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## **A Cultural Resources Survey for the City of Temple's Prairie View Road Expansion Project, Bell County, Texas**

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## A Cultural Resources Survey for the City of Temple's Prairie View Road Expansion Project, Bell County, Texas

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*A Cultural Resources Survey for the City of  
Temple's Prairie View Road Expansion Project,  
Bell County, Texas*

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Herbert G. Uecker, Principal Investigator

Prepared for Terracon Consultants, Inc.

Terracon Project Number 96137543

Texas Antiquities Permit 6735

January, 2014



South Texas Archeological Research Services, LLC  
Report of Investigations No. 209



## Abstract

In December, 2013, and January, 2014, South Texas Archeological Research Services, LLC, conducted a cultural resources survey for the City of Temple's Prairie View Road Expansion Project, Bell County, Texas. The survey focused on discovery, identification, and preliminary assessment of archeological resources. The area surveyed was about 3,220 m of public road right-of-way about 30 m wide. It consisted of about 24 acres of land.

Because the survey area was owned or controlled by the City, a political subdivision of the State of Texas, compliance with the Antiquities Code of Texas was triggered for the project. Since there was no federal link for the project, the National Historic Preservation Act did not apply to it. The survey included search of relevant data in the Texas Historical Commission's *Texas Archeological Sites Atlas*, pedestrian visual surface inspection, subsurface testing, and reporting. It was done under Texas Antiquities Permit 6735 and according to applicable professional standards and guidelines.

Surface inspection and subsurface testing during fieldwork revealed that much of the project area was previously disturbed in recent times by human agency, and apparently was also disturbed by natural forces such as soil erosion, deflation, and bioturbation. No archeological evidence was found and no non-archeological cultural evidence that might have been eligible for landmark designation or that merited further investigation or documentation was seen either within or adjacent to the project area. Nothing was collected or curated.

Considering the methods and results of the survey, the Principal Investigator believed that the project as planned at the time of the survey should not affect any cultural resources eligible for landmark designation and therefore should proceed without further state antiquities code compliance efforts. It was also recommended that, per applicable statutes and regulations, if any archeological evidence was discovered during construction all work in the vicinity should immediately be suspended pending examination of the finds by the Texas Historical Commission and/or a Commission-qualified archeological consultant.



### Acknowledgements

Several persons rendered valuable assistance to South Texas Archeological Research Services, LLC, in conjunction with its survey and their help is gratefully acknowledged: Temple City Manager David Blackburn; Michael Newman, P. E., with Kasberg, Patrick, and Associates, LP, Consulting Engineers in Temple; Environmental Services Manager Hilary D. Johns, P. G., of the Austin, Texas, office of Terracon Consultants, Inc.; Project Archeologist James E. Warren and archeological technicians Rindle Wilson and Wayne Wernli; and Texas Historical Commission reviewer Mark Denton.

## INTRODUCTION

On December 16 and 17, 2013, South Texas Archeological Research Services, LLC (STARS), conducted fieldwork for a cultural resources survey for the City of Temple's Prairie View Road Expansion Project, Bell County, Texas. The survey focused on discovery, identification, and preliminary assessment of archeological resources. The area surveyed was about 3,220 m of road right-of-way (ROW) about 30 m wide, which was the area of potential effects to archeological resources (APE) for the project (Figures 1 and 2). It consisted of about 24 acres of land in an upland prairie setting, but included several crossings of minor local drainages.

Because the APE was owned or controlled by the City of Temple, a political subdivision of the State of Texas, compliance with the Antiquities Code of Texas (ACT) was triggered for the project and Texas Antiquities Permit 6735 was obtained for the survey. Therefore the survey was done according to *Archeological Survey Standards for Texas, Minimum Survey Standards*; and applicable rules and regulations of the Texas Historical

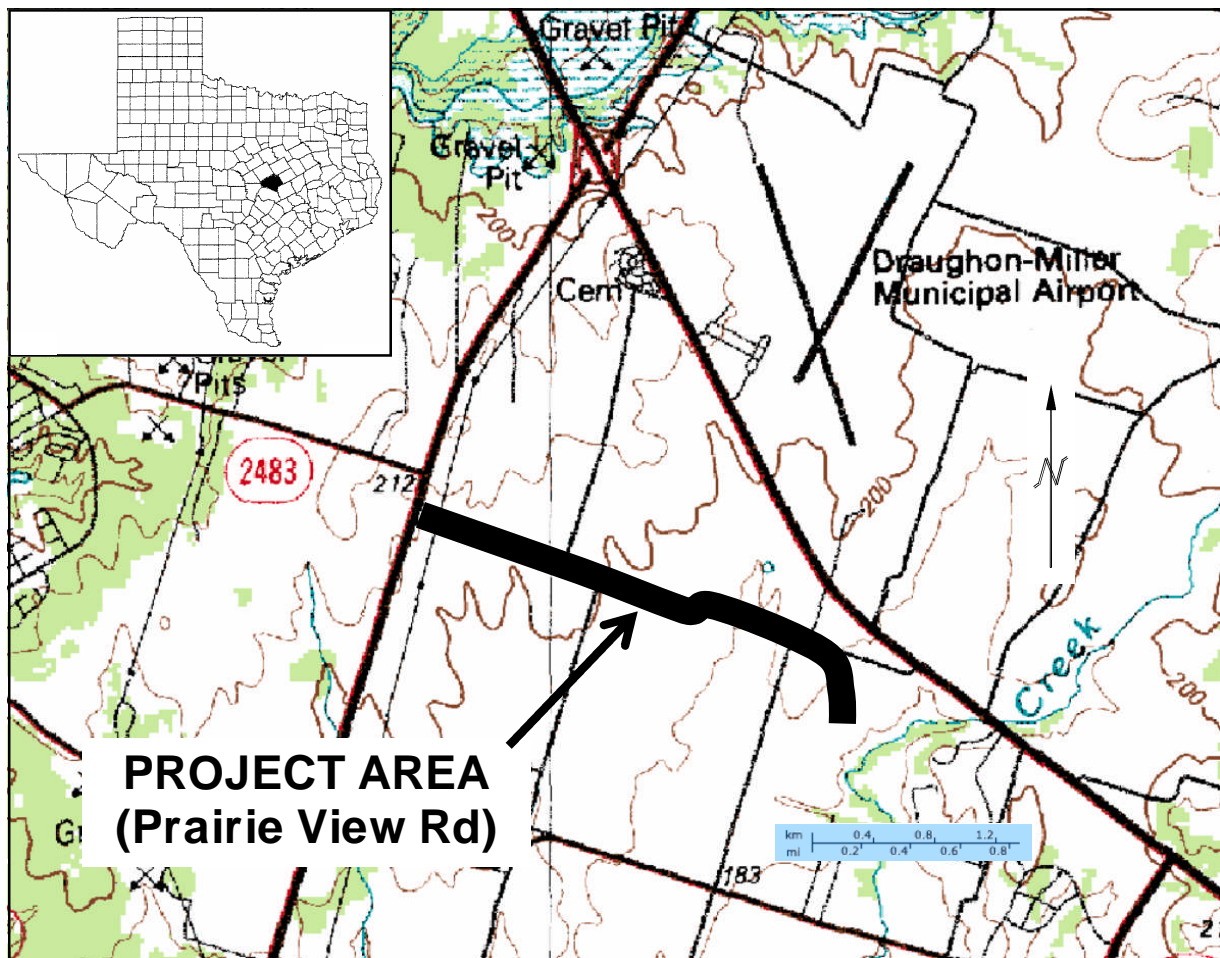


Figure 1. Project Area (APE) as plotted on *Temple, Texas*, United States Geological Survey 7.5-minute quadrangle topographic map (3197-121) section.  
Inset shows location of Bell County in Texas.

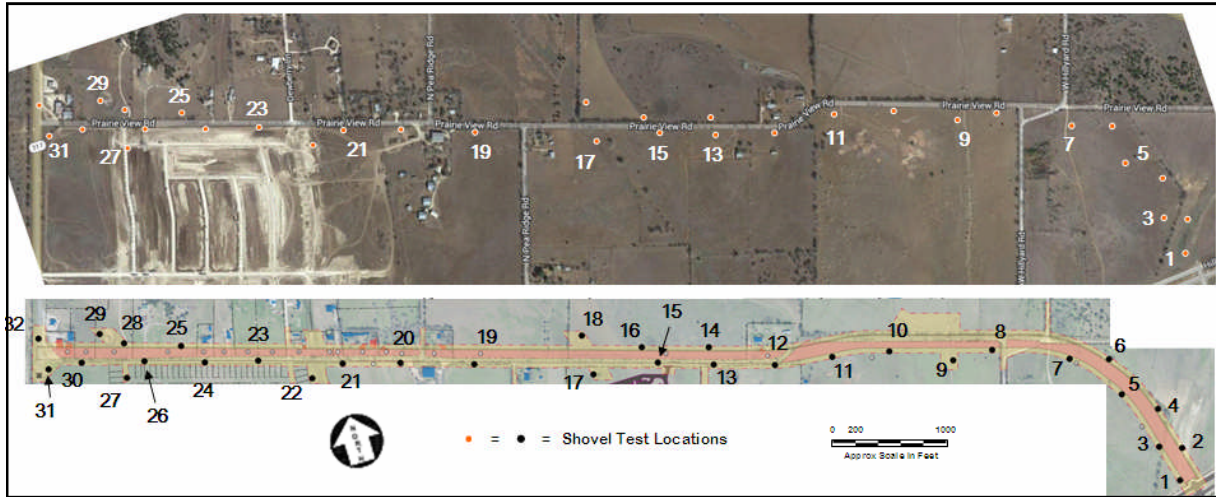


Figure 2. Two plan views of the project area. Top: Plot on recent aerial image of STARS archeological shovel tests excavated during fieldwork. Bottom: Footprint of project area (APE), shown in yellow and pink, also showing locations of STARS archeological shovel tests. All locations, scales, and plottings are approximate.

Base map for lower image provided courtesy of Terracon Consultants, Inc., and Kasberg, Patrick, and Associates, LP, Consulting Engineers, Temple, Texas.

Commission (THC). The Commission administered the ACT in Texas and issued the antiquities permit for the survey. The survey included search of relevant data in the THC's *Texas Archeological Sites Atlas (TASA)*, pedestrian visual surface inspection, subsurface testing, and reporting. Work was led by Principal Investigator Herbert G. Uecker, who was assisted during fieldwork by Project Archeologist James E. Warren and archeological technicians Wayne Wernli and Rindle Wilson. This report conforms to the Council of Texas Archeologists guidelines for negative findings reporting.

### GEOGRAPHIC AND HISTORIC CONTEXT

This section is adapted from and closely follows the narratives in the *Handbook of Texas Online* (Texas State Historical Association 2013a, 2013b).

#### *Bell County*

Bell County, in east central Texas, is along the Balcones Escarpment about 45 miles north of Austin, and is bordered by Coryell, McLennan, and Falls counties on the north, on the east by Falls and Milam counties, on the south by Milam and Williamson counties, and on the west by Lampasas and Burnet counties. Belton, the third largest town in the county, serves as the county seat and is 65 miles north of Austin. The county's center lies at approximately 31°02' north latitude and 97°30' east longitude. Interstate Highway 35 and State highways 195, 95, and 317 are the major north-south roads in the county. U.S. Highway 190 and State Highway 36 cross the county east and west. Bell County is also served by the Burlington Northern Santa Fe and the Union Pacific railroads.

Bell County comprises some 1,055 square miles and is divided into regions by the Balcones Escarpment, which runs through the approximate center of the county from southeast to northwest. The eastern part of the county, on the Blackland Prairie, consists of comparatively level prairieland, mainly undulating to gently rolling. The western half of the county belongs to the Grand Prairie region of Texas, and includes undulating to rolling uplands, deeply cut with stream valleys that, in places, have stony slopes and steep bluffs. Bell County ranges in



elevation from about 450 feet above sea level in the southeast to about 1,200 feet above sea level on the western boundary. The county is drained chiefly by the Little River and its tributaries, especially the Leon, Lampasas, and Salado rivers, which come together at historic Three Forks to form the Little River.

Soils in the eastern part of the county are mostly dark, loamy to clayey "blackland" soils. The rich Houston black clay is the most common type and the most suitable for farming. The soils west of the Balcones fault are light to dark and loamy and clayey, with limy subsoils. In places, shallow, stony soils have encouraged ranching and hardwood and pine production. Vegetation west of the fault is characterized by tall grasses and oak, juniper, pine, and mesquite trees, while the eastern part of the county, which has been extensively utilized for farming, is still wooded along its streams with a variety of hardwood trees. Between 41 and 50 percent of the land in Bell County is considered prime farmland. Mineral resources include limestone, oil, gas, sand and gravel, and dolomite.

In the mid-nineteenth century, early settlers found a rich wildlife population of, deer, wild turkeys, wolves, bear, buffalo, antelope, wild horses, ducks, geese, wild hogs, and an occasional alligator. While the buffalo, bear, and hogs were hunted to extinction in the county in the nineteenth century and the last alligator was killed in 1908, Bell County still provides habitat for many wild species, including deer, antelope, and numerous birds. Belton Lake and Stillhouse Hollow Lake provide a refuge for Bell County wildlife. Temperatures range from an average high of 96° in July to an average low of 36° in January. Rainfall averages 34 inches a year. The average relative humidity is 82 percent at 6 A.M. and 52 percent at 6 P.M., and the growing season averages 258 days annually.

Bell County has been the site of human habitation since at least 6000 B.C. Evidence of Archaic period (c. 7000 B.C.-A.D. 500) and Paleoindian period (pre-7000 B.C.) occupations has been recovered from archeological sites at the Stillhouse Hollow Site, Lake Belton, and Youngsport. Numerous campsites, kitchen middens, and burial mounds from the Late Prehistoric period have been found along the watercourses of the county, and burials have been discovered in rockshelters in the western part of the county.

The earliest known Historic-period occupants of the county, the Tonkawas, were a flint-working, hunting people who followed the buffalo on foot. During the eighteenth century they made the transition to a horse culture and began to use firearms. Lipan Apaches, Wacos, Anadarkos, Kiowas, and Comanches also frequented the land that become Bell County. The Lipans camped by the rivers and streams, and early white settlers had friendly relations with them. Early settlers also recorded that the Indians fired the prairie each spring to burn off the matted winter grass and facilitate new growth. But by the late 1840s the Lipans, Tonkawas and other groups who had customarily camped and hunted in the Bell County area were decimated by European diseases and driven away by white settlement. Comanche raiding parties continued to strike into the county until 1870.

While the Spanish had explored the Little River to the east in what would become Milam County and had established missions along the San Gabriel to the southeast in the eighteenth century, apparently they never entered the future Bell County area. Anglo settlement began in the 1830s, when the area was part of Robertson's colony and, somewhat later, part of old Milam County. The area was first settled in 1834 and 1835 by the families of Goldsby Childers, Robert Davidson, John Fulcher, Moses Griffin, John Needham, Michael Reed, William Taylor, and Orville T. Tyler, who settled as colonists along the Little River. The settlements were deserted during the Runaway Scrape, reoccupied, and then deserted again after the Indian attack on Fort Parker in June, 1836. In their retreat from the fort several of the settlers were overtaken by Indians and killed. The area was reoccupied in the winter of 1836-37.

In November, 1836, George B. Erath founded a fort on the Little River about a mile below Three Forks. The post has been known as Smith's Fort, the Block House, Fort Griffin, and Little River Fort. The settlements along the river were considerably troubled by marauding Indians. Important engagements of 1837 were the Elm Creek Raid on January 7 and the Post Oak Massacre in June. Little River Fort was abandoned, and by 1838 all settlers had left the Bell County area. On May 26, 1839, the Bird's Creek Indian Fight, a bloody but indecisive skirmish between Texas Rangers and Comanches, took place about 1.5 miles northwest of the site of present Temple.





Settlers began to return to the Bell County area after the peace treaties of 1843–44, and Indian raids into the county became less frequent. By the census of 1850, the population of what would shortly become Bell County was approximately 600 whites and 60 black slaves. Bell County was formed on January 22, 1850, and named for Peter H. Bell. The election held to organize the county took place in April at the "Charter Oak," near the center of the county at the military crossing on the Leon River. Nolan Springs was chosen as the county seat and named Nolanville. On December 16, 1851, the name was changed to Belton. In 1854 Coryell County was marked off from Bell County, and in 1856 the legislature attached a six-mile-wide strip of Falls County to Bell County. In 1860, when a resurvey of the line between Bell and Milam counties was made and recognized by the legislature, Bell County assumed its present boundaries.

The last serious Indian raid occurred in March, 1859. The Independent Blues, a company of volunteer rangers led by John Henry Brown, was organized in the immediate aftermath of the raid to protect the frontier. This group functioned for about two months. It was succeeded by several other volunteer units that operated into the summer of 1860.

Bell County had a population of 3,794 whites and 1,005 blacks in 1860. Most of the settlers had come to the county either from the older settled counties of lower and eastern Texas, or from the southern United States. The county was not really part of the plantation economy like the eastern part of antebellum Texas. Two-thirds of the 179 slaveholders in 1860 owned seven or fewer slaves, and only four county residents owned 20 slaves or more. Belton, Aiken, and Salado, the only towns, were on a stage route running north from Austin. Salado College was established in 1859 and flourished in the second half of the nineteenth century. Early settlement in the county was along the creeks and rivers, but by 1860 most of the county land, some 462,884 acres, was divided into farms. A series of drought years in the mid-1850s hindered the development of farming in the area, and Bell County farmers still operated in a frontier economy on the eve of the Civil War.

Due to the uncertain water supply, much of the land in the county was considered worthless for anything but undeveloped pasture, and county residents raised large herds of cattle and sheep. The 42,037 cattle enumerated by the 1860 census was not equaled again until the 1950s. There were only 21,196 cleared acres in the county in 1860, and the large number of oxen in the county, 2,132, when compared to the relatively small number of mules, 646, indicates that many farmers were still doing the heavy work of breaking the land to the plough. Corn and wheat were the main crops, though cotton was introduced into the county along the Little River in the mid-1850s and 514 bales of cotton were harvested in 1860.

A significant minority of Bell County residents were Unionists during the secession crisis. A Whig newspaper, the *Independent*, was published in Belton, and, in the election of 1859, Bell County strongly supported Sam Houston. In 1861, however, the county voted 495 to 198 in favor of secession, and many of the former Unionists loyally supported the Confederacy during the Civil War. Out of a white population of some 4,000 at the beginning of the war, one source claims that more than 1,000 Bell County men served in Confederate or state military units.

Companies organized in the county served in the First, Fourth, Sixth, and Eighteenth Texas Cavalry regiments, and the Sixth, Sixteenth, and Seventeenth Texas Infantry regiments. Bell County civilians established a variety of rural industries to provide shoes, saddles, and other goods for themselves and the forces. Unionist sentiment never entirely disappeared, however, and from 1862 to 1865 some Union sympathizers and Confederate deserters congregated in northern Bell County at what locals called "Camp Safety."

Reconstruction in Bell County was a troubled and violent period. Federal troops were quartered in Belton in 1865–66 to support Hiram Christian, newly appointed chief justice of the commissioners' court, but they were powerless to prevent a series of feuds between political factions that resulted in murders and lynchings. Horse and



cattle thieves thrived in the unsettled conditions of the time and contributed to the anarchy that prevailed in the county. During the brief return to self-government under Governor James W. Throckmorton in 1866–67, Bell County sent X. B. Saunders to the Constitutional Convention of 1866, and a Belton mob helped to discredit Throckmorton's administration by lynching several pro-Union men who were being held prisoner for feud-related murders. Bell County whites chafed under the imposition of congressional Reconstruction in 1868, and a Ku Klux Klan–like organization was established in the county.

Due to the small number of black voters in the county, Radical Republicans were dependent on military assistance for local control, and the election of December 1869 returned Bell County to Democratic party rule. The pattern of lawlessness continued into the mid-1870s; and the worst example of vigilante violence occurred on the evening of May 25, 1874, when a mob of men from Bell and other counties broke into the Belton jail and killed nine men, eight members of a gang of accused horse thieves and an accused murderer. One of the most interesting cultural movements of the period in Texas was the Belton Woman's Commonwealth, a celibate commune of "sanctificationists" that flourished in Belton from the 1870s through the 1890s.

Before the Civil War, African Americans had formed some 21 percent of the county population. The difficulties they faced in finding a niche in Bell County society in the postwar period can be glimpsed in an 1868 description of the county's blacks by a former Confederate officer: "The negroes behave as well as any one expected, though a large majority of them...are inclined to shift from place to place without having any settled employment." Most of the immigration to the county after the Civil War was white. The black population fell to 11 percent of the total in 1870 and fluctuated between 8 and 12 percent until the 1970s, when it increased to about 16 percent. As in other areas of Texas, blacks were relegated to segregated and inferior housing and educational facilities until the 1960s. Though racial violence was not as common in Bell County as it was in some areas of the state, there were at least two lynchings, in 1911 and 1915, and the Klan was revived in the county in the 1920s.

The Civil War and Reconstruction had a dramatic, if temporary, impact on the county economy. In 1870 the value of Bell County farms was only half of what it had been in 1860. Recovery was fairly rapid, aided by the growth of the cattle and sheep industries and, in the 1870s, by a dramatic expansion of cotton farming. From 1866 to the mid-1870s, stock raising was the chief county industry. One of the main feeder routes to the Chisholm Trail entered the county near Prairie Dell, extended through the center of Salado and the eastern edge of Belton, and left the county in the direction of Waco.

Many cattle drives passed through or originated in the county from the 1860s to the early 1880s. Cattle raising, after declining somewhat in importance in the early twentieth century, was again a major part of the county agricultural economy by 1950, and in 1969 ranchers owned a record 56,101 cattle. Sheep and goat raising also followed a similar pattern in the county. The number of sheep grew from 9,718 in 1870 to 21,224 in 1880, and nearly doubled again to 42,063 sheep producing 198,665 pounds of wool in 1890. The sheep industry declined dramatically in the late nineteenth and early twentieth centuries to some 7,859 sheep producing 31,245 pounds of wool in 1920, but revived in the 1930s and reached a new high of 50,141 sheep and 270,311 pounds of wool in 1940. Mohair became a significant agricultural product by 1930, and reached a peak in 1959, when some 32,269 goats were raised in the county.

Cotton, the second boom industry in Bell County, also developed after the Civil War. Cotton culture in the county, which had been relatively insignificant before the war, rose to successive heights of 9,217 bales in 1880, 37,473 bales in 1890 and a peak of 58,050 bales in 1910. The number of improved acres increased more than sevenfold between 1870 and 1880, and nearly doubled again to some 378,355 acres by 1890. While much of the land was used to grow wheat, corn, oats, and other food crops in 1880, cotton was grown on 26 percent of the cropland in 1890, 45 percent in 1900, 55 percent in 1910, and 61 percent as late as 1930.



Attracted by economic opportunities in ranching and farming, large numbers of immigrants swelled the population of Bell County in the later nineteenth century. The number of residents doubled between 1860 and 1870, from 4,799 to 9,771, more than doubled again to 20,517 in 1880, and had reached 45,535 by the turn of the century. Many immigrants came either from the older counties of Texas or from other southern states, particularly Arkansas, Alabama, Mississippi, and Tennessee. Population pressure and the shift to cotton production after 1870 adversely affected the economic position of the growing number of county farmers.

Increasingly concerned over marketing and credit issues, Bell County citizens pioneered the Grange movement in Texas in the 1870s, and Salado became one of the state centers of Grange activities. Nevertheless, as early as 1880, 41 percent of the county's farms were worked by tenants. The number increased to 58 percent by 1900 and remained at about 60 percent until the 1920s, when it increased still further to a maximum of 68 percent by 1930. Tenancy rates began to decline during the Great Depression with the shift away from cotton and other staple crops, and by 1959 had dropped to approximately 24 percent of the county's farmers.

Both the cotton and cattle booms were aided by the improved communications available in the county in the later nineteenth century. The Gulf, Colorado and Santa Fe, the first railroad to be built in Bell County, reached Belton in 1881 and established Temple as its headquarters that same year. Temple quickly surpassed Belton to become the largest town in the county by 1890. In 1882 the Missouri, Kansas and Texas crossed the county, and Belton secured a branch line of this railroad from Echo. The Belton and Temple Interurban, an electric line, was constructed in 1905. Roads were generally poor throughout the county in the early twentieth century. There were 11,748 automobiles in the county by 1935, and extensive improvements, including blacktopping, of all major roads took place in the 1930s, as highway development continued throughout the state.

In 1870 only 84 foreign-born inhabitants out of a population of 9,771 lived in Bell County. Significant numbers of Germans, Austrians, and Czechs moved to the county between 1880 and 1920. Though foreign-born residents never exceeded 5 percent of the county population, these groups and their descendants formed distinctive cultural enclaves, particularly in the southern and eastern parts of the county. For the most part these groups seem to have coexisted peacefully with the Anglo majority of Bell County citizens, but they were harassed by the County Council of Defense during World War I and by the county Klan in the 1920s. The Hispanic population never exceeded 3 percent of the county total until the second half of the twentieth century, when it rose to some 11 percent of the whole.

By 1930 Bell County had an ethnically mixed population of 50,030. The county economy was still based mostly on agriculture, with only 41 manufacturing establishments employing some 565 workers in operation that year. While cotton production was near its peak in terms of percentage of cropland, the cotton industry was already undergoing a rapid transformation. The combined effects of soil depletion, overproduction, and the boll weevil had already damaged the industry by the mid-1920s, and the situation of cotton growers was further worsened by the depression. The county population dropped to 44,863 in 1940, as many residents left to find jobs elsewhere.

Among the county farmers who remained, the depression encouraged diversification and a shift away from staple crops to livestock. Between 1930 and 1940 the number of acres used for cotton growing fell by more than half, and cotton production shrank from 57,574 bales to 30,435. Acres used for corn production increased over the same period by almost half, and wool and mohair production almost doubled, to 137,434 pounds and 75,827 pounds respectively. Though cotton continued to be an important crop in eastern Bell County, the county's farmers increasingly turned to such other crops as sorghum and wheat and to livestock raising in the later twentieth century. Poultry production also grew in significance in the county economy, and in 1970 Bell County ranked first in the state in turkey raising.

The two world wars had a major impact on Bell County. The community enthusiastically threw itself into the war effort in 1917, providing twice its draft quota on one occasion and forming a variety of citizens'



organizations to assist in rationing, in maintaining morale, and in providing services for the armed forces. A more permanent change in county life brought about by World War II was the establishment of the military base at Fort Hood in the western part of the county. The large installation continues to function as a military training center.

In the 1980s much of western Bell County lay within the boundaries of the military reservation, and the fort's estimated 160,000 military personnel, dependents, military retirees, and civilian employees exerted a tremendous economic and social influence on the civilian communities bordering the base. Neighboring Killeen was the largest city in the county, and the contiguous communities of Killeen, Harker Heights, and Nolanville, with an estimated combined population of 50,949 in 1980, were home to almost a third of the county's inhabitants.

The growth of the Fort Hood-Killeen area was matched by developments in the rest of the county. Bell County's population shot up to 73,824 in 1950, and increased by 27 to 32 percent every decade thereafter, to reach 157,820 in 1980 and 191,088 in 1990. The county also became increasingly urbanized. By 1980, 81 percent of the population lived in urban areas, and Bell County was one of the most densely populated counties in the state. Population growth benefited from and contributed to economic diversity in Bell County. In 1982 approximately 6,900 county residents were employed in factories, more than three times as many as in 1963. Other major areas of employment in the 1980s were construction, agribusiness, retail trade, and services. Among the noteworthy educational and medical institutions in the county were the University of Mary Hardin-Baylor, Central Texas College, Temple Junior College, the University of Central Texas, Scott and White Memorial Hospital, and the Olin E. Teague Veterans Center.

In 2000, the census counted 237,974 people living in Bell County. About 58 percent were Anglo, 21 percent were African American, and 17 percent were Hispanic. About 75 percent of residents age 25 and older had four years of high school, and almost 20 percent had college degrees. In the early twenty-first century the presence of Fort Hood remained a central element of the area's economy, but local firms also manufactured a wide variety of products, including computers, plastic goods, furniture, and clothing.

In 2002 the county had 2,080 farms and ranches covering 450,923 acres, 52 percent of which were devoted to crops and 42 percent to pasture. In that year Bell County farmers and ranchers earned \$40,832,000, with livestock sales accounting for \$23,378,000 of that total. Beef, corn, sorghum, wheat, and cotton were the chief agricultural products. Belton (2000 population, 14,623) is the seat of government and Killeen (86,911) is the county's largest city. Other towns include Temple (54,514), Harker Heights (17,308), Salado (3,475), Morgan's Point Resort City (2,989), Nolanville (2,150), Troy (1,378), Little River Academy (1,645), Rogers (1,117), Holland (1,102), and Heidenheimer (144). Fort Hood had a population of 33,711 in 2000. Recreation and tourist attractions in Bell County include Belton and Stillhouse Hollow lakes, the Central Area Museum in Salado, the Belton Independence Day celebration and rodeo (July), the Central Texas State Fair in Belton (September), and the Salado Art Fair (August) and gathering of the Scottish clans (November).

### *Temple*

Temple is at the intersection of Interstate Highway 35 and State highways 53 and 95, in northeastern Bell County 36 miles south of Waco and 67 miles north of Austin. In 1880 Jonathan E. Moore sold 187 acres of his land to the Gulf, Colorado and Santa Fe Railway to use for a construction camp. The site was called Temple Junction by the railroad company, in honor of Bernard Moore Temple, chief engineer of the railroad. Local residents called the community Mud Town or Tanglefoot. When a post office was established there in January 1881, the official name became Temple. The Gulf, Colorado and Santa Fe held a sale of town lots in June 1881. There was a nucleus of railroad workers to begin with, and stores went up rapidly.

In 1882 the Missouri, Kansas and Texas line was built through Temple, and the Santa Fe made the town a division point. The railroad shops added several hundred to the community population, which included doctors,



lawyers, and merchants. Temple was incorporated in 1882, and by 1884 its 3,000 residents were served by three churches and a school, as well as two banks, two weekly newspapers, an opera house, a waterworks, and a wide variety of other businesses.

The Santa Fe Hospital was established in Temple in 1891, King's Daughters Hospital in 1897, and Scott and White Hospital in 1904, making Temple one of the leading medical centers in the Southwest. Because of its railroad interchange and its medical facilities, it became the largest city in the county. Around 1900 it reported 7,065 residents and by 1930 that number had more than doubled, to 15,345. Local residents made several attempts to have the county seat moved to Temple from Belton, but these efforts failed. An interurban rail line, in operation between Temple and Belton from 1905 to 1923, helped facilitate travel to the county seat.

Businesses established in Temple included the American Desk Company in 1921 and a Coca-Cola bottling plant in 1925. Temple Junior College opened in 1926. The Great Depression interrupted the town's steady growth, but the 1940s brought another wave of new residents. Between 1940 and 1960 the population nearly doubled, rising from 15,344 to 30,419. In 1942 the Veterans Administration opened a new hospital in Temple, adding another dimension to the local medical facilities. The Temple area became a convenient place for military personnel to move to for their retirement.

By the 1970s Temple manufactures included furniture, shoes, insulation, cottonseed products, electronic products, plastics, clothing, optical supplies, woodwork, and livestock and poultry feed. In addition, Temple had a substation of the agricultural experiment station system and was the site for the state offices of the United States Soil Conservation Service. The city's population had risen to 42,483 by 1980 and to 49,851 by 1990. It decreased slightly in the early 1990s, to 46,109. By 2000 the population had surpassed the 1990 population and increased to 54,514. The Killeen-Temple metropolitan statistical area reported a population of 255,301 in 1990. That figure had grown to 312,952 by 2000.

## GEOLOGY, TOPOGRAPHY, AND SOILS

The *Geological Highway Map of Texas* (Refro et al. n.d.) indicated that the project area is within the K1b map unit, and that the primary parent rocks of the vicinity are limestones of the Cretaceous System; Comanchean Series; Buda, Del Rio, Denton, Duck Creek, Fort Worth, Georgetown, Grayson, Kiamichi, Main Street, Pawpaw, and Weno formations. The area was part of a gently rolling to flat upland prairie region crossed by several rivers and numerous streams on a dendritic pattern. Elevations within the area ranged from about 185-210 m above mean sea level. According to the University of California at Davis (2013a-2013f) and the United States Department of Agriculture, Natural Resources Conservation Service (NRCS; 2013a-2013f), principal soils within the project area include Denton silty clay (DeB), Heiden clay (HeB), Houston Black clay (HoA), Purves silty clay (PrB), San Saba clay (SaA and SaB), and Tarrant soils (TPF):

### *Denton Series*

The Denton series consist of deep, well drained, slowly permeable soils that formed in clayey materials over residuum weathered from limestone bedrock. These nearly level or gently sloping soils are on uplands and have slopes ranging from 0 to 5 percent.

TAXONOMIC CLASS: Fine-silty, carbonatic, thermic Udic Calcicustolls

TYPICAL PEDON: Denton silty clay-cropland.

Ap--0 to 6 inches; dark brown (7.5YR 4/2) silty clay, dark brown (7.5YR 3/2) moist; moderate fine and very fine granular structure; soft, very friable, sticky and plastic; few fine and medium roots; few fine pitted concretions of calcium carbonate; strongly effervescent; moderately alkaline; clear smooth boundary. (4 to 8 inches thick)

A--6 to 13 inches; dark brown (7.5YR 4/2) silty clay, dark brown (7.5YR 3/2) moist; moderate



fine and very fine subangular blocky structure; very hard, firm, sticky and plastic; few fine roots; many pressure faces; few small slickensides less than 1 inch across forming wedge-shaped peds; few fine pitted concretions of calcium carbonate; strongly effervescent; moderately alkaline; gradual wavy boundary. (6 to 16 inches thick)

Bw--13 to 19 inches; reddish brown (5YR 4/4) silty clay, dark reddish brown (5YR 3/4) moist; moderate fine and very fine angular blocky structure; very hard, firm, sticky and plastic; few fine roots; many pressure faces forming wedge-shaped peds; few fine pitted concretions of calcium carbonate; strongly effervescent; moderately alkaline; gradual wavy boundary. (0 to 14 inches thick)

2Bk--19 to 36 inches; reddish yellow (7.5YR 7/6) silt loam, reddish yellow (7.5YR 6/6) moist; common medium masses of strong brown (7.5YR 5/6); weak medium and fine subangular blocky structure; hard, firm, sticky and plastic; few fine roots; about 20 percent fine and medium concretions and soft masses of calcium carbonate; violently effervescent; moderately alkaline; clear irregular boundary. (6 to 24 inches thick)

2CBk--36 to 52 inches; strong brown (7.5YR 5/6) marly soil materials, massive; with about 5 percent reddish yellow (7.5YR 6/6) Bk material along root channels and fracture planes; few fine roots; 10 percent by volume limestone fragments 1 inch to 8 inches across and 2 to 4 inches thick, fragments form a discontinuous line mainly in the upper part of layer; about 25 percent coarse and very coarse soft masses and thin discontinuous strata of calcium carbonate; violently effervescent; moderately alkaline; abrupt wavy boundary. (0 to 20 inches thick)

2R--52 to 70 inches; indurated slightly weathered limestone bedrock; interbedded with marl or chalky limestone at vertical intervals of 6 to about 12 inches; bedrock has tight fractures spaced about 8 to 24 inches apart and cannot be excavated with backhoe machine [NRCS 2013a].

### *Heiden Series*

The Heiden series consists of soils that are well drained and very slowly permeable. They are deep to weathered shale. These soils are on nearly level to moderately steep uplands. Slopes are mainly 3 to 8 percent but range from 0.5 to 20 percent.

TAXONOMIC CLASS: Fine, smectitic, thermic Udic Haplusterts

TYPICAL PEDON: Heiden clay--cropland. Pedon described near its deepest part.

Ap--0 to 6 inches; dark grayish brown (10YR 4/2) clay, very dark grayish brown (10YR 3/2) moist; weak angular blocky structure; very hard, very firm, very sticky and very plastic; many fine roots; few wormcasts; few fragments of snail shells; strongly effervescent; moderately alkaline; abrupt boundary. (4 to 8 inches thick)

A--6 to 18 inches; dark grayish brown (10YR 4/2) clay, very dark grayish brown (10YR 3/2) moist; moderate fine angular blocky structure; few wedge shaped peds in lower part; extremely hard, very firm, very sticky and very plastic; few fine roots; shiny faces on peds; strongly effervescent; moderately alkaline; diffuse wavy boundary. (8 to 22 inches thick)

Bssk1--18 to 36 inches; dark grayish brown (10YR 4/2) clay, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse angular blocky structure, wedge shaped peds are about 1 to 3 inches long and axis tilted 10 to 60 degrees from the horizontal; extremely hard, very firm, very sticky and very plastic; many slickensides; common fine calcium carbonate concretions; strongly effervescent; moderately alkaline; diffuse wavy boundary. (0 to 20 inches thick)

Bssk2--36 to 58 inches; olive gray (5Y 5/2) clay, olive gray (5Y 4/2) moist; few fine faint olive mottles and streaks; weak coarse angular blocky structure, wedge shaped peds are about 1 to 3 inches long and axis tilted 10 to 60 degrees from the horizontal; extremely hard, very firm, very sticky and very plastic; many distinct slickensides; common fine calcium carbonate concretions; violently effervescent; moderately alkaline; diffuse wavy boundary. (12 to 40 inches thick)

C--58 to 70 inches; prominently and coarsely mottled olive (5Y 5/3) moist; and yellow (5Y 7/6)



moist, clay and weakly consolidated shale; few fine olive and yellow mottles; massive, with a few slickensides in the upper part; extremely hard, very firm and very plastic; violently effervescent; moderately alkaline.

The Lewisville series consists of very deep, well drained, moderately permeable soils that formed in ancient loamy and calcareous sediments. These upland soils have slopes of 0 to 10 percent.

TAXONOMIC CLASS: Fine-silty, mixed, active, thermic Udic Calciustolls

TYPICAL PEDON: Lewisville silty clay--pasture.

Ap--0 to 6 inches; dark grayish brown (10YR 4/2) silty clay; very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky and granular structure; hard, friable; contains a few strongly cemented calcium carbonate concretions; calcareous; moderately alkaline; abrupt smooth boundary. (0 to 7 inches thick)

A--6 to 16 inches; dark grayish brown (10YR 4/2) silty clay, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; hard, firm; few root channels; common strongly cemented calcium carbonate concretions about 2 to 5 mm in diameter; calcareous; moderately alkaline; gradual smooth boundary. (7 to 15 inches thick)

Bk1--16 to 34 inches; grayish brown (10YR 5/2) silty clay, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure; very hard, firm; common strongly cemented calcium carbonate concretions 2 to 5 mm in diameter; a few threads of soft calcium carbonate; calcareous; moderately alkaline; gradual smooth boundary. (13 to 30 inches thick)

Bk2--34 to 62 inches; pale brown (10YR 6/3) silty clay; brown (10YR 5/3) moist; weak subangular blocky structure; hard, firm; common soft masses of segregated calcium carbonate, few small, strongly cemented calcium carbonate concretions; calcareous; moderately alkaline. [NRCS 2013b].

#### *Houston Series*

The Houston series consists of moderately well drained, slowly permeable, cyclic soils that formed in alkaline clays and chalk of the Blackland Prairies. These clayey soils have very high shrink-swell potential. Slope ranges from 0 to 8 percent.

TAXONOMIC CLASS: Very-fine, smectitic, thermic Oxyaquic Hapluderts

TYPICAL PEDON: Houston clay in the center of a micro-pasture.

A11--0 to 10 inches; very dark gray (5Y 3/1) clay; moderate fine and medium granular structure; hard, firm, very plastic; common fine roots; mildly alkaline; gradual smooth boundary. (4 to 11 inches thick)

A12--10 to 25 inches; dark olive gray (5Y 3/2) clay; moderate fine angular and subangular blocky structure; hard, firm, very plastic; common fine roots; mildly alkaline; clear irregular boundary. (0 to 24 inches thick)

AC--25 to 42 inches; olive gray (5Y 4/2) clay; few fine faint mottles of very dark gray; large wedge-shaped aggregates that are bordered by intersecting slickensides; parts to successively smaller angular blocky structure; very hard, firm, very plastic, sticky; few fine black concretions; common medium and coarse calcium carbonate concretions; moderately alkaline; gradual wavy boundary. (5 to 27 inches thick)

C1--42 to 58 inches; olive (5Y 4/3) clay; few fine faint mottles of very dark gray; large wedge-shaped aggregates that are bordered by intersecting slickensides; parts to angular blocky structure; very hard, extremely firm, very firm, very plastic, sticky; few fine black concretions; common medium and coarse calcium carbonate concretions; calcareous; moderately alkaline; gradual wavy boundary. (5 to 26 inches thick)

C2--58 to 72 inches; light olive brown (2.5Y 5/6) clay;



common fine distinct olive gray and few fine faint yellowish brown mottles; large wedge-shaped aggregates that are bordered by intersecting slickensides; parts to angular blocky structure; very hard, extremely firm, plastic; few medium and coarse calcium carbonate concretions; calcareous; moderately alkaline [NRCS 2013c].

#### *Purves Series*

The Purves series consists of shallow, well drained, moderately slowly permeable soils that formed in interbedded limestone and marl. These soils are on gently sloping to steep uplands. Slopes are mainly 1 to 5 percent, but range from 1 to 40 percent.

TAXONOMIC CLASS: Clayey, smectitic, thermic Lithic Calcicustolls

TYPICAL PEDON: Purves clay--pasture.

A--0 to 8 inches; very dark grayish brown (10YR 3/2) clay, very dark brown (10YR 2/2) moist; strong very fine subangular blocky and granular structure; very hard, firm; many fine roots; calcareous; moderately alkaline; gradual smooth boundary.

Ak--8 to 12 inches; brown (10YR 4/3) clay, dark brown (10YR 3/3) moist; strong very fine subangular blocky and granular structure; hard, firm; common fine roots; few to common concretions and soft masses of calcium carbonate; calcareous; moderately alkaline; clear smooth boundary.

Bk--12 to 14 inches; brown (10YR 5/3) very gravelly clay dark brown (10YR 3/3) moist; strong fine granular structure; hard, firm; contains about 70 percent fragments of limestone 1 to 6 inches across the long axis; fragments have pendants and coatings of calcium carbonate 3 to 10 mm thick; many fine concretions; calcareous; moderately alkaline; abrupt smooth boundary.

R--14 to 20 inches; indurated limestone, with a hardness by Moh's scale of 3 or more; contains a few fractures [NRCS 2013d].

#### *San Saba Series*

The San Saba series consists of moderately deep, moderately well drained, very slowly permeable soils that formed in clayey sediments over hard limestone. These nearly level to gently sloping soils are on uplands. Slopes range from 0 to 5 percent.

TAXONOMIC CLASS: Fine, smectitic, thermic Leptic Udic Haplusterts

TYPICAL PEDON: San Saba clay--cropland.

Ap--0 to 4 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; moderate fine and medium granular structure; extremely hard, very firm; few fine roots; very slightly effervescent; slightly alkaline; clear smooth boundary. (4 to 6 inches thick)

A--4 to 19 inches; very dark gray (10YR 3/1) clay, black (10YR 2/1) moist; moderate medium angular blocky structure; extremely hard, very firm; few fine roots; streaks of dark gray in old crack fillings; common pressure faces; few fine iron-manganese concretions; very slightly effervescent; slightly alkaline; gradual wavy boundary. (8 to 26 inches thick)

Bss--19 to 35 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; common prominent slickensides and wedge shaped peds tilted 30 to 45 degrees from horizontal, these part to moderate fine angular blocky structure; extremely hard, very firm; few calcium carbonate concretions; few fine iron-manganese concretions; slightly effervescent; moderately alkaline; abrupt smooth boundary. (12 to 20 inches thick)

R--35 to 38 inches; gray indurated fractured limestone; fractures about 8 to 20 inches apart; hardness of about 3 Mohs scale.

The Purves series consists of shallow, well drained, moderately slowly permeable soils that formed in interbedded limestone and marl. These soils are on gently sloping to steep uplands. Slopes are mainly 1 to 5 percent, but range from 1 to 40 percent.





TAXONOMIC CLASS: Clayey, smectitic, thermic Lithic Calciustolls

TYPICAL PEDON: Purves clay--pasture.

A--0 to 8 inches; very dark grayish brown (10YR 3/2) clay, very dark brown (10YR 2/2) moist; strong very fine subangular blocky and granular structure; very hard, firm; many fine roots; calcareous; moderately alkaline; gradual smooth boundary.

Ak--8 to 12 inches; brown (10YR 4/3) clay, dark brown (10YR 3/3) moist; strong very fine subangular blocky and granular structure; hard, firm; common fine roots; few to common concretions and soft masses of calcium carbonate; calcareous; moderately alkaline; clear smooth boundary.

Bk--12 to 14 inches; brown (10YR 5/3) very gravelly clay dark brown (10YR 3/3) moist; strong fine granular structure; hard, firm; contains about 70 percent fragments of limestone 1 to 6 inches across the long axis; fragments have pendants and coatings of calcium carbonate 3 to 10 mm thick; many fine concretions; calcareous; moderately alkaline; abrupt smooth boundary.

R--14 to 20 inches; indurated limestone, with a hardness by Moh's scale of 3 or more; contains a few fractures [NRCS 2013e].

#### *Tarrant Series*

The Tarrant series consists of soils that are very shallow and shallow to indurated limestone bedrock, interbedded with marl and chalk. These well drained soils formed in residuum derived from limestone of Cretaceous age. These nearly level to very steep soils are on summits, shoulders, and backslopes of ridges on dissected plateaus. Slopes are 1 to 50 percent. Mean annual air temperature is about 18 degrees C (66 degrees F), and the mean annual precipitation is about 533 mm (21 in).

TAXONOMIC CLASS: Clayey-skeletal, smectitic, thermic Lithic Calciustolls

TYPICAL PEDON: Tarrant cobbly clay--native pasture.

A--0 to 20 cm (0 to 8 in); very dark grayish brown (10YR 3/2) very cobbly clay, very dark brown (10YR 2/2) moist; strong very fine subangular blocky structure parting to strong medium granular; very hard, firm; common fine roots; common fine pores; carbonate masses around and on bottom of rock fragments; 35 percent limestone cobbles and 5 percent limestone gravel; violently effervescent; moderately alkaline; clear irregular boundary. (Thickness of the A horizon is 10 to 28 cm [4 to 11 in])

Ak--20 to 33 cm (8 to 13 in); brown (10YR 4/3) extremely cobbly clay, dark brown (10YR 3/3) moist; moderate very fine angular blocky structure parting to moderate medium granular; very hard, firm; common fine roots in vertical and horizontal bands; carbonate masses around and on bottom of rock fragments; 85 percent weakly cemented to strongly cemented limestone cobbles and stones; violently effervescent; moderately alkaline; abrupt wavy boundary. (Thickness of the Ak horizon is 5 to 25 cm [2 to 10 in])

R--33 to 76 cm (13 to 30 in); fractured, indurated and platy limestone bedrock and interbedded strata of weakly cemented to strongly cemented limestone about 1 to 15 cm (0.5 to 6 in) thick. [NRCS 2013f].

#### GENERAL CULTURAL AND ARCHEOLOGICAL CONTEXT

Texas culture history has typically been divided by archeologists into four broad periods (cf. Black 1989a:25-33, 1989b:48-57; Black and McGraw 1985:35-40; Hester 1980:27-37; Turner and Hester 1999:50-63): the Paleoindian (c. 11,000 B. P. to 8000 B.P.), the Archaic (c. 8000 B.P. to 1500 B.P.), the Late Prehistoric (c. 1500 B.P. to A.D. 1528), and the Historic (c. A.D. 1528 to present). Although there is evidence for several specialized subsistence adaptations, during all but the Historic period, apparently humans in the area were engaged primarily in a broad-spectrum nomadic to semi-sedentary hunting and foraging lifeway (Hester 1989:119-125). The



archeological record indicates that they were organized as small groups or bands that traveled much of the time in regular patterns, known as subsistence forays, in order to exploit a variety of seasonably available natural resources (Collins 2004:123; Johnson 1994:282). Such a hunting-foraging lifeway apparently was practiced not just in what is now Texas, but in most of today's North America for many thousands of years before the fifteenth century infusion of culturally modern Europeans to the New World.

In recent decades, several scholars have summarized the archeology of the region that includes the project area. Black (1989a:18, 1989b:5) named it the Central Texas Plateau-Prairie. Apparently following Turner and Hesters' (1993:67) Central Texas Region, Collins (1995:363, 2004:121) used the title Central Texas archeological area. For their purposes, Mercado-Allinger et al. (1996:12) called it the Central and Southern Planning Region.

Bell County and the surrounding region are very rich in archeological resources. A check of the TASA at the time of the STARS survey revealed that about 1,370 archeological sites and two State Antiquities Landmarks were previously recorded in the county (THC 2013). None of those were found within or near the APE. Most previously recorded sites in the county were of prehistoric origins and were discovered since about the late 1960s in conjunction with surveys triggered by archeological compliance requirements under federal and state antiquities laws.

#### DISTURBANCES

By the time of the STARS investigation much of the project area was previously cleared of natural vegetation and developed into Prairie View Road and several lateral public roads, drainage culverts, and agricultural fields, residences, and industrial developments on each side of the ROW (Figures 2 and 3). The presence of numerous fire hydrants along the narrow strips between the existing paved portion of Prairie View Road and property line fences on both sides of the road attested to the presence of buried water lines. Other disturbances within the area were inferred to be from natural sources such as soil erosion, deflation, and bioturbation that likely occurred in the vicinity for many millennia of prehistory.

#### PROJECT DESCRIPTION AND GENERAL SETTING, SURVEY METHODS, AND FINDINGS

In essence, the project consisted of widening an existing asphalt-paved segment of Prairie View Road from about 15 m to 30 m wide between Texas Highway 317 on the west end and the intersection with West Hilliard Road to the east, and construction of a new road segment from that intersection southeastward to Hilliard Road (Figure 2). About half the width of the ROW between the highway and West Hilliard Road contained the existing paved portion of Prairie View Road, within which archeological work was not feasible. Therefore in that segment the survey was performed within the expansion strips on both sides of the road (Figure 2). The entire ROW for the proposed new road segment to the east, about 30 m wide, was also surveyed.

The TASA search revealed that apparently the APE was not investigated before the STARS survey and that no known archeological sites or other cultural resources were within or adjacent to the area (THC 2013). At the time of fieldwork, ground surface visibility within most the APE averaged about 50 percent. The ground surface within the APE was visually inspected by walking in zig-zag paths along the ROW, and 32 archeological shovel tests were excavated within the APE (Figures 2 and 4). About 20 percent of the APE was on private property not accessible at the time of fieldwork, but all of the drainage crossings and margins within the APE were able to be examined. Those drainages all led to Pepper Creek, a primary tributary of the Leon River. The creek in that vicinity was about 500 m east of the easternmost extent of the APE.

Each shovel test or probe pit was about 30 cm across. Tests were excavated and recorded in arbitrary 20-cm-thick unit-levels. Excavated matrix able to be screened was screened using quarter-in-mesh hardware cloth. Matrix not able to be screened was troweled through and closely examined for the presence or absence of cultural



Figure 3. Two photographs of the APE taken during STARS fieldwork. Top: Sweeping view to east from near Shovel Test 11, with Prairie View Road at left. Bottom: View to south from near Shovel Test 15, showing active disturbances from industrial construction.



Figure 4. STARS shovel tests in progress. Clockwise from top left: Shovel Tests 1, 4, 15, and 22. Approximate locations of tests are shown in Figure 2.

evidence. Most of the shovel tests were able to be excavated to depths between 40 and 60 cm below the surface, and most were dug to bedrock or impenetrable gravels. In a few areas shallow soils prevented excavations below about 15-20 cm beneath the surface. The soil encountered throughout the excavated columns of most of the tests was gray-brown (about 10YR4/3 Munsell value) or dark gray-brown (about 10YR3/1 Munsell value) loamy or gravelly clay (Figure 4).

No archeological evidence, and no buildings, structures, objects, or sites of the Historic period that originated 45 or more years before 2013 were found or seen during the survey. Nothing was collected or curated.

#### INTERPRETATIONS AND RECOMMENDATIONS

Considering the methods and results of the survey, the Principal Investigator believed that the project as planned at the time of the survey should not affect any cultural resources eligible for landmark designation and therefore should proceed without further ACT compliance efforts. However, should any archeological evidence be discovered during construction, per the ACT and THC regulations, all work in the vicinity should immediately be suspended pending examination of the finds by the THC and/or a THC-qualified archeological consultant.



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