Anglo settlements until the 1860s (Newcomb 1961:158-161). In addition to the Tonkawa, Lipan Apache, and Comanche, several other tribes, such as the Kiowa, Yojuane, and Tawakoni were reported to have been living in Williamson County at the time of early European settlement (Odintz 2010).

It is speculated that Álvar Núñez Cabeza de Vaca traveled through the southern Edwards Plateau region in the 16th century (Krieger 2002:48-49); however, this region was likely first explored by Captain Alonso De León in 1690 while he was seeking a route between the San Francisco de los Tejas mission in east Texas and the Mission de San Antonio de Paua mission in central Texas. This new route, called el Camino de Arriba, passed through Williamson Country along Brushy Creek and the San Gabriel River and represented a drier alternate route to the more southernly and previously established el Camino Real de los Tejas (Odintz 2010). Subsequent to its discovery in 1716 by the Spanish explorers Louis Juchereau de St. Denis and Domingo Ramon, Brushy Creek, a tributary of San Gabriel River, was the site of several of the earliest colonial period communities in what would become present-day Williamson County (Odintz 2010). During the mid-18th century, the Spanish colonizers settled along the San Gabriel River just east of Williamson County in present-day Milam County in a series of sites known as the San Xavier missions (Odintz 2010). In an effort to introduce colonists to central Texas in the 1820s and early 1830s, allotments of land in Williamson County were awarded to several Mexican and Anglo families. This colonization contract would eventually become known as Robertson's colony (also known as the Texas Association, Leftwich's Grant, the Nashville colony, and the upper colony) (McLean 1974:93). However, as a consequence of the outbreak of the Texas Revolution in 1835, the provisional government of Texas closed the colonial land offices, so few, if any, settlements in the county resulted from these awards (McLean 1974:93).

In the early days of the Republic of Texas in 1835, Anglo settlement began in the area that was to become southwestern Williamson County when a military garrison was built near the headwaters of Brushy Creek (Odintz 2010). The frontier post was named after Captain John J. Tumlinson, Jr., a commander of a Texas Rangers company and, later, a participant in the Texas Revolution (Tumlinson 2010). Originally, the military garrison was positioned to thwart Native American attacks; however, the post was eventually abandoned in 1836 under orders of the Texas provincial government during the war campaign against Mexico (Odintz 2010). Two years later, in 1838, Dr. Thomas Kenney and a party of Anglo colonizers established the first known civilian settlement in the area, which was based around a fort, known as Kenney's Fort, near the

banks of Brushy Creek (Odintz 2010). Native American raids continued in the region well into the 1840s, and Dr. Kenney was killed by one of these frontier war parties (Odintz 2010).

Due to the pressures of continuing Native American raids in the central Texas region, Governor Sam Houston advised settlers to abandon their farms and move away from the frontier in and around 1842 (Odintz 2010). After the US Congress passed the annexation resolution in 1845, the state's authority was transferred from the republic to the state in 1846, and Native American raids were finally quelled in the area (Odintz 2010; Neu 2010). This sudden paucity of frontier attacks resulted in an influx of settlers, who, at first, mainly occupied the arable lands along Brushy Creek and the San Gabriel River (Odintz 2010). In the mid-1840s, the first grist mill in the county was constructed by John Berry at the site of present-day Berry Springs Park and Preserve (Worley and Dyer 2009).

In 1848, 107 out of the total population of 250 settlers in the Milam District successfully petitioned to organize a new county, which the Texas Legislature named Williamson to honor the Texas Ranger, Battle of San Jacinto veteran, and judge Robert McAlpin Williamson (Odintz 2010; Worley and Dyer 2009). Along with Thomas B. Huling, George Washington Glasscock donated approximately 173.0 acres for a newly established county seat, which would later become known as the town of Georgetown (Worley and Dyer 2009). By 1850, the population census would list 1,379 whites and 155 slaves living in scattered agricultural communities and farmsteads along Brushy Creek and the San Gabriel River (Odintz 2010). Prior to the Civil War, only three families owned 15 or more slaves, but the majority of agriculture was produced by smaller family farms practicing subsistence-based agronomy (Odintz 2010). During the onset of the Civil War, Williamson County was one of three counties in Texas to vote against secession from the Union, and this may reflect the fact that a substantial population had emigrated from Vermilion County, Illinois, that had remained pro-Union during the secession crisis (Odintz 2010).

By 1850, Williamson County had blossomed into an agriculturally diverse county that focused on wheat, corn, cotton, cattle, and sheep (Whorley and Dyer 2009). By 1860, the Anglo population had tripled to 3,638 while the slave population had grown to 891, the latter being six times the amount ten years prior (Odintz 2010; Whorley and Dyer 2009). The geographic diversity of the land and ecotones (i.e., Blackland soils in the eastern half of the county, fresh water rivers, creeks, and trees) were ideal for agriculture, and several grist mills and, later, cotton gins began to appear throughout the county (Odintz 2010). Cotton, albeit not an important cash crop for most farmers, supplemented many homesteads' incomes, while the cattle ranching market was more widespread throughout Williamson County during this time (Odintz 2010). Both cattle and sheep husbandry had grown extensively from 1850 to 1860. For example, the number of head of cattle on local ranches grew from 11,973 in 1850 to 38,114 in 1860; similarly, the number of sheep grew from 2,937 head in 1850 to 16,952 head in 1860 (Odintz 2010).

During the secession crisis leading up to the Civil War and the following Reconstruction period, Williamson County experienced political strife centered on a rift that divided their political communities. Unionist support was evident in the county, as evidenced by a resolution denouncing secession adopted by the Texas Constitution Union at a party meeting in Round Rock in 1860 (Odintz 2010). In the same year, Williamson County rejected secession along with 19 other counties in a vote of 480 to 349 (Ordintz 2010). Aside from this pro-Union sentiment,

most of the citizens of Williamson County supported the Confederate cause by early years of the Civil War as five companies and regiments were raised, including "an independent 'spy' company under James O. Rice, a company of Texas Rangers for border defense under William C. Dalrymple, and companies in the Fourth, Seventh, and Sixteenth Texas Cavalry regiments" (Odintz 2010). Pro-Union loyalists enlisted in the US army and a small percentage either fled south to Mexico or to the North. Many Unionists were the recipients of vigilante violence at the hands of Confederate soldiers and sympathizers; for example, in July 1863, eight men from Williamson Country were en route to Mexico but were intercepted by Confederate troops and subsequently hanged near Bandera, Texas (Odintz 2010). Acts of violence such as these continued into the post-war Reconstruction period, and several citizens were arrested and tried for "flagrant crimes" and "illegal persecution of Union men" (Odintz 2010). Shortly after the war, the county government was returned to a conservative Democratic majority. Concomitantly, small groups of freed slaves built communities isolated from white neighborhoods, and they were barred from many professions based on their skin color (Odintz 2010). In the latter 19th century, Williamson County experienced a wave of violent crime, including horse and cattle thieves, outlaw robberies, drunken disputes, and homicides in the various saloons across the county (Odintz 2010).

While Williamson County experienced no physical effects or material damage during the Civil War, Williamson County suffered economically during the Reconstruction period as evidenced by the fallen value of livestock in 1870 from $823,653 to $341,794 (Odintz 2010). However, the county rebounded in the 1870s with an expansive cotton boom (Whorley and Dyer 2009). Additionally, many Chisholm Trail cattle drives originated in Williamson County (Whorley and Dyer 2009). In the 1870s, the town of Taylor in the eastern part of the county became a crucial and strategic railroad hub for the cattle trade (Odintz 2010). The technological advances of the railways and communication systems, such as the telegraph, bolstered the success of the cattle and cotton booms. The year 1876 saw the consolidation of the International-Great Northern with the Missouri Pacific railroads and the founding and flourishing of the nascent towns of Taylor, Hutto, and the relocation of the town of Round Rock (Odintz 2010). In the 1880s, further amalgamations of smaller railways, such as the Taylor, Bastrop, and Houston railways, were conglomerated into the larger corporate lines such as the Missouri, Kansas, and Texas Railway, which further aided in the booming of the towns Granger and Bartlett (Odintz 2010). In the early 20th century, many of the automobile roads typically were in dissolute shape. By 1930, there were 11,882 automobiles in the county, and, by the 1930s, the Works Progress Administration (WPA) helped with extensive road improvements, which included blacktopping, cementing, and building of highways (Odintz 2010).

With the economic agricultural boom of the late 19th and early 20th centuries came an influx of eastern European and Mexican immigrants, which led to an ethnic diversification in Williamson Country. In 1870, only 111 citizens out of 6,368 in Williamson County were of foreign birth; however, the 1880s and 1890s saw a significant population increase of Scandinavians, Germans, Czechs, Wends, and Austrians, and the foreign-born proportion remained steadily around 10% of the entire population from 1890 to the 1930s (Odintz 2010). In 1910, as European immigrantion ceased, Mexican immigrant began to arrive. In 1900, there were 294 Hispanics on the Williamson County census, 732 in 1910, and 4,967 in 1930, or 11% of the entire population

(Odintz 2010). With these immigrants came a plethora of distinct customs, cuisine, music, and architectural styles as well as new religious sects and denominations (Odintz 2010). At the end of the Civil War, only Baptist, Methodists, and different sects of Presbyterian churches were located in Williamson County. Eastern Europeans and Hispanics soon established Lutheran, Catholic, and Czech Moravian congregations, which expanded the religious horizons of the county. In 1930, the population of Williamson County had grown to over 44,000 citizens, and the economy was still heavily agriculturally based, with only 29 manufacturing businesses operating and employing approximately 300 workers (Odintz 2010). The cotton industry was soon to undergo a rapid metamorphosis as the Great Depression and the Dust Bowl hit in the later 1930s.

The cattle and sheep ranching industries declined dramatically in the late 19th and early 20th centuries, but both experienced a revivalist economic boom by 1950. By 1969, ranchers in Williamson County owned a record number of cattle—65,093 head (Odintz 2010). Sheep ranching followed a similar trajectory, peaking in 1890 with 171,752 pounds of wool, but showed a steady decline to 39,458 pounds of wool by 1920 (Odintz 2010). Unlike the cotton industry, the sheep industry went through a revitalization in the 1930s onward through the mid-20th century and reached record figures of wool production—336,494 pounds of wool by 1959 (Odintz 2010). Mohair, a fabric made of the silky hair of the angora goat that is typically mixed with sheep wool, became an agricultural staple of the economy in Williamson County by 1930, when 44,668 goats produced 209,098 pounds of mohair (Odintz 2010).

The second cotton boom occurred at the same time as the cattle industry boom in Williamson Country. In 1869, in the Georgetown *Watchman*, the editor advised its farming readers to "make cotton, but do not by any means, neglect the grain crop-diversity" (Odintz 2010). The production of cotton rose to an impressive 4,217 bales in 1880, 33,945 bales in 1900, and 80,514 bales from 1900 to 1901. Williamson County was among state leaders in cotton production, lagging just behind Ellis County (Odintz 2010). The total number of improved and tenable acres increased "tenfold from 1870 to 1880 and doubled again to 306,881 acres by 1890" (Odintz 2010). In 1880, the total percentage of available cropland in the county was 33%, rising to 77% by 1910 (Odintz 2010). Over the course of 70 years, the percentage of land tenure declined rapidly, shifting from 77% of farms worked by its owners in 1880 to 29% of owner-operators in 1930 (Odintz 2010). This tendency resulted from a variety of factors, including monopolization of farms by larger corporations and the economic setbacks caused by the Great Depression as well as a large-scale shift away from cotton and other staple crops.

By the late 1920s, the profitability of the cotton industry had begun to slump due to over-farming, soil depletion, overproduction, lack of crop and livestock rotation, and the introduction of the boll weevil. The African-American farming population was hit particularly hard by the economic depression; although representing only 16% of the entire population, 442 of 944 families were on a governmental financial relief plan (Odintz 2010). Widespread financial loss abounded, and a variety of federal relief programs assisted those in need. In 1936, $204,000 in subsidy checks were issued to Williamson County farmers (Odintz 2010). In order to alleviate the throes of the agricultural depression, crop diversification was encouraged as well as a shift away from staple crops to the adoption of animal husbandry. Cotton production between the years of 1930 and 1940 was almost cut in half from 68,266 to 36,890 bales per year (Odintz 2010). Many

farmers turned to corn production, and the acreage used for cotton production dropped by half. Corn filled the void, and acreage for corn production doubled (Whorley and Dyer 2009). Similarly, mohair and wool production also doubled to 102,517 and 342,983 pounds, respectively (Odintz 2010). As cotton was phased out of the overall agricultural economy, many farmers in eastern Williamson Country turned to other staple crops such as sorghum and wheat as well as various livestock by the later 20th century (Odintz 2010). Furthermore, poultry farming hit its stride in 1950, placing the county fifth in the state in chicken egg production; by 1980, the production of turkeys in Williamson Country was tenth in the state (Odintz 2010).

Throughout the middle to late decades of the 20th century, Williamson County experienced great social and economic changes. The African-American population, which had been remained steady between 15 and 18% throughout the early 20th century, began a rapid decline. From the 1940s onward, it had fallen to 4,111, about 5% of the total population in 1980 (Odtinz 2010). Unfortunately, these communities experienced institutionalized racism at the hands of both the state and the economy and were "relegated to segregated and inferior housing and educational facilities" until the social justice movements of the 1960s demanded change at the national level. These changes through nonviolent protests and civil disobedience were brought about by federal desegregation policies under the democratic Kennedy and Johnson administrations. Aside from the racial population regression, the overall population of Williamson County increased dramatically from 37,305 citizens in 1970 to an estimated 85,700 citizens in 1982, thus making it 34th in "population growth among counties in the US in the 1970s" (Odintz 2010).

4.0 ARCHIVAL RESEARCH

Prior to initiating fieldwork, Horizon personnel reviewed the THC's online *Texas Archeological Sites Atlas* (TASA) and the Texas Department of Transportation's (TxDOT) *Historic Districts & Properties of Texas* and *Historic Bridges of Texas* online databases for information on previously recorded archeological sites and previous archeological investigations conducted within a 1.0-mile radius of the project area. Based on this archival research, seven previously recorded archeological sites and two cemeteries are located within a 1.6-kilometer (1.0-mile) radius of the project area (Figure 5; Table 2) (THC 2019; TxDOT 2019a, 2019b). Note that the two cemeteries have also been recorded as archeological sites, and one of the cemeteries (41WM814; the Hutto Lutheran Cemetery) also has a minor prehistoric component. All of the known cultural resources are located well outside of the project area and would not be disturbed as a result of the proposed undertaking.

According to the THC's TASA, no prior cultural resources surveys have been conducted within or immediately adjacent to the project area.

A review of historical aerial photographs dating from 1954 to the present and US Geological Survey (USGS) topographic maps dating from 1925 to the present indicates that no historic-age structures have stood within the project area within the 20th century (NETR 2019). The project area has remained largely undeveloped until construction of the adjacent soccer park in the early 2000s.

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				
41WM814	Aboriginal lithic scatter (undetermined prehistoric); Hutto Lutheran Cemetery	Undetermined (prehistoric); Historic Texas Cemetery	0.5 mile east	No
41WM820	Aboriginal lithic scatter (undetermined prehistoric)	Undetermined	0.5 mile west	No
41WM1010	Aboriginal campsite (Late Archaic); Historic-age artifact scatter (undetermined historic)	Determined ineligible	0.7 mile west	No
41WM1017	Historic homestead/trash dump (20th century)	Determined ineligible	0.8 mile west-northwest	No
41WM1026	Aboriginal campsite (undetermined prehistoric)	Determined ineligible	0.8 mile west	No
41WM1262	Aboriginal lithic scatter (undetermined prehistoric)	Determined ineligible	0.9 mile north-northwest	No
Cemeteries				
Hutto Cemetery (WM-C107) (41WM813)	Cemetery	Historic Texas Cemetery	0.9 mile east-southeast	No
Hutto Lutheran Cemetery (WM-C018) (41WM814)	Cemetery	Historic Texas Cemetery	0.5 mile east	No

[1] *Determined eligible/ineligible* = Site determined eligible/ineligible by SHPO
Recommended eligible/eligible = Site recommended as eligible/ineligible by site recorder and/or sponsoring agency but eligibility has not been determined 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

SENSITIVE ARCHEOLOGICAL SITE LOCATION INFORMATION OMITTED

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

5.0 SURVEY METHODOLOGY

On May 7, 2019, Horizon archeologists Emily McCurdy and Rachel Naasz conducted an intensive cultural resources survey of the project area. The purpose of the survey was to locate any significant cultural resources that potentially would be impacted by the proposed undertaking. Horizon's archeologists traversed the park and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. The project area is located on the upper terraces of Brushy Creek and exhibited signs of prior disturbances from grading, landscaping, periodic vegetation clear-cutting, and construction of a gravel driveway that provides access to the back side of the adjacent soccer field to the west. The field where the parking lot would be constructed appears to already be in use as an informal parking lot for games at the adjacent park. Vegetation within the southern portion of the project area consists of manicured grasses, though the northern portion of the project area adjacent to Brushy Creek was densely overgrown in tall grasses and weeds and a line of deciduous trees lining the creek bank. The largely level, high terrace landform drops off sharply toward the creek, and no lower terraces are evident in this area. Visibility of the modern ground surface was generally poor due to vegetative ground cover (<20%) (Figures 6 to 8)

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 project areas between 1.2 and 4.0 hectares (3.0 and 10.0 acres) in size. As such, a minimum of seven shovel tests would be required within the 1.3-hectare (3.3-acre) project area. Horizon excavated a total of 14 shovel tests during the survey, thereby exceeding the TSMASS for a project area of this size (Figure 9). Shovel tests generally measured 30.0 centimeters in diameter and were excavated to a target depth of 1.0 meter below surface, to the top of pre-Holocene deposits, or to the maximum depth practicable. All sediments were screened through 6.35-millimeter (mm) hardware cloth. Shovel testing typically revealed dense grayish-brown to gray silty loam overlying dense grayish-brown clay loam or black clay at depths ranging from 45.0 to 75.0 centimeters (17.7 to 29.5 inches) below surface. Sediments on the tract exhibited extensive signs of prior disturbance and compaction. It is Horizon's opinion that sediments with the potential to contain subsurface archeological deposits were fully penetrated and that the project area was adequately assessed for cultural resources. Standard shovel test logs were completed for each shovel test describing the location, strata, soil texture and color, archeological materials (if present), and any unusual characteristics of the surrounding landscape. All sediments excavated from shovel tests were replaced in the shovel test hole upon completion of recording. The Universal Transverse

Figure 6. Overview of Project Area (Facing Southwest)

Figure 7. Dense Vegetation along Upper Terrace of Brushy Creek (Facing Northeast)

Figure 8. View of Brushy Creek from Northern Boundary of Project Area (North)

Mercator (UTM) coordinates of each shovel test were determined using hand-held Garmin Foretrex or eTrex Global Positioning System (GPS) devices using the North American Datum of 1983 (NAD 83). Shovel testing typically revealed dense, gravelly, dark grayish-brown to black clay extending from the modern ground surface to the bottom of all excavated shovel tests. It is Horizon's opinion that sediments with the potential to contain subsurface archeological deposits were fully penetrated and that the project area was adequately assessed for cultural resources. Specific shovel test data are summarized in Appendix A.

During the survey, field notes were maintained on terrain, vegetation, soils, landforms, survey methods, and shovel testing and backhoe trenching results. Digital photographs were taken, and a photographic log was maintained. Horizon employed a non-collection policy for cultural resources. Diagnostic artifacts (e.g., projectile points, ceramics, historic materials with maker's marks) and non-diagnostic artifacts (e.g., lithic debitage, burned rock, historic glass, and metal scrap) were to be described, sketched, and/or photo-documented in the field and replaced in the same location in which they were found.

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. No artifacts were collected during the survey. Following completion of the project, project records will be permanently curated at the Texas Archeological Research Laboratory (TARL).

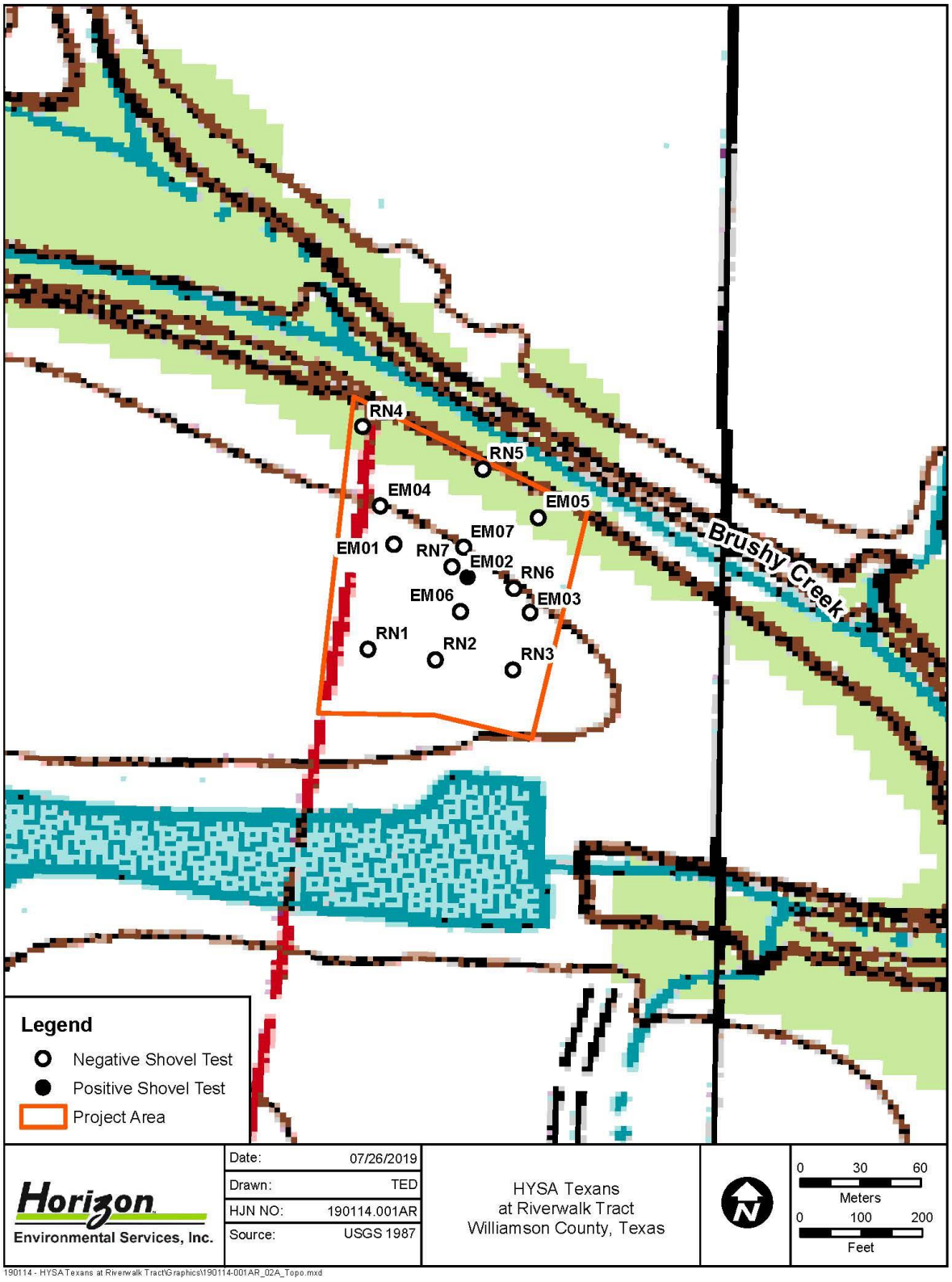

Figure 9. Locations of Shovel Tests Excavated within Project Area

6.0 RESULTS OF INVESTIGATIONS

One aboriginal expedient tool, a utilized chert flake, was observed in one shovel test at a depth of 30.0 centimeters (11.8 inches) below surface (Figure 10). The artifact is manufactured from medium-grained brown chert and exhibits signs of utilization along one edge. Additional delineation shovel tests were excavated surrounding this initial positive shovel test, though no more cultural resources were observed. This lithic flake tool has been classified as an isolated artifact occurrence and was not recorded as an archeological site. While the presence of an aboriginal lithic artifact is broadly indicative of prehistoric activity dating to an undermined prehistoric timeframe within the project area, the artifact also may have been redeposited from somewhere nearby during prior construction activities on and adjacent to the tract. No further investigations are warranted in connection with this single artifact.

Figure 10. Aboriginal Utilized Flake Observed within Project Area

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 APE 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 the Code of Federal Regulations (CFR) in 36 CFR §60.4(a-d). The 4 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, ethic 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 May 7, 2019, Horizon archeologists Emily McCurdy and Rachel Naasz conducted an intensive cultural resources survey of the project area. The survey was conducted under the overall direction of Jeffrey D. Owens, Principal Investigator, under Texas Antiquities Permit no. 8997. The purpose of the survey was to locate any significant cultural resources that potentially would be impacted by the proposed undertaking. Horizon's archeologists traversed the park and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. The project area is located on the upper terraces of Brushy Creek and exhibited signs of prior disturbances from grading, landscaping, periodic vegetation clear-cutting, and construction of a gravel driveway that provides access to the back side of the adjacent soccer field to the west. The field where the parking lot would be constructed appears to already be in use as an informal parking lot for games at the adjacent park. Vegetation within the southern portion of the project area consists of manicured grasses, though the northern portion of the project area adjacent to Brushy Creek was densely overgrown in tall grasses and weeds and a line of deciduous trees lining the creek bank. The largely level, high terrace landform drops off sharply toward the creek, and no lower terraces are evident in this area. Visibility of the modern ground surface was generally poor due to vegetative ground cover (<20%).

In addition to pedestrian walkover, the TSMASS require a minimum of two shovel tests per 0.4 hectare (1.0 acre) for project areas between 1.2 and 4.0 hectares (3.0 and 10.0 acres) in size. As such, a minimum of seven shovel tests would be required within the 1.3-hectare (3.3-acre) project area. Horizon excavated a total of 14 shovel tests during the survey, thereby exceeding the TSMASS for a project area of this size. Shovel testing typically revealed dense grayish-brown to gray silty loam overlying dense grayish-brown clay loam or black clay at depths ranging from 45.0 to 75.0 centimeters (17.7 to 29.5 inches) below surface. Sediments on the tract exhibited extensive signs of prior disturbance and compaction. It is Horizon's opinion that

sediments with the potential to contain subsurface archeological deposits were fully penetrated and that the project area was adequately assessed for cultural resources.

One aboriginal expedient tool, a utilized chert flake, was observed in one shovel test at a depth of 30.0 centimeters (11.8 inches) below surface. Additional delineation shovel tests were excavated surrounding this initial positive shovel test, though no more cultural resources were observed. This lithic flake tool has been classified as an isolated artifact occurrence and was not recorded as an archeological site. While the presence of an aboriginal lithic artifact is broadly indicative of prehistoric activity dating to an undermined prehistoric timeframe within the project area, the artifact also may have been redeposited from somewhere nearby during prior construction activities on the tract. No further investigations are warranted in connection with this single artifact.

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 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.

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APPENDIX A:

Shovel Test Data

Table A-1. Shovel Test Summary Data

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
EM01	637827	3377867	0-45+	Rocky grayish-brown clay loam (disturbed)	None
EM02	637859	3377851	0-65+	Grayish-brown clay loam	1 utilized flake @ 30 cmbs
EM03	637886	3377834	0-35+	Rocky grayish-brown clay loam (disturbed)	None
EM04	637820	3377886	0-65+	Grayish-brown clay loam	None
EM05	637888	3377881	0-50+	Grayish-brown clay loam	None
EM06	637856	3377834	0-30+	Rocky grayish-brown, clay loam (disturbed)	None
EM07	637856	3377866	0-50+	Grayish-brown clay loam	None
RN1	637816	3377815	0-70	Dense black silty loam	None
			70-75+	Very dense black clay	None
RN2	637845	3377810	0-55	Compact light grayish-brown silty loam	None
			55-60+	Very dense dark grayish-brown clay	None
RN3	637878	3377805	0-45+	Compact light grayish-brown silty loam with construction gravels	None
RN4	637812	3377925	0-75	Dark gray sandy/silty loam	None
			75-100+	Black sandy clay loam	None
RN5	637864	3377905	0-75	Dark gray sandy/silty loam	None
			75-100+	Black sandy clay loam	None
RN6	637878	3377846	0-45	Dry, compact light grayish-brown silty loam	None
			45-50+	Very dense dark grayish-brown clay	None
RN7	637851	3377856	0-45	Light grayish-brown, dry and compact silty loam	None
			45-50+	Very dense dark grayish-brown clay	None

[1] All UTM coordinates are located in Zone 14 and utilize the North American Datum of 1983 (NAD 83).

cmbs = Centimeters below surface

ST = Shovel test

UTM = Universal Transverse Mercator