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Intensive Cultural Resources Survey of the 1,753.7-acre Waterstone Tract, San Marcos, Hays County, Texas

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Intensive Cultural Resources Survey of the 1,753.7-acre Waterstone Tract, San Marcos, Hays County, Texas

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Intensive Cultural Resources Survey of the 1,753.7-acre Waterstone Tract, San Marcos, Hays County, Texas

By:

Jeffrey D. Owens and Kathryn St. Clair



**Texas Antiquities Permit No. 7955
HJN 170033 AR**

Prepared for:

**Wolff Enterprises II, LLC
Scottsdale, Arizona**

Prepared by:

Horizon
Environmental Services, Inc.

**Horizon Environmental Services, Inc.
Austin, Texas**

May 2017

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May 2017

MANAGEMENT SUMMARY

Horizon Environmental Services, Inc. (Horizon) was selected by Wolff Enterprises II, LLC (Wolff), on behalf of La Salle Municipal Utility District (MUD) Nos. 1, 2, 3, 4, and 5, to conduct a cultural resources inventory survey and assessment of the 709.7-hectare (1,753.7-acre) Waterstone tract. The Waterstone tract consists of a series of undeveloped agricultural fields located roughly midway between Kyle and San Marcos in southeastern Hays County, Texas. The proposed undertaking would involve construction of mixed-use commercial and residential development on the tract. The tract is located a short distance east of Interstate Highway (IH) 35 and is bounded on the northeast by Farm-to-Market Road (FM) 158, on the southeast by State Highway (SH) 21 (a.k.a. Camino Road), and on the southwest by Yarrington Road. At the time the cultural resources survey was conducted, design plans were not yet available and the specific locations of utility easements that would be constructed, owned, and operated by La Salle MUD Nos. 1 to 5 were unknown. Consequently, for purposes of the cultural resources survey, the project area was considered to consist of the entire 709.7-hectare (1,753.7-acre) tract.

The proposed project includes utility easements that would be constructed, owned, and operated by La Salle MUD Nos. 1 to 5, which represent public utilities within the state of Texas. Consequently, the proposed undertaking falls under the jurisdiction of the Antiquities Code of Texas (Natural Resources Code, Title 9, Chapter 191). At this time, no federal permits or agency involvement have been identified for the project. As the project includes a publicly sponsored undertaking with the potential to impact cultural resources, a cultural resources inventory and assessment of the project area was required.

From March 20 to 30, 2017, Horizon Project Archeologist Briana Smith, with the assistance of archeological technicians Jacob Lyons and Ben Johnson and under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive survey of the project area to locate any cultural resources that may be impacted by the proposed undertaking. Kathryn St. Clair, architectural historian, assisted with architectural evaluations and historical research on sites containing standing architecture or remnants of standing structures. Horizon's archeologists traversed the project area on foot and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources.

The vast majority of the project area is characterized by active agricultural fields that had recently been planted for the season. Small copses of hackberry and cedar trees are scattered

throughout the project area; these are typically associated with historic-age standing structures on archeological sites. The Clear Fork of Plum Creek and two of its tributaries flow eastward through the northern portion of the project area, and unnamed tributaries of Hemphill Creek drain the southern portion of the project area to the south. Typically, the channels associated with these drainages were dry at the time of the survey, though one poorly drained segment of the Clear Fork of Plum Creek retained water. Standing water was also present in scattered, poorly drained areas in the northern portion of the project area, though the agricultural fields that characterize the vast majority of the project area were typically dry. Two large stock ponds or small, artificial lakes are present in the north-central portion of the project area north of the only currently operating farm within the project area (recorded as site 41HY539). Two main roads traverse the project area—FM 158 crosses the project area from southwest to northeast, and a private gravel road crosses the project area between SH 21 on the southeast and FM 158 on the northwest—and a number of ephemeral field roads skirt the edges of the active fields. Visibility of the modern ground surface was characteristically excellent in the agricultural fields (100%), though ground surface visibility in the small forested patches was typically obscured by grasses and shrubs (<30%).

In addition to pedestrian walkover, the Texas State Minimum Archeological Survey Standards (TSMASS) require a minimum of 1 shovel test per 1.2 hectares (3.0 acres) within project areas measuring more than 40.5 hectares (100.0 acres) in size. As such, 585 shovel tests would be required within the 709.7-hectare (1,753.7-acre) project area. Horizon excavated a total of 223 shovel tests during the survey. While the shovel testing density did not meet the TSMASS requirements, the shovel testing regimen is considered to be more than adequate to assess the subsurface cultural resources potential of the project area. The vast majority of the project area consists of recently plowed fields, and visibility of the modern ground surface was excellent across most of the project area, with the exception of a few isolated stands of vegetation. As such, shovel testing was employed judgmentally to determine whether or not the potential existed for intact archeological deposits to occur below the active plowzone, which averaged approximately 30.0 to 35.0 centimeters (11.8 to 13.8 inches) in depth within the project area. The majority of the cultural materials observed during the survey were constrained to the modern ground surface, and all of the subsurface cultural materials observed were found within the plowzone. As such, the shovel testing confirmed that all cultural materials within the project area are confined to disturbed contexts on the modern ground surface and within the active plowzone.

Eleven newly recorded archeological sites were documented during the survey—41HY536 to 41HY546. Nine of the 11 sites (41HY436 to 41HY543 and 41HY546) consist of the remnants of early to mid-20th-century farmsteads and/or scatters of historic-age domestic debris. Two of the 11 sites (41HY544 and 41HY545) consist exclusively of aboriginal artifact scatters dated to unspecified prehistoric timeframes, and secondary cultural components composed of sparse scatters of aboriginal artifacts were also observed on three of the nine historic-age sites (41HY537, 41HY540, and 41HY543). All 11 sites are recommended as ineligible for designation as State Antiquities Landmarks (SAL) and for inclusion in the National Register of Historic Places (NRHP) based on the poor condition of the sites and their low potential to contribute meaningfully to an understanding of the historic and/or prehistoric past. No further investigations are warranted on these sites in connection with the proposed undertaking.

In addition, the mapped location of one previously recorded site located within the project area, 41HY426, was revisited in an attempt to re-locate and re-investigate the site. When it was originally recorded in 2006, this site consisted only of an ephemeral field scatter of early 20th-century domestic debris, including two glass shards. Horizon inspected the modern ground surface at the mapped site location and excavated several shovel tests in the surrounding area. No cultural resources were observed at the mapped location of site 41HY426. The two isolated artifacts that composed the site in 2006 have probably been reincorporated into the plowzone. Site 41HY426 was previously determined to be ineligible for inclusion in the NRHP, and no further archeological investigations are warranted on this site.

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 that meet the criteria for designation as SALs according to 13 TAC 26 or for inclusion in the NRHP according to 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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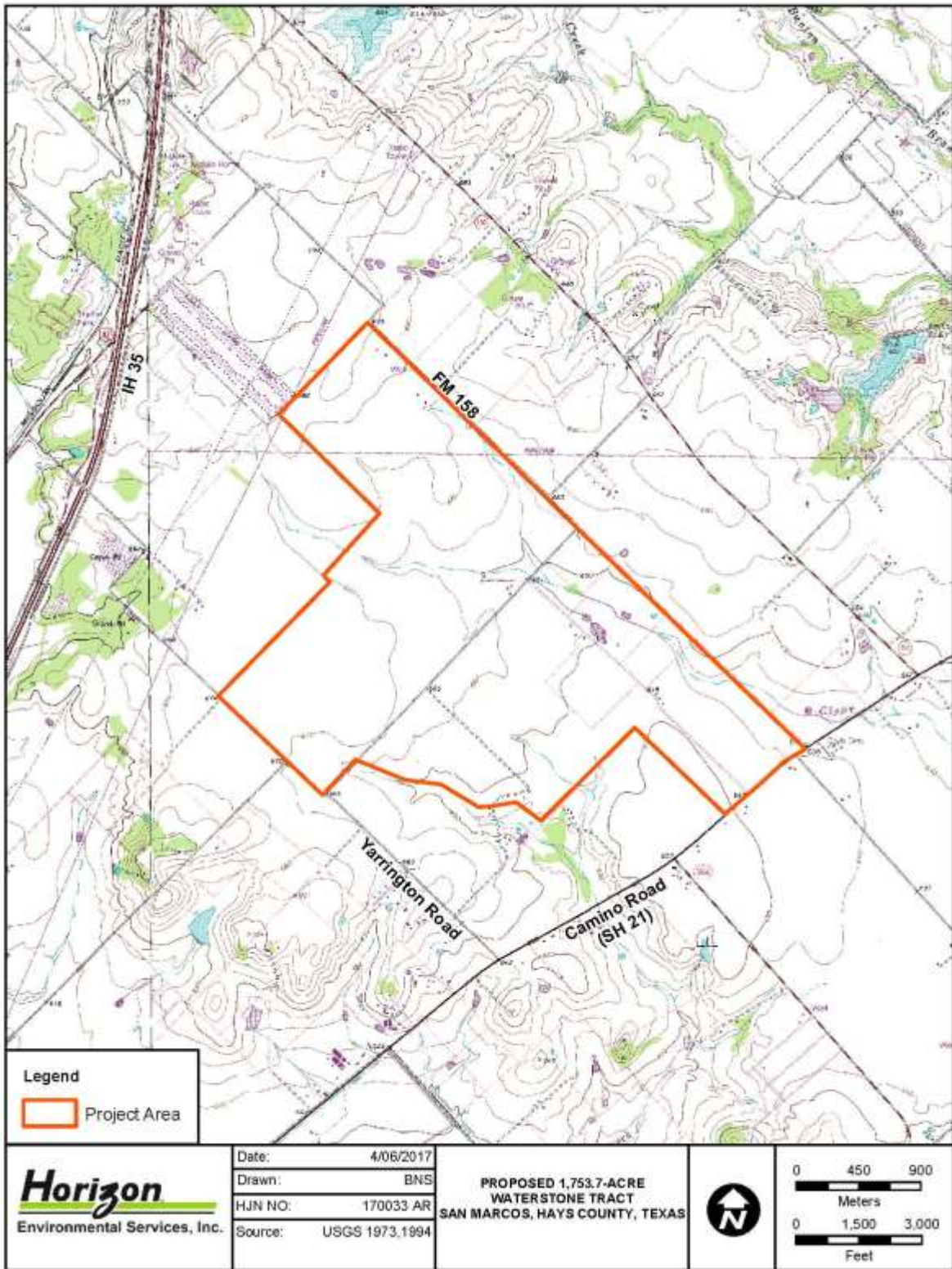
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1.0 INTRODUCTION

Horizon Environmental Services, Inc. (Horizon) was selected by Wolff Enterprises II, LLC (Wolff), on behalf of La Salle Municipal Utility District (MUD) Nos. 1, 2, 3, 4, and 5, to conduct a cultural resources inventory survey and assessment of the 709.7-hectare (1,753.7-acre) Waterstone tract. The Waterstone tract consists of a series of undeveloped agricultural fields located roughly midway between Kyle and San Marcos in southeastern Hays County, Texas. The proposed undertaking would involve construction of mixed-use commercial and residential development on the tract. The tract is located a short distance east of Interstate Highway (IH) 35 and is bounded on the northeast by Farm-to-Market Road (FM) 158, on the southeast by State Highway (SH) 21 (a.k.a. Camino Road), and on the southwest by Yarrington Road. At the time the cultural resources survey was conducted, design plans were not yet available and the specific locations of utility easements that would be constructed, owned, and operated by La Salle MUD Nos. 1 to 5 were unknown. Consequently, for purposes of the cultural resources survey, the project area was considered to consist of the entire 709.7-hectare (1,753.7-acre) tract (Figures 1-1 to 1-2).

The proposed project includes utility easements that would be constructed, owned, and operated by La Salle MUD Nos. 1 to 5, which represent public utilities within the state of Texas. Consequently, the proposed undertaking falls under the jurisdiction of the Antiquities Code of Texas (Natural Resources Code, Title 9, Chapter 191). At this time, no federal permits or agency involvement have been identified for the project. As the project includes a publicly sponsored undertaking with the potential to impact cultural resources, a cultural resources inventory and assessment of the project area was required.

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170033 - Waterstone Tract\graphics\work\170033AR_A01_Topoc (BNS) (04-12-2017)

Figure 1-1. Location of Project Area on USGS Topographic Map



Figure 1-2. Location of Project Area on Aerial Photograph

Chapter 26, Section 27, and the Council of Texas Archeologists (CTA) Guidelines for Cultural Resources Management Reports.

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 shovel test data, and Appendix B presents chain-of-title data for the eight newly recorded archeological sites with historic-age structures (sites 41HY536 to 41HY543).

2.0 ENVIRONMENTAL SETTING

2.1 PHYSIOGRAPHY AND HYDROLOGY

The project area is located approximately midway between Kyle and San Marcos along the southeastern edge of Hays County, Texas, near the boundary of two significant physiographic provinces—the Edwards Plateau and the Blackland Prairie. The Blackland Prairie, the narrow physiographic zone situated between the Edwards Plateau on the west and the Gulf Coastal Plain on the east, 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.

Physiographically, the project area is situated on a series of gently rolling uplands dissected by the Clear Fork of Plum Creek and two of its tributaries as well as by tributaries of Hemphill Creek. The project area slopes down generally to the southeast, spanning elevations ranging from 197.3 to 211.3 meters (647.0 to 693.0 feet) above mean sea level (amsl).

Hydrologically, the project area is situated within the Guadalupe River basin. Hays County's numerous streams generally flow in an easterly direction. The principal waterways are Bear, Cypress, and Onion creeks as well as the Blanco and San Marcos rivers. The Edwards Aquifer underlies the eastern portion of the county, and the San Marcos Springs, located north of the City of San Marcos, are the second largest in Texas, delivering over 102 million gallons daily. The northern half of the project area is situated on upland landforms dissected by the Clear Fork of Plum Creek and two of its tributaries, and the southern half is drained by tributaries of Hemphill Creek. The Clear Fork of Plum Creek flows generally southeastward, discharging into Plum Creek proper northeast of Luling in Caldwell County. Plum Creek meanders generally southward a short distance before flowing into the San Marcos River southeast of Luling. Hemphill Creek flows generally southwards, discharging directly into the San Marcos River near Martindale in

Caldwell County. The San Marcos River, in turn, meanders generally southeastward across the coastal plain, discharging into the Guadalupe River near Gonzales in Gonzales County. The Guadalupe River continues southeastward, ultimately discharging into the Gulf of Mexico near Port Lavaca.

2.2 GEOLOGY AND GEOMORPHOLOGY

Hays County is underlain by a thick sequence of Cretaceous-age sedimentary rock strata, while areas of alluvium may be present adjacent to major streams and rivers. Geologically, the project area is situated on Late Pleistocene-age fluvial terrace deposits of the Leona Formation (Qle), which forms a broad terrace southeast of Kyle that is composed of sand, clay, and gravel up to 15.2 meters (50.0 feet) thick (Fisher 1974). The project area traverses a mosaic of soil units typically composed of calcareous clayey alluvium of Late Pleistocene age (Table 2-1; Figure 2-1) (NRCS 2017). No Holocene-age alluvial sediments are mapped within the project area, though thin veneers of Holocene-age alluvial and/or colluvial deposits may be expected in undisturbed areas.

While aboriginal cultural resources are commonly encountered in deep alluvial sediments adjacent to major streams in Central Texas, no Holocene-age sediments are mapped within the project area. Furthermore, the majority of the project area is characterized by active agricultural fields, and a century or more of plowing and harvesting activities has thoroughly displaced and mixed surficial and near-surface sediments within the project area. Subsurface archeological deposits may be present within any areas of intact alluvium, though the overall lack of such contexts within the project area suggests that cultural resources would be constrained to the modern ground surface or in shallowly buried contexts in disturbed settings lacking integrity.

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 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.

Table 2-1. Summary of Mapped Soils within Project Area

NRCS Soil Code	Soil Name	Parent Material	Typical Profile/Horizon (inches)
ByA	Branyon clay, 0 to 1% slopes	Calcareous clayey alluvium derived from mudstone of Pleistocene age on stream terraces	0-12: Clay (Ap) 12-72: Clay (Bkss) 72-80: Clay (BCKss)
ByB	Branyon clay, 1 to 3% slopes	Calcareous clayey alluvium derived from mudstone of Pleistocene age on stream terraces	0-12: Clay (Ap) 12-72: Clay (Bkss) 72-80: Clay (BCKss)
GrC	Gruene clay, 1 to 5% slopes	Clayey alluvium over gravelly alluvium of Pleistocene age derived from mixed sources on ridges	0-13: Clay 13-22: Cemented material 22-80: Stratified very gravelly loam
KrA	Krum clay, 0 to 1% slopes	Clayey alluvium of Pleistocene age derived from mixed sources on stream terraces	0-19: Clay 19-49: Clay 49-80: Clay
KrB	Krum clay, 1 to 3% slopes	Clayey silty and clayey alluvium derived from limestone on stream terraces	0-19: Clay 19-49: Clay 49-80: Clay
LeA	Lewisville silty clay, 0 to 1% slopes	Calcareous clayey alluvium derived from mudstone on stream terraces	0-17: Silty clay (Ap) 17-44: Silty clay (Bk1) 44-61: Silty clay (Bk2)
LeB	Lewisville silty clay, 1 to 3% slopes	Calcareous clayey alluvium derived from mudstone on stream terraces	0-15: Silty clay (Ap) 15-38: Silty clay (Bk1) 38-69: Silty clay (Bk2)
Tn	Tinn clay, 0 to 1% slopes, frequently flooded	Calcareous clayey alluvium on floodplains	0-17: Clay (A) 17-57: Clay (Bss) 57-80: Clay (Bkssy)

Source: NRCS 2017

NRCS = Natural Resources Conservation Service

Hays 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 fairly 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 (cm) (32.0 inches [in]) and temperature averages 19°Celsius (C) (67°Fahrenheit [F]) annually, ranging from 36°C (96°F) in August (the warmest month) to 15°C (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 to 25 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-inches) 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 into 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, northwest 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 C₂ (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*) and blackjack and post oak in Bastrop County, as well as 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*), ground squirrel (*Citellus tridecemlineatus*), white-tailed deer (*Odocoileus virginiana*), hispid pocket mouse (*Perognathus hispidus*), deer mouse (*Peromyscus maniculatus*), black-tailed jackrabbit (*Lepus californicus*), 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.

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*), and glass snake (*Ophiosaurus ventralis*) (grassland species), as well as collared lizard (*Crotaphytus collaris*), Texas spiny lizard (*Sceloporus olivaceous*), 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 treefrog (*Hyla versicolor*), green treefrog (*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*), 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 (*Ceyrle 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 (Journey et al. 1989:13-14).

3.0 CULTURAL BACKGROUND

The project area is located within Prewitt's (1981, 1985) Central Texas Archeological Region. 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 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 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, 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 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 3 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 Álvarez de Pineda explored the northern shores of the Gulf of Mexico. In 1528, 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.

During the Spanish period, the region lay at the edge of the main route from San Antonio to East Texas, the Old San Antonio Road.¹ In 1691, Domingo Terán de los Ríos crossed the southern edge of the county on his way to the East Texas missions and the Red River. The Espinosa-Olivares-Aguirre expedition explored the upper San Marcos River in 1709, and Louis Juchereau de St. Denis was attacked by Apaches in 1714 at the San Marcos River crossing. A mission to be called San Marcos was authorized in 1729 near the site of present San Marcos, but the authorization was later rescinded in favor of San Antonio. San Xavier Mission and San Francisco Xavier Presidio were located briefly at the site in 1755-56, but no permanent settlement was attempted until 1807, when some 80 persons were moved to the Old San Antonio Road crossing of the San Marcos River. San Marcos de Neve, one of a chain of defense settlements, was abandoned four years later, after flooding and attacks by Comanche and Tonkawa Indians. To encourage settlement after the Mexican War for Independence, the government of Coahuila and Texas issued land grants in the county to Juan Martín Veramendi in 1831, Juan Vicente Campos in 1832, and Thomas Jefferson Chambers in 1834. The first Anglo-American settler in Hays County, Thomas G. McGehee, was issued a league of land in 1835 by the Mexican government and was farming north of the site of present San Marcos in 1846.

On March 1, 1848, the state legislature formed Hays County from territory formerly part of Travis County. William W. Moon, Eli T. Merriman, and Mike Sessom, original settlers and members of John Coffee Hays' company of Texas Rangers, worked with General Edward Burleson, a member of the Texas Senate, to have the new county named for Hays. County organization and the designation of San Marcos as the county seat gave impetus to settlement; the population grew from 387 in 1850 to 2,126 in 1860. The county shrank slightly on February 12, 1858, when it lost acreage to the new Blanco County and gained a portion of Comal County. On January 10, 1862, the legislature again transferred another small area to Blanco County. Boundaries remained stable for nearly a century, until resurvey of the Hays-Travis county line in 1955 added more than 16,000 acres to Hays County.

A stage line from Austin to San Antonio crossed the county in 1848, the year that Edward Burleson built the first sawmill. W.A. Thompson built the first cotton gin in the early 1850s, and, between 1855 and 1885, Ezekiel Nance built and operated five gins, five gristmills, a sawmill, a shingle mill, and a beef packery. Alfred B.F. Kerr organized the first church in Hays County in

¹ The following history of Hays County has been adapted from TSHA (2017).

1847, and a school was built at San Marcos in 1849. Another school was opened at Snake Lake in 1851, and John D. Pitts built a school in Stringtown before 1860. The Johnson Institute, founded in 1852 by Thomas Jefferson Johnson, drew students from a large area of Central Texas until it closed in 1872.

The early settlers of Hays County were a mix of old Texans and Georgia and Arkansas immigrants. With the coming of the Civil War, most of the residents favored secession. Colonel Peter C. Woods' 36th Texas Cavalry regiment was organized at Camp Clark, in neighboring Guadalupe County, in 1862; Company A was primarily made up of Hays County men. During the war, county beef helped to feed Confederate forces. Shortly after the war's end, Colonel George F. Snyder, a Georgian, established the first newspaper in Hays County, the *Pioneer*. During Reconstruction, a Ku Klux Klan group was formed, and, in May 1876, a military organization, the San Marcos Greys, was formed.

George Neill drove the first herd of cattle from Hays County to Kansas in 1867, and other drives followed. Farming also became more profitable in the eastern part of the county and helped encourage a fresh influx of settlers. By 1878, the county was out of debt, several new communities had been organized, and schools had grown in number to match the increased population. The Coronal Institute was founded in 1866 followed by the San Marcos public school system in 1870. Southwest Texas Normal School was authorized at the turn of the century and opened in 1903 as a teacher-training institution; it became Southwest Texas State University in 1969. San Marcos Baptist Academy was established in 1907.

In 1880, the first Hays County rail line, built by the International-Great Northern Railroad, was completed to San Marcos from Austin; it later extended to San Antonio. Another population boom followed the railroad. The county population nearly doubled, from 7,555 in 1880 to 14,142 in 1900, and then remained virtually unchanged for the next 50 years despite the influences of World War I and the depression of the 1930s. Even the economic stimulus of World War II had only momentary effect. Hays County remained predominantly agricultural; almost 90% of the mid-1960s farm income came from livestock. Not until the establishment of the Gary Job Corps Training Center on the site of the former Gary Air Force Base in 1964 and the growth of enrollment at the university in San Marcos did Hays County begin a period of steady growth—from 19,934 in 1960 to 27,642 in 1970; 40,594 in 1980; and 65,614 in 1990. Although agriculture remained significant in county economics, nonagricultural income, primarily at the educational and training facilities, played an even larger role. The 1979 per capita income of \$6,009, however, remained well below the state average of \$8,778.

Since early in the century, Hays County has enjoyed a steady influx of tourists attracted by the caves, springs, and spas of Wimberley and San Marcos. Aquarena Springs and Wonder Caves are particularly well known. Camp Ben McCulloch, near Driftwood, was organized in 1896 as a site for reunions of the United Confederate Veterans; their descendants continue the annual tradition. More recently, the county caught the attention of environmentalists. Ezell Cave, a watery cavern in San Marcos, is the habitat of several rare animal species, including the Texas blind salamander, and six of the 10 known varieties of aquatic cave fauna are found only in this cave and its underground waters. The only known habitat of the San Marcos salamander is San Marcos Springs, and two other unique fish of the springs, the fountain darter and San Marcos

gambusia, were classed as endangered in 1990. Also on the endangered list is Texas wild rice, which is not known to exist outside a small area near the springs.

During the 1970s and 1980s, growth in the northern and eastern parts of the county was influenced by the expanding Austin metropolitan area and the Austin-San Antonio urban strip along IH 35. In 1973, Hays County became part of the Austin Metropolitan Statistical Area. In addition to the county seat, San Marcos, which had a population of 28,743 in 1990, other county population centers are Wimberley (2,403), Kyle (2,225), Buda (1,795), Dripping Springs (1,033), and Hays (252).

San Marcos is the county seat of Hays County. It was the site of several Spanish attempts at colonization before it became the center of Anglo-American settlement in the area. The first such attempt, in 1755, saw the short-lived establishment of the San Xavier missions and the presidio of San Francisco Xavier. These were relocated less than a year later, and the headwaters of the San Marcos River remained unsettled for another half-century. In 1808, the Spanish governor of Texas, Manuel Antonio Cordero y Bustamante, sponsored the civil settlement of San Marcos de Neve near the same site, but floods and Indian raids prompted its abandonment in 1812. In November 1846, Thomas G. McGehee became the first Anglo-American to settle in the vicinity of the San Marcos Springs, but William W. Moon has been identified as the original resident of the site that became San Marcos proper. Moon was soon joined by other former members of John C. Hays's company of Texas Rangers and by Gen. Edward Burleson. Caton Erhard opened the first store and post office by 1847, and the First Methodist Church began soon after. The Texas Legislature organized Hays County on March 1, 1848, and designated the young community as the county seat. In 1851, General Burleson, William Lindsey, and Dr. Eli T. Merriman took possession of a 259.0-hectare (640.0-acre) section of the Juan Veramendi grant and laid out the town center. Tarbox and Brown stagecoaches linked San Marcos with Austin and San Antonio in 1848, and the town began its development as the commercial center for the cart trade between area farmers and ranchers and coastal commission merchants. It also became a center for ginning and milling local agricultural products. Slowed for a while by the Civil War, the population in 1870 had grown only to 742, but, in the decade following the arrival of the International-Great Northern Railroad in 1881, it reached 2,335. In that decade the town supported two banks, an opera house, and a variety of stores, saloons, and other businesses.

Cattle and cotton production in the area provided the basis for the gradual but steady growth of San Marcos as a center for commerce and transportation. The chartering in 1899 and subsequent opening in 1903 of Southwest Texas State Normal School and of the San Marcos Baptist Academy in 1907 established education as an important local industry. By the second decade of the 20th century, San Marcos counted more than 4,000 residents. On the eve of World War II, the population was estimated to be 5,500, and the town had 200 businesses. During and after World War II, the city's economy began to diversify, and growth accelerated. Wartime demand provided the initial stimulus for development of a light industrial and manufacturing sector; it was reported after the war that the financial resources of the city had increased 500% from prewar levels. In the 1960s, with the emergence of Aquarena Springs and Wonder Cave as important attractions, the tourist industry became a reliable and growing source of income. The

expansion of Southwest Texas State University into an important regional institution, as well as the establishment in 1965 of the Gary Job Corps Training Center, not only made education the single largest employer in the city but also helped to account for a 48% increase in population, from 12,713 in 1962 to 18,860 in 1972. Industrial development continued apace through the 1970s; among the 400 businesses recorded by 1980 were manufacturers of furniture, sheet metal products, plastics, woolens, lighting fixtures, telecommunication devices, baked goods, construction materials, and tortillas. Austin's emergence as a regional metropolitan center is another cause of the growth of San Marcos since the 1950s; in 1973, Hays County and San Marcos became part of the Austin Standard Metropolitan Statistical Area.

3.5 HISTORIC CONTEXT OF THE PROJECT AREA

Early Settlement in Hays County

The project area is located in the eastern, rural section of Hays county; southeast of Kyle and northeast of San Marcos. The small community of Uhland is approximately 4.8 kilometers (3.0 miles) northeast of the project area. The local terrain is characterized by clay and chalk soils that natively support post oak trees, though most of the natural vegetation has been cleared from the project area to create agricultural fields.

Historically, rural communities of the Blackland Prairie included small villages like Uhland and Niederwald and larger towns like Kyle and Buda surrounded by family farms ranging from 32.4 to 101.2 hectares (80.0 to 250.0) acres in size. The smaller communities were often located in the center of farming districts defined by ethnic or religious origins or by limiting topographical features such as rivers and creeks. They functioned somewhat like neighborhoods within urban areas that have a school, one or two churches, a few grocers, and a gas station to serve the immediate needs of the surrounding households. Nearly every such hamlet in the Blackland Prairie had a cotton gin. Larger towns in the region, like Buda and Kyle, were generally located at the crossroads of two or more county roads, often with railroad access, and supported more diverse commercial, institutional, and social activities. Such towns generally had several general merchandise stores, a few specialty retail shops, a small railroad hotel or inn, and a few cafes or restaurants. Religious and institutional buildings included a regional high school, several churches serving different denominations, and occasionally a cultural or civic building such as a community hall or masonic lodge. Larger rural towns sometimes had banks, law offices, and doctors' offices or small clinics. They usually had several small industries, including one or more gins, a lumber yard, and sometimes a mill or quarry (Myers 2004).

Kyle is located off of IH-35 approximately 12.9 kilometers (8.0 miles) north of San Marcos and 32.3 kilometers (20.0 miles) south of Austin in southeastern Hays County. Established on July 24, 1880, when David E. Moore and Fergus Kyle (for whom the town was named) deeded 80.9 hectares (200.0 acres) for a town site to the International-Great Northern Railroad. The new town drew residents and businesses from Mountain City (4.8 kilometers [3.0 miles] to the west) and Blanco (6.4 kilometers [4.0 miles] to the west). The community's population exceeded 500 by 1882 but later declined. Kyle was incorporated in 1928 as a general-law city with a mayor and five council members (Strom 2017).

Beginning in the 1860s, several communities developed within Hays County, with the population growing from 387 in 1850 to 2,126 in 1860. Following the Civil War, there was an influx of settlers to Hays County. In 1880, the opening of the Great Northern Railroad through the county drew many families and immigrants to the area. During this period, many areas of the county were devoted to the raising of sheep and goats, and large amounts of wool and mohair was produced annually. In the last two decades of the 19th century, the eastern part of the county (where the project area is located) was settled by many German immigrants. The majority of the German Baptists lived in an area referred to as Plum Creek Valley. The prairie within this valley was known as Pecan Springs. Pecan Springs was part of the original Hemphill Survey (Marder 1995).

The founder of Pecan Springs was Colonel R.J. Sledge of North Carolina. Colonel Sledge became a planter and purchased his first tract of land (102.0 hectares [252.0 acres]) in Hays County on October 23, 1875. He later purchased 493.7 hectares (1,220.0 acres), including Pecan Springs, in 1876. He eventually built a house, servant and employee quarters, outbuildings, and a cotton gin. Between 1875 and 1880, Colonel Sledge acquired 2,023.4 hectares (5,000.0 acres) in this area. He planned to use the hillsides and prairies for grazing sheep and cattle and to use the valleys for raising cotton and foodstuffs. Colonel Sledge eventually sold portions of his land to other German settlers, many of which were from nearby New Braunfels. He further recruited immigrant families from the German town of Kassel in efforts to settle Pecan Springs (Marder 1995). Churches and other community buildings were built as the German population grew in this area east of Kyle.

In 1891, the county judge created school district boundaries within Hays County. The Hemphill Elementary School was established on the William Hemphill Survey from land purchased from David Crews (Stovall et al. 1986).

Approximately 600,000 Germans arrived in America between 1831 and 1847 (Myers 2004). Following the Civil War, German immigration was encouraged by railroad companies that advertised their lands extensively in Germany. Most of the distinctively German settlements in Hays County, such as Umland and Niederwald, date from this period. After emancipation, many former slave owners moved west, while others gave up cotton farming and began subdividing their plantations, breaking them into smaller parcels and selling them piecemeal. This allowed later immigrant families, like Germans and Swedes, to establish farms in areas where previously land had not been available. German immigration slowed in the 20th century but continued to be a significant factor in Texas until the 1920s (Jordan 1969).

During the 1880s, when cotton was first cultivated on a large scale on the Blackland Prairie, the community of Umland formed along the eastern edge of the county. Umland encompassed an earlier community named Live Oak, which had been founded around 1860, but Umland was settled largely by an influx of German farmers who had moved into the area by 1880.

From the 1880s until the turn of the century, Umland was an unnamed collection of farmsteads with a cluster of buildings, including a blacksmith shop and general mercantile store, built in 1892. By 1900, the area's population warranted a post office; it was named Umland in honor of the German poet Ludwig Umland (1787-1862). The village grew very little beyond the

few businesses that served the immediate needs of the area's agricultural economy, but the surrounding farmsteads prospered and increased in the early 20th century. Virtually all of area's farmers were of German descent and were members of the Evangelical Church in the 1930s (Marder 1995).

An Official Texas Historical Marker (OTHM) denotes the Immanuel Baptist Church located on FM 150 approximately 0.8 kilometer (0.5 mile) northeast of the project area. The church was first organized in 1883 at the home of George Wiegand, a German settler. The church was formed as the German Baptist Church of Kyle. By 1893, a church building was constructed on land acquired from Frank Marstellar and later reconstructed in 1940 following a fire (THC 2017).

In general, German farmers tended to own small, family-operated farms concentrating on a variety of crops and a balance of pasture, field, orchard, and garden. They raised corn, cotton, and cattle like their Anglo neighbors, but large cotton plantations using slave labor and concentrating on a monoculture cash crop were largely unknown to them (Myers 2004).

The German community in the Pecan Springs area was severely impacted by a hail and wind storm in 1925 followed by a drought. Too much rain during 1926 resulted in bollworms and leaf worms that destroyed the cotton crops. The crop failures forced many families into bankruptcy. Those not affected by agricultural losses often faced other hardships from the Great Depression. By the time of World War II, many families had moved to urban centers, including Austin and San Antonio, in search of work. Farms were often leased out to tenant farmers and extended families started to disperse (Marder 1995).

The turn of the 20th century marked a prolific period of harvest and crop production for farmers in this region. With the abundant harvest, farmers needed extra help. During this period, many families from Mexico migrated to the Hays County agricultural fields and became tenant farmers, eventually purchasing farms and land of their own. The 1900, 1910, and 1920 census records indicate that many Mexican families were renting and living on property within the project area during this period of time. This area of Hays County resulted in an enclave of the Mexican and Hispanic population. In 1905, a Latin-American school district was formed on the Hemphill Survey tract to serve the children of the growing community.

Agriculture and Ranching

The southeastern corner of Hays County is part of the Blackland Prairie region, one of the smaller agricultural zones in the county. Although ranching and raising livestock were historically the more prevalent agricultural activities in the larger Edwards Plateau region of Hays County (primarily west of IH-35), the prairie region supported cotton and dairy production, which were common in and around the project area (Moore et al. 2013). Cotton was the primary crop produced in the area, grown as early as the 1850s to 1925. The area experienced droughts, heavy rains, insect infestations, and careless farming techniques that contributed to the decline of the productivity of the land in the 1920s (Hindes 1996). Soon after, the Depression contributed to the decline in the cotton market, and, subsequently, the growth of the area.

The Blackland Prairie was not ideal for subsistence farming. The labor involved in cultivating the black clay is considerably more intensive than that required along the alluvial

corridors; therefore, farmers raised cash crops, primarily cotton. Wild fluctuations in cotton prices and production made it difficult to predict income and curb debt. Increased production invariably followed a good year, flooding the market and forcing prices down. Extension services and farm cooperatives encouraged diversification, but farmers planted what they thought would return the most money in a given year, and that was usually cotton.

There were soon farms of all sizes on the Blackland Prairie area of Texas, but few contained as many as 404.7 hectares (1,000.0 acres). At the beginning of World War I, cotton bale production had fallen drastically; however, during the war, demand drove cotton prices to unprecedented levels and farmers planted as much as they could. When the war ended, prices plummeted. The boom and bust cycle was typical of cotton prices in the late 19th and early 20th centuries. Another problem that plagued cotton production was the boll weevil, which appeared in the Corpus Christi area around 1893 and quickly spread to other cotton-producing areas of the South (Myers 2004).

The revival of cotton on the Blackland Prairie in the late 19th and early 20th centuries was based largely on tenant farming. In Hays County, the rise in cotton economy dates from the arrival of the railroads in 1880 until about 1925. Floods, droughts, and poor land use, combined with the invasion of the boll weevil, ruined the county's cotton fields in the mid-1920s. World War II sent thousands of young Texans abroad and many never returned to the farm after the war (Myers 2004).

In the early 20th century, the percentage of tenant-occupied farms grew compared with those tended by resident owners. Many farm owners lived in nearby towns and engaged in other occupations while they leased or otherwise profited from their land. There were three categories of arrangements between absentee farmers and their tenants—sharecropping, share renting, and cash renting. Tenants agreed to furnish the landowner with part of the crop they raised, usually a third or a half (Myers 2004).

By 1950, the majority of people recorded in the census of Hays County lived in towns rather than on farms or ranches. That trend continued through the second half of the 20th century as farms and ranches were divided into suburban housing tracts.

Rural landscape features included plowed fields and pastures fenced with cedar post and barbed wire fencing, timber lots along creeks, and stock ponds. Historic-age properties tend to be clustered late 19th and early 20th-century farmsteads containing a one- or one-and-a-half-story, wood-frame dwelling set on cedar post, concrete block, or brick pier foundations and one to 20 agricultural buildings or structures set near the dwelling, frequently to the rear. On historic-age farms, the building complex contains the primary dwelling, smaller houses for tenants or shelters for hired hands, and animal and vehicle barns and sheds. Narrow graveled or packed earth driveways lead to the front or main entry of houses from county roadways. A few farmsteads contain tenant houses or other, sometimes temporary, accommodations for hired hands during peak periods of agricultural activity, such as harvest. All contain outbuildings associated with agriculture. The number and type of outbuildings varies depending on the crops, livestock, and scope of a particular farm (Myers 2004).

The rural landscape in the Blackland Prairie featured farm complexes situated on high ground and set back some distance from the nearest public roads. Farm building complexes were typically positioned near the center of their farms to minimize the distance from barn to field and thus reduce the strain on draught animals. Farmsteads typically contained a primary family dwelling, one or more small tenant houses, privies, smoke houses, storage sheds, animal and vehicle barns, and small animal shelters such as pig pens and chicken coops. Auxiliary structures included cisterns, wells, well houses, windmills, and dipping troughs (Lassell 2010).

Agricultural resources include a variety of buildings with varying roles in the production of crops and livestock. Associated property types include, but are not limited to:

- Farmsteads/ranches/plantations with support buildings, such as barns, dairies, sheds, coops, cribs, water tanks, windmills, and stock tanks.
- Processing plants and storage buildings, such as grist mills, cotton gins, and grain elevators.

Irrigation Systems

Ranching has played a major role in Texas agriculture since the early 1700s. By the late 1880s, the open range ended and fenced pastures occupied the landscape. During World War I, the Texas cattle industry boomed. However, deflation and bankruptcies followed in the 1920s, followed by the stock market bust of 1929. The cattle industry suffered, and plunging prices, droughts, overstocked ranges, and scarce feed plagued the industry. Things slowly improved in the 1930s, and, by the 1950s, the cattle industry was conducted as an enterprise, though some ranchers elected to run stock farms with small heads and crops (Lassell and Wolfenden 2009).

Livestock resources include a variety of buildings with varying roles in the raising of livestock. The form of individual structures, as well as their arrangement, often provides an indication of the type of ranching practiced. Associated property types include:

- Farmsteads/ranches/plantations with support buildings, such as barns, dairies, sheds, coops, cribs, water tanks, windmills, and stock tanks.
- Processing plants and storage facilities, such as meat-packing plants, feed lots, railroad siding for transporting livestock, livestock pens, and cattle chutes.

Transportation Networks: Old San Antonio Road (Camino Real) and the Railroad

The Camino Real was a path across Texas connecting the missions. It was used predominantly by Spanish settlers to transport supplies and facilitate trade between Mexico City and East Texas before Texas independence. Texans continued to use the trail as a main trade artery until the advent of the railroad in the late 1800s (TSHA 2014).

More a series of trails than a highway, the Camino Real had a number of routes at various times. Many of the original paths were links between Native American settlements. Major expansions of the trail by the Spanish occurred in the late 17th and early 18th centuries. The

section of the trail that travels through Hays County (State Highway [SH] 21) is referred to as the “Old San Antonio Road” (TSHA 2014).

The Texas Legislature appropriated \$5,000 to survey the historic trail in 1915, and the Daughters of the American Revolution (DAR) placed granite markers along the surveyed route. The survey tracked the trail from the Rio Grande near Laredo to San Antonio; then passing through Hays, Caldwell, Bastrop, Lee, Burleson, Robertson, Brazos, Madison, Leon, Houston, Cherokee, Nacogdoches, San Augustine, and Sabine counties; into Louisiana. In 1929, the trail was declared a historic trail of Texas to be maintained and preserved by the highway department. By 1949, the majority of the historic trail had been paved, and it is still in use as SH 21 and other smaller state roads and highways (TSHA 2014). The Old San Antonio Road, the main trade route between San Antonio and East Texas during the Spanish Period, runs through the county, passing by the project area as modern-day SH 21 (TSHA 2014).

The Camino Real de Los Tejas incorporates SH 21, which forms the southeastern boundary of the current project area. This section of the Camino Real (or “Old San Antonio Road”) is considered a National Historic Trail; however, it has not been evaluated for its eligibility for listing on the National Register of Historic Places (NRHP). The section of SH 21 south of Umland that passes by the project area is a two-lane asphalt highway, and it is devoid of any DAR markers (Texas Designs 2017). This was confirmed by field observation. This section of SH 21 is not included in the NRHP-listed Old Austin to San Antonio Post Road Historic District, which was listed on the NRHP in 2006. The section of the roadway adjacent to the project area is not considered eligible for listing on the NRHP for purposes of the current investigation.

By the late 19th century, improved transportation aided settlement growth and agricultural dispersion. In 1880, the International and Great Northern Railroad established lines from San Marcos to Austin and created a stop in Kyle and Buda. By 1881, the track extended to San Antonio (Lassell and Wolfenden 2009). After the arrival of the railroad in Hays County, the population boomed from 7,555 in 1880 to 14,142 in 1900 (Lassell and Wolfenden 2009). The railroad allowed farmers an inexpensive and efficient way to export large quantities of crops and cattle. From the late 19th to the mid-20th centuries, the towns of Kyle and Umland, as well as most others in the county, had economies based on agriculture and ranching, particularly cotton production. The railroad through nearby Buda and Kyle not only facilitated shipping of cattle, cotton, and other crops, but also tenant and migrant farmers coming up from Mexico in the early 1900s (Hindes 1996). An Interception Center was established in San Marcos in 1942 as an aid to migratory labor supply and demand (Hindes 1996).

Transportation resources include a variety of property types, including the following:

- Trails and trail markers
- Roads
- Rest stops and picnic areas
- Bridges and culverts

- Depots and railroad tracks and trestles
- Section houses and water stations

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), the National Park Service's (NPS) online *National Register Information System* (NRIS), the Texas Archeological Research Laboratory's (TARL) files, and the Texas State Historical Association's (TSHA) *The Handbook of Texas Online* for information on previously recorded cultural resources sites and previous archeological investigations conducted within a 1.6-kilometer (1.0-mile) radius of the project area. The archival research indicated the presence of three known archeological sites and one cemetery within a 1.6-kilometer (1.0-mile) radius of the project area (Table 4-1; Figure 4-1) (NPS 2017; THC 2017). The majority of the known archeological sites and the cemetery are located well outside the boundaries of the project area and would not be disturbed as a result of the proposed undertaking.

One of the previously recorded archeological sites, 41HY426, is located within the southwestern portion of the project area. When it was originally recorded in 2006, site 41HY426 consisted of an ephemeral scatter of domestic debris, including only two glass shards, reportedly dating to the early 20th century. These two artifacts likely represented field scatter associated with nearby farmsteads and farming activities rather than the primary location of historic-age activity, and it is questionable whether or not these isolated artifacts warranted recording as a formal archeological site. Nevertheless, site 41HY426 was determined to be ineligible for inclusion in the NRHP, and no further archeological investigations have since been conducted on the site.

Two previous linear cultural resources surveys traverse the southwestern corner of the current project area (see Figure 4-1). Both of these surveys were conducted in association with a proposed realignment of FM 110 (Galindo 2013; Roger et. al 2007). It was during the earlier of these two prior surveys that site 41HY426 was recorded within the current project area.

Horizon also reviewed existing literature pertinent to the historic context of the project area. Hinds (1996) and Marder (1995) provided general information on the history and development of Hays County that contributed to the historic context presented in Chapter 3.0, though these reports did not list any identified resources within the project area. Myers (2004) provided additional historic context information and expectations regarding resource types that may be expected to be present within the project area. The reviewed literature identified various

SENSITIVE ARCHEOLOGICAL SITE LOCATION DATA OMITTED

Figure 4-1. Locations of Known Cultural Resources within 1.0 Mile of Project Area

Table 4-1. 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?
<i>Archeological Sites</i>				
41HY405	Historic-age domestic artifact scatter (undetermined historic)	Determined ineligible	0.3 mile northwest	No
41HY426	Historic-age domestic debris scatter (early 20th century)	Determined ineligible	Within project area	Yes
41HY412	Aboriginal lithic scatter (Middle Archaic)/ Historic-age farmstead (undetermined historic)	Determined ineligible	0.4 miles southwest	No
<i>Cemeteries</i>				
Doyle Cemetery (CW-C032)	Cemetery	N/A	725.0 feet southeast	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

resource types associated with the historical farming, ranching, and dairy industries and suburban development, with buildings dating from 1857 to 1945, though no resources specific to the project area have been previously identified.

Historical US Geological Survey (USGS) topographic maps and aerial photographs, Hays County deed records, and Hays County Central Appraisal District records were consulted for additional information about potential historic-age resources within the project area. Topographic maps from 1911 and 1919 (Figures 4-2 to 4-3) and early highway maps from 1946 and 1961 (Figures 4-4 to 4-5) show clustered areas of development near Kyle and San Marcos, with very little development within the primarily rural surrounding agricultural land. While recent suburban development has begun to expand the boundaries of the larger towns, the project area and the surrounding area have remained primarily agricultural land characterized by small farms. Specific results of the supplemental historical map and deed research are presented in Chapter 6.0 with the discussions of each historic-age resource recorded during the survey.

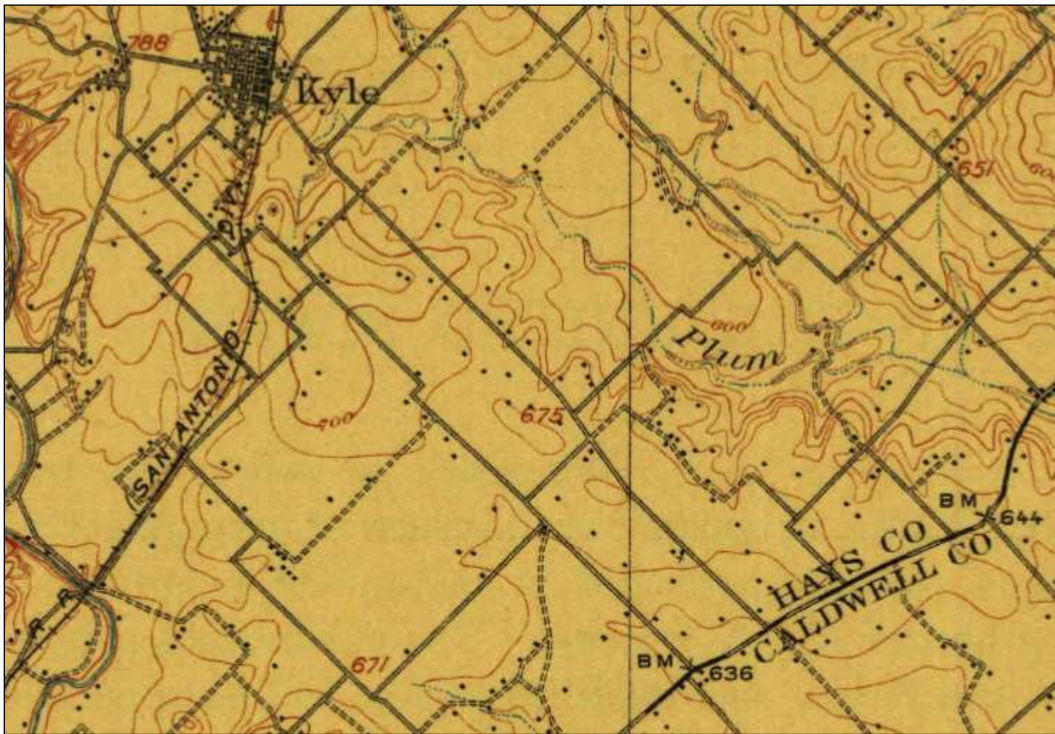


Figure 4-2. 1911 San Marcos, Texas, USGS Topographic Quadrangle

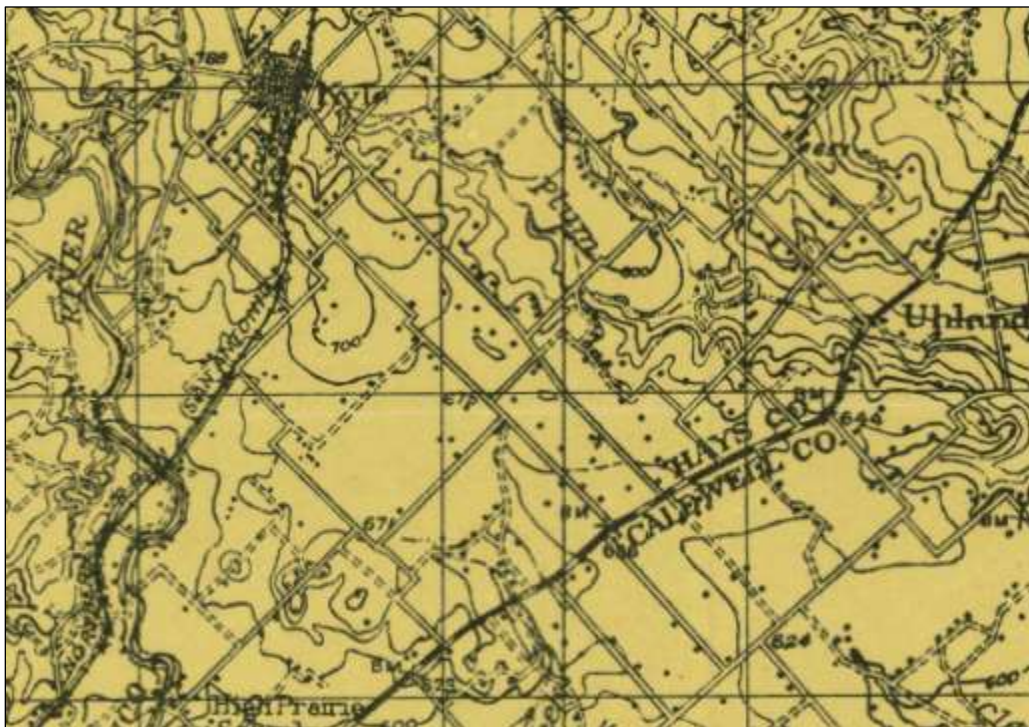


Figure 4-3. 1919 San Marcos, Texas, USACE Tactical Map



Figure 4-4. 1946 Hays County General Highway Map



Figure 4-5. 1961 Hays County General Highway Map

5.0 SURVEY METHODOLOGY

From March 20 to 30, 2017, Horizon Project Archeologist Briana Smith, with the assistance of archeological technicians Jacob Lyons and Ben Johnson and under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive survey of the project area to locate any cultural resources that may be impacted by the proposed undertaking. Horizon's archeologists traversed the project area on foot and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources.

The vast majority of the project area is characterized by active agricultural fields that had recently been planted for the season (Figures 5-1 to 5-2). While the majority of the project area was dry, several poorly drained areas were observed in the northern portion of the project area that retained pools of standing water from recent rains (Figure 5-3). Push piles of caliche and other sediments and dozer cuts characterized small areas along the edges of fields in some areas (Figure 5-4). Small copses of hackberry and cedar trees are scattered throughout the project area; these are typically associated with historic-age standing structures on archeological sites. The Clear Fork of Plum Creek and two of its tributaries flow eastward through the northern portion of the project area, and unnamed tributaries of Hemphill Creek drain the southern portion of the project area to the south. Typically, the ephemeral channels associated with these drainages were dry at the time of the survey (Figure 5-5), though one poorly drained segment of the Clear Fork of Plum Creek retained some water (Figure 5-6). Where present, erosional cutbank profiles generally displayed a shallow to moderately deep plowzone overlying a thick B horizon (Figure 5-7), though caliche-rich subsoils were observed immediately below the plowzone in some areas (Figure 5-8). While most portions of the project area exhibited clayey plowzone soils on the modern ground surface, some portions of the project area had exposed caliche subsoils or dense beds of chert-bearing limestone gravel on the surface (Figures 5-9 to 5-10). Two large stock ponds or small, artificial lakes are present in the north-central portion of the project area north of the only currently operating farm within the project area (recorded as site 41HY539) (Figures 5-11 to 5-12). Two main roads traverse the project area—FM 158 crosses the project area from southwest to northeast, and a private gravel road crosses the project area between SH 21 on the southeast and FM 158 on the northwest—and a number of ephemeral field roads skirt the edges of the active fields. Visibility of the modern ground surface was characteristically excellent in the agricultural fields (100%), though ground surface visibility in the small forested patches was typically obscured by grasses and shrubs (<30%).



Figure 5-1. Typical View of Plowed Fields within Project Area (Facing Northeast)



Figure 5-2. Typical View of Recently Planted Fields within Project Area (Facing South)



Figure 5-3. Standing Water on Surface of Plowed Field within Project Area (Facing North)



Figure 5-4. Disturbed Area along Edge of Plowed Field (Facing West)



Figure 5-5. Dry Segment of Clear Fork of Plum Creek (Facing West)



Figure 5-6. Wet Segment of Clear Fork of Plum Creek (Facing West)



Figure 5-7. Caliche Bedrock Exposed on Modern Ground Surface (Facing South)



Figure 5-8. Dense Chert-Bearing Limestone Gravel Bed on Surface (Facing North)



Figure 5-9. Cutbank Profile of Clear Fork of Plum Creek within Project Area



Figure 5-10. Open Trench Observed near Caliche Push Piles



Figure 5-11. Larger Stock Pond North of Site 41HY539 (Facing Northeast)

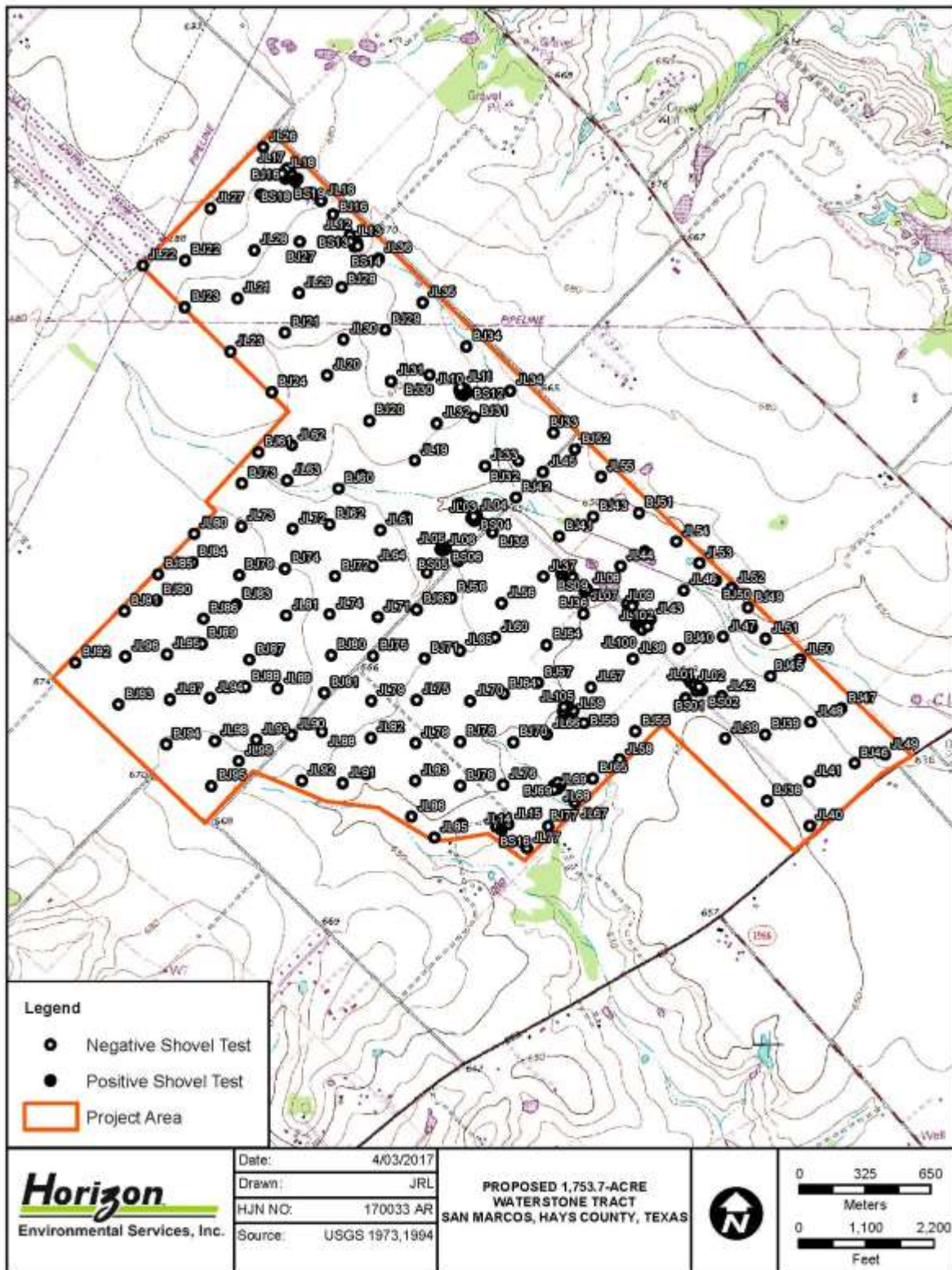


Figure 5-12. Smaller Stock Pond North of Site 41HY539 (Facing West)

In addition to pedestrian walkover, the Texas State Minimum Archeological Survey Standards (TSMASS) require a minimum of 1 shovel test per 1.2 hectares (3.0 acres) within project areas measuring more than 40.5 hectares (100.0 acres) in size. As such, 585 shovel tests would be required within the 709.7-hectare (1,753.7-acre) project area. Horizon excavated a total of 223 shovel tests during the survey (Figure 5-13). While the shovel testing density did not meet the TSMASS requirements, the shovel testing regimen is considered to be more than adequate to assess the subsurface cultural resources potential of the project area. The vast majority of the project area consists of recently plowed fields, and visibility of the modern ground surface was excellent across most of the project area, with the exception of a few isolated stands of vegetation. As such, shovel testing was employed judgmentally to determine whether or not the potential existed for intact archeological deposits to occur below the active plowzone, which averaged approximately 30.0 to 35.0 centimeters (11.8 to 13.8 inches) in depth within the project area. The majority of the cultural materials observed during the survey were constrained to the modern ground surface, and all of the subsurface cultural materials observed were found within the plowzone. As such, the shovel testing confirmed that all cultural materials within the project area are confined to disturbed contexts on the modern ground surface and within the active plowzone. All sediments were screened through 6.35-millimeter (0.25-inch) hardware cloth. The Universal Transverse Mercator (UTM) coordinates of all shovel tests were determined using hand-held Garmin ForeTrex Global Positioning System (GPS) devices based on the North American Datum of 1983 (NAD 83). Shovel testing was capable of fully penetrating sediments with the potential to contain subsurface archeological deposits, and it is Horizon's opinion that the pedestrian walkover with surface inspection and judgmental shovel testing was adequate to evaluate the cultural resources potential of the APE. Specific shovel test data for all 223 shovel tests excavated during the survey are summarized in Appendix A.

Eleven newly recorded archeological sites were documented during the survey—41HY536 to 41HY546. In the field, standard site recording forms were 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. Scaled sketch maps were drawn that illustrated site boundaries; locations of shovel tests, cultural features, and/or material concentrations; as well as notable features of the landscape. The sites were thoroughly photo-documented using color digital photography, and photographic logs were maintained of all photographs taken. Based on the information recorded on the standard archeological site recording forms in the field, *Texas Archeological Data Site Update Forms* were completed by Horizon's laboratory personnel using the most current version of the Texas Archeological Research Laboratory's (TARL) *TexSite* archeological data collection software, and the forms were submitted to TARL to update the existing site files.

In addition, the mapped location of one previously recorded site located within the project area, 41HY426, was revisited in an attempt to re-locate and re-investigate the site (see Figure 4-1). When it was originally recorded in 2006, this site consisted only of an ephemeral field scatter of early 20th-century domestic debris, including two glass shards. Horizon inspected the modern ground surface at the mapped site location and excavated several shovel tests in the surrounding area. No cultural resources were observed at the mapped location of site 41HY426. The two



170033 - Waterstone Tract\Graphics\Arch\170033AR_A05_ShovelTest1\JRL (04-03-2017)

Figure 5-13. Locations of Shovel Tests Excavated within Project Area

isolated artifacts that composed the site in 2006 have probably been reincorporated into the plowzone. Site 41HY426 was previously determined to be ineligible for inclusion in the NRHP, and no further archeological investigations are warranted on this site.

During the survey, field notes were maintained on terrain, vegetation, soils, landforms, survey methods, and shovel test 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 described, sketched, and/or photo-documented in the field and replaced in the same location in which they were found. No cultural resources were collected during the survey.

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 Code of Federal Regulations (CFR) 800.3.

6.0 RESULTS OF INVESTIGATIONS

Eleven newly recorded archeological sites were documented during the survey—41HY536 to 41HY546 (Figure 6-1). Nine of the 11 sites (41HY436 to 41HY543 and 41HY546) consist of the remnants of early to mid-20th-century farmsteads and/or scatters of historic-age domestic debris. Two of the 11 sites (41HY544 and 41HY545) consist exclusively of aboriginal artifact scatters dated to unspecified prehistoric timeframes. Secondary cultural components composed of sparse scatters of aboriginal artifacts were also observed on three of the nine historic-age sites (41HY537, 41HY540, and 41HY543). Each site is described individually below. The results of supplemental architectural evaluations and historical research on sites containing standing architecture or remnants of standing structures (i.e., sites 41HY536 to 41HY543) provided by Horizon’s architectural historian, Kathryn St. Clair, are included within the appropriate site descriptions.

6.1 SITE 41HY536

General Description

Site 41HY536 represents the remnants of an early to mid-20th century farmstead located off the northeastern side of an unnamed gravel road that provides access to several historic-age farmsteads within the project area between SH 21 to the southeast and FM 158 to the northwest (Figure 6-2; also see Figure 6-1). The site consists of a house, four barns, a metal windmill lattice tower, a small well, two debris piles, and an associated surface and shallow subsurface scatter of domestic debris. The site is situated on a rolling upland landform in a small copse of trees surrounded by active agricultural fields. Vegetation on the site consists of post oak, sycamore, and hackberry trees; poison ivy; dense grasses; and various weeds. Elevations on the site range from 197.3 to 197.9 meters (647.0 to 649.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of cultural features and historic-age debris, site 41HY536 measures approximately 80.0 meters (262.4 feet) north to south by 85.0 meters (278.8 feet) east to west. The delineated site boundaries are co-extensive with the grove of trees and vegetation within which the site is situated. The site is bounded on its southwestern side by a private gravel road and surrounded by agricultural fields.

SENSITIVE ARCHEOLOGICAL SITE LOCATION DATA OMITTED

Figure 6-1. Locations of Archeological Sites within Project Area

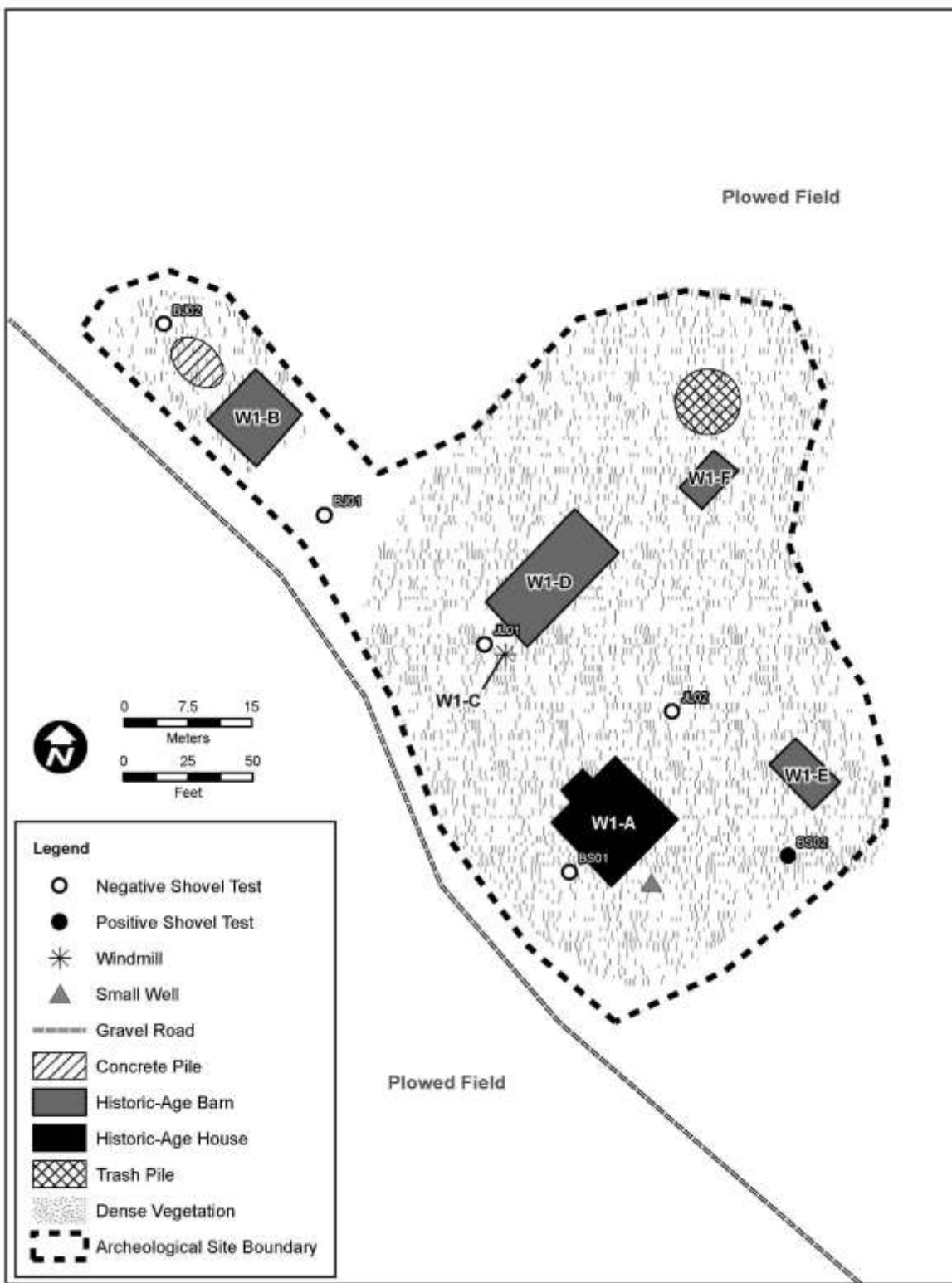


Figure 6-2. Sketch Map of Site 41HY536

Cultural materials on site 41HY536 are largely constrained to the modern ground surface. A total of six shovel tests were excavated on the site, one of which revealed shallow subsurface cultural resources extending to a depth of 10.0 centimeters (3.9 inches) below surface.

Cultural Features Observed

Cultural features on site 41HY536 include a house (Structure W1-A), four barns (Structures W1-B, W1-D, W1-E, and W1-F), a metal windmill lattice tower (Structure W1-C), a small well, two debris piles, and an associated surface and shallow subsurface scatter of domestic debris.

Structure W1-A—House (ca. 1910)

Structure W1-A is a one-story frame house with a rectangular footprint measuring approximately 12.0 meters (39.4 feet) northeast to southwest by 10.0 meters (32.8 feet) northwest to southeast (Figures 6-3 to 6-5). The house is sheltered with a pyramidal roof clad in corrugated metal. A front hipped-porch roof extends over the two single-entry doors on the front façade and over a small, concrete porch. The house is clad in ca. 1955 asbestos shingles. Paired, wood-framed, one-over-one sash windows flank the front entrance. A brick chimney stack rises from the center pitch of the roof. Exposed roof rafters under the eaves demonstrate Craftsman stylistic influences, though the house is primarily modest in details and size. Wooden posts (hewn cedar tree trunks) function as piers to support the sill plates and floor beams of the house. The pyramidal, cottage-style house is in poor condition and is vacant. The house may



Figure 6-3. Structure W1-A (41HY536)—Front of House (Facing Southeast)



Figure 6-4. Structure W1-A (41HY536)—Side of House (Facing Northeast)



Figure 6-5. Structure W1-A (41HY536)—Rear of House (Facing Northwest)

have served as a duplex. The house is equipped with relatively modern electrical and plumbing fixtures. A small concrete well set flush with the ground is located a few meters southeast of the house.

Structure W1-B—Northwestern Barn (ca. 1920)

Structure W1-B is a small barn located at the northwestern end of the site with a rectangular footprint measuring approximately 8.0 meters (26.2 feet) square (Figures 6-6 to 6-7). The barn is sheltered with an end-gabled roof. Clad in corrugated metal, the barn is constructed of posts and beams and has a wooden plank floor and interior planked walls. A shed roof extends over the southern side. The roof shelters an open bay, presumably an area that once housed livestock. Hewn tree posts support the shed roof extension. A pile of concrete blocks is located immediately northwest of the structure. Several pieces of furniture have been stored inside the structure.

Structure W1-C—Windmill (ca. 1920)

Structure W1-C is a windmill mounted on a metal lattice tower with a metal ladder extending to the top (Figure 6-8). The tower is secured on a concrete base. This structure is located immediately southwest of the large central barn (Structure W1-D).



Figure 6-6. Structure W1-B (41HY536)—Side of Barn (Facing Northeast)



Figure 6-7. Structure W1-B (41HY536)—Side of Barn (Facing Southwest)



Figure 6-8. Structure W1-C (41HY536)—Windmill (Facing Southeast)

Structure W1-D—Central Barn (ca. 1920)

Structure W1-D is a large barn located in the approximate center of the site with a rectangular footprint measuring approximately 15.0 meters northeast to southwest by 7.0 meters northwest to southeast (Figures 6-9 to 6-12). The barn is sheltered with an end-gabled roof. Corrugated metal clads the exterior walls and roof. The pole barn has an open bay on the southeastern side and likely housed large equipment. Some of the poles are hewn tree trunks. The building is in poor condition.

Structure W1-E—Eastern Barn (ca. 1920)

Structure W1-E is a small barn located at the eastern end of the site with a rectangular footprint measuring approximately 7.0 meters (23.0 feet) northwest to southeast by 4.0 meters (13.1 feet) northeast to southwest (Figures 6-13 to 6-15). The structure has an end-gabled roof. Clad in corrugated metal, the barn is constructed with poles with the metal secured to the wood. The southwestern side of the building is composed of two open bays. The barn once housed chickens.

Structure W1-F—Northeastern Barn (ca. 1920)

Structure W1-F is a small wood pole barn located in the northeastern portion of the site with a rectangular footprint measuring approximately 6.5 meters northeast to southwest by



Figure 6-9. Structure W1-D (41HY536)—Front of Central Barn (Facing Northwest)



Figure 6-10. Structure W1-D (41HY536)—Interior of Central Barn (Facing North)



Figure 6-11. Structure W1-D (41HY536)—Back of Central Barn (Facing East)



Figure 6-12. Structure W1-D (41HY536)—Side of Central Barn (Facing Southwest)



Figure 6-13. Structure W1-E (41HY536)—Front of Eastern Barn (Facing Northeast)



Figure 6-14. Structure W1-E (41HY536)—Side of Eastern Barn (Facing Southeast)



Figure 6-15. Structure W1-E (41HY536)—Interior of Eastern Barn (Facing Northeast)

4.5 meters northwest to southeast (Figures 6-16 to 6-17). Sheltered with an end-gabled roof, the barn is clad in corrugated metal. Many of the structural poles are hewn cedar posts supporting milled lumber horizontal bracing and roofing members (trusses and beams). The west side of the barn has a partially open bay enclosed with chicken wire. The building was used as a large chicken coop at one point.

Cultural Materials Observed

Cultural materials observed on site 41HY563 include whiteware and stoneware ceramic sherds; amethyst, clear, aqua, brown, and olive green glass shards; a square nail; red cherry bricks imprinted with “SEGUIN” maker’s marks; butchered faunal bone; and a vast array of relatively modern domestic debris. The historic-age cultural materials on the site are generally diagnostic of the early to mid-20th century.

Historical Research

The property on which site 41HY536 is located was owned by David William (D.W.) Crews in 1912 prior to conveying the property to his son, Paul Crews, during that same year. D.W. Crews owned numerous acres of land in Hays County during the late 19th and early 20th centuries. According to the Texas 1860 Slave Schedule, he owned one African-American male, age 36. D.W. Crews is indicated as a farmer on the agricultural schedules of 1880. As a side note, the Crews family name is spelled “Cruz” in the 1880 census, and “Crews” in following



Figure 6-16. Structure W1-F (41HY536)—Corner of Northeastern Barn (Facing Northeast)



Figure 6-17. Structure W1-F (41HY536)—Interior of Northeastern Barn (Facing Northeast)

census records. It is not known if he lived on this particular property during the ca.1910 to 1920 period of construction. Paul Crews (b. 1877, d. 1942) lived in Precinct 5 in 1900, 1910, and until his death in 1942. His occupation in 1940 was “real estate” on the US census of 1940. This may suggest that he purchased the property and rented it out to tenant farmers. The house may have been constructed as a tenant house. The property was sold prior to 1952 to H.J. Wranitzky, and it stayed in the Wranitzky family until Emil and Olga Ehrlich purchased the property in 1967. Henry John (H.J.) Wranitzky arrived from Austria in 1889 with his parents. In the early 1900s, H.J. Wranitzky purchased a blacksmith shop in Uhland (Stovall et al. 1986). In 1995, the Ehrlichs sold the property to the Warhund family members, who eventually would own all of the properties within the project area. The property stayed under the ownership of the Warhund family prior to the sale to investment bankers and developers in 2005.

Summary and Recommendations

Site 41HY536 represents the remnants of an early to mid-20th century farmstead consisting of a house, four barns, a metal windmill lattice tower, a small well, two debris piles, and an associated surface and shallow subsurface scatter of domestic debris. The structures on the site were constructed between ca. 1910 and 1920, and the cultural materials on the site suggest an occupation spanning the early to mid-20th centuries. Judging from the large quantities of modern debris stored within the buildings, it is possible the occupation extended into the late 20th century, though it is also possible the buildings have been used for storage by the occupants of another nearby farmstead to the northwest (site 41HY539).

The small farm complex is associated with the early agricultural development and German settlement in Hays County near the Pecan Springs community or the Plum Creek valley. The house, associated barns, windmill, and surrounding farmland are associated with this period in history and could be considered significant under Criterion A. However, the main house and barns lack integrity of design, workmanship, materials, and feeling in order to convey this significance.

The Crews, Ehrlich, and Warhmund families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B.

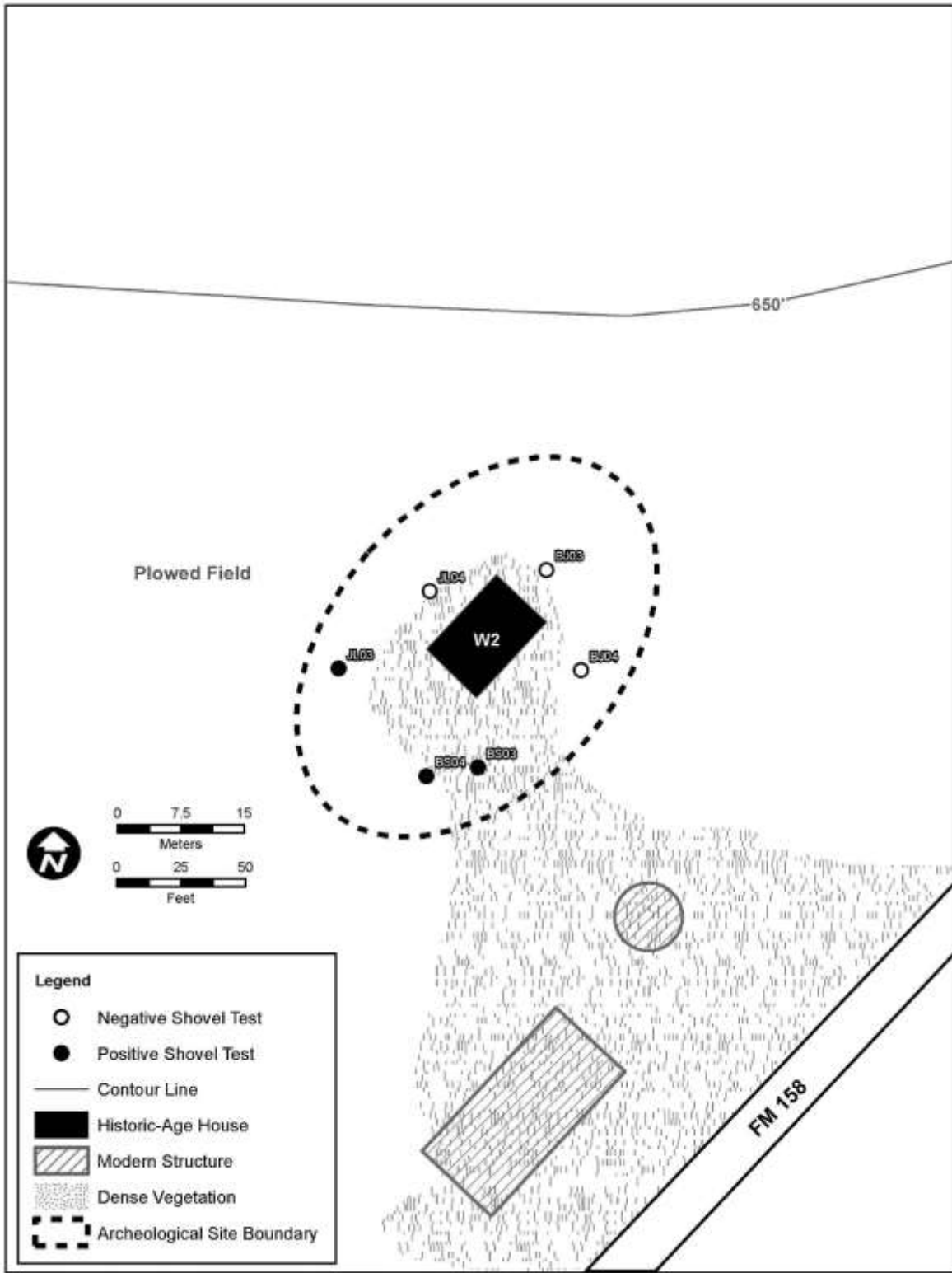
Structure W1-A is an early 20th-century pyramidal cottage typically found on farms and ranches of this region. The house may have served as a tenant farmer dwelling or as the domicile of the family that owned the property over the years. Overall, the house is not constructed in a particularly unique or distinct architectural style or design. It is in poor condition and no longer conveys architecturally or stylistically significant features. The original form of the house is not evident due to its poor condition. The barns do not have a unique design and do not embody distinct characteristics of a particular style. Structures W1-B, W1-D, W1-E, and W1-F (i.e., the barns) are considered not eligible for inclusion in the NRHP under Criterion C. Structure W1-C (i.e., the windmill) is also not considered a unique design and is considered not eligible for inclusion in the NRHP under Criterion C. The integrity of workmanship, design, materials, and feeling are compromised by the poor condition of the house and barns, and the buildings no longer convey a historic sense of an early 20th-century farm complex. The resources do appear to be in the original location. The house and associated barns and windmill are recommended as not eligible for listing on the NRHP under Criterion C.

The main house does not embody distinctive characteristics of a type, period, or method of construction; does not represent the work of a master; and does not possess high artistic values. Therefore, the property is not significant under Criterion C. Due to a lack of historic integrity, the property is considered not eligible for listing on the NRHP. The resources are not considered historically significant under Criteria A, B, or C. Therefore, the resources individually or as a ranch complex are recommended as not eligible for listing on the NHRP. Furthermore, while there is an abundance of domestic debris on the site, the cultural materials do not possess any special capacity to contribute meaningfully to knowledge of the historical past. As such, the site is not considered significant under Criterion D. Site 41HY536 is recommended as not eligible for designation as a State Antiquities Landmark (SAL) or for inclusion in the NRHP.

6.2 SITE 41HY537

General Description

Site 41HY537 is a multiple-component site consisting of the remnants of an early to mid-20th-century farmstead and a low-density scatter of aboriginal lithic debitage of unknown date located off the northwestern side of FM 158 (Figure 6-18; also see Figure 6-1). The remains of a historic-age house are located on this site. Two newer buildings, a metal shed or garage and a



170033-Waterstone Tract\Graphics\Arch\170033AR_AR_W2_DigitalSketch (BNS) (04-06-2017)

Figure 6-18. Sketch Map of Site 41HY537

metal silo, are located southeast of the site closer to the road. The site is situated on a rolling upland landform in a small copse of trees surrounded by active agricultural fields. Vegetation on the site consists of post oak and hackberry trees and various shrubs, weeds, and ankle- to knee-high grasses. Elevations on the site are relatively flat, ranging only from approximately 199.4 to 200.0 meters (654.0 to 656.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of cultural features and historic-age debris, site 41HY537 measures approximately 52.0 meters (170.6 feet) northeast to southwest by 34.0 meters (111.5 feet) northwest to southeast.

Cultural materials on site 41HY537 are largely constrained to the modern ground surface, though three of the six shovel tests excavated on the site revealed shallow subsurface archeological deposits extending to depths of 10.0 to 15.0 centimeters (3.9 to 5.9 inches) below surface.

Cultural Features Observed

The only extant cultural feature observed on site 41HY537 is a house (Structure W2). The two modern metal buildings adjacent to FM 158 were not included in the site boundaries. No aboriginal cultural features were observed on the site.

Structure W2—House (ca. 1925)

Structure W2 is a one-story house with a rectangular footprint measuring approximately 12.0 meters (39.4 feet) northeast to southwest by 8.0 meters (26.2 feet) northwest to southeast (Figures 6-19 to 6-25). Constructed with hollow-clay tiles clad in stucco, the house dates from ca. 1925. A front-gable roof with a planked, wood-clad gable shelters the house. The roof eaves extend over exposed wood rafters. A brick chimney extends from the northern slope of the roof, near the center of the house. Two-over-two aluminum sash window configurations are found on the northern and southern sides along with older one-over-one configurations. A collapsed shed-roof porch extends from the front façade. The chimney has stove-pipe connections in two rooms of the house.

Cultural Materials Observed

Historic-age cultural materials observed on site 41HY537 include clear, blue, amethyst, aqua, milk, amber, and green glass shards; a porcelain door handle fragment; plain and transfer-printed whiteware ceramic sherds; one square nail; and various unidentified metal fragments (Figure 6-26). The historic-age materials are generally diagnostic of an early to mid-20th-century occupation. Aboriginal cultural resources observed on the site consist of one late-stage biface preform and a piece of lithic debitage, both of which were manufactured from gray Edwards Formation chert (Figure 6-27). Due to the lack of temporally diagnostic aboriginal artifacts, the aboriginal occupation of the site can only be dated to an unspecified prehistoric timeframe.



Figure 6-19. Overview of Site 41HY537 (Facing Southeast)



Figure 6-20. Structure W2 (41HY537)—Southwestern Side of House (Facing Northeast)



Figure 6-21. Structure W2 (41HY537)—Southern Corner of House (Facing North)



Figure 6-22. Structure W2 (41HY537)—Southeastern Side of House (Facing Northwest)



Figure 6-23. Structure W2 (41HY537)—Northeastern Side of House (Facing Southwest)



Figure 6-24. Structure W2 (41HY537)—Interior of House (Facing Northeast)



Figure 6-25. Structure W2 (41HY537)—Detail of Clay Tile Construction



Figure 6-26. Historic egg Artifacts Observed on Site 41H



Figure 6-27. Aboriginal Lithic Artifacts Observed on Site 41HY537

Historical Research

In the mid-1920s, hollow tiles were promoted as building materials by trade organizations and magazines as fireproof, vermin-proof, good insulating material that would not deteriorate (Hollow Building Tile Association 1925). The hollow building tile was described as a:

[H]ard burned clay product, made in various sizes, and having one or more voids running longitudinally through it. It is made of surface clay, or fire clay, which is finely ground, mixed with water into a plastic mass and forced through dies. It is then fired at 2,000 degrees (Hollow Building Tile Association 1925).

Organizations encouraged the use of stucco as cladding over the tile. Tile manufactures highlighted the stable properties of the tile, which were thought to eliminate the risk of stucco chipping or flaking off. Stucco was advertised as easy to apply and customize with different colors (Hollow Building Tile Association 1925). The D'Hanis Brick and Tile Company, founded in 1883 (and still in operation through the 1980s) produced hollow clay building tiles (Odintz 2017). The D'Hanis Brick and Tile Company was located in a small community near San Antonio. The remains of a house built with the same tile and with brick from the D'Hanis Brick and Tile Company is found on site 41HY542. The building tiles for the house on site 41HY537 may have also been shipped (via railroad) from the D'Hanis company.

Historically, sites 41HY536, 41HY538, and 41HY540 were part of the property on which site 41HY537 is located. Site 41HY538 includes a ca.1890 well, site 41HY540 includes another ca.1930 house (now collapsed) constructed using a similar method as the house on site 41HY537, and site 41HY536 has a ca.1910 house and barn. Based on the estimated date of the well on site 41HY538 (possibly as early as the late 19th or early 20th centuries), this larger property may have had earlier structures associated with farming that are no longer extant. Many of the farms in this area were occupied by tenant farmers. The houses on sites 41HY537 and 41HY540 may have been constructed as tenant farmer houses, with a larger, earlier primary farmhouse now gone. The lack of stylistic details, the modest size, and the use of somewhat utilitarian materials suggest that the house on site 41HY537 was constructed for functionality. The house loosely resembles a bungalow form, though it does not exhibit characteristics of a particular style. It is in poor condition.

The property on which site 41HY537 is located was owned by David William (D.W.) Crews in 1912 prior to conveying the property to his son, Frank Crews, during that same year. Prior to this time period, the Crews family (wife Ann and their 10 children) lived in Hays County Precinct 2 according to the US census of 1880. D.W. Crews owned numerous acres of land in Hays County during the late 19th and early 20th centuries. D.W. Crews is indicated as a farmer on the agricultural schedules of 1880. It is not known if he ever lived on this particular property. Frank Crews (b. 1878, d. 1945) lived in Buda in 1920 according to US census records of 1920. Frank Crews is listed on the World War I draft registration (1917-1918) as a farmer and a resident of Buda. In 1927, Frank and his wife Lena sold the property to R.H. Kretzmeier. When the Kretzmeier's sold the land in 1948, there is mention of tenants on the premises (Hays County Deed, v. 148, p. 352). In the late 1950s and 1960s, the property was sold to Dr. M.D. Heatly, who owned quite a bit of property in the county, and to Alex Kercheville. The property eventually ended up with the Warhmund family prior to the sale to investment bankers and developers in 2005.

Summary and Recommendations

Site 41HY537 is a multiple-component site consisting of the remnants of an early to mid-20th-century farmstead and a low-density scatter of aboriginal lithic debitage of unknown date. The historic-age component consists of a farmhouse constructed around 1925 and an associated scatter of 20th-century domestic debris. The aboriginal component consists of one late-stage biface preform and a piece of lithic debitage.

The small house (Structure W2) is associated with agricultural development in eastern Hays County near the Pecan Springs community or the Plum Creek valley. The house and surrounding agricultural fields are associated with this period in history and could be considered significant under Criterion A. However, the house lacks integrity of design, workmanship, materials, and feeling in order to convey this significance. The property likely included additional historic-age structures at one time. The Crews, Heatly, Kretzmeier, and Warhmund families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B. The house does not embody distinctive

characteristics of a type, period, or method of construction. It does not represent the work of a master and does not possess high artistic values. Therefore the property is not significant under Criterion C. Due to a lack of historic integrity, the property is considered not eligible for listing on the NRHP. Furthermore, the ephemeral archeological deposits associated with both the historic-age and aboriginal components are constrained to the modern ground surface and shallow subsurface deposits. The archeological deposits are disturbed, lack integrity, and possess minimal potential to contribute to knowledge of the historic or prehistoric past. As such, the site is not considered significant under Criterion D. Site 41HY537 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.3 SITE 41HY538

General Description

Site 41HY538 consists of a late 19th to early 20th-century well, a debris pile, and a surrounding scatter of early to mid-20th-century domestic debris located off the northwestern side of FM 158 (Figures 6-28 to 6-29; also see Figure 6-1). No standing structures or other cultural features are present on the site. The site is situated on a rolling upland landform in a small copse of trees surrounded by active agricultural fields. Vegetation on the site consists of small saplings and various weeds. Elevations on the site are relatively flat, ranging only from 200.3 to 200.9 meters (657.0 to 659.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of cultural features and historic-age debris, site 41HY538 measures approximately 35.0 meters (114.8 feet) in diameter.

Cultural materials on site 41HY538 are largely constrained to the modern ground surface, though four of the six shovel tests excavated on the site revealed shallow subsurface archeological deposits extending to depths of 5.0 to 20.0 centimeters (2.0 to 7.9 inches) below surface.

Cultural Features Observed

Two cultural features were observed on site 41HY538, a brick-and-limestone well and a pile of cut limestone rubble.

The brick-and-limestone well is located roughly in the center of the site and measures 1.6 meters (5.2 feet) in diameter (Figures 6-30 to 6-31). The well is constructed from cut limestone blocks, and the top is lined with red cherry bricks. A small portion of the rim of the well projects above the modern ground surface to a height of approximately 0.3 meter (1.0 feet), though the rest of the well is set flush with the ground. The well may date from the late 19th century or early 20th centuries.

The debris pile is composed of cut limestone blocks, concrete chunks, bricks, and metal debris (see Figure 6-32). The rubble pile may represent the remnants of a historic-age structure based on the presence of metal hardware and other construction materials among the associated

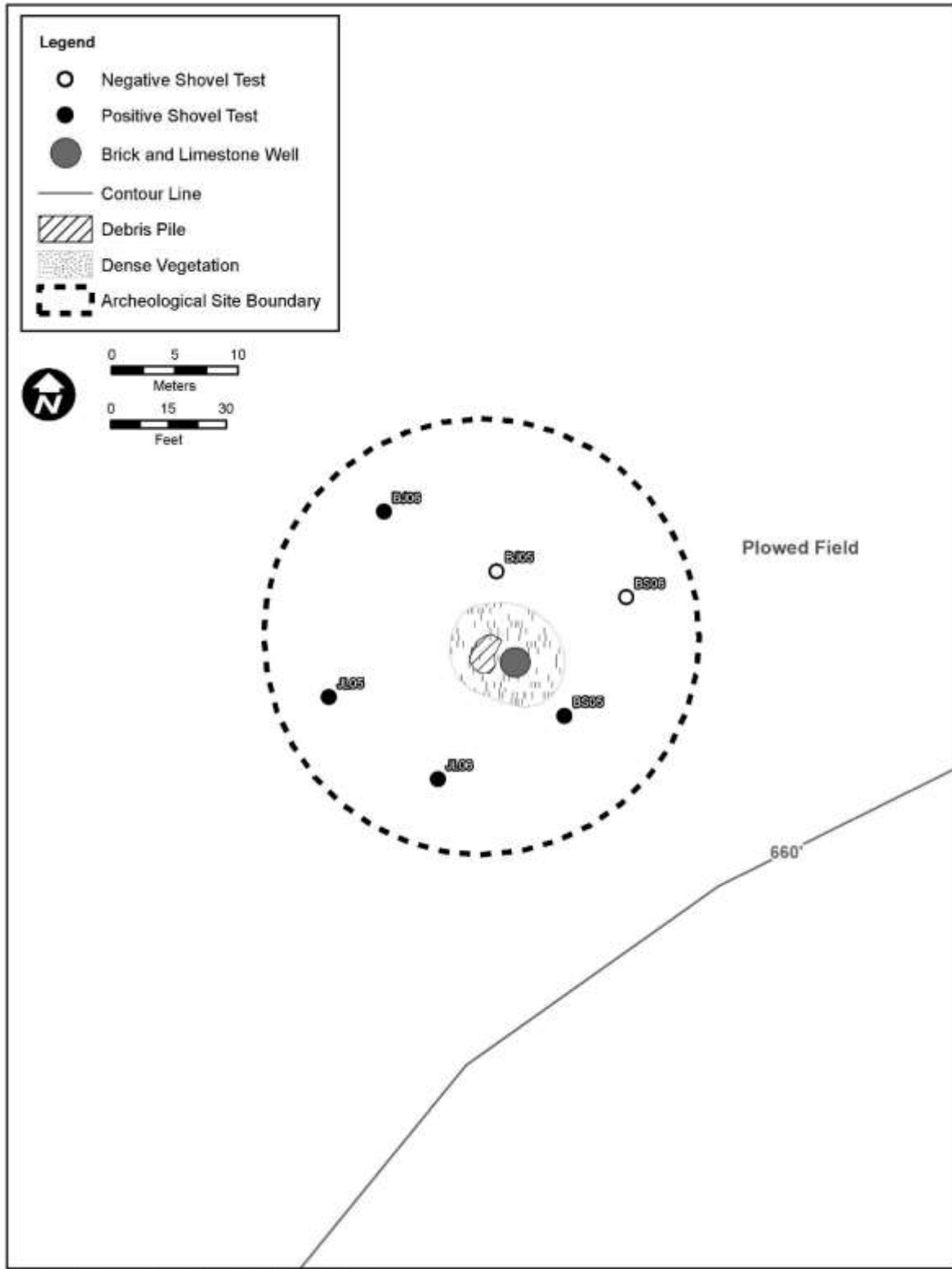


Figure 6-28. Sketch Map of Site 41HY538



Figure 6-29. Overview of Site 41HY538 (Facing North)



Figure 6-30. Structure W3 (41HY538)—Overview of Well (Facing South)



Figure 6-31. Structure W3 (41HY538)—Interior of Well



Figure 6-32. Pile of Cut Limestone Debris on Site 41HY538 (Facing North)

artifact scatter surrounding the feature, though the function of this structure is unknown. It may also simply represent unused cut limestone blocks left over from the construction of the well.

Cultural Materials Observed

Cultural materials observed on site 41HY538 include blue, aqua, amethyst, rose, amber, milk, and clear glass shards; two clear glass bottle fragments; one porcelain door handle; one metal belt buckle; one metal door or window hinge; various pieces of unidentified metal debris; and red cherry bricks stamped with “D’HANIS” maker’s marks (Figures 6-33 to 6-34). The historic-age cultural materials are generally diagnostic of an early to mid-20th-century occupation.

Historical Research

Hays County Tax Appraisal District information indicates that there was a house dating from 1890 on the parcel on which site 41HY538 is located. This house, or the remains of the house, were not identified during field investigations, though the presence of a well and a moderately dense scatter of domestic debris on the site attests to the presence of a historic-age occupation. The well is no longer associated with a contemporary domestic structure. Historically, sites 41HY536, 41HY537, and 41HY540 were part of the property on which site 41HY538 is located. Site 41HY537 includes a ca.1930 house, and site 41HY540 includes another cs.1930 house (now collapsed) constructed in a similar method as the house on site 41HY537. These houses may have been constructed as tenant farmer houses, with a larger, earlier primary



Figure 6-33. Glass Shards Observed on Site 41HY538



Figure 6-34. Metal Hardware Observed on Site 41HY538

farmhouse now gone. Based on the estimated date of the well on site 41HY538 (possibly as early as the late 19th or early 20th centuries), this larger property may have had earlier structures associated with farming that are no longer extant. The chain-of-title for this property is the same as that discussed above for site 41HY537.

Summary and Recommendations

Site 41HY538 consists of a late 19th to early 20th-century well, a debris pile, and a surrounding scatter of early to mid-20th-century domestic debris. Tax records indicate that there was a house standing on this parcel in 1890, though this structure is no longer present. Based on the small size of the site, it is likely that the house stood near to the well, and the rubble pile adjacent to the well may represent the former location of this structure.

The well is associated with early agricultural development and German settlement in Hays County near the Pecan Springs community or the Plum Creek valley. The well and surrounding pasture land are associated with this period in history and could be considered significant under Criterion A. However, the well lacks integrity of feeling, association, and setting. The lack of primary buildings, including a farmhouse of similar construction period and a farm complex, diminishes the historical significance and context of the well. Though the materials and design of the well are largely intact, the well is not considered significant under Criterion C. The property likely included additional historic-age structures at one time. The Crews, Heatly, Kretzmeier and

Warhmund families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B. The well does not embody distinctive characteristics of a type, period, or method of construction; does not represent the work of a master and does not possess high artistic values. Therefore the property is not significant under Criterion C. Due to a lack of historic integrity, the property is considered not eligible for listing on the NRHP. Furthermore, the ephemeral archeological deposits are constrained to the modern ground surface and shallow subsurface deposits. The archeological deposits are disturbed, lack integrity, and possess minimal potential to contribute to knowledge of the historic or prehistoric past. As such, the site is not considered significant under Criterion D. Site 41HY538 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.4 SITE 41HY539

General Description

Site 41HY539 consists of an early to mid-20th-century farmstead with some additional modern buildings located off of either side of an unnamed gravel road that provides access to several historic-age farmsteads within the project area between SH 21 to the southeast and FM 158 to the northwest (Figure 6-35; also see Figure 6-1). Historic-age structures on the site include an early to mid-20th-century house, two barns, a concrete well, and a concrete animal trough. Several modern buildings also have been constructed on the site, including two barns and six metal storage silos. Two large stock ponds or small lakes are present to the northeast of the farm complex in a lightly wooded area on the other side of the gravel road. The site is currently occupied by tenant farmers and is in use as an active farm complex. The site is located on a rolling upland landform overlooking the channel of the Clear Fork of Plum Creek to the north. Vegetation immediately surrounding the structures on the site consists mainly of post oak, hackberry, and various sapling trees as well as short, dense grasses and weeds. Vegetation surrounding the stock ponds or lakes northeast of the gravel road is much denser. To the southwest of the site are open, plowed fields. Elevations on the site range from 196.6 to 199.4 meters (645.0 to 654.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of standing structures, cultural features, and associated historic-age debris, site 41HY539 measures approximately 405.0 meters (1,328.4 feet) northwest to southeast by 56.0 meters (183.7 feet) northeast to southwest.

Cultural materials on site 41HY536 are constrained to the modern ground surface. No subsurface cultural materials were observed in any of the 10 shovel tests excavated on the site.

Cultural Features Observed

Cultural features on site 41HY539 include an early to mid-20th-century house (Structure W4-A), two contemporary historic-age barns (Structures W4-B and W4-C), a concrete

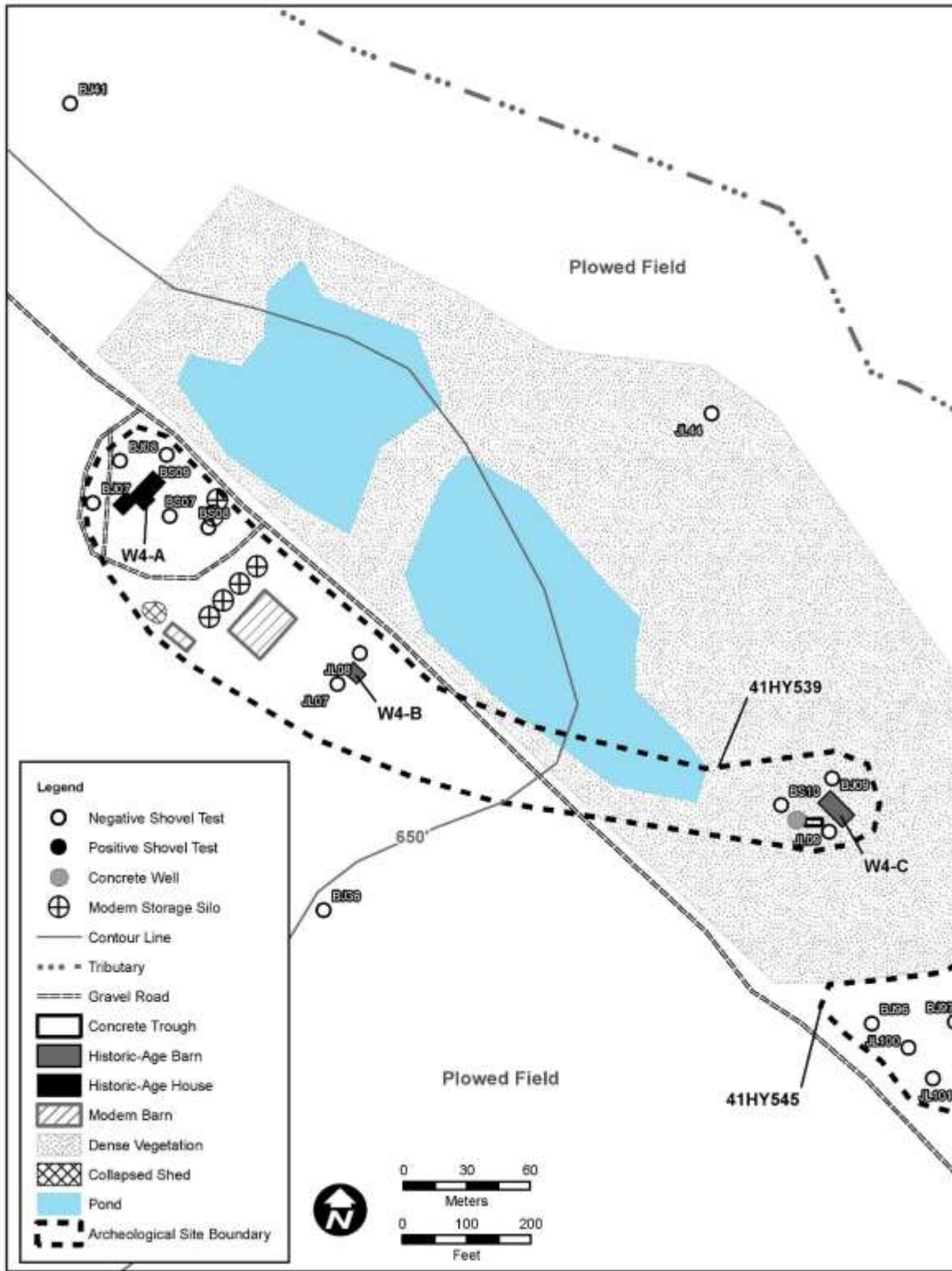


Figure 6-35. Sketch Map of Site 41HY539

well, and a concrete animal trough. Several modern structures, including two barns and six storage silos, are also present on the site. A gravel road bisects the site. The farm complex is currently in operation.

Structure W4-A—House (ca. 1925)

Structure W4-A is a one-story bungalow with a slight “L” footprint measuring approximately 24.0 meters (78.7 feet) northeast to southwest by 9.0 meters (29.6 feet) northwest to southeast (Figures 6-36 to 6-39). The house has a rear double-garage addition. The front-gabled roof overhangs the exterior walls to form deep eaves supported with L brackets. Exposed rafter tails emerge from the eaves on the slope sides of the house. The frame house is clad in what appear to be asbestos shingles. An enclosed front porch is positioned on the front of the house. The front door is off-center between two four-over-four wood-framed sash windows. Windows of the same configuration are found on the northwestern and southwestern sides of the house. The L extends from the southeastern side of the house and may be an addition. A standing-seam metal roof shelters the house. A chimney pipe extends from the center of the ridgeline. Form stone is applied to the base of the house to provide an exaggerated foundation skirt for the pier-and-beam foundation.

The bungalow exhibits some characteristics of the Craftsman style, including the bracketed eaves and exposed rafter tails. This style, and the bungalow form, were widely popular from 1910 to the 1930s. The form, typically with two bedrooms, a bathroom, kitchen, and living space, was efficient to construct and easy to apply architectural details to, particularly in the Craftsman stylistic details, which were easily accessible to rural communities during this time due to the proximity to the railroad. Common features of these early bungalows include a strong horizontal emphasis with low-pitched roofs, extended eaves, and broadly proportioned openings. The porch is a critical design element and a visually dominant feature. It is often partially inset and typically has tapered or canted supports with broad bases that suggest weight and mass to both the porch and the structure. Although they display many of the essential components seen on earlier versions, bungalows built after 1920 often are less grand in scale, detailing, and level of craftsmanship, which made them more affordable to the growing numbers of middle-income families. Ornate woodwork was seen less often and windows typically were grouped in pairs and had one-over-one light sashes without the geometric designs frequently seen on pre-1920 bungalows. Tapered box columns, triangular knee brackets in gable ends, and extended eaves with exposed rafter ends are common features of post-1920 bungalows. A total of 287 bungalows were recorded in Hays County in Myers (2004).

Of the popular plan types built throughout the nation in the early 20th century, the bungalow was the most significant and common. They appeared in the first decade of the 20th century, reaching a peak of popularity between 1910 and 1930 when they were featured in literature and magazines devoted exclusively to the house type. Typical bungalow features include a low-slung profile of only one or 1-1/2 stories and a broad roofline that incorporates the porch or veranda in an attempt to minimize the contrast between exterior and interior space. Bungalow designs typically feature angular brackets supporting widely spreading and often



Figure 6-36. Structure W4-A (41HY539)—Front of House (Facing Southwest)



Figure 6-37. Structure W4-A (41HY539)—Northwestern Side of House (Facing Southeast)



Figure 6-38. Structure W4-A (41HY539)—Southeastern Side of House (Facing North)



Figure 6-39. Structure W4-A (41HY539)—Back of House (Facing Northeast)

decoratively carved eaves. The roof form most often identified with bungalows is a multiple-gabled roof (Myers 2004).

Bungalows are found throughout rural Hays County in both the small towns and as ranch or farmhouses. Bungalows are the most common subtype of domestic building in Hays County. Because they are so prevalent, bungalows are found throughout the county in varying stages of integrity and condition. They were built locally from the 1910s until the 1930s. Their dominance reflects the bungalow's popularity and the county's general prosperity when most citizens benefited from the high yields of local cotton growers.

The most common form of bungalow in Hays County is the front-gabled bungalow. A smaller, secondary front gable often covers a partially inset porch. Side-gabled bungalows, likewise, have a single-gabled roof with slopes on the front and rear elevations, while the gable ends are on the side. Porches on earlier versions of this subgroup are completely inset, but more recent ones have small porches that only cover the main entrance. Cross-gabled bungalows have a front-facing gable and another gable that intersects at a right angle. Often, this second gable is located on the front and incorporates the porch, giving the structure a more horizontal emphasis (Myers 2004).

Structure W4-B—Barn (ca. 1925)

Structure W4-B is a small barn in the central portion of the site with a rectangular footprint measuring approximately 5.0 meters (16.4 feet) northeast to southwest by 6.5 meters (21.3 feet) northwest to southeast (Figures 6-40 to 6-41). This structure has an end-gabled roof. Rafter tails



Figure 6-40. Structure W4-B (41HY539)—Side of Barn (Facing Northeast)



Figure 6-41. Structure W4-B (41HY539)—Back of Barn (Facing Southeast)

are exposed under the roof eaves. Corrugated metal siding clads the barn. Two single-entry doors are found on the barn, one on the northeastern side and one on the southwestern side (both on the long or slope sides of the barn). The doors are also enclosed in the metal sheeting. Relatively small in size, the barn may have housed equipment, livestock feed, or possibly chickens.

Structure W4-C—Livestock Barn (ca. 1925)

Structure W4-C is a livestock barn located at the eastern end of the site with a rectangular footprint measuring approximately 15.0 meters (49.2 feet) northwest to southeast by 7.0 meters (23.0 feet) northeast to southwest with an end-gabled roof (Figure 6-42 to 6-43). The pole barn is constructed of cedar posts supporting the roof and multiple open bays that face southwest. The barn is clad in corrugated metal and is in very poor condition. This barn is located across the gravel road from the historic-age house on the site (Structure W4-A), though historically the structures were all a part of the same property. The barn is currently on the same legal parcel as site 41HY536, though historically sites 41HY536 to 41HY540 and 41HY542 were all part of the same parcel as early as 1912 (Hays County Deed Records, Vol. 61, page 577).

Concrete Well

A concrete well is located about 10.0 meters (32.8 feet) west-southwest of the larger barn (Structure W4-C) (Figure 6-44). The well measures approximately 1.8 meters (6.0 feet) across.



Figure 6-42. Structure W4-C (41HY539)—Southwestern Side of Barn (Facing Northeast)



Figure 6-43. Structure W4-C (41HY539)—Northwestern Side of Barn (Facing Southeast)



Figure 6-44. Concrete Well near Structure W4-C on Site 41HY539 (Facing West)

Concrete Trough

A concrete animal trough is located adjacent to the concrete well near the larger barn (Structure W4-C) (Figure 6-45). The trough measures about 2.0 meters (6.6 feet) in length by 1.0 meter (3.3 feet) in width.

Modern Facilities

Site 41HY539 also contains two modern steel barns and six metal storage silos (Figure 6-46). The farm is currently utilized by tenant farmers and is the only farmstead within the project area currently in use.

Cultural Materials Observed

Tenant farmers were active on site 41HY539 at the time of the survey. As such, Horizon's archeologists sought to be as non-obtrusive as possible and inspected the property quickly. No cultural materials were observed on the modern ground surface during the survey.

Historical Research

The property on which site 41HY539 is located was owned by David William (D.W.) Crews in 1912 prior to conveying the property to his son, Samuel Crews, during that same year. Prior to



Figure 6-45. Concrete Trough near Structure W4-C on Site 41HY539 (Facing North)



Figure 6-46. Modern Equipment Barn and Storage Silos on Site 41HY539 (Facing South)

this time-period, the Crews family (wife Ann and their 10 children) lived in Hays County Precinct 2 according to the US census of 1880. D.W. Crews owned numerous acres of land in Hays County during the late 19th and early 20th centuries. D.W. Crews is indicated as a farmer on the agricultural schedules of 1880. It is not known if he ever lived on this particular property. Samuel Crews is listed on the World War I draft registration (1917 to 1918) as a farmer and a resident of Precinct 2 in Hays County. By 1934, the property was sold to J.M. Young, who later sold the property to Aubra Young and later Edward Young (Aubra's son). Aubra Young is listed on the 1940 census for Precinct 2 as a farmer who owns his own land with a home valued at \$1,500. By 1942, he and his wife Alice lived in San Marcos, though he worked in Kyle according to US World War II draft registration cards. David A. Young was one of Kyle's first grocers, having opened a mercantile store after the railroad was established (Myers 2004). It has not been confirmed that J.M, Aubra and David Young are related, but is a high likelihood. The property eventually ended up with the Warhmund family (in 1983) prior to the sale to investment bankers and developers in 2005.

Summary and Recommendations

Site 41HY539 consists of an early to mid-20th-century farmstead with some additional modern buildings. Historic-age structures on the site include an early to mid-20th-century house, two barns, a concrete well, and a concrete animal trough. Several modern buildings also have been constructed on the site, including two barns and six metal storage silos. Two large stock ponds or small lakes are present to the northeast of the farm complex in a lightly wooded area on the other side of the gravel road. The site is currently occupied by tenant farmers and is in use as an active farm complex.

The bungalow on site 41HY539 is associated with early agricultural development and German settlement in Hays County near the Pecan Springs community or the Plum Creek valley. The house, associated barns, and surrounding pasture land are associated with this period in history and could be considered significant under Criterion A. However, the main house lacks integrity of design, workmanship, materials, and feeling in order to convey this significance. The property likely included additional historic-age structures at one time. The Crews and Warhmund families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The Young family is associated with the first grocery store, though the founder, David Young, is far removed from the time period of construction; therefore, the association with this person is minimal. The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B. The house or barns do not embody distinctive characteristics of a type, period, or method of construction; do not represent the work of a master; and do not possess high artistic values. Therefore the property is not significant under Criterion C. Due to a lack of historic integrity, the property is considered not eligible for listing on the NRHP.

6.5 SITE 41HY540

General Description

Site 41HY540 is a multiple-component site consisting of the remnants of a collapsed early to mid-20th-century farmhouse with an associated scatter of historic-age domestic debris and a sparse aboriginal component consisting of a low-density scatter of lithic artifacts (Figure 6-47; also see Figure 6-1). The farmhouse has almost completely collapsed and currently consists of a standing brick-and-mortar chimney on a concrete foundation covered in the collapsed remnants of the structure that once stood there (Figure 6-48). The site is situated on a rolling upland landform overlooking an unnamed tributary of the Clear Fork of Plum Creek. This intermittent tributary flows southeastward to the northeast of the site and lies between the site and the nearest road, FM 158, to the northeast, and it is not currently apparent how this site was accessed historically. A small clump of hackberry trees forms a backdrop to the standing chimney, but vegetation on the site is otherwise largely absent. The site is surrounded by active agricultural fields. Elevations on the site are relatively flat, averaging approximately 201.8 meters (662.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of cultural features and historic-age and aboriginal debris, site 41HY540 measures approximately 60.0 meters (196.8 feet) in diameter.

Cultural materials on site 41HY540 are largely constrained to the modern ground surface, though three of the six shovel tests revealed shallow subsurface archeological deposits extending to a depth of 10.0 centimeters (3.9 inches) below surface.

Cultural Features Observed

The remnants of one cultural feature, a concrete foundation supporting a pile of clay tile and mortar rubble and a standing brick-and-mortar chimney, are present on site 41HY540 (Figures 6-49 to 6-52). The concrete foundation slab measures approximately 12.0 meters (39.4 feet) northeast to southwest by 7.0 meters (23.0 feet) northwest to southeast. The former house was constructed of hollow clay tile, though the structure has almost completely collapsed. Only the concrete foundation pad and brick chimney remain, and construction materials are scattered around the site. The former house had a square or almost square foundation. The hollow tiles are the same as those found on site 41HY537 (see the site description for site 41HY537 for information about the hollow clay tile building material). Both properties were owned by the same person as far back as 1912 (Hays County Deed Records, Volume 61, page 577). No other associated historic-age features were identified near this house ruin.

Cultural Materials Observed

Historic-age cultural materials observed on site 41HY540 include amethyst, clear, aqua, olive green, amber, and milk glass shards; one porcelain door knob; plain and decorated whiteware ceramic sherds; tile fragments; a stoneware insulator; and unidentified metal fragments (Figure 6-53 to 6-54). Historic-age artifacts are generally diagnostic of an early to mid-20th-

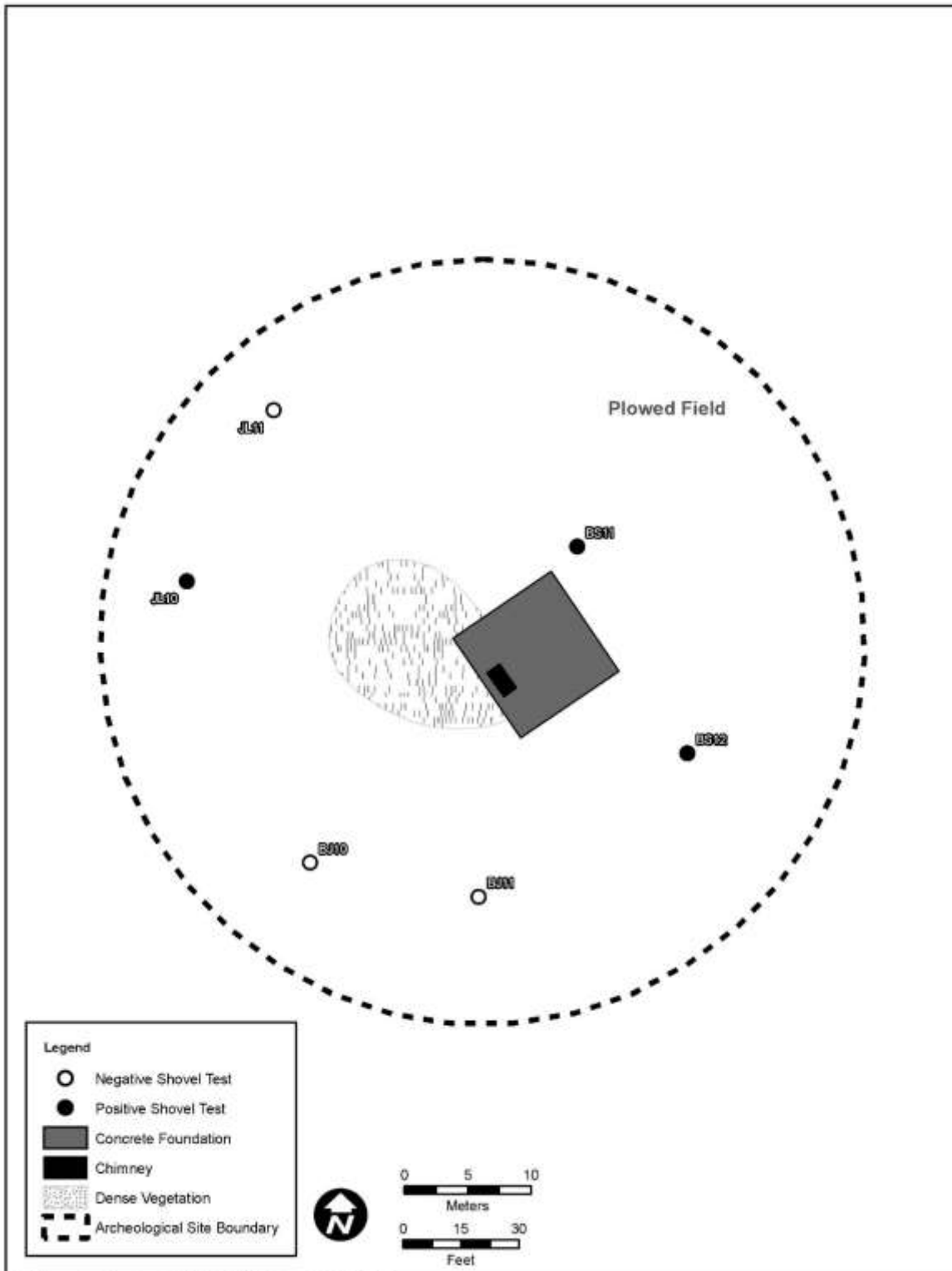


Figure 6-47. Sketch Map of Site 41HY540



Figure 6-48. Overview of Site 41HY540 (Facing Southeast)



Figure 6-49. House Foundation and Chimney on Site 41HY540 (Facing Southwest)



Figure 6-50. House Foundation and Rubble Pile on Site 41HY540 (Facing Southeast)



Figure 6-51. Detail of Chimney Base on Site 41HY540 (Facing South)



Figure 6-52. Detail of Chimney Top on Site 41HY540 (Facing South)



Figure 6-53. Historic-age Glass Shards Observed on Site 41HY540



Figure 6-54. Historic-age Ceramic Sherds Observed on Site 41HY540

century occupation. Aboriginal cultural resources observed on the site consist of one late-stage biface preform, a tested chert cobble, a few small chert cores, and several primary flakes (Figure 6-55). No temporally diagnostic aboriginal artifacts were observed, and the aboriginal occupation of the site can only be dated to an unspecified prehistoric timeframe.

Historical Research

The property on which site 41HY540 is located was owned by David William (D.W.) Crews in 1912 prior to conveying the property to his son, Frank Crews, during that same year. Prior to this time period, the Crews family (wife Ann and their 10 children) lived in Hays County Precinct 2 according to the US Census of 1880. As a side note, the Crews family name is spelled “Cruz” in the 1880 census and “Crews” in following census records. D.W. Crews owned numerous acres of land in Hays County during the late 19th and early 20th centuries. D.W. Crews is indicated as a farmer on the agricultural schedules of 1880. It is not known if he ever lived on this particular property. Frank Crews (b. 1878, d. 1945) lived in Buda in 1920 according to US census records of 1920. Frank Crews is listed on the World War I draft registration (1917-1918) as a farmer and a resident of Buda. In 1927, Frank and his wife Lena sold the property to R.H. Kretzmeier. In the late 1950s and 1960s, the property was sold to Dr. M.D. Heatly, who owned quite a bit of property in the county, and to Alex Kercheville. The property eventually ended up with the Warhund family prior to the sale to investment bankers and developers in 2005.



Figure 6-55. Aboriginal Lithic Debitage Observed on Site 41HY540

Summary and Recommendations

Site 41HY540 is a multiple-component site consisting of the remnants of a collapsed early to mid-20th-century farmhouse with an associated scatter of historic-age domestic debris and a sparse aboriginal component consisting of a low-density scatter of temporally non-diagnostic lithic artifacts. The farmhouse has almost completely collapsed and currently consists of a standing brick-and-mortar chimney on a concrete foundation covered in the collapsed remnants of the structure that once stood there.

The domestic structure ruin on site 41HY540 is associated with the early agricultural development and German settlement in Hays County near the Pecan Springs community or the Plum Creek valley. The house and surrounding plowed agricultural field are associated with this period in history and could be considered significant under Criterion A. However, the structure lacks integrity of design, workmanship, materials, association, and feeling in order to convey this significance. The property likely included additional historic-age structures at one time. The Crews, Heatly, Kretzmeier and Warhmund families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B. The collapsed structure does not embody distinctive characteristics of a type, period, or method of construction; does not represent the work of a master; and does not possess high artistic values. Therefore the property is not significant under Criterion C. Due to a lack of historic

integrity, the property is considered not eligible for listing on the NRHP. Furthermore, the ephemeral archeological deposits associated with both the historic-age and aboriginal components are constrained to the modern ground surface and shallow subsurface deposits. The archeological deposits are disturbed, lack integrity, and possess minimal potential to contribute to knowledge of the historic or prehistoric past. As such, the site is not considered significant under Criterion D. Site 41HY540 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.6 SITE 41HY541

General Description

Site 41HY541 represents the remnants of an early to mid-20th-century farmstead located off the southwestern side of FM 158 (Figure 6-56; also see Figure 6-1). The site is accessed via a gravel driveway from FM 158 constructed atop an elevated earthen berm. The site consists of the remnants of a somewhat unusual brick house, a barn, a concrete well, and a collapsed shed. A gravel drive leads from FM 158 to the northeast onto the property and towards the original front of the house. The site is situated on a rolling upland overlooking the headwaters of an intermittent tributary of the Clear Fork of Plum Creek that arises to the southeast of the site. The site is located in a copse of trees surrounded by plowed fields. Vegetation on the site consists of post oak, elm, hackberry, and sycamore trees, various grasses, and weeds. Elevations on the site are relatively flat, ranging only from approximately 205.5 to 206.1 meters (674.0 to 676.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of cultural features and historic-age debris, site 41HY541 measures approximately 78.0 meters (255.8 feet) northwest to southeast by 52.0 meters (170.6 feet) northeast to southwest. The site boundaries are largely co-extensive with the little copse of trees within which the historic-age structures are situated.

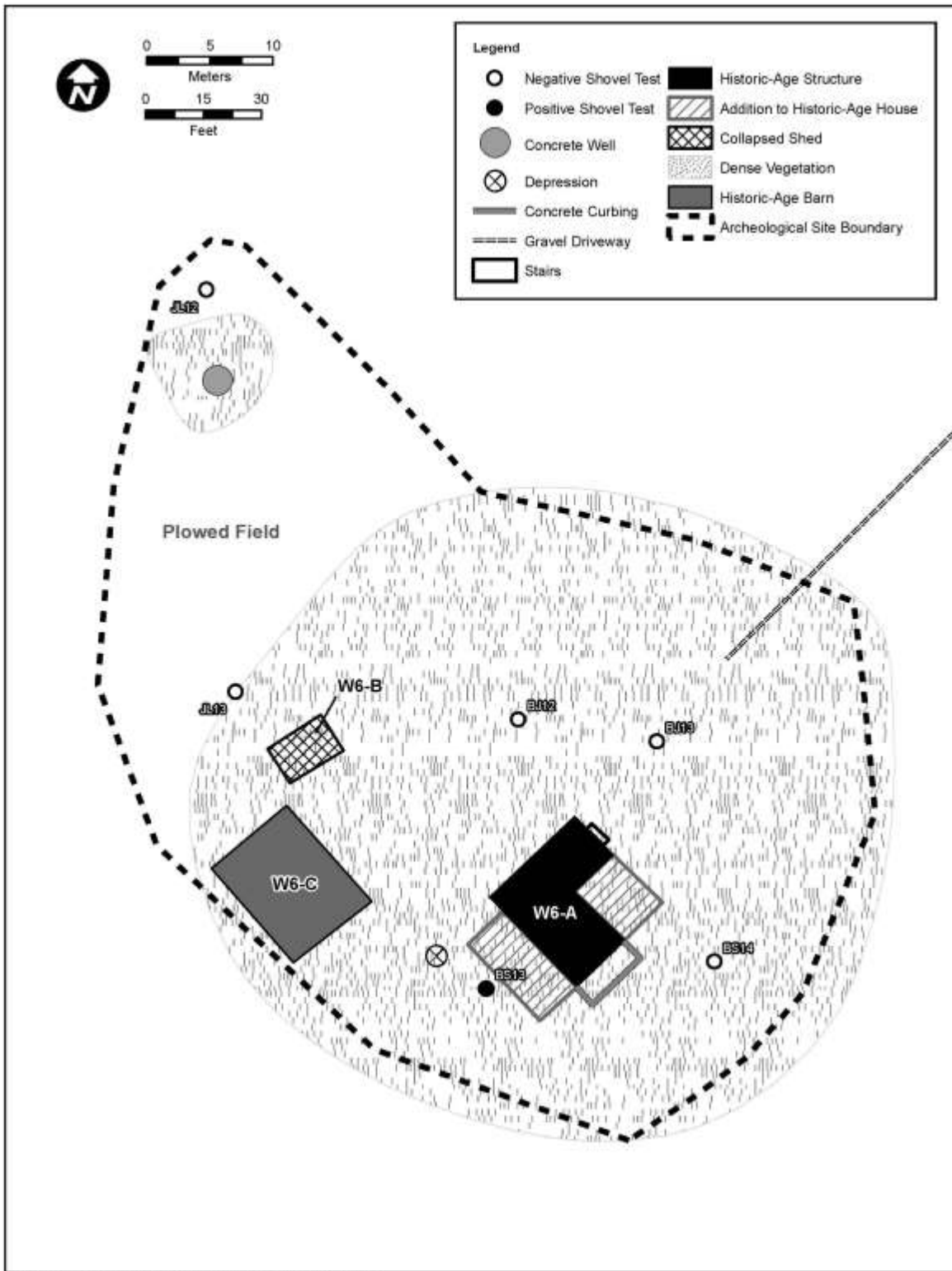
Cultural materials on site 41HY541 are constrained largely to the modern ground surface, though one of the six shovel tests excavated on the site contained shallow subsurface archeological deposits extending to a depth of 10.0 centimeters (3.9 inches) below surface.

Cultural Features Observed

Cultural features on site 41HY541 include the remnants of a brick house (Structure W6-A), a collapsed shed (Structure W6-B), a barn (Structure W6-C), and a concrete well.

Structure W6-A—House (ca. 1900)

Structure W6-A is a front-facing, L-plan house constructed of buff-colored brick coursed in a common bond pattern (Figures 6-57 to 6-64). The house appears to have had a single story, with a partial basement under the L portion (i.e., the southeastern section). Stone steps lead down into the basement level from the exterior. The window and door openings feature rough brick arches formed with two courses of header bricks above transom window openings. Header course bricks form window sills. The interior walls of the building once had stucco coating



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Figure 6-56. Sketch Map of Site 41HY541



Figure 6-57. Structure W6-A (41HY541)—Northwestern Side of House (Facing Southeast)



Figure 6-58. Structure W6-A (41HY541)—West Half of South Side of House (Facing North)



Figure 6-59. Structure W6-A (41HY541)—East Half of South Side of House (Facing East)



Figure 6-60. Structure W6-A (41HY541)—Southeastern Side of House (Facing West)



Figure 6-61. Structure W6-A (41HY541)—Northeastern Room Interior (Facing Northeast)



Figure 6-62. Structure W6-A (41HY541)—Southeastern Room and Basement Interior (Facing Southeast)



Figure 6-63. Structure W6-A (41HY541)—Northwestern Room Interior from Basement (Facing Northwest)



Figure 6-64. Structure W6-A (41HY541)—Remnants of Burned Frame on Eastern Outer Porch (Facing East)

(possibly the exterior as well). A water table extends approximately 0.9 meter (3.0 feet) up from ground level. The building is supported on rough-cut sandstone blocks, limestone rubble, and bricks. A kitchen addition (presumably) once extended from the southwestern side of the building. This addition appears to have been a frame construction with a concrete slab foundation and a wood floor supported on wood beams. Gas and water pipes extend from the slab. A front porch inset within the L faced FM 158 and the driveway leading up to the house, though the porch burned down along with the rest of the interior of the structure several years ago.

The remaining walls are approximately 30.5 centimeters (12.0 inches) thick, with 40.6-centimeter- (16.0-inch-) thick basement or foundation walls. An additional concrete slab is found off the southeastern end of the house. This may have been a bathroom addition based on the presence of water pipes extending from the slab. A newer brick addition was constructed off the northeastern (front) side of the house. This addition may have been a reconstructed porch floor, though the steps into the basement are located in this area also. The house had large wooden floor beams extending from voids within the brick walls (almost all of the wood members are burned out, along with all windows, doors, and interior walls). Small, brick-arched openings located near the foundation provided light into the basement level. The roof type is undetermined based on the lack of remaining roofing materials. It may have had a cross-gable roof or hipped roof clad in corrugated metal. The house may also have had some Folk Victorian or Queen Anne details in the woodwork. The windows were likely a two-over-two wood sash configuration. Any evidence of a fireplace or chimney is gone.

The L-plan dwelling, Texas' most common late-19th-century house form, is probably an elaboration of the center-passage house. The most common examples of L-plan houses are one or one-and-a-half stories in height, although two-story versions exist, especially in main areas. L-plan houses characteristically have cross-gable or intersecting roofs with an off-center gabled wing extending forward and another one to the rear. Wood-frame construction is typical and weatherboard siding is often used to sheath the exterior, but masonry dwellings of this type are found as well, most often in cities. Because most were built during the late 19th century, L-plan dwellings often display the elaborate detailing and ornamentation, particularly on porches and on gable ends, that was widely popular at that time. Entry is made into the central hallway or passage, and the interior arrangement follows the basic plan of the center-passage house. Access to the projecting rooms extends from within one of the main rooms off the central hall. The projecting wing can be divided into two rooms, of which the front room is the most important public space. The two areas can be paired, if necessary, to form a circuit of entertaining spaces. The remaining room functions as a private chamber (Myers 2004).

L-plan houses are the most common vernacular plan type found in Hays County and are common in both rural and urban settings. Surveys conducted in 1995 and 1996 identified 74 L-plan houses in rural Hays County. They were common in the country, serving as primary farm and ranch houses, as well as in the county's small towns like Dripping Springs, Buda, and Kyle. Many others are in the city of San Marcos. Although they were built from the late 1870s until about 1910, most local examples date to the last two decades of the 19th century and are one or one-and-a-half stories in height. Wood-frame construction with weatherboard siding prevails, although many houses are now covered with synthetic siding. The majority display modest

detailing and textural variety that are characteristic of the Queen Anne style, and these features often are seen on the porch and on the gable ends. Porch supports, for example, frequently have turned-wood supports, jig-sawn brackets, and spindled friezes. The gable ends typically feature pent roofs and wood-shingled siding in contrasting patterns, occasionally with jig-sawn bargeboards in the apex of gable ends. Doors typically have single light transoms (Myers 2004).

Structure W6-A is unusual in its style (primarily in terms of the window and door openings) and materials for the area. Rural farmhouses in eastern Hays County were typically of frame construction, not masonry. Early rural masonry farmhouses were more often constructed of stone, not brick. The arched window and door openings give the building a commercial and/or urban feel. The construction of such a house on a rural property suggests that the house may have had a public use, such as a farm office or meeting space, though it's most recent use does appear to have been as a residence based on the amount of furniture and domestic debris scattered around the site. The building seems a bit out of place for a domestic structure, though no documentation or resources suggest an alternate use.

Structure W6-B—Collapsed Shed (ca. 1950)

Resource W6-B is a collapsed frame shed that was once sheltered within a corrugated metal roof (Figure 6-65 to 6-66). Wood planking composed the walls, though the form is undetermined due to the condition of the structure.



Figure 6-65. Structure W6-B (41HY541)—Collapsed Shed (Facing South)



Figure 6-66. Structure W6-B (41HY541)—Collapsed Shed (Facing West)

Structure W6-C—Barn (ca. 1920)

Structure W6-C is a barn with a rectangular footprint measuring approximately 10.0 meters (32.8 feet) northwest to southeast by 7.0 meters (23.0 feet) northeast to southwest located west of the house (Structure W6-A) (Figures 6-67 to 6-68). This barn is sheltered with an end-gabled roof clad in corrugated metal. The gable ends are clad in corrugated metal. The pole barn has three open-bays on the northern side. The southeastern portion of the structure served as a garage, while the northwestern portion appears to have been used as a workshop. No flooring is present.

Concrete-Capped Well (ca. 1956)

Located immediately west of the house is a large concrete-capped well (Figure 6-69). The top of the well rises approximately 50.8 centimeters (20.0 inches) above ground, and the well is approximately 1.5 meters (5.0 feet) in diameter. A metal-capped access port is positioned off-center on the well. The concrete well cap has an inscription that reads “1956 SEP. RMS.”

Cultural Materials Observed

Cultural materials observed on site 41HY541 include clear, green, and amber glass shards; furniture (including sofas, chairs, and remnants of at least four porcelain toilets); piles of



Figure 6-67. Structure W6-C (41HY541)—Front of Barn (Facing Southwest)



Figure 6-68. Structure W6-C (41HY541)—Southeastern End of Barn (Facing Northwest)



Figure 6-69. Concrete-Capped Well on Site 41HY541 (Facing East)

large tires from farm equipment; and farm equipment. The historic-age cultural materials on the site are generally diagnostic of the early to mid-20th century.

Historical Research

The USGS San Marcos, Texas, topographic quadrangle of shows a house located at site 41HY531 (see Figure 4-2). The chain of title for the property indicates that, in 1895, Owen Ford and C.H. Word sold 173.6 hectares (429.0 acres) out of the Hemphill Survey to T.C. Johnson and G.C. Johnson. In 1949, J.M. Johnson sold 46.9 hectares (116.0 acres) to Ruth Johnson, T.C. Johnson, Jr., and Lucy Pettey (of California). The Johnson family may be related to Thomas Jefferson Johnson, who founded the Johnson Institute near Driftwood, Texas. The school was a private secondary school (Stovall et al. 1986). In 1996, the property was sold via a trust from Thomas Sewell, Jr. (he inherited the property from Lucy Pettey) to the Wahrmond family. The house was likely constructed during the ownership of T.C. Johnson during the boom of agricultural production.

Summary and Recommendations

Site 41HY541 represents the remnants of an early to mid-20th-century farmstead consisting of an unusual brick house, a barn, a concrete well, and a collapsed shed. The house (Structure W6-A) is the earliest structure on the site (ca. 1900), and the larger of the two outbuildings (Structure W6-C) was constructed somewhat later (ca. 1920). The smaller shed

(Structure W6-B) represents a later era of construction (ca. 1950s). The concrete well cap has an inscription indicating the well was capped in 1956, though the well itself may be older. According to Mr. Curby Ohnheiser, a local rancher who stopped by while Horizon's archeologists were recording site 41HY541, the site was most recently inhabited by some renters who burned the house down about four years ago. Mr. Ohnheiser did not know who lived in the house before the renters, but he did mention that the locals call it "Rattlesnake House" because the basement is usually full of rattlesnakes.

The house, barn, shed, and well are associated with the early agricultural development and German settlement in Hays County near the Pecan Springs community or the Plum Creek valley. The site and surrounding agricultural fields are associated with this period in history and could be considered significant under Criterion A. All of the buildings and structures on the property are in poor condition. While the house ruins provide some indication of a turn-of-the-century farmstead, the complex lacks integrity of design, workmanship, materials, association, and feeling in order to convey this significance. The style of the house, the primary resource, is underdetermined due to the substantial fire damage. The property likely included additional historic-age structures at one time.

The Owen, Word, or Wahrmund families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B. The house and outbuildings do not embody distinctive characteristics of a type, period, or method of construction; do not represent the work of a master; and do not possess high artistic values. Therefore the property is not significant under Criterion C. Due to a lack of historic integrity, the property is considered not eligible for listing on the NRHP. Furthermore, while there is an abundance of domestic debris on the site, the cultural materials do not possess any special capacity to contribute meaningfully to knowledge of the historical past. As such, the site is not considered significant under Criterion D. Site 41HY541 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.7 SITE 41HY542

General Description

Site 41HY542 represents the remnants of an early to mid-20th-century farmstead composed of a standing barn, a collapsed structure, and an associated scatter of domestic debris (Figure 6-70; also see Figure 6-1). Historically, the site was accessed via an unimproved field road that extended southeastward from FM 158 to the northwest past the site location before bending to the west and south, crossing an unnamed tributary of Hemphill Creek, and continuing southwestward to articulate with Yarrington Road. This old field road is visible even on recent USGS topographic quadrangles (see Figure 1-1), though the portion of this road located north of the unnamed tributary of Hemphill Creek is no longer extant. The site is located on a rolling upland landform in a small copse of trees surrounded by active agricultural fields. Vegetation on the site consists of post oak, hackberry, and sycamore trees as well as various grasses and weeds. Elevations on the site are relatively flat, ranging only from approximately 195.7 to 196.3 meters (642.0 to 644.0 feet) amsl.

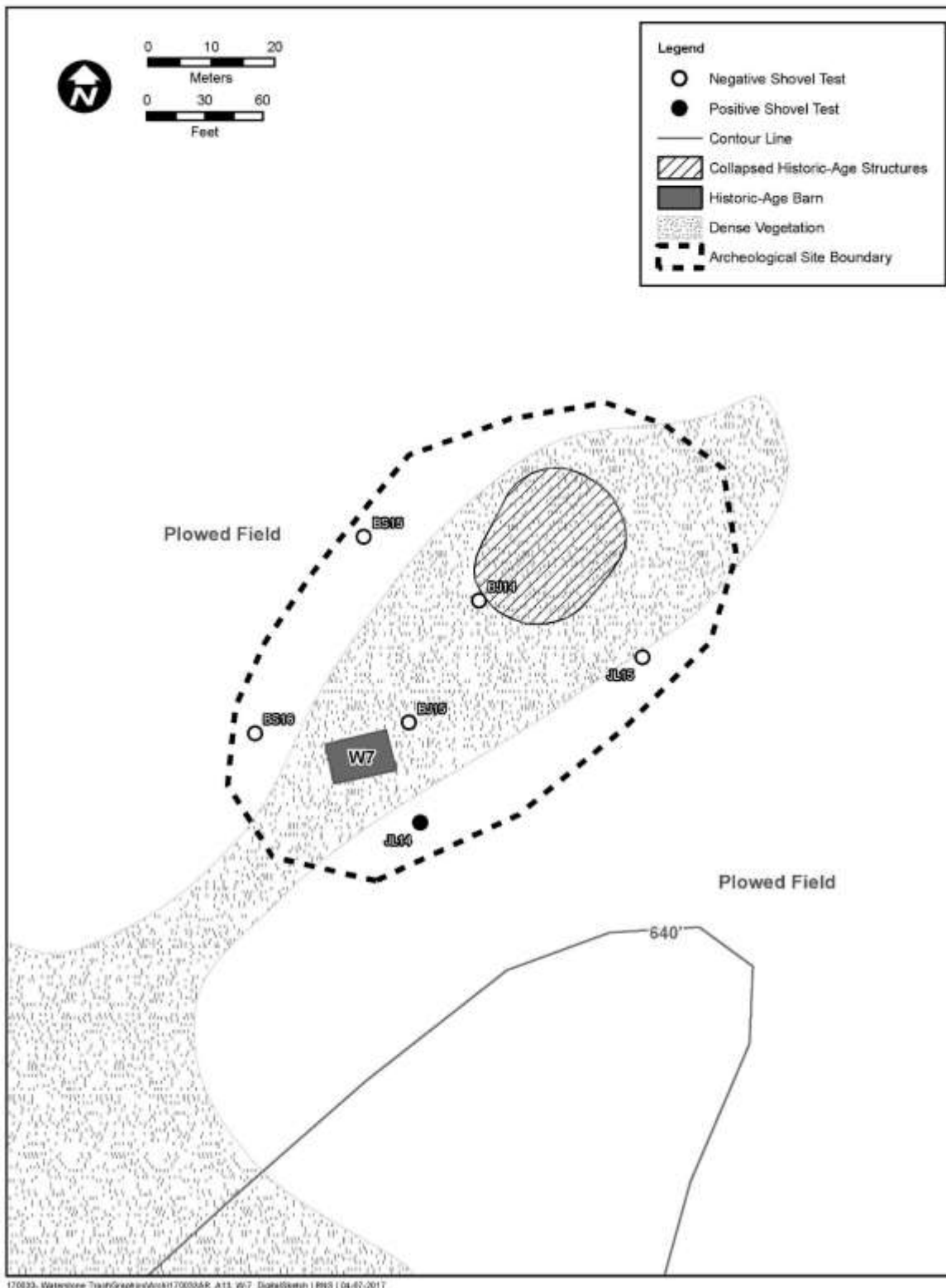


Figure 6-70. Sketch Map of Site 41HY542

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of cultural features and historic-age debris, site 41HY542 measures approximately 94.0 meters (308.3 feet) northeast to southwest by 54.0 meters (177.1 feet) northwest to southeast.

Cultural materials on site 41HY542 are largely constrained to the modern ground surface, though one of the six shovel tests excavated on the site yielded shallow subsurface archeological deposits extending to a depth of 15.0 centimeters (5.9 inches) below surface.

Cultural Features Observed

Cultural features on site 41HY542 include a standing barn (Structure W7) and a pile of construction debris that may represent the former location of a house that probably served as the primary residence on the site.

Structure W7—Barn (ca. 1915)

Structure W7 is a frame barn with a rectangular footprint measuring approximately 9.0 meters (29.5 feet) east to west by 7.0 meters (23.0 feet) north to south (Figures 6-71 to 6-72). An end-gabled roof shelters the building, which is clad in corrugated metal. The wood-planked sides of the barn are also clad in corrugated metal. Two rectangular window openings are found on the southern side of the barn. Cypress piers support the pier-and-beam barn. The barn may have been used as a chicken coop.



Figure 6-71. Structure W7 (41HY542)—Southwestern Corner of Barn (Facing Northeast)



Figure 6-72. Structure W7 (41HY542)—Northeastern Corner of Barn (Facing Southeast)

Collapsed House

Approximately 30.0 meters (98.4 feet) northeast of the barn (Structure W7) is a large pile of construction debris and building elements that may represent the former location of the primary residence on the site (Figures 6-73 to 6-74). The debris pile measures approximately 20.0 meters (65.6 feet) northeast to southwest by 15.0 meters (49.2 feet) northwest to southeast. The collapsed structure was likely a plank-wall house constructed ca. 1910. A portion of a brick chimney flue, portions of a shingled roof, portions of a wood-planked floor, window glass, evidence of a ceramic knob and tube wiring, and domestic debris are scattered across the site (Figure 6-75). It is also possible the collapsed outbuilding was second barn, as recent USGS topographic quadrangles show two outbuildings at this location. In this case, the barns were probably associated with a larger farmstead on the other side of the unnamed tributary of Hemphill Creek farther south along the field road that provides access to this site.

Cultural Materials Observed

Cultural materials observed on the site include clear, amber, amethyst, olive green, aqua, and milk glass shards; a blue ceramic insulator; glazed stoneware sherds; whiteware ceramic sherds; ceramic tile fragments; a rubber button; an amber glass bottle top with a packer-style finish, tool markings, and no side seems (i.e., not machine-made); one clear glass jar handle; red



Figure 6-73. Collapsed Structure on Site 41HY542 (Facing Southwest)



Figure 6-74. Collapsed Roofing of Structure on Site 41HY542 (Facing Southeast)



Figure 6-75. Scatter of Construction Debris on Site 41HY542 (Facing Northeast)

cherry bricks with “D’HANIS” maker’s marks; a milk glass jar base with a “Pond’s” makers mark; and numerous unidentified metal fragments (Figure 6-76). Cultural materials are generally diagnostic of the early to mid-20th century.

Historical Research

The property on which site 41HY542 is located (the same property on which site 41HY539 is located) was owned by David William (D.W.) Crews in 1912 prior to conveying the property to his son, Samuel Crews, during that same year. Prior to this time period, the Crews family (wife Ann and their 10 children) lived in Hays County Precinct 2 according to the US census of 1880. D.W. Crews owned numerous acres of land in Hays County during the late 19th and early 20th centuries. D.W. Crews is indicated as a farmer on the agricultural schedules of 1880. It is not known if he ever lived on this particular property. Samuel Crews is listed on the World War I draft registration (1917-1918) as a farmer and a resident of Precinct 2 in Hays County. By 1934, the property was sold to J.M. Young, who later sold the property to Aubra Young and later Edward Young (Aubra’s son). Aubra Young is listed on the 1940 census for Precinct 2 as a farmer who owns his own land with a home valued at \$1,500. By 1942, he and his wife Alice lived in San Marcos, though he worked in Kyle according to US World War II draft registration cards. David A. Young was one of Kyle’s first grocers, having opened a mercantile store after the railroad was established (Myers 2004). It has not been confirmed that J.M, Aubra, and David Young are related, but is a high likelihood. The property eventually ended up with the Warhund family (in 1983) prior to the sale to investment bankers and developers in 2005.



Figure 6-76. Historic-age Cultural Materials Observed on Site 41HY542

Summary and Recommendations

Site 41HY542 represents the remnants of an early to mid-20th-century farmstead composed of a standing barn, a collapsed structure, and an associated scatter of domestic debris. The site may have been part of a larger farm complex located southwest of the site across an unnamed tributary of Hemphill Creek (outside of the project area). Based on aerial imagery, this farm complex to the southwest appears to include several barns as well as a house. However, site 41HY542 is currently not on the same legal parcel as the farm complex to the south. Rather, site 41HY542 is currently on the same parcel as site 41HY539. If this property was once associated with the farm complex to the south, this house may have been a tenant dwelling based on the location near the fields, behind the main house, and near the outbuildings.

The barn on site 41HY542 (Structure W7) is associated with the early agricultural development and German settlement in Hays County near the Pecan Springs community or the Plum Creek valley. The barn and surrounding agricultural fields are associated with this period in history and could be considered significant under Criterion A. The barn is in poor condition and lacks integrity of design, workmanship, materials, association, and feeling in order to convey this significance. The house (or possibly a second barn) that was once adjacent to the standing barn is currently a pile of debris. The property likely included additional historic-age structures at one time. The Crews and Warhund families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The Young family is associated with

the first grocery store, though the founder, David Young, is far removed from the time period of construction; therefore, the association with this person is minimal. The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B. The barn does not embody distinctive characteristics of a type, period, or method of construction; does not represent the work of a master; and does not possess high artistic values. Therefore the property is not significant under Criterion C. Due to a lack of historic integrity, the property is considered not eligible for listing on the NRHP. Furthermore, the ephemeral archeological deposits on the site are constrained to the modern ground surface and shallow subsurface contexts. The archeological deposits are disturbed, lack integrity, and possess minimal potential to contribute to knowledge of the historical past. As such, the site is not considered significant under Criterion D. Site 41HY542 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.8 SITE 41HY543

General Description

Site 41HY537 is a multiple-component site consisting of the remnants of an early to mid-20th-century farmstead and a low-density scatter of aboriginal lithic artifacts located off the southwestern side of FM 158 (Figure 6-77; also see Figure 6-1). The historic-age component consists of a collapsed wooden structure, a concrete livestock trough, an elevated metal cistern mounted on a concrete stand, and an associated scatter of domestic debris. The aboriginal component consists of three bifaces and a sparse scatter of lithic debitage. The site is situated on a rolling upland landform in a small copse of trees surrounded by active agricultural fields (Figure 6-78). Vegetation on the site consists of small saplings and various weeds and grasses. Elevations on the site are relatively flat, ranging only from approximately 208.5 to 209.1 meters (684.0 to 686.0 feet) amsl.

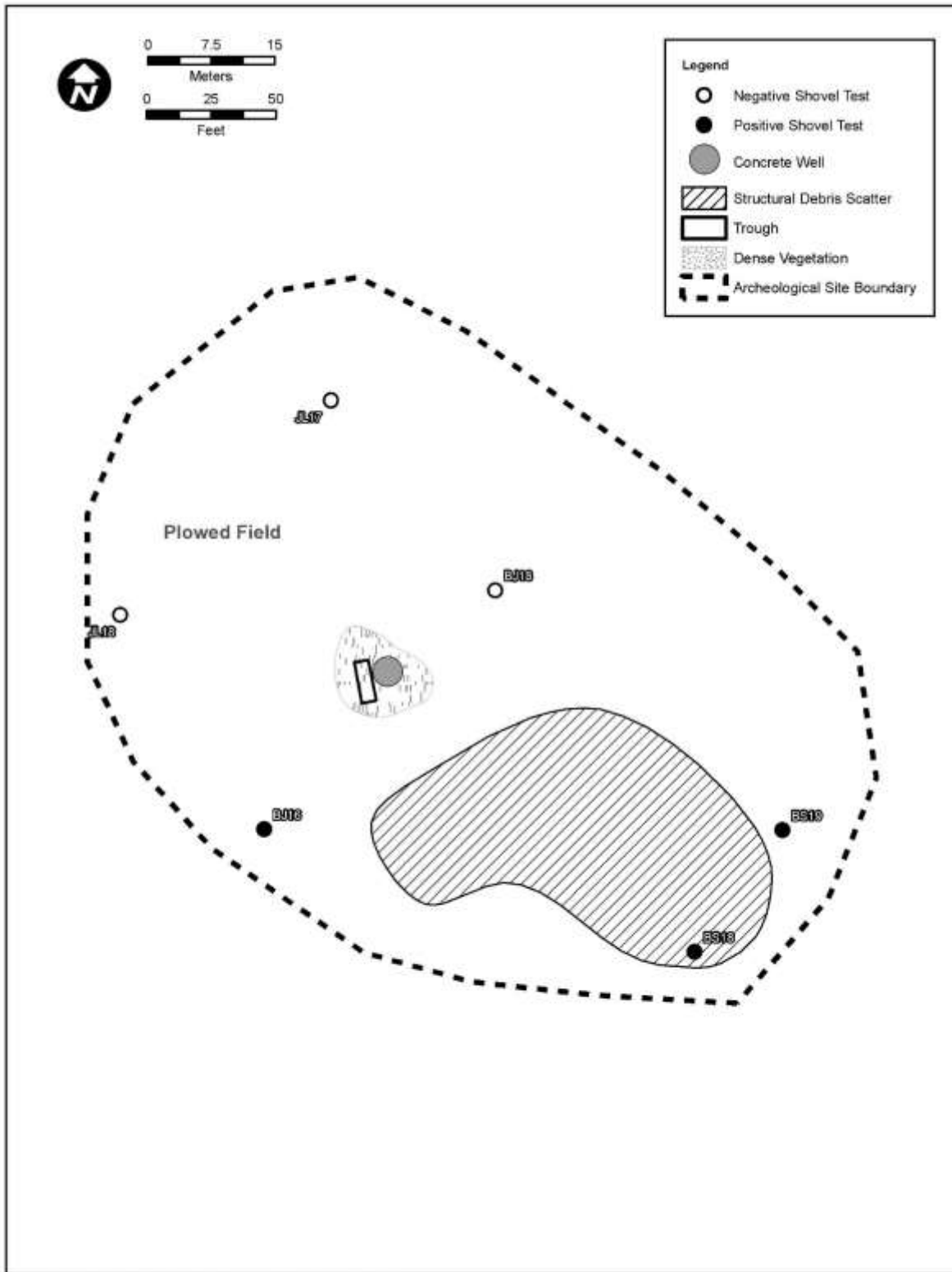
Horizontal and Vertical Extents of Cultural Materials

Based on the extent of cultural features and historic-age debris, site 41HY543 measures approximately 67.0 meters (219.8 feet) northeast to southwest by 100.0 meters (328.0 feet) northwest to southeast.

Cultural materials on site 41HY543 are largely constrained to the modern ground surface, though two of the six shovel tests excavated on the site revealed shallow subsurface archeological deposits extending to a depth of 10.0 centimeters (3.9 inches) below surface.

Cultural Features Observed

Two historic-age cultural features, a concrete livestock trough and an elevated metal cistern, are present on site 41HY543. In addition, an extensive scatter of construction debris located to the southeast of the animal trough and cistern likely represents the former location of a wood-frame house that once stood on the site. No aboriginal cultural features were observed on the site.



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Figure 6-77. Sketch Map of Site 41HY543



Figure 6-78. Overview of Site 41HY543 (Facing Southeast)

Concrete Trough (ca. 1920)

The trough is rectangular and is supported on a concrete stand (Figure 6-79). The trough measures approximately 0.6 by 1.5 meters (2.0 by 5.0 feet) in size and is located adjacent to the cistern.

Cistern (ca. 1920)

The riveted metal cylindrical cistern is supported on a poured concrete circular platform (Figure 6-80). The cistern is approximately 3.0 meters (10.0 feet) in diameter.

Cultural Materials Observed

Historic-age cultural materials observed on site 41HY543 include clear, blue, green, aqua, and amber glass shards; plain and transfer-print whiteware ceramic sherds; one glass marble; red cherry brick fragments; concrete fragments; cut limestone fragments; and unidentified metal fragments (Figure 6-81). The scatter of historic-age domestic debris is located southeast of the trough and cistern and defines a somewhat coherent area measuring approximately 45.0 meters (147.6 feet) east to west by 20.0 meters (65.6 feet) north to south. Historic-age cultural materials are generally diagnostic of an early to mid-20th-century occupation.



Figure 6-79. Concrete Trough on Site 41HY543 (Facing Northeast)



Figure 6-80. Elevated Metal Cistern on Site 41HY543 (Facing Southeast)



Figure 6-81. Scatter of Construction Debris on Site 41HY542

Aboriginal cultural materials observed on site 41HY543 include three bifaces and a sparse scatter of lithic debitage (Figure 6-82). Due to the lack of temporally diagnostic aboriginal artifacts, the aboriginal occupation of the site can only be dated to an unspecified prehistoric timeframe.

Historical Research

Site 41HY543 was once part of a larger farm belonging to Henry and Minna Neiman prior to 1908. Henry was 53 in 1908. The land stayed in the Nieman family until 1937 when Ida Nieman (age 54 at the time) sold the property to Otto Heidemann. Henry Nieman was a former Texas Ranger. He purchased a farm in 1890, and his home was one of the first to have a Delco plant to provide electricity. In 1916, Charles Kettering designed and developed a family of complete electric power systems (Delco plants) to provide electricity to farms, country homes, businesses, cabins, resorts, schools, churches, small towns, country clubs, and virtually every rural or remote building. Farmers could purchase the small generator and install it in an outbuilding or near their homes (Delco-Light Farm Electric Plant 2017).

Families that lived nearby were Aubrey Young, Johnson Farm, and Emil Ehrlich (Stovall et al. 1986). Henry Nieman is listed as a farmer, age 72, in the 1920 US census. The Hiedemanns kept the property until 1975 when the property was sold to Frank and Joyce Eichmann. The 1911 USGS San Marcos, Texas, topographic quadrangle shows a house on this property close to



Figure 6-82. Aboriginal Lithic Artifacts on Site 41HY542

FM 158 (see Figure 4-2). The farm may have been established by the Nieman family during the turn of the 20th century.

Summary and Recommendations

Site 41HY537 is a multiple-component site consisting of the remnants of an early to mid-20th-century farmstead and a low-density scatter of aboriginal lithic artifacts. The historic-age component consists of a collapsed wooden structure, a concrete livestock trough, an elevated metal cistern mounted on a concrete stand, and an associated scatter of domestic debris. The aboriginal component consists of three bifaces and a sparse scatter of lithic debitage.

The trough and cistern are associated with the early agricultural development and German settlement in Hays County near the Pecan Springs community or the Plum Creek valley. These features and the surrounding plowed fields are associated with this period in history and could be considered significant under Criterion A. The structures are no longer associated with a primary resource, such as a farmhouse. The compromised integrity of association and feeling substantially diminishes the conveyance of historical significance for these ancillary agricultural structures. The property likely included additional historic-age structures at one time. The Heidemann and Eichmann families do not appear in any of the previous surveys, prepared historic contexts, online searches, or in Stovall et al. (1986). The property is not known to be associated with an important person or family; therefore, it is not significant under Criterion B. The features do not embody distinctive characteristics of a type, period, or method of construction; do not

represent the work of a master; and do not possess high artistic values. Therefore the property is not significant under Criterion C. Due to a lack of historic integrity, the property is considered not eligible for listing on the NRHP. Furthermore, the ephemeral archeological deposits associated with both the historic-age and aboriginal components are constrained to the modern ground surface and shallow subsurface deposits. The archeological deposits are disturbed, lack integrity, and possess minimal potential to contribute to knowledge of the historic or prehistoric past. As such, the site is not considered significant under Criterion D. Site 41HY543 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.9 SITE 41HY544

General Description

Site 41HY544 consists of a moderate-density, surficial scatter of aboriginal lithic artifacts in a plowed field in an upland setting adjacent to an unnamed tributary of Hemphill Creek (Figure 6-83). The surrounding upland landscape contains a high density of chert-bearing limestone gravels and cobbles exposed on the modern ground surface of the active plowzone, and the site appears to represent a lithic raw material procurement locality (i.e., “quarry”) (Figure 6-84). An ephemeral drainage flows southeastward, forming the southwestern boundary of the site (Figure 6-85). Aside from a recently planted corn crop, no natural vegetation occurs within the site boundaries. Elevations on the site are relatively flat, ranging only from approximately 196.0 to 197.0 meters (643.0 to 646.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of aboriginal cultural debris, site 41HY544 measures approximately 85.0 meters (278.8 feet) in diameter.

Cultural materials on site 41HY544 are constrained to the modern ground surface. None of the six shovel tests excavated on the site revealed subsurface archeological deposits, though it is likely that some cultural materials have been incorporated into the shallow plowzone.

Cultural Features Observed

No cultural features or other cultural materials suggestive of cultural features (such as burned rocks) were observed on site 41HY544.

Cultural Materials Observed

Cultural materials observed on site 41HY544 included approximately five ephemeral flake tools, five to 10 bifaces, and 10 to 20 pieces of lithic debitage (Figure 6-86). No formal tools, temporally diagnostic artifacts, or preserved floral or faunal remains were observed on the site.

Summary and Recommendations

Site 41HY544 consists of a moderate-density, surficial scatter of aboriginal lithic artifacts in a plowed field in an upland setting adjacent to an unnamed tributary of Hemphill Creek. No formal tools, temporally diagnostic artifacts, or preserved floral or faunal remains were observed

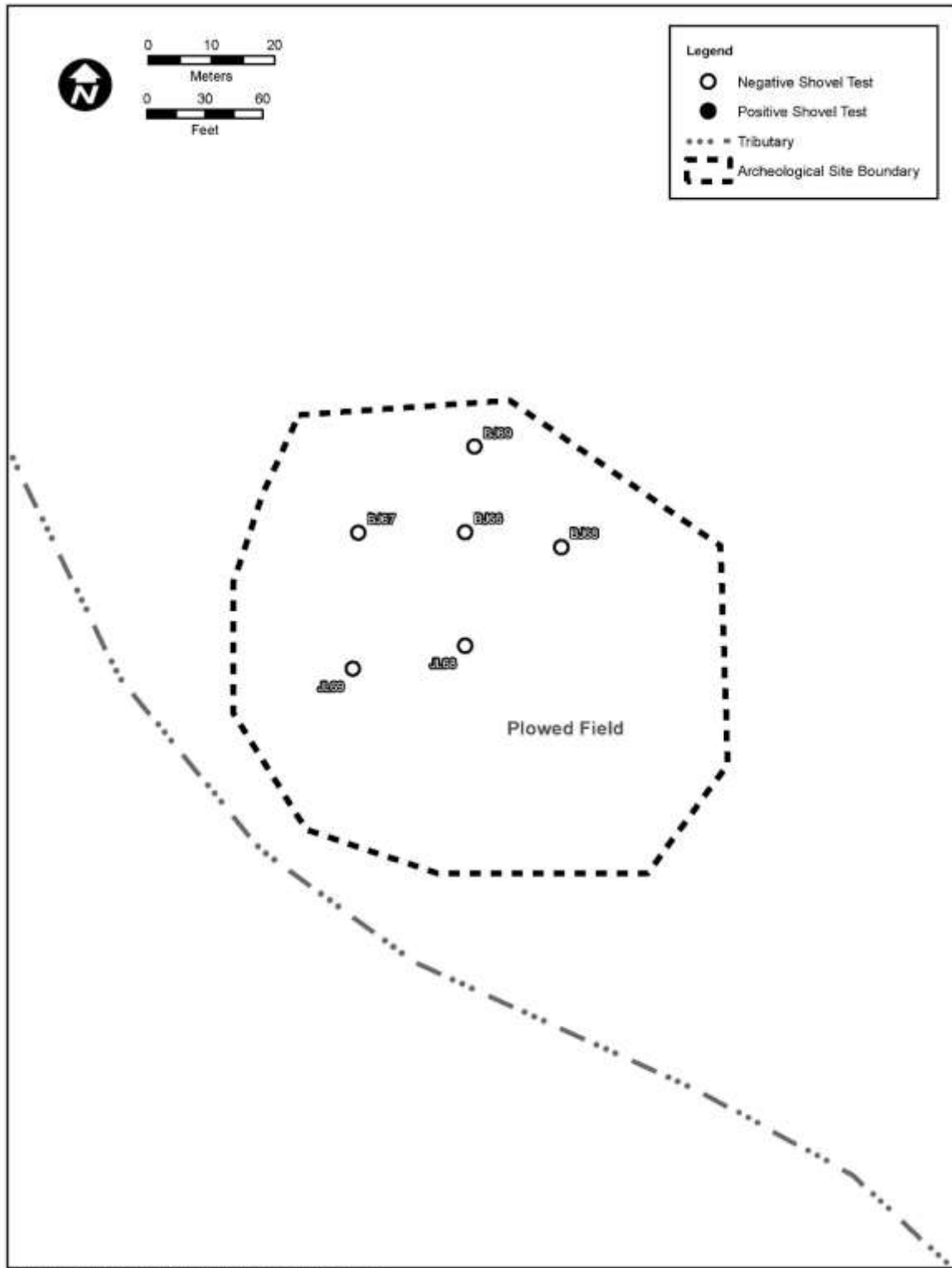


Figure 6-83. Sketch Map of Site 41HY544



Figure 6-84. Overview of Site 41HY544 (Facing South)



Figure 6-85. Drainage along Southwestern Boundary of Site 41HY544 Facing West)



Figure 6-86. Aboriginal Lithic Artifacts Observed on Site 41HY544

on the site, and the aboriginal occupation of the site can only be dated to an undetermined prehistoric timeframe. Cultural materials are constrained to the modern ground surface (and possibly within the shallow plowzone). Based on the presence of dense beds of chert-bearing gravels and cobbles on the site and in the surrounding area, the site is interpreted as a lithic raw material procurement locality. The aboriginal archeological deposits have been disturbed via decades, even centuries, of seasonal plowing and crop harvesting cycles. The site lacks integrity and possess minimal potential to contribute to an understanding of the prehistoric past; as such, the site is not considered significant under Criterion D. Site 41HY544 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.10 SITE 41HY545

General Description

Site 41HY545 consists of a moderate-density, surficial scatter of aboriginal lithic artifacts in a plowed field in an upland setting overlooking the Clear Fork of Plum Creek to the north (Figure 6-87). The site is located off the northeastern side of a private gravel road that provides access to several historic-age farmsteads within the project area. The surrounding upland landscape contains a high density of chert-bearing limestone gravels and cobbles exposed on the modern ground surface of the active plowzone, and the site appears to represent a lithic raw material procurement locality (i.e., “quarry”) (Figures 6-88 to 6-89). Vegetation on the site is limited to a recently planted corn crop. A forested area composed of post oak, hackberry, and

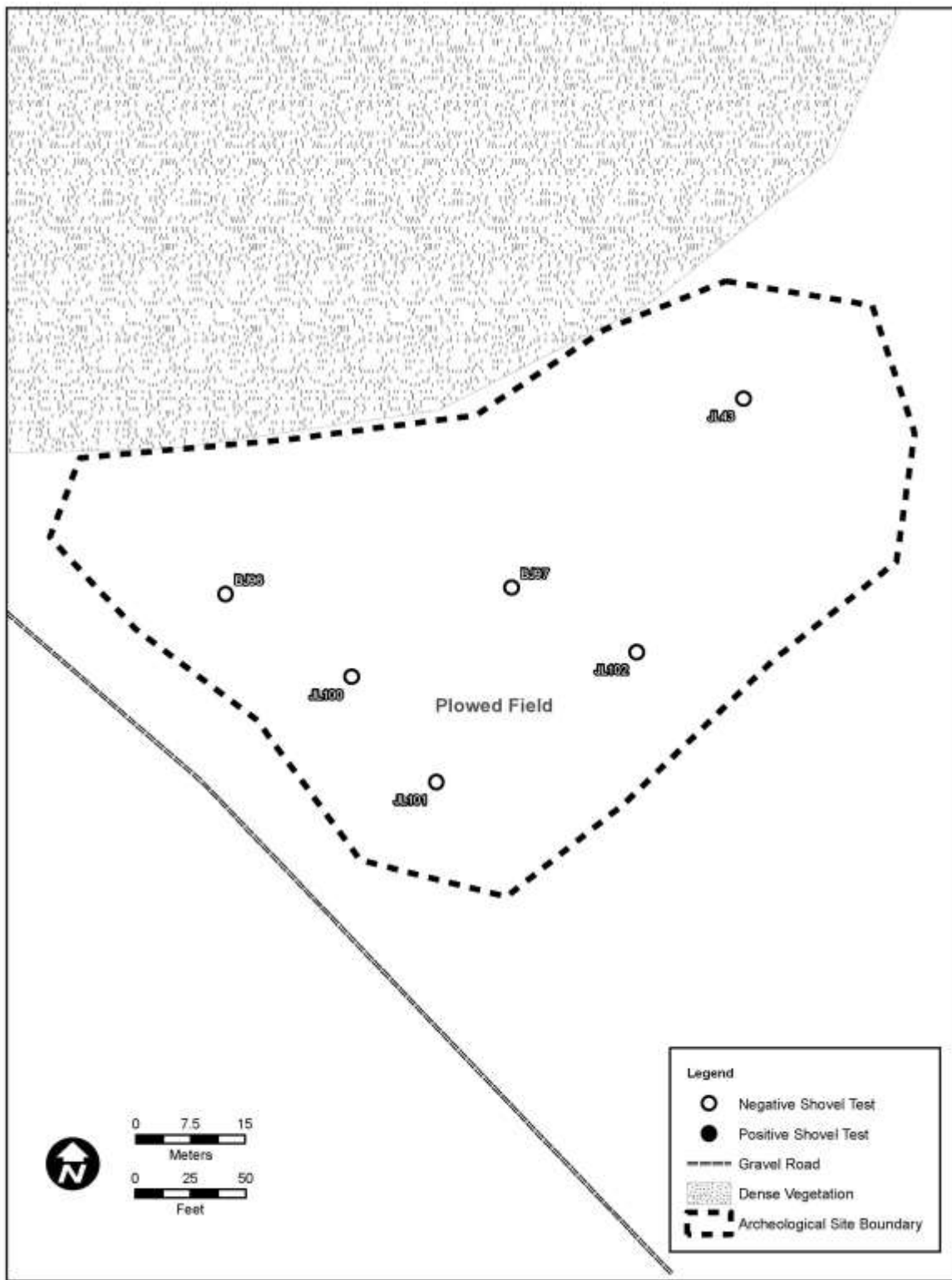


Figure 6-87. Sketch Map of Site 41HY545



Figure 6-88. Overview of Site 41HY545 (Facing North)



Figure 6-89. Gravelly Modern Ground Surface of Site 41HY545

various sapling trees as well as a dense undergrowth of grasses and weeds borders the site to the north. This forested area surrounds the two large stock ponds or small lakes discussed in connection with site 41HY539 above. Elevations on the site are relatively flat, ranging only from approximately 197.3 to 197.9 meters (647.0 to 649.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of aboriginal cultural debris, site 41HY545 measures approximately 120.0 meters (393.6 feet) east to west by 65.0 meters (213.2 feet) north to south.

Cultural materials on site 41HY545 are constrained to the modern ground surface. None of the six shovel tests excavated on the site revealed subsurface archeological deposits, though it is likely that some cultural materials have been incorporated into the shallow plowzone.

Cultural Features Observed

No cultural features or other cultural materials suggestive of cultural features (such as burned rocks) were observed on site 41HY545.

Cultural Materials Observed

Cultural materials observed on site 41HY545 included 10 to 15 ephemeral flake tools and 20 to 30 pieces of lithic debitage (Figure 6-90). No formal tools, temporally diagnostic artifacts, or preserved floral or faunal remains were observed on the site.



Figure 6-90. Aboriginal Lithic Artifacts Observed on Site 41HY545

Summary and Recommendations

Site 41HY545 consists of a moderate-density, surficial scatter of aboriginal lithic artifacts in a plowed field in an upland setting overlooking the Clear Fork of Plum Creek to the north. No formal tools, temporally diagnostic artifacts, or preserved floral or faunal remains were observed on the site, and the aboriginal occupation of the site can only be dated to an undetermined prehistoric timeframe. Cultural materials are constrained to the modern ground surface (and possibly within the shallow plowzone. Based on the presence of dense beds of chert-bearing gravels and cobbles on the site and in the surrounding area, the site is interpreted as a lithic raw material procurement locality. The aboriginal archeological deposits have been disturbed via decades, even centuries, of seasonal plowing and crop harvesting cycles. The site lacks integrity and possess minimal potential to contribute to an understanding of the prehistoric past; as such, the site is not considered significant under Criterion D. Site 41HY545 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

6.11 SITE 41HY546

General Description

Site 41HY546 consists of a moderate-density, surficial scatter of late 19th- to 20th-century debris and modern trash in an upland setting overlooking two unnamed tributaries of Hemphill Creek that arise to the south (Figure 6-91). The site is in a remote location in the middle of an active agricultural field (Figure 6-92). No existing roads or historical roads are visible on historical aerial imagery or USGS topographic maps that would have provided access to the site (NETR 2017). Furthermore, no construction materials or structural remnants are present among the scatter of historic-age and modern domestic debris, and no standing structures are depicted at this location on historical aerial photographs or topographic maps; as such, it would appear that this was not the location of a historic-age farmstead. The site simply appears to represent a dump of historic-age and modern trash. Vegetation on the site is limited to a recently planted corn crop. Elevations across the site are relatively flat, ranging only from approximately 197.6 to 198.5 meters (648.0 to 651.0 feet) amsl.

Horizontal and Vertical Extents of Cultural Materials

Based on the extent of aboriginal cultural debris, site 41HY546 measures approximately 150.0 meters (492.0 feet) in diameter.

Cultural materials on site 41HY546 are constrained to the modern ground surface. None of the six shovel tests excavated on the site revealed subsurface archeological deposits, though it is likely that some cultural materials have been incorporated into the shallow plowzone.

Cultural Features Observed

No cultural features or other cultural materials suggestive of cultural features, such as structural debris, were observed on site 41HY546.

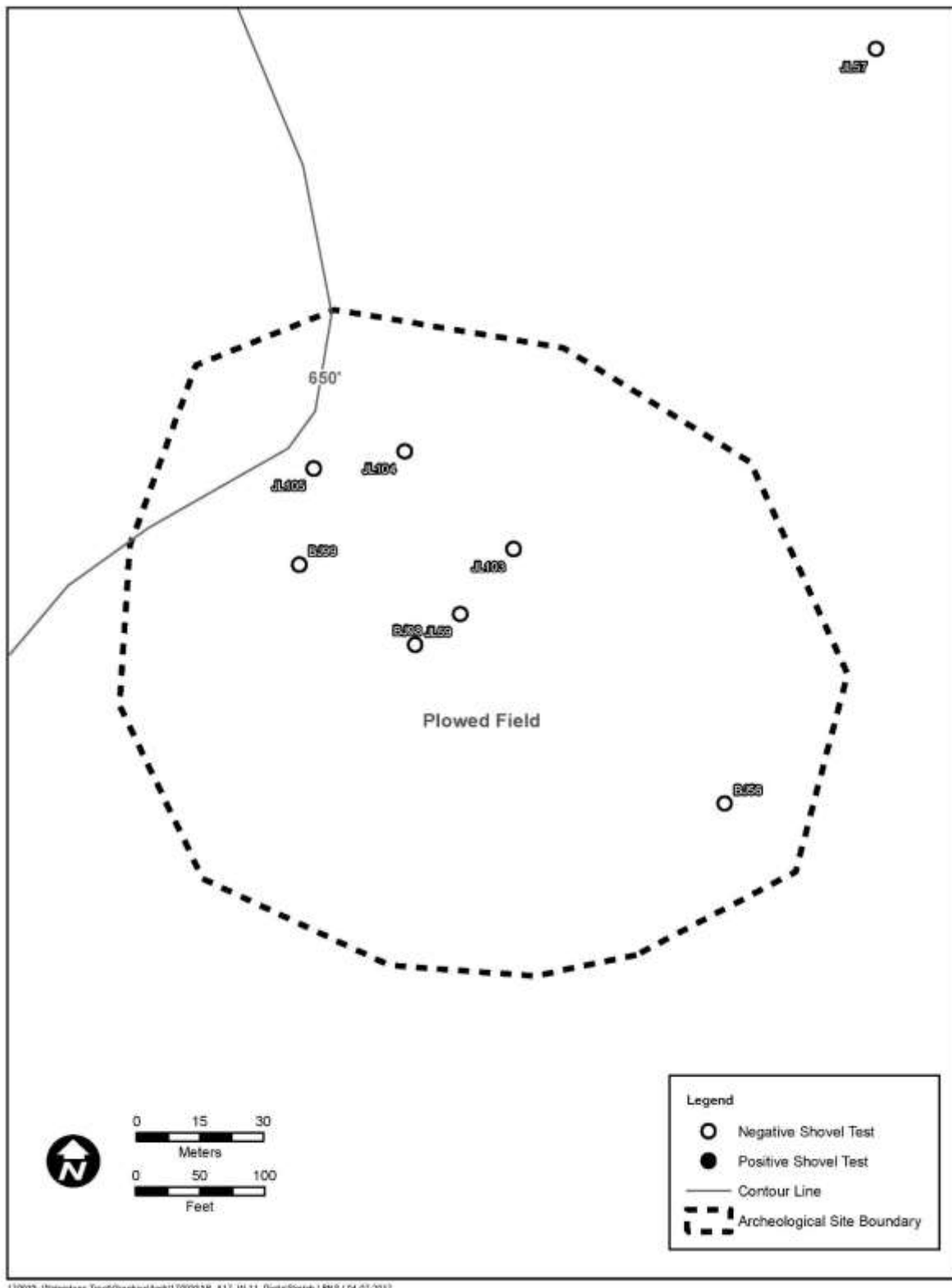


Figure 6-91. Sketch Map of Site 41HY546



Figure 6-92. Overview of Site 41HY546

Cultural Materials Observed

Cultural materials observed on site 41HY546 include clear, aqua, amethyst, rose, cobalt, and milk glass shards; whiteware ceramic sherds; and miscellaneous unidentified metal fragments (including part of a cast iron clothing iron) (Figure 6-93 to 6-95). Some modern materials, including rubber, plastic, and metal objects, were also observed. Historic-age cultural materials are generally diagnostic of the late 19th through 20th centuries, though early to mid-20th-century associations are most likely based on the dates of the various historic-age farmsteads that dot the surrounding landscape described in this report.

Summary and Recommendations

Site 41HY546 consists of a moderate-density, surficial scatter of late 19th- to 20th-century debris and modern trash in an upland setting overlooking two unnamed tributaries of Hemphill Creek that arise to the south. The site is in a remote location in the middle of an active agricultural field. No existing roads or historical roads are visible on historical aerial imagery or USGS topographic maps that would have provided access to the site (NETR 2017). Furthermore, no construction materials or structural remnants are present among the scatter of historic-age and modern domestic debris, and no standing structures are depicted at this location on historical aerial photographs or topographic maps; as such, it would appear that this was not the location of a historic-age farmstead. The site simply appears to represent a dump of historic-age and



Figure 6-93. Glass and Ceramic Cultural Materials Observed on Site 41HY546



Figure 6-94. Metal Hardware Remnants Observed on Site 41HY546



Figure 6-95. Domestic Metal Cultural Materials Observed on Site 41HY546

modern trash. The historic-age archeological deposits have been disturbed via decades, even centuries, of seasonal plowing and crop harvesting cycles. The site lacks integrity and possess minimal potential to contribute to an understanding of the prehistoric past; as such, the site is not considered significant under Criterion D. Site 41HY546 is recommended as not eligible for designation as an SAL or for inclusion in the NRHP.

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 designation as SALs and for inclusion in the NRHP.
- Formulate recommendations for the treatment of these resources based on their SAL and NRHP 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 the Code of Federal Regulations (CFR) 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 on 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

From March 20 to 30, 2017, Horizon Project Archeologist Briana Smith, with the assistance of archeological technicians Jacob Lyons and Ben Johnson and under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive survey of the project area to locate any cultural resources that may be impacted by the proposed undertaking. Kathryn St. Clair, architectural historian, assisted with architectural evaluations and historical research on sites containing standing architecture or remnants of standing structures. Eleven newly recorded archeological sites were documented during the survey—41HY536 to 41HY546 (Table 7-1). Nine of the 11 sites (41HY436 to 41HY543 and 41HY546) consist of the remnants of early to mid-20th-century farmsteads and/or scatters of historic-age domestic debris. Two of the 11 sites (41HY544 and 41HY545) consist exclusively of aboriginal artifact scatters dated to unspecified prehistoric timeframes, and secondary cultural components composed of sparse scatters of aboriginal artifacts were also observed on three of the nine historic-age sites (41HY537, 41HY540, and 41HY543).

The project area is composed of rural agricultural land, primarily corn fields. All of the project area falls within the William Hemphill Land Grant, which was originally granted in 1847 and included 1,743.7 hectares (4,308.8 acres) (Texas General Land Office, Abstract No. 221, Patent No. 230). The majority of the project area was owned by the same owner at least as early as 1912.

The sites identified within the project area are all located on rural properties that were once part of, or continue to be part of, farms and ranches. All of the identified historic-age architectural resources are related to agricultural sites, including the houses identified. Most of the resources are in poor condition, and most of them are no longer part of a cohesive grouping of agricultural structures, and therefore lack historical context. The resources identified range from the remains of a ca.1900 house to ca. 1930s houses and barns. Most of the properties are vacant, though the surrounding fields remain cultivated.

Table 7-1. Summary of Cultural Resources Recorded During Survey

Permanent Trinomial	Temp. Site No.	Cultural Affiliation	Site Type	Recommended NRHP/SAL Eligibility	Recommendations
41HY536	W-1	Historic-age (early to mid-20th century)	Farmstead	Recommended ineligible	No further investigations
41HY537	W-2	Historic-age (early to mid-20th century)/ Aboriginal (undetermined prehistoric)	Farmstead/ Lithic raw material procurement site	Recommended ineligible	No further investigations
41HY538	W-3	Historic-age (late 19th to mid-20th centuries)	Farmstead	Recommended ineligible	No further investigations
41HY539	W-4	Historic-age to modern (early 20th to 21st centuries)	Farmstead	Recommended ineligible	No further investigations
41HY540	W-5	Historic-age (early to mid-20th century)/ Aboriginal (undetermined prehistoric)	Farmstead/ Lithic raw material procurement site	Recommended ineligible	No further investigations
41HY541	W-6	Historic-age (early to mid-20th century)	Farmstead	Recommended ineligible	No further investigations
41HY542	W-7	Historic-age (early to mid-20th century)	Farmstead	Recommended ineligible	No further investigations
41HY543	W-8	Historic-age (early to mid-20th century)/ Aboriginal lithic scatter (undetermined prehistoric)	Farmstead/ Lithic raw material procurement site	Recommended ineligible	No further investigations
41HY544	W-9	Aboriginal (undetermined prehistoric)	Lithic artifact scatter	Recommended ineligible	No further investigations
41HY545	W-10	Aboriginal (undetermined prehistoric)	Lithic artifact scatter	Recommended ineligible	No further investigations
41HY546	W-11	Historic-age (late 19th-century to modern)	Domestic artifact scatter	Recommended ineligible	No further investigations

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.

NRHP National Register of Historic Places

SAL State Antiquities Landmark

To evaluate historical significance of the resources that remain extant on this rural area, the *NRHP Multiple Property Nomination Form prepared for Rural Properties of Hays County* (Myers 2004) was consulted to maintain a consistent approach in evaluating the significance of these rural resources. Each site on which historic-age resources were identified was evaluated as a cluster of resources as they relate to one another as each site was part of a farm or ranch at one time. Most of the sites, including 41HY536 to 41HY541, were all owned by the same land owner at least as far back as 1912 (Hays County Deed Records, Vol. 61, page 577). Deed research, federal census records review, and online searches were conducted to provide insight on past property owners for each property. This information is important in order to understand if the sites are associated with persons of historical importance.

The following excerpt was provided by Myers (2004) on the aforementioned NRHP form. This evaluation approach was considered for the resources identified on sites 41HY536 to 41HY543 for the current project:

Agricultural resources represent a large percentage of the county's historic built environment. They are an important part of Hays County's legacy of the late 19th and early 20th centuries as tangible links to its physical development. Agricultural properties can have both historical and architectural significance and may be eligible for listing in the National Register under Criteria A, B or C, either individually or as part of a historic district. An agricultural property with historical significance is one that is representative of important events or trends of the past (Criterion A) or is associated with an individual(s) that made noteworthy contributions to the county's historic development (Criterion B).

An agricultural property with architectural significance is one that displays notable physical features, craftsmanship or design, or is an exemplary illustration of a type. They can be listed in the National Register under Criterion C. In general, however, agricultural properties are common utilitarian buildings and structures built with modest materials. They are subject to changes in function rather than fashion and retain their defining form and characteristics over time. Agricultural properties in rural Hays County are generally identified by subtypes that include barns, vehicle garages, chicken coops, pig pens, corrals, grain and feed sheds, dairy barns or sheds, and other buildings and structures related to the raising of crops and livestock. Most are of simple frame or corrugated metal construction with gabled or hipped roofs.

Agricultural buildings can be considered for nomination to the National Register if they are at least 50 years old and retain a significant amount of their architectural integrity. They should be recognizable to their period of significance which, in most cases, is the date of construction. To be listed in the National Register, an agricultural building must also meet at least one of the four National Register Criteria for Evaluation. An individual agricultural building or a historic district or site comprised primarily of agricultural properties must be strongly linked with and related to the associated historic context. The Statement of Significance should discuss how the individual property or historic district meets the National Register criteria and how the area relates to, and is associated with, the historic context.

Because an individual agricultural property being nominated under Criteria A or B is one with strong historical associations, it does not necessarily have to be unaltered or a particularly noteworthy example of an architectural type or form. It should, however, be

closely associated with important trends and events in the past (Criterion A) or with individuals who have been historically significant (Criterion B). Whether nominated under Criteria A or B, a strong argument must be made to establish the relative importance of that event, trend or person within 19th and early 20th century development in Hays County. Merely stating, for example, that a barn belonged to a locally successful farmer is not enough to justify listing in the National Register. The accomplishments of that individual must be articulated and then related to the historic context. Also, such a property must have been used by that person when significance was achieved or be the residence most closely associated with that individual. The property must retain sufficient integrity to be recognizable to its Period of Significance.

Some individual historic agricultural properties are candidates for listing in the National Register under Criterion C as excellent or rare examples of a type or method of construction. Seldom do they represent the work of an architect or master builder. However, that property's relation with the historic context must also be addressed. Moreover, its physical integrity must be retained to a large degree. A building's exterior detailing should appear almost exactly as it did when it was originally constructed or when it was sympathetically altered before 1951. While architectural fabric inevitably deteriorates over time, restoration, rehabilitation and reconstruction efforts should be sensitive to a dwelling's historic character and should utilize shapes, forms and materials that are compatible with original detailing. The installation of historically inappropriate elements which obscure or detract from a property's integrity, therefore, can make it ineligible for the National Register (Myer, 2004).

The identified resources were also assessed for their potential eligibility as contributing to a rural historic landscape district due to the linkage of the common agricultural theme. The NPS defines a rural historic landscape district as a resource that:

Is a geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features (National Register Bulletin 30).

The resources all date from the first quarter (or close to that) of the 20th century (which is considered the period of significance for the recorded resources), and are all related to agriculture and settlement of this area of the county. However, the architectural resources lack integrity, primarily of association and feeling. Most of the recorded resources are secondary or ancillary structures lacking an associated primary resource. There is a lack of continuity of the resource types, and significant concentration of land use and human-modified landscape features within the project area. The project area is not considered a Rural Historic Landscape District, and it is not likely the identified resources would be considered contributing resources to a larger district should one be identified in the area at a later time.

None of the recorded resources meet the NRHP or SAL criteria for significance, and they do not retain integrity individually or as small farm or ranch complexes identified and associated with archeological sites. All of the resources are associated with the early rural agricultural development of Hays County and the Blackland Prairie region. However, the resources no longer retain integrity to convey the significance of an early Hays County ranch properties. Therefore, it

is recommended that the proposed project would have no effect on historic-age resources identified within the project.

There are no resources within the project area that have been previously determined eligible or that are recommended as eligible for inclusion in the NRHP. There are no SALs, Recorded Texas Historic Landmarks (RTHL), or Official Texas Historical Markers (OTHM) within the project area. All 11 sites recorded within the current project area are recommended as ineligible for designation as SALs and for inclusion in the NRHP based on the poor condition of the sites and their low potential to contribute meaningfully to an understanding of the historic and/or prehistoric past. No further investigations are warranted on these sites in connection with the proposed undertaking.

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 that meet the criteria for designation as SALs according to 13 TAC 26 or for inclusion in the NRHP according to 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			
BJ01	612200	3311932	0-45+	Medium brown clay loam	None
BJ02	612181	3311954	0-45+	Brown clay loam	None
BJ03	611139	3312748	0-40+	Dark brown clay	None
BJ04	611143	3312736	0-40+	Dark brown clay	None
BJ05	610975	3312591	0-35+	Dark brown clay	None
BJ06	610966	3312596	0-45+	Dark brown clay	2 clear and 1 brown glass shards at 10-20 cmbs
BJ07	611559	3312459	0-30+	Dark brown clay	None
BJ08	611572	3312479	0-35+	Dark brown clay	None
BJ09	611909	3312330	0-25	Dark brown clay	None
			25+	Gravel	None
BJ10	611059	3313345	0-30+	Medium brown clay	None
BJ11	611073	3313343	0-30+	Medium brown clay	None
BJ12	610532	3314093	0-5+	Rock	None
BJ13	610543	3314092	0-30+	Medium brown clay	None
BJ14	611280	3311236	0-35+	Light brown clay loam	None
BJ15	611268	3311216	0-30	Medium brown clay	None
			30-40+	Light brown clay	None
BJ16	610423	3314230	0-30	Medium brown clay loam	1 glass shard, 1 stoneware sherd at 10-20 cmbs
			30-40+	Light brown clay loam	None
BJ17	610187	3314405	0-30+	Dark brown clay loam	None
BJ18	610214	3314433	0-35+	Dark brown clay loam	None
BJ19	611053	3312808	0-30	Medium brown clay loam	None
			30-35+	Light brown clay	None
BJ20	610607	3313214	0-25	Medium brown clay loam	None
			25-35+	Light brown clay	None
BJ21	610189	3313647	0-35	Medium brown clay	None
			35-40+	Light brown clay	None
BJ22	609696	3314001	0-25	Medium brown clay	None
			25-35+	Light brown clay loam	None
BJ23	609696	3313770	0-30+	Medium brown clay	None
BJ24	610126	3313352	0-25	Medium brown clay	None
			25-35+	Light brown clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BJ25	610571	3312946	0-40	Medium brown clay	None
			40-45+	Light brown clay	None
BJ26	610068	3314328	0-35+	Dark reddish-brown clay	None
BJ27	610260	3314095	0-25	Dark reddish-brown clay	None
			25-30+	Light brown clay	None
BJ28	610466	3313871	0-20	Dark reddish-brown clay	None
			20-25+	Light brown clay	None
BJ29	610686	3313662	0-35	Dark reddish-brown clay	None
			35+	Light brown clay	None
BJ30	610905	3313442	0-10	Dark reddish-brown clay	None
			10-20+	Medium reddish-brown clay	None
BJ31	611123	3313231	0-35+	Dark brown clay	None
BJ32	611344	3313018	0-35+	Grayish-brown clay	None
BJ33	611516	3313159	0-20	Grayish-brown clay	None
			20-30+	Medium brown clay loam	None
BJ34	611085	3313582	0-35+	Dark grayish-brown clay	None
BJ35	611219	3312664	0-30	Dark grayish-brown clay loam	None
			30-35+	Dark grayish-brown clay	None
BJ36	611669	3312267	0-30+	Dark grayish-brown clay	None
BJ37	612175	3311853	0-30+	Dark grayish-brown clay	None
BJ38	612578	3311347	0-15	Dark grayish-brown clay	None
			15-25+	Light brown clay	None
BJ39	612568	3311676	0-30	Dark grayish-brown clay	None
			30-35+	Light grayish-brown clay	None
BJ40	612139	3312098	0-30	Dark grayish-brown clay	None
			30-40+	Light grayish-brown clay	None
BJ41	611547	3312648	0-30	Dark brown clay loam	None
			30+	Dark gray clay	None
BJ42	611332	3312839	0-30	Medium brown clay loam	None
			30+	Dark gray clay	None
BJ43	611713	3312747	0-30+	Dark gray clay	None
BJ44	611971	3312576	0-20+	Dark gray clay with reddish-brown mottles	None
BJ45	612592	3311963	0-35	Dark gray clay with reddish-brown mottles	None
			35-40+	Medium brown clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BJ46	613012	3311535	0-30	Medium brown clay loam	None
			30-35+	Medium brown clay	None
BJ47	612946	3311806	0-35	Dark gray clay	None
			35-40+	Medium brown clay	None
BJ48	612501	3312203	0-30	Dark gray clay loam	None
			30-35+	Dark gray clay	None
BJ49	612480	3312301	0-20	Dark gray clay	None
			20+	Rocks	None
BJ50	612322	3312435	0-35+	Dark gray clay	None
BJ51	611942	3312765	0-30+	Dark gray clay	None
BJ52	611622	3313076	0-35+	Dark gray clay	None
BJ53	611049	3312524	0-25	Dark gray clay loam	None
			25-35+	Medium reddish-brown clay loam	None
BJ54	611488	3312112	0-25	Dark brown clay loam	None
			25-35+	Medium brown clay	None
BJ55	611928	3311688	0-40	Dark brown clay loam	None
			40-45+	Medium brown clay	None
BJ56	611672	3311726	0-30	Pale brown clay loam	None
			30+	Rocks	None
BJ57	611445	3311925	0-30+	Dark gray clay	None
BJ58	611017	3312343	0-30	Dark brown clay loam	None
			30-35+	Medium brown clay	None
BJ59	610896	3312464	0-20	Dark brown clay	None
			20-30+	Dark brown clay with reddish-brown mottles	None
BJ60	610458	3312877	0-30	Dark brown clay loam	None
			30-40+	Light brown clay loam	None
BJ61	610060	3313055	0-30+	Dark brown clay loam	None
BJ62	610414	3312702	0-30+	Dark gray clay	None
BJ63	610845	3312284	0-30+	Dark gray clay	None
BJ64	611276	3311871	0-30	Dark brown clay loam	None
			30-35+	Medium brown clay loam	None
BJ65	611718	3311455	0-25	Dark brown clay loam	None
			25+	Limestone cobbles	None
BJ66	611544	3311419	0-30+	Dark gray clay loam	None
BJ67	611527	3311419	0-35+	Dark gray clay loam	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BJ68	611559	3311417	0-30+	Dark gray clay loam	None
BJ69	611545	3311432	0-20	Dark gray clay loam	None
			20-30+	Light brown clay	None
BJ70	611325	3311632	0-30+	Dark gray clay	None
BJ71	610887	3312042	0-30+	Dark gray clay	None
BJ72	610442	3312445	0-30+	Dark gray clay	None
BJ73	609980	3312901	0-25	Dark gray clay	None
			25-35+	Light brown clay	None
BJ74	610195	3312483	0-30+	Dark gray clay	None
BJ75	610633	3312053	0-20	Dark gray clay	None
			20-30+	Light brown clay	None
BJ76	611064	3311633	0-30+	Dark gray clay	None
BJ77	611501	3311218	0-30	Dark gray clay loam	None
			30-40+	Medium brown clay	None
BJ78	611064	3311415	0-30+	Dark gray clay	None
BJ79	609969	3312448	0-30+	Dark gray clay	None
BJ80	610425	3312055	0-20	Dark gray clay	None
			20-30+	Dark gray clay with brown clay mottles	None
BJ81	610391	3311870	0-30+	Dark gray clay	None
BJ82	610159	3312080	0-20	Dark gray clay	None
			20-30+	Dark brown clay loam	None
BJ83	609955	3312304	0-35	Dark brown clay	None
			35-45+	Dark brown clay with light brown clay mottles	None
BJ84	609737	3312511	0-20+	Dark brown clay with light brown clay mottles	None
BJ85	609571	3312451	0-30+	Dark gray clay	None
BJ86	609794	3312233	0-35+	Dark gray clay	None
BJ87	610022	3312030	0-20	Dark gray clay	None
			20-30+	Light brown clay loam	None
BJ88	610002	3311897	0-30+	Dark brown clay loam	None
BJ89	609786	3312110	0-30+	Dark brown clay loam	None
BJ90	609563	3312322	0-35+	Dark gray clay	None
BJ91	609405	3312270	0-30+	Dark gray clay	None
BJ92	609164	3312014	0-30+	Dark gray clay	None
BJ93	609378	3311807	0-35+	Dark gray clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BJ94	609613	3311613	0-30+	Dark brown clay loam	None
BJ95	609837	3311408	0-25	Dark brown clay loam	None
			25-35+	Medium brown clay	None
BJ96	611929	3312214	0-30+	Dark gray clay	None
BJ97	611968	3312215	0-30+	Dark gray clay	None
BJ98	611599	3311764	0-30+	Dark gray clay	None
BJ99	611571	3311782	0-30+	Dark gray clay	None
BS01	612231	3311894	0-30+	Very dark brown gravelly clay	None
BS02	612255	3311892	0-30+	Very dark brown gravelly clay	3 clear glass shards and 1 tile fragment at 0-20 cmbs
BS03	611131	3312725	0-35+	Very dark brown gravelly clay	1 concrete chunk, 1 clear glass shard, 1 amber glass shard at 0-15 cmbs
BS04	611125	3312723	0-35+	Very dark brown gravelly clay	1 metal ring at 0-10 cmbs
BS05	610977	3312583	0-30	Dark grayish-brown gravelly loamy clay	1 clear glass shard at 0-10 cmbs
			30-40+	Very dark grayish-brown clay	None
BS06	610985	3312589	0-25	Dark grayish brown gravelly clay loam	None
			25-30+	Dark grayish-brown dense clay	None
BS07	611595	3312453	0-25	Very dark grayish-brown cobbly/gravelly clay	None
			25+	Limestone bedrock	None
BS08	611614	3312448	0-10	Very dark grayish-brown gravelly clay	None
			10+	Dense limestone gravels	None
BS09	611594	3312482	0-30+	Very dark grayish-brown gravelly clay	None
BS10	611885	3312317	0-10	Very dark grayish-brown gravelly clay	None
			10+	Limestone bedrock	None
BS11	611081	3313371	0-30	Dark grayish-brown gravelly clay loam	1 yellow brick fragment at 0-10 cmbs
			30-40+	Very dark grayish-brown gravelly clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BS12	611089	3313355	0-30	Dark grayish-brown clay loam	1 clear glass fragment at 0-10 cmbs
			30-40+	Dark grayish-brown clay with yellowish-red sandy clay mottles	None
BS13	610530	3314074	0-35+	Dark grayish-brown clay	1 clear glass shard at 0-10 cmbs
BS14	610548	3314074	0-30+	Dark grayish-brown clay	None
BS15	611261	3311246	0-25	Very dark grayish-brown clay loam	None
			25-35+	Very dark grayish-brown clay with CaCO ₃ inclusions	None
BS16	611244	3311215	0-30+	Very dark grayish-brown/yellowish-brown clay	None
BS17	610312	3314336	0-25	Very dark grayish-brown clay	None
			25-30+	Dark yellowish-brown clay	None
BS18	610238	3314391	0-30	Very dark grayish-brown clay loam	2 lithic flakes at 0-10 cmbs
			30-35+	Dark yellowish-brown clay	None
BS19	610248	3314405	0-30+	Very dark grayish-brown clay	1 small red brick fragment at 0-10 cmbs
JL01	612219	3311917	0-20	Brown sandy loam	None
			20+	Gravel	None
JL02	612241	3311909	0-30	Dark grayish-brown loamy clay	None
			30+	Very dark grayish brown clay	None
JL03	611115	3312736	0-35	Very dark grayish-brown sandy clay	2 clear glass shards at 10 cmbs
			35+	Mottled very dark grayish-brown/very dark reddish-brown dense clay	None
JL04	611125	3312745	0-40	Very dark grayish-brown dense clay	None
			40+	Mottled very dark grayish-brown/very dark reddish-brown dense clay	None
JL05	610962	3312581	0-30	Dark grayish-brown dense clay	3 wire nails, 1 wire fragment, 1 aqua glass shard, 1 cobalt shard at 10-20 cmbs
			30-35	Very dark grayish-brown gravelly clay	None
			35+	Gravel	None
JL06	610971	3312575	0-30	Very dark grayish-brown dense clay	1 wire nail at 0-5 cmbs
			30+	Very dark reddish-brown dense clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
JL07	611679	3312377	0-10	Pale brown sandy clay loam	None
			10+	Gravel	None
JL08	611684	3312384	0-30	Pale brown sandy clay loam	None
			30+	Gravel	None
JL09	611906	3312311	0-20	Gravelly very dark grayish-brown sandy clay loam	None
			20+	Limestone cobbles	None
JL10	611050	3313368	0-30	Very dark brown dense clay	2 clear glass shards at 0-10 cmbs
			30-40+	Very dark reddish-brown dense clay	None
JL11	611057	3313381	0-30	Very dark brown dense clay	None
			30-40+	Very dark reddish-brown dense clay	None
JL12	610507	3314127	0-35	Dark brown sandy clay loam	None
			35-45+	Mottled reddish-brown/dark brown dense clay	None
JL13	610510	3314096	0-30	Dark brown sandy clay loam	None
			30-40+	Mottled reddish-brown/dark brown dense clay	None
JL14	611270	3311201	0-30	Dark grayish-brown dense sandy clay	1 square nail at 5-10 cmbs; 1 ceramic tile fragment at 10-15 cmbs
			30+	Light reddish-brown dense clay	None
JL15	611305	3311227	0-35	Dark grayish-brown dense sandy clay	None
			35+	Light reddish-brown dense clay	None
JL16	610366	3314298	0-30	Dark grayish-brown sandy clay loam	None
			30+	Very dark grayish-brown dense clay	None
JL17	610195	3314455	0-30	Dark grayish-brown sandy clay loam	None
			30+	Very dark grayish-brown dense clay	None
JL18	610170	3314430	0-35	Very dark grayish-brown dense loamy clay	None
			35-45+	Very dark reddish-brown dense clay	None
JL19	610833	3313018	0-30	Brown sandy clay loam	None
			30-40+	Mottled dark grayish-brown/dark reddish-brown dense clay	None
JL20	610398	3313437	0-25	Dark grayish brown dense sandy clay	None
			25-35+	Mottled very dark grayish-brown/dark reddish-brown dense clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
JL21	609955	3313815	0-30	Dark grayish brown dense sandy clay	None
			30-40+	Mottled very dark grayish-brown/ dark reddish-brown dense clay	None
JL22	609487	3313975	0-15	Dark reddish-brown rocky sandy clay loam	None
			15-30+	Very dark grayish-brown dense clay	None
JL23	609921	3313551	0-35	Dark brown sandy clay loam	None
			35-40+	Very dark brown dense clay with reddish-brown mottles	None
JL24	610347	3313144	0-30	Very dark brown sandy clay	None
			30-40+	Mottled very dark grayish-brown/ dark reddish-brown dense clay	None
JL25	610791	3312742	0-30	Very dark brown sandy clay	None
			30-40+	Mottled very dark grayish-brown/ dark reddish-brown dense clay	None
JL26	610078	3314560	0-25	Very dark grayish-brown dense loamy clay	None
			25-35+	Dense brown clay	None
JL27	609820	3314258	0-30	Very dark grayish-brown dense loamy clay	None
			30-40+	Dense brown clay	None
JL28	610037	3314052	0-30	Dark grayish-brown dense loamy clay	None
			30-40+	Mottled very dark grayish-brown/ very dark reddish-brown dense clay	None
JL29	610256	3313842	0-15	Dark brown sandy clay loam	None
			15-30+	Reddish-brown dense clay	None
JL30	610480	3313615	0-35	Dark grayish-brown dense loamy clay	None
			35-45+	Very dark grayish-brown dense clay	None
JL31	610714	3313410	0-30	Dark brown clay loam	None
			30-40+	Dark reddish-brown dense clay	None
JL32	610942	3313203	0-30	Brown sandy clay loam	None
			30-40+	Mottled dark reddish-brown/ dark grayish-brown dense clay	None
JL33	611179	3312994	0-25	Dark brown sandy clay loam	None
			25-35+	Reddish-brown dense clay	None
JL34	611303	3313365	0-35+	Dense brown clay	None
JL35	610867	3313798	0-30+	Dense brown clay	None
JL36	610649	3314014	0-50+	Very dark grayish-brown dense clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
JL37	611470	3312448	0-30	Very dark grayish-brown loamy clay	None
			30-40+	Very dark grayish-brown dense clay	None
JL38	611914	3312046	0-30	Very dark grayish-brown dense clay	None
			30+	Rock	None
JL39	612372	3311655	0-25	Very dark grayish-brown loamy clay	None
			25-35+	Very dark grayish-brown dense clay	None
JL40	612789	3311227	0-35	Very dark grayish-brown loamy clay	None
			35-45+	Very dark grayish-brown dense clay	None
JL41	612786	3311445	0-30	Very dark grayish-brown loamy clay	None
			30-40+	Very dark grayish-brown dense clay	None
JL42	612354	3311864	0-30	Very dark grayish-brown dense loamy clay	None
			30-40+	Dark brown dense clay	None
JL43	612000	3312241	0-30	Very dark grayish-brown dense loamy clay	None
			30-40+	Dark brown dense clay	None
JL44	611851	3312503	0-5	Dark brown sandy loam	None
			5+	Gravel	None
JL45	611466	3312965	0-20	Dark brown sandy clay loam	None
			20-35+	Very dark grayish-brown dense clay	None
JL46	612164	3312384	0-25	Dark grayish-brown sandy clay loam	None
			25-35+	Very dark grayish-brown dense clay	None
JL47	612358	3312157	0-20	Dark grayish-brown sandy clay loam	None
			20-30+	Very dark grayish-brown dense clay	None
JL48	612792	3311739	0-20	Dark brown sandy clay loam	None
			20-30+	Dark reddish-brown dense clay	None
JL49	613160	3311578	0-20	Dark grayish-brown sandy clay loam	None
			20-30+	Very dark grayish-brown dense clay	None
JL50	612738	3312047	0-30+	Very dark grayish-brown dense clay	None
JL51	612568	3312147	0-30+	Very dark grayish-brown dense clay	None
JL52	612398	3312397	0-30+	Very dark grayish-brown dense clay	None
JL53	612240	3312519	0-30+	Very dark grayish-brown dense clay	None
JL54	612125	3312625	0-30+	Very dark grayish-brown dense clay	None
JL55	611753	3312944	0-10	Dark grayish-brown sandy clay loam	None
			10-30+	Very dark grayish-brown dense clay	None
JL56	611265	3312316	0-20	Very dark grayish-brown sandy clay loam	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
			20-30+	Mottled very dark grayish brown/ dark reddish-brown dense clay	None
JL57	611707	3311904	0-25	Very dark grayish brown rocky sandy clay loam	None
			25-30+	Mottled very dark grayish- brown/brown dense clay	None
JL58	611850	3311549	0-30	Very dark grayish-brown rocky sandy clay loam	None
			30-40+	Dark brown dense rocky clay	None
JL59	611610	3311771	0-25	Dark grayish-brown rocky sandy clay loam	None
			25-30+	Dark brown dense rocky clay	None
JL60	611233	3312147	0-30+	Very dark grayish-brown dense clay	None
JL61	610665	3312673	0-25	Dark brown dense clay	None
			25-30+	Reddish-brown dense clay	None
JL62	610226	3313090	0-25	Dark grayish-brown dense clay	None
			25-30+	Dark reddish-brown dense clay	None
JL63	610204	3312917	0-25	Very dark grayish-brown sandy clay loam	None
			25-30+	Mottled very dark grayish-brown/ dark reddish-brown dense clay	None
JL64	610627	3312496	0-15	Dark grayish-brown sandy clay loam	None
			15-30+	Very dark grayish-brown dense clay	None
JL65	611059	3312083	0-30+	Very dark grayish-brown dense clay	None
JL66	611493	3311673	0-20	Dark brown sandy loam	None
			20-30+	Mottled dark grayish-brown/ dark reddish-brown dense clay	None
JL67	611632	3311335	0-30+	Very dark grayish-brown dense clay	None
JL68	611544	3311401	0-30+	Very dark grayish-brown dense clay	None
JL69	611526	3311397	0-30+	Very dark grayish-brown dense clay	None
JL70	611112	3311833	0-30+	Very dark grayish-brown dense clay	None
JL71	610654	3312244	0-30+	Very dark grayish-brown dense clay	None
JL72	610232	3312678	0-30+	Very dark brown dense clay	None
JL73	609980	3312690	0-20	Very dark brown dense clay	None
			20-30+	Mottled very dark brown/ dark reddish-brown dense clay	None
JL74	610417	3312258	0-30+	Very dark grayish-brown dense clay	None
JL75	610848	3311838	0-30+	Very dark grayish-brown dense clay	None
JL76	611276	3311422	0-30+	Very dark grayish-brown dense clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
JL77	611396	3311109	0-15	Dark brown sandy clay loam	None
			15-30+	Mottled dark brown/light reddish-brown dense clay	None
JL78	610845	3311625	0-30+	Very dark grayish-brown dense clay	None
JL79	610625	3311832	0-30+	Very dark grayish-brown dense clay	None
JL80	609745	3312652	0-30+	Very dark grayish-brown dense clay	None
JL81	610202	3312251	0-30+	Very dark brown dense clay	None
JL82	610623	3311649	0-30+	Very dark brown dense clay	None
JL83	610843	3311440	0-30+	Very dark grayish-brown dense clay	None
JL84	611071	3311226	0-30+	Very dark grayish-brown dense clay	None
JL85	610939	3311158	0-30+	Very dark grayish-brown dense clay	None
JL86	610826	3311262	0-30+	Very dark grayish-brown dense clay	None
JL87	610602	3311472	0-30+	Very dark grayish-brown dense clay	None
JL88	610381	3311678	0-30+	Very dark grayish-brown dense clay	None
JL89	610163	3311890	0-30+	Very dark grayish-brown dense clay	None
JL90	610233	3311662	0-30+	Very dark brown dense clay	None
JL91	610484	3311424	0-30+	Very dark brown dense clay	None
JL92	610284	3311436	0-30+	Very dark brown dense clay	None
JL93	610057	3311637	0-30	Very dark grayish-brown dense clay	None
			30-40+	Mottled very dark grayish-brown/dark reddish-brown dense clay	None
JL94	609830	3311842	0-30+	Very dark grayish-brown dense clay	None
JL95	609616	3312058	0-30+	Very dark grayish-brown dense clay	None
JL96	609410	3312044	0-30+	Very dark grayish-brown dense clay	None
JL97	609631	3311834	0-30+	Very dark grayish-brown dense clay	None
JL98	609854	3311630	0-15	Very dark grayish-brown dense clay	None
			15-30+	Light brown dense clay	None
JL99	609973	3311531	0-15	Dark brown dense loamy clay	None
			15-30+	Dark reddish-brown dense clay	None
JL100	611946	3312203	0-30+	Very dark grayish-brown dense rocky clay	None
JL101	611958	3312188	0-30+	Very dark grayish-brown dense rocky clay	None
JL102	611985	3312206	0-30+	Very dark grayish-brown dense rocky clay	None
JL103	611622	3311786	0-10	Dark grayish-brown dense loamy clay	None
			10-30+	Very dark grayish-brown dense clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates ¹		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
JL104	611596	3311809	0-15	Dark grayish-brown dense loamy clay	None
			15-30+	Very dark grayish-brown dense clay	None
JL105	611575	3311805	0-15	Dark grayish-brown dense loamy clay	None
			15-30+	Very dark grayish-brown dense clay	None

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

CaCO₃ = Calcium carbonate

cmbs = Centimeters below surface

ST = Shovel test

UTM = Universal Transverse Mercator

APPENDIX B:

Chain-of-Title Data

Table B-1. Chain-of-Title Data

Vol./Page	Date	Grantor	Grantee	Notes
41HY536 (W-1)				
1153/067	06/01/1995	Olga Ehrlich, Louis and Wayne Ehrlich	James R, Corrine, Ruben, Albertine Wahrmund	
218/392	06/13/1967	B.R. an Molly Wranitzky	Emil and Olga Ehrlich	
152/538	1952	H.J. Wranitzky and Ottlille	B.R. Wranitzky	Parents to son
		Bankers Life Company	H.J Wranitzsky	
61/573	04/13/1912	D.W Crews	Paul Crews	344.0 acres
41HY537, 538, & 540 (W-2, 3, & 5)				
2620/24	01/17/2005	Ruben et al., Wahrmund	Lyndon, Janice Wahrmund	
		Albertine, Corrine, James and Ruben Wahrmund	Jane Covery, Susan Mae Jenschke, Betty Jean Roeder, Texas J4 Properties, Janice Wahrmund, and Lyndon Wahrmund	326.0 acres
189/278	12/26/1961	Dr. M.D. Heatly	Alex Kercheville	555.3 acres; references three tracts
Tract 1: 154/419	10/28/1952	Henry Knox	M.D. Heatly	454.0 acres
Tract 1: 154/419	11/22/1952	Haney and Elfie Knox	M.D. Heatly	454.0 acres
Tract 1: 148/461	12/23/1950	L.R. Jones	Haney Knox	454.0
Tract 1: 148/352	02/02/1948	R.H. Kretzmeier	L.R. Jones	References tenants on land
Tract 1: 94/203	10/06/1927	Frank and Lena Crews	R.H. Kretzmeier	225.9 acres
Tract 1: 61/574	04/13/1912	D. W. Crews (owned slave in 1860)	Frank Crews	Referenced in above deed
Tract 1: W/231	04/22/1922	H.W. Ferguson (trustee)	Frank Crews	Referenced in 94/203 deed
Tract 2: 177/600	06/10/1959	Mary Crutcher	M.D. Heatly	75.9 acres

Table B-1. Chain-of-Title Data (cont.)

Vol./Page	Date	Grantor	Grantee	Notes
41HY537, 538, & 540 (W-2, 3, & 5) (cont.)				
Tract 3: 177/600	06/10/1959	Mary Crutcher	M.D. Heatly	25.0 acres
M/148 *not confirmed this is related deed	05/06/1879	Samuel Crews	P.C. Woods (Peter C. Woods, large cotton plantation owner and Doctor)	311.7 acres
C/467 *not confirmed this is related deed	04/09/1880	P.C. Woods	Samuel Crews	253.0 acres
135/53 *not confirmed this is related deed	09/22/1855	W.A. Hemphill	Moses Dimon	
84/225 *not confirmed this is related deed	06/13/1856	W.A. Hemphill	Joseph Kerby	
C/597 *not confirmed this is related deed	12/29/1858	J.C. Kerby	Johns Minton	
41HY539 & 542 (W-4 & 7) (R14932)				
2909/684	04/21/2006	Easy Kyle Partners	LaSalle Holdings	
2909/655	04/20/2006		Easy Kyle Partners	
2620/29	01/17/2005	Ruben Wahrmund et al.	Ruben, Albertine, Wahrmund	
389/134	02/11/1983	Edward Young	Ruben Wahrmund, et al.	125.0 acres
112/293	10/01/1936	J.M. Young	Aubra Young	
108/334	12/21/1934	Trinity Universal Insurance Co.	J.M. Young	
61/577	04/12/1912	D.W. Crews	Samuel Crews (son of D.W. and first wife, Ann Zora)	150.0 acres from this track; adjacent to Frank Crews' tract (brother)
41HY541 (W-6)				
2909/684	04/21/2006	Easy Kyle Partners	LaSalle Holdings	
2909/655	04/20/2006		Easy Kyle Partners	

Table B-1. Chain-of-Title Data (cont.)

Vol./Page	Date	Grantor	Grantee	Notes
41HY541 (W-6) (cont.)				
2620/29	01/17/2005	James Wahrmund et al.	Ruben and Albertine Wahrmund, James and Corrine	
1657/130	04/17/2000	Ruben and Albertine et al.	James Wahrmund et al.	
1249/582	08/31/1996	Inter Vivos Trust, Thomas Sewell, Jr. Trust (1987)	Ruben Wahrmund et al.	116.0 acres
149/547	09/20/1949	J.M Johnson (resides in Houston)	Ruth Johnson, T.C. Johnson, Jr., and Lucy Pettey (of CA)	
34/557	12/01/1895	Owen Ford and C.H. Word	T.C. Johnson and G.C. Johnson	429.1 acres
41HY543 (W-8)				
2909/684	04/21/2006	Easy Kyle Partners	LaSalle Holdings	
2909/655	04/20/2006		Easy Kyle Partners	
2620/29	1/17/2005	James Wahrmund et al.	Ruben and Albertine Wahrmund, James and Corrine	
1657/130	04/17/2000	Ruben and Albertine Wahrmund, et al.	James Wahrmund et al.	
HCD0C/9930406	12/02/1999	Ruben Wahrmund et al.	James Wahrmund	
831/789	05/31/1990	Frank and Joyce Eichmann	Ruben Wahrmund et al.	119.0 acres
329/90	07/20/1979	Joyce Eichmann	Frank and Joyce Eichmann	
274/415	05/04/1975	Otto Heidemann	Joyce Eichmann	
114/196	03/06/1937	Ida Nieman	Otto Heidemann	
54/320	02/15/1908	Henry and Minna	C. Niemann	