

**AN ARCHAEOLOGICAL SURVEY FOR THE
RIVERSIDE WATER SUPPLY CORPORATION
WARREN PLANT IMPROVEMENTS PROJECT
IN WALKER AND SAN JACINTO COUNTIES TEXAS**

Antiquities Permit 5347



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RIVERSIDE WATER SUPPLY CORPORATION WARREN PLANT IMPROVEMENTS
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BVRA Project 09-18

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ABSTRACT

Brazos Valley Research Associates (BVRA) conducted a Phase I archaeological survey for the Riverside Water Supply Corporation (WSC) Warren Plant Improvements Project (12.5 acres) under Antiquities Permit 5347. William E. Moore was the Principal Investigator, and Edward P. Baxter was the Project Archaeologist. No new sites were found as a result of this investigation. Six previously recorded sites are within or near the Area of Potential Effect (APE), and shovel tests were excavated in the APE on or near these sites in four cases. The six sites in or near the project area are 41SJ42 and 41SJ43 in San Jacinto County and 41WA73, 41WA89, 41WA187, and 41WA283 in Walker County. These sites consist of five unknown prehistoric sites and Camp Huntsville (41WA283), a World War II camp for prisoners of war. No evidence was found that indicates undisturbed portions of any of these sites are within the APE as indicated on the maps provided by the client. The authors recommend that construction be allowed to proceed as planned. Copies of the final report are on file at the Texas Historical Commission (THC), Texas Archeological Research Laboratory (TARL), the Texas Water Development Board (TWDB), BVRA, the engineering firm Stolz Engineering & Associates, Inc. and the Riverside WSC. No artifacts were collected, and no records were curated.

ACKNOWLEDGMENTS

The authors are grateful to the following individuals for their participation in this project. Wayne Stolz of Stoltz Engineering & Associates, Inc. provided maps and visited the project area with the Principal Investigator. Larry Dorman, General Manager at the Riverside WSC, assisted the Project Archeologist by answering questions about changes in the route of the water line. Ray Agostinetti, an employee of the Riverside WSC, also assisted the Project Archeologist. The file search and general records check were performed by Jean Hughes, Curator of Records at TARL. Information regarding site 41WA283 was obtained from talking with local informants James Patton; Barbara Mason; and Sandra E. Rogers, the recorder of the site. The figures that appear in this report were prepared by Lili G. Lyddon of LL Technical Services and Mr. Baxter. Ms. Lyddon also served as editor.

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INTRODUCTION

The Riverside WSC plans to install 98,000 feet (18.5 miles) of water distribution line in northeast Walker County and western San Jacinto County (Figure 1). The water distribution line will be placed on private land, on land owned by the Texas Department of Criminal Justice (TDCJ), and within the rights-of-way of Farm-to-Market Road 980 and State Highway 19. There are three sizes of pipe that will be installed. The diameter of the pipe is six inches, eight inches, and twelve inches. The pipe will be placed in a trench beneath four feet of cover, and the width of the trench will be thirty inches or less. The construction easement will be twenty feet, and the permanent easement will be fifteen feet.

Other proposed improvements include four water treatment plants. They are the Warren Plant with a footprint of 100 feet by 100 feet, the Cedar Hill Plant with a footprint of 150 feet by 200 feet, and the Acorn Hill and Huntwood plants with footprints of 150 feet by 150 feet.

In addition, the Gospel Hill Stand Pipe is proposed, and it will have a footprint of 125 feet by 125 feet. Funding will be provided by the TWDB. The TWDB representative for the project is Darrell Nichols, and the Environmental Coordinator is Chris Jurgens. The project area is covered by two 7.5' USGS topographic maps. They are Riverside (3095-432) and Staley (3095-431). They appear as six maps in Appendix I. The proposed construction is in an area where significant prehistoric and historic sites have been recorded, and six sites are within or near the APE. Therefore, an investigation by a professional archaeologist was requested by the THC. In order to satisfy this requirement, the Riverside WSC retained BVRA to perform this service that was conducted under Antiquities Permit 5347.

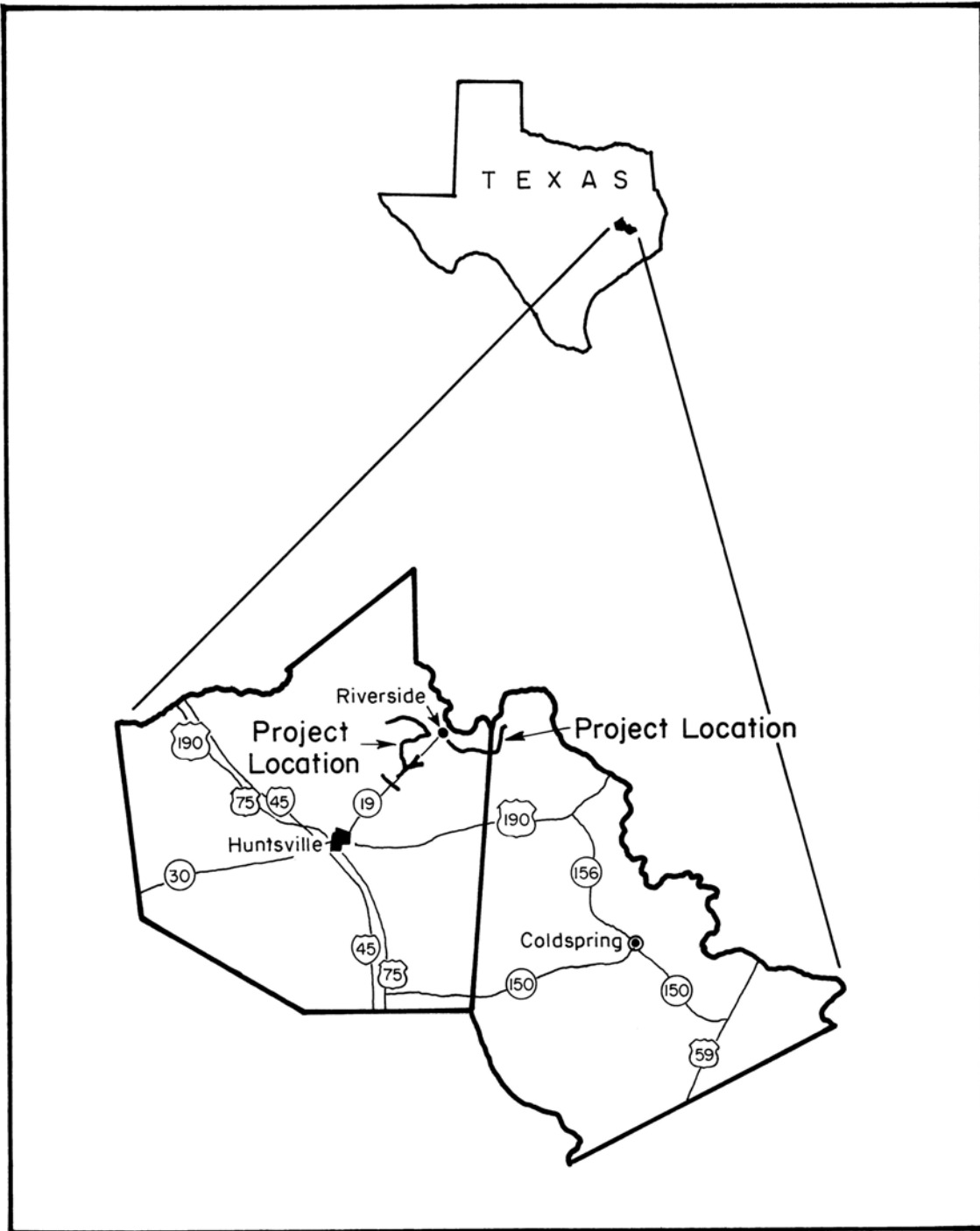


Figure 1. General Location

ENVIRONMENTAL SETTING

General

The project area is located within the Austroriparian biotic province as defined by Blair (1950) and includes the Gulf coastal plain from the Atlantic Ocean to eastern Texas. The western boundary of this province in Texas is approximated by a line running north from western Harris County to western Red River County. The western boundary of the Austroriparian is also the western boundary of the main body of the pine and hardwood forests of the eastern Gulf coastal plain (Blair 1950:99). According to Thornthwaite (1948), these forests are limited on the west by available moisture.

Flora

The Project Area is located within the loblolly pine, shortleaf pine, and upland hardwood plant community as defined by the United States Forest Service for the four National Forests in East Texas. According to Ippolito (1983:6-7), the major forest cover types in this community include loblolly pine, shortleaf pine, slash pine, post oak, southern red oak, white oak, black oak, blackjack oak, black gum, sweet gum, American elm, red maple, hickories, and beech. Approximately 70 percent of East Texas is currently occupied by the Piney Woods with Post Oak Savannah and Blackland Prairie in the rest of the region (Boyd and Howard 1988:4). Keller (1974:139-156) believes that deciduous trees may have been more numerous during most of the Holocene and were probably more important resources to prehistoric populations than the modern flora would suggest.

Fauna

The vertebrate fauna of the Austroriparian is considered typical of that to the east. Blair (1950:99) states that at least 47 species of mammals occur or have occurred there in recent times. Known types include at least 29 species of snakes, 10 lizards, 2 land turtles, 17 anurans, and 18 urodeles. Ippolito (1983:11) states that there is an inadequate sample of faunal material for the area in an archaeological context. Therefore, assumptions concerning prehistoric exploitation of animals must be based on historical accounts and current populations.

A study by Keller (1974:78-81) of the paleoecology of the middle Neches region lists those mammals most likely to have been hunted in the area. They are Whitetail deer, Cottontail rabbit, Swamp rabbit, Grey squirrel, Fox squirrel, Flying squirrel, Raccoon, Opossum, Red fox, Grey fox, Woodchuck, Bobcat, Spotted skunk, Striped skunk, Mink, Otter, Long-tailed weasel, and Muskrat. According to Ippolito (1983:11), this list excludes many species of birds, especially migratory fowl, and fish that can still be found in the area. Species not found in the area today include black bear, beaver, and wild turkey. These were once numerous but were eradicated by uncontrolled hunting and timber harvesting that irreparably altered their habitats.

Climate

The following climatic information was taken from the *Texas Almanac: 2004-2005* published by the Dallas Morning News (2004). The weather in the two counties consists of hot summers and cool winters. An occasional cold front may cause temperatures to drop below freezing, sometimes quite suddenly. The January mean minimum temperature for San Jacinto County is 36 degrees Fahrenheit, while the July mean maximum temperature is 93 degrees Fahrenheit. The January mean minimum temperature for Walker County is 38 degrees Fahrenheit, while the July mean maximum temperature is 94 degrees Fahrenheit. An annual growing season of 234 days above freezing is typical. Prevailing winds are from the south-southeast. Rainfall is uniformly distributed throughout the year, and snowfall is rare.

Soils

According to the General Soil Map in the published soil survey for Walker County (McClintock et al. 1979), the Walker County portion of the project area is located within the Falba-Almina-Arriola association. Soils in this association consist of moderately deep and deep, sandy and loamy, nearly level to sloping soils on uplands. According to the General Soil Map in the published soil survey for San Jacinto County (McEwen et al. n.d.), the San Jacinto County portion of the project area is located within the Laska-Colita-Oakhurst Association. Soils in this association consist of nearly level to strongly sloping, moderately well drained and somewhat poorly drained, moderately rapidly permeable, moderately permeable, and very slowly permeable loamy soils.

ARCHAEOLOGICAL BACKGROUND

According to a bibliography prepared by William E. Moore and published by the THC (Moore 1989), the project area is located in the Southeastern Region of Texas (Figure 2). Most of the early information for San Jacinto and Walker Counties is based on projects in neighboring counties such as the Lake Livingston reservoir study in Polk and San Jacinto counties (Nunley 1963, McClurkan 1967, 1968; Ensor and Carlson 1988), Lake Conroe in Montgomery County (McNatt 1978; Shafer 1968; Shafer and Stearns 1975), Lake Creek Reservoir in Montgomery County (Bement et al. 1987), and the Gibbons Creek Mine in Grimes County (Rogers 1993, 1994). Most of the archaeological work in San Jacinto and Walker counties revealed the presence of sites associated with the Late Prehistoric period of Texas prehistory based on the presence of arrow points and ceramics. Sites dating to the Paleo-Indian period are rare and are usually identified by isolated finds of early projectile points found on the surface without a direct association of subsurface cultural materials. Sites dating to the Early Archaic or pre-ceramic period are also rare, although examples are known. In 1985, a statistical overview of prehistoric sites in Texas was published by the Office of the state Archeologist (Biesaat et al. 1985). At the time of this publication, San Jacinto County contained 1 Paleo-Indian site, 24 Archaic sites (one dating to the Early Archaic), and 114 Late Prehistoric sites. Walker County contained no Paleo-Indian sites, 3 Archaic sites, and 15 Late Prehistoric sites. This source provides statewide, regional, and county statistics. Although it is outdated, being published twenty-four years ago, it provides valuable comparative data for what was known at that time and the current status of Texas archeology. Unfortunately, this document does not provide site numbers. No attempt was made by the authors to identify the number of Paleo-Indian, Archaic, and Late Prehistoric recorded in San Jacinto and Walker counties at this time. It is known, however, that the number of known sites in San Jacinto County and Walker County at the time of this study has increased from 139 sites in San Jacinto County and 18 sites in Walker County to 217 and 297 sites, respectively, due to archaeological surveys by professional archaeologists and continued work by amateur archaeologists and the Houston Archeological Society.

As stated above, sites with Paleo-Indian components are rare in Southeast Texas. The authors are not aware of any sites that can be identified as pure Paleo-Indian. One of the more significant pre-ceramic sites in the area is 41MQ41 in Montgomery County, a site found at Lake Conroe by archaeologists from Texas A&M University (Shafer and Stearns 1975). At the time this site was investigated, it represented the oldest cultural remains recovered from the Lake Conroe Area. The findings were significant in that they confirm an earlier hypothesis that prehistoric sites having considerable antiquity are present on older landforms in the area. Earlier work in the area tended to sample sites situated on more recent landforms; therefore, the materials from these sites are relatively late.

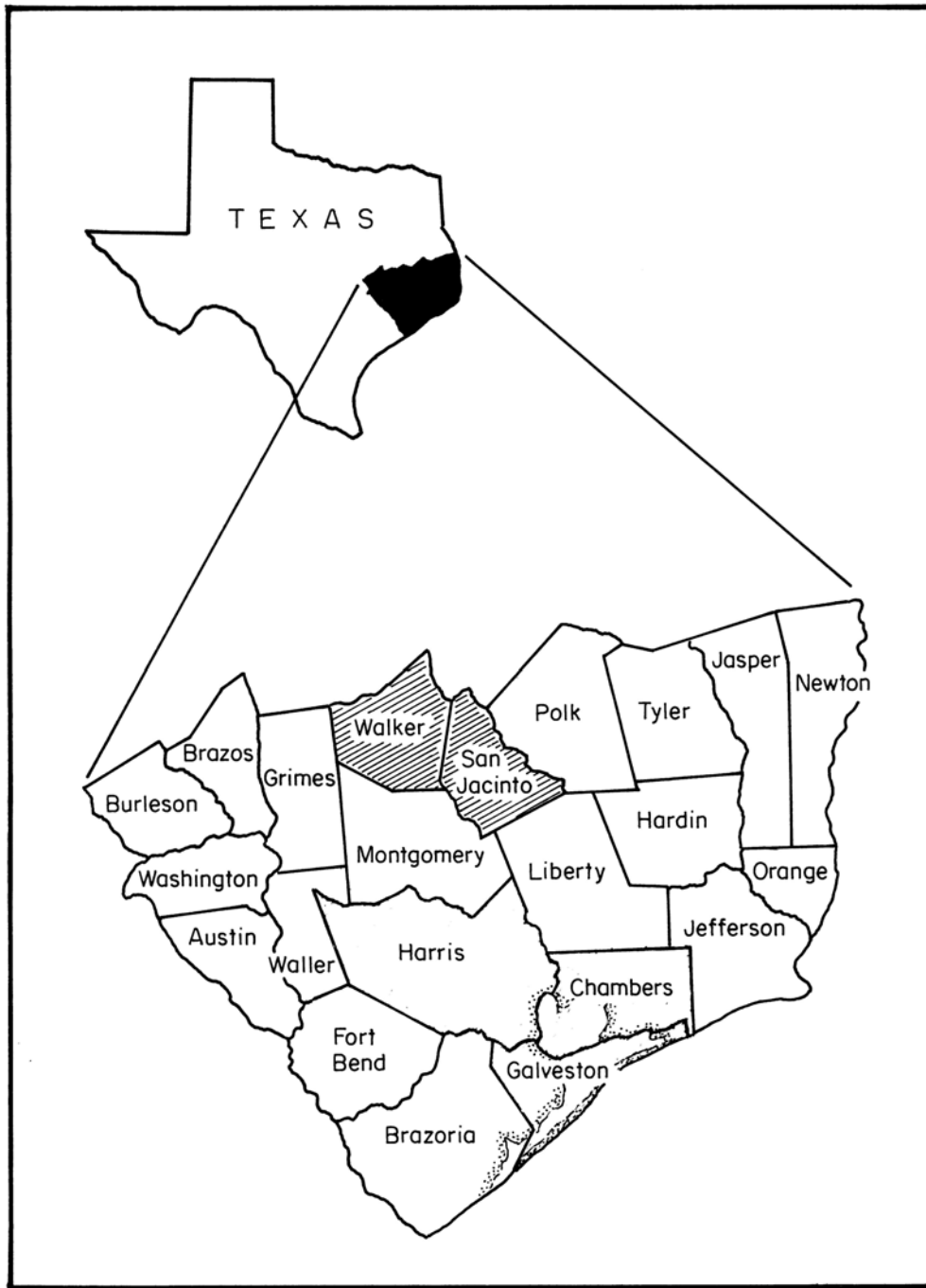


Figure 2. The Southeastern Region of Texas

(After Moore 1989)

Formal tools found at 41MQ41 include a *San Patrice* point (viewed by some archaeologists as a transitional point between the Paleo-Indian period and the Early Archaic period) and other stemmed biface forms not present in the Late Lithic and subsequent periods. Shafer and Stearns (1975:39) describe 41MQ41 as a "lightly occupied, probably intermittent campsite used during the Early and Middle Lithic periods." This dates the site to sometime between 8000 B.C. and 1000 B.C. Another probable pre-ceramic site (41WA99) in the area is in Walker County. It was discovered during a survey by Moore Archeological Consulting (Moore et al. 1999). Shovel testing revealed a large dart point, flakes, and no ceramics on a sandy hill high above the nearest creek. Additional evidence of Paleo-Indian era sites in the area is known from a surface-collected *Angostura* point at 41WA116 (Moore 2001), and a possible *Angostura* point found on the surface by the landowners of site 41WA100 (Moore 1990), and a *San Patrice* point found on the surface by the landowner of site 41WA83 (Moore 1983). A *Scottsbluff* point was reported by Keller and Weir (1979) at site 41SJ160 in San Jacinto County. The primary author of this report viewed this specimen at the curation facility at Stephen F. Austin State University and concluded that it is a large stemmed point and not a *Scottsbluff* point.

Sites attributed to the Caddo are not known in the area; however, a single ceramic sherd identified by Dee Ann Story as *Holly Fine Engraved* (Moore 1986) was found on the surface at 41WA55, a site on the border of Walker and San Jacinto counties and its presence suggests Caddoan interaction in the area. Sites containing artifacts that date to the time of contact between Europeans and native Indians are also rare in the area. The project area was part of the area inhabited by the historic Akokisa (Newcomb 1986), but no direct evidence of sites associated with this group has been documented in either county. One of the largest surveys in Southeast Texas (3570 acres) was conducted at Lake Creek Reservoir in adjacent Montgomery County by archeologists from the Texas Archeological Survey (Bement et al. 1987). Their study area is also in the area occupied by the Akokisa, but they found no evidence of sites dating to the contact period. In the late eighteenth century and early nineteenth century, many tribes living in the Southeast part of the United States were being forced westward into Texas because of Anglo-American expansion into their traditional territories. Two sites containing artifacts associated with one of these tribes, the Alabama-Coushatta, have been documented in San Jacinto County. These are 41SJ136 in the Sam Houston National Forest and 41SJ67 located east of the forest near the town of Shepherd. Site 41SJ67 is the best documented evidence of a site associated with this tribe. This site was excavated by members of the Houston Archeological Society in 1969 under the supervision of Dick Ping Hsu (1969). European-made artifacts associated with burials included glass trade beads, clothing decorated with glass beads and other burial items. The site is believed to have been occupied during the 1840s or 1850s.

Historic sites dating to the early settlement of the two counties are too numerous to mention here. Examples include log cabins such as the early 19th century structure in San Jacinto County (41SJ217) that dates to the 1840s, farmsteads dating to the 19th and 20th centuries, and early towns and settlements such as Cincinnati on the Trinity River (41WA95). Cemeteries are sometimes associated with early settlements such as the one at Cincinnati (41WA95) and also churches. Isolated graves and private family cemeteries are also known in the area.

The only community that is within the project area is Riverside, which is located on Farm-to-Market Road 405 east of State Highway 19 and thirteen miles northeast of the town of Huntsville. Riverside was founded in 1872 by the Houston and Great Northern Railroad on the west bank of the Trinity River in order to provide easy access for freight that was being shipped by rail and on the river. The early economy of the area was cotton, but this changed to lumber and livestock as they became important. By the middle of the 1880s, the population of Riverside was 200, and the town boasted two hotels, two general stores, and a gristmill. Ten years later, there were three churches, two schools, two sawmills, a cotton gin, a saloon, and a restaurant. The population was reduced to only fifty by 1914. In 1920, fuller's earth was discovered and, this caused a boom to the economy as two refining plants were established near the town. In 1933, there were seven businesses, three churches, two schools, and a population of 300. In 1968, Riverside incorporated, and a community fire department was organized in 1973. The population consisted of 451 residents in 1990 and 425 residents in 2000. The information cited above was compiled by James L. Hailey (2009) who posted it on *The Handbook of Texas Online*. Additional information about Walker County can be found in two sources by Crews (1976) and Kathleen and Clifton St. Clair (1982).

According to the Atlas, there have been 186 formal surveys by professional archaeologists that involve portions of the current project area and vicinity. Of this number, 60 were linear surveys dating from 1975 to 2004, and 123 were area surveys dating from 1963 to 2008 (Figure 3). Information regarding the sites not depicted in Figure 3 can be found on the Atlas. Six sites have been recorded in or near the project area. They are 41SJ42, 41SJ43, 41WA73, 41WA89, 41WA187, and 41WA283. Five of these are unknown prehistoric sites with no diagnostic artifacts, and one (41WA283) is a former World War II prisoner of war camp known as Camp Huntsville.

The first investigation in the area by professional archaeologists was associated with the proposed Livingston Reservoir in Polk, San Jacinto, Trinity, and Walker counties in 1961 and 1962. This study was performed by the Texas Archeological Salvage Project (TASP) with assistance from members of the Houston Archeological Survey. This study recorded the first known sites in San Jacinto County and the first known sites in Walker County. A report of this investigation was authored by Nunley (1963).

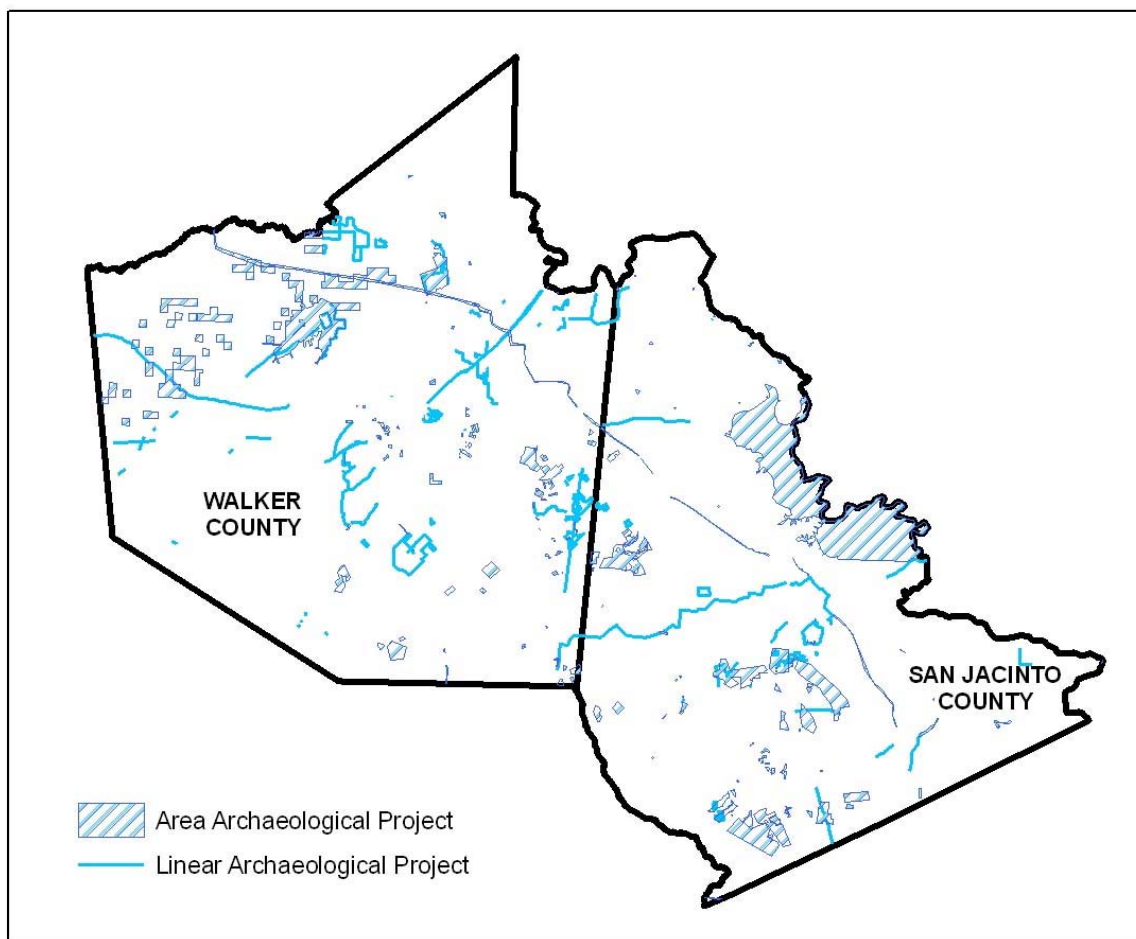


Figure 3. Previous Archaeological Surveys

The earliest investigation involving the project area was an informal survey by William E. (Bill) Moore in the 1970s (Moore 1976). At the time, Moore was a student at Sam Houston State University with an interest in archaeology. He obtained a county highway map for Walker County and drove many of the roads looking for evidence of sites based on artifacts in road cuts. He also identified sites based on conversations with landowners and local collectors. This survey identified 34 previously unrecorded sites. Two of these sites (41WA73 and 41WA89) are within the current project area. During this time, Moore also recorded sites in San Jacinto County, but not one of these sites are in the current project area.

In 1990, James E. Corbin conducted an archaeological survey for a proposed water line expansion project in San Jacinto and Walker counties for the Riverside WSC (Corbin 1990). Two sites (41SJ42 and 41SJ43) were recorded. Site 41SJ42 is on the opposite side of the APE, and site 41SJ43 is within the current project area.

In 1996, an archaeological survey of a proposed water line project was performed by Moore Archeological Consulting (Moore et al. 1999). The study area consisted of 11.56 miles on land owned by the Texas Department of Corrections. Five new sites (41WA184 - 41WA188) were recorded, and one previously recorded site (41WA65) was visited and assessed. Only one site (41WA187) recorded during this survey is within the current project area.

In 2005, the Texas Historical Commission asked stewards to identify and record all World War II sites in their respective counties to commemorate the 60th anniversary of this conflict. Archeological Steward Sandra E. Rogers took time from her busy schedule to visit and document Camp Huntsville (41WA283), the World II camp that housed prisoners of war from Germany and Japan. This effort resulted in a very thorough study of this site.

In 2008, a survey for the proposed Arbuckle Pipeline was conducted by Bo Nelson working with Archeological & Environmental Consultants, LLC. This study recorded one prehistoric site (41WA290), but it is outside the current project area.

Several overviews of the area provide valuable data for Walker County and vicinity. Some of the major works are discussed below.

In 1978, a file and literature search was conducted by TARL in an effort to prepare an overview of the cultural resources within the Davy Crockett, Sam Houston, Angelina, and Sabine National Forests of Texas. Information in the TARL files was compiled by Ross Fields and Rosario Casarez. This report (Fields 1979) provides a good synthesis of central East Texas prehistory and assesses 17 sites in Walker County.

John Ippolito (1983), Forest Service Archeologist for the National Forest, Southern Region, compiled an overview of cultural resources present in the National Forests of Texas that includes Walker County. This volume presents a short history of Texas forests and discusses such topics as environment and ecosystems, culture history, past archaeological activities relevant to the National Forests in Texas, and direction for future cultural resource investigations. A map depicting areas surveyed within the forest and a list of compliance projects with acreage, date conducted, and sites found are included.

More recently, five studies have been published which are worthy of mention. These are *Archeology in the Eastern Planning Region, Texas: A Planning Document* compiled by the Department of Antiquities Protection (Kenmotsu and Perttula (1993); Roger G. Moore's (1995) Ph.D. dissertation entitled *The Mossy Grove Model of Long-Term Forager-Collector Adaptations in Inland Southeast Texas*; Volume 66 of the *Bulletin of the Texas Archeological Society* which reviews the current state of Archeology in Texas and contains a chapter devoted to Southeast Texas (Patterson 1995); an archaeological study by the Texas Parks and Wildlife Department at the Huntsville Fish Hatchery in Walker County (Davis et al. 1994:20-33); and a database by Moore Archeological Consulting (Moore et al. 1999). The database was created from encoding site data for all known sites in Walker County at the time of this project. This database was an attempt to define settlement rules specific to Walker County through the application of an empirical analysis cross-tabulating site data with environmental variables and was based, as stated above, on the computerization of data from all of the existing TARL site records for the county. Moore used data from 181 sites for this study; however the analyses utilized only those sites with prehistoric components since the sample size for historic sites is inadequate and the settlement criteria for historic sites location are much different and currently more ambiguous than for prehistoric sites. This study revealed that prehistoric sites seem to be found throughout the county where suitable landforms (sandy ridges and knolls) exist in close proximity to dependable water sources. The only large concentrations of prehistoric sites are the result of large area surveys. Single sites along major drainages should not be interpreted as sparse use of an area; rather, these sites were most likely recorded by individuals with restricted access to larger areas.

METHODS

Prior to entering the field, the Texas Archeological Site Atlas and the files at TARL were checked for previously recorded sites and past surveys in the project area and vicinity. Several documents were reviewed during the planning stages of this project. These are a planning document by the THC (Biesart et al. 1985), an *Archeological bibliography for the Southeastern Region of Texas* published by the THC (Moore 1989), and all volumes of the *Abstracts in Texas Contract Archeology* published by the THC. The interested reader is referred to these sources for additional information regarding the prehistory of this area. The soil surveys for San Jacinto County (McEwen et al. n.d.) and Walker County (McClintock, Jr., et al. 1979) were reviewed in order to identify the general soil types present in the APE. The survey was documented through the utilization of Microsoft Word and Excel documents. Location data was collected and documented with a Garmin GPS-aided computer topographic program, National Geographic Topo and ESRI ArcMap. A Kodak digital camera was used to document the project, and all photographs were enhanced using Adobe Photoshop software. The field survey was conducted on July 28-31, 2009.

The majority of the project area was visually inspected during a “windshield survey” designed to look for historic buildings and cemeteries that might be affected by the proposed water line. A portion of the project area was on private property away from roads where permission to access the APE was not obtained was not included in the windshield survey. Portions of the pipeline segment of the project area near creeks and previously recorded sites were chosen prior to the survey to be subjected to an intensive survey if needed. A total of 27 areas were surveyed. The areas surveyed were subjected to a visual inspection, shovel probes, and shovel tests where warranted. All shovel tests were screened through quarter-inch mesh hardware cloth. The 27 areas are discussed in detail below.

Area 1

This area is 900 meters long and is on the south side of Farm-to-Market Road 980. It crosses Burge Branch and a tributary of Burge Branch, both dry intermittent streams. A visual inspection revealed clay and bedrock at the surface. At the time of this investigation, the area had been disturbed by construction associated with a previous water line. Corbin had surveyed the area in 1990 for a water line in the same easement (see *Archaeological Background* above). No shovel tests were excavated.

Area 2

This area is 150 meters long and is on the east side of Farm-to-Market Road 980. It crosses an unnamed intermittent tributary of Carolina Creek. A visual inspection revealed clay and bedrock at the surface. At the time of this investigation, the area had been disturbed by construction associated with a previous water line. Corbin surveyed the area in 1990 for a water line in the same easement (see *Archaeological Background* above). No shovel tests were excavated.

Area 3

This area is 1025 meters long and is on the west side of Farm-to-Market Road 980 where it crosses East Carolina Creek. Site 41SJ42 is on the west side of the road and the north bank of the creek. Corbin recorded this site in 1990 during a survey for a water line in the same easement as this project (see *Archaeological Background* above). On the north side of the creek, the area loops eastward away from the highway to circumnavigate a swamp. Surface visibility in this area was 90 percent due to exposed earth from a buried gas line and a recently installed water line. The area in the vicinity of the site was inspected through a surface inspection of the highway cut bank and two shovel tests. Six shovel tests were excavated between the site area and the creek. The south side of the creek was subjected to a visual inspection and five shovel tests. At the time of this investigation, this area was in mowed grass, and the surface visibility was 40 percent. It consisted of a flat plateau running from the creek to a hill slope and a hill. There was shallow sand on the hill and slope. In the flat area clay was present with no sand observed. The road cut through the hill in the right-of-way, and this area was also inspected. All of Area 3 had been disturbed by construction of a previous water line.

Area 4

This area is 180 meters long and is on the east side of Farm-to-Market Road 980. It parallels East Carolina Creek to the east, which flows from north to south. Previously recorded site 41SJ43 (Figure 4) is plotted on the maps at TARL as being on both sides of the road (including the center of the road). Corbin recorded this site in 1990 during a survey for a water line in the same easement (See *Archaeological Background* above). This area was investigated through a surface inspection of both sides of the road and two shovel tests in the proposed water line easement. Surface visibility in portions of Area 4 was estimated at 75 percent. Based on the two shovel tests, the sandy mantle in this area was only 10-15 cm over clay. This area had been disturbed by construction of a previous water line.



Figure 4. 41SJ43

Area 5

This area is 450 meters long and is on the south side of Farm-to-Market Road 980 where it crosses West Carolina Creek. On the east side of the creek is a hill with bedrock at the surface. On the west side of the creek is a low area with clay at the surface. This area has been disturbed by construction of a previous water line. Visual inspections and shovel probes were conducted. Corbin surveyed this area in 1990 for a proposed water line in the same easement (See *Archaeological Background* above). No shovel tests were excavated.

Area 6

This area is 200 meters long and is on the south side of Farm-to-Market Road 980 where it crosses an intermittent tributary of Bethea Creek. Area 6 had been disturbed by construction of a previous waterline. Clay and bedrock was observed at the surface. Corbin surveyed the area in 1990 for a water line in the same easement (See *Archaeological Background* below). No shovel tests were excavated.

Area 7

This area is 400 meters long and is on the south side of Farm-to-Market Road 980 where it crosses an intermittent tributary of Bethea Creek. Area 7 had been disturbed by construction of a previous water line. Clay was observed at the surface. Corbin surveyed the area in 1990 for a water line in the same easement (See *Archaeological Background* above). No shovel tests were excavated.

Area 8

This area is 280 meters long and is on the south side of Farm-to-Market Road 980 where it crosses an intermittent tributary of Bethea Creek. Area 8 had been disturbed by an old roadbed and mining activities. Corbin surveyed the area in 1990 for a water line in the same easement (See *Archaeological Background* above). No shovel tests were excavated.

Area 9

This area is 120 meters long and is on the south side of Farm-to-Market Road 980 where it crosses an intermittent tributary of Bethea Creek. The area was inspected through a visual inspection, and clay and bedrock were observed at the surface. Area 9 has been disturbed by construction of a previous water line. Corbin surveyed this area in 1990 for a water line in the same easement (See *Archaeological Background* above). No shovel tests were excavated.

Area 10

This area is 300 meters long and is on the southwest side of Farm-to-Market Road 980 where it crosses Bethea Creek. At the time of this study, the area was wooded with a section that had been recently mowed. The route on the northwest bank of Bethea Creek had been cut and graded in the past by construction of a previous water line that removed about 2.5 feet of the ground surface. The area was visually inspected, and clay was observed on the surface on the southeast bank of the creek. Corbin surveyed the area in 1990 for a water line in the same easement (see *Archaeological Background* below). No shovel tests were excavated.

Area 11

This area is 100 meters long and is in the woods parallel to a small, unnamed road near the site of the proposed Warren water treatment plant where it crosses an intermittent unnamed tributary of Caney Creek. The creek in this area was observed to be a slight depression with no water present. No shovel tests were excavated.

Area 12

This area is 800 meters long and crosses Harmon Creek. It begins on the southwest side of the road and, after crossing the creek it moves to the northeast side of the road. The area on the southwest side follows the disturbed old roadbed of Farm-to-Market Road 980, now on private land. This area was visually inspected, and no shovel tests were excavated. Five shovel tests were excavated in that portion of the area on the northeast side of the road within the right-of-way since landowner permission to work on private property had not been obtained. Later, permission was obtained from the landowner to walk on his property and visually inspect the surface. The area had been disked along the proposed easement, and this resulted in excellent visibility of the ground surface. The landowner stated that he had never found any artifacts at that location in many years of plowing. The shovel tests revealed sand over clay on the slope and clay in the bottomland.

Area 13

This area is 150 meters long and is on the north side of side of Farm-to-Market Road 980 near the location of site 41WA187 (Figure 5). The proposed route is on a rocky hilltop that has been cut through by road construction. The proposed route has been disturbed by the construction of another pipeline at that location. The site, which was recommended to be ineligible, lies just to the north of the proposed route. A surface inspection revealed no artifacts or soil depth. No shovel tests were excavated.



Figure 5. 41WA187

Area 14

This area is 900 meters long and is on the southeast side of State Highway 19 just inside the plotted boundary of site 41WA283, a World War II prisoner of war camp (Figure 6). At the time of this study, the area was in pasture and being used as a cattle ranching operation. The area was visually inspected, and no features associated with this site were observed. Clay was observed at the surface. No shovel tests were excavated.

Area 15

This area is 370 meters long and is on the north side of Obannon Drive where it crosses an intermittent unnamed tributary of Caney Creek. The area was visually inspected, and clay was observed on the surface on both sides of the creek. No shovel tests were excavated.

Area 16

This area is 140 meters long and is on the north side of Obannon Drive where it crosses an intermittent unnamed tributary of Caney Creek. The area was visually inspected, and clay was observed on the surface on both sides of the creek. No shovel tests were excavated.

Area 17

This area is 200 meters long and is on the southeast side of State Highway 19 where it crosses an unnamed intermittent tributary of Rocky Creek. The area was visually inspected, and clay was observed on the surface on both sides of the creek. No shovel tests were excavated.

Area 18

This area is 200 meters long and is on the southeast side of State Highway 19 where it crosses an unnamed intermittent tributary of Harmon Creek. The area was visually inspected, and clay was observed on the surface on both sides of the creek. No shovel tests were excavated.



Figure 6. 41WA283

Area 19

This area is 260 meters long and is on the north side of Acorn Drive where it crosses an unnamed intermittent tributary of Harmon Creek. The area was visually inspected, and clay was observed on the surface on both sides of the creek. No shovel tests were excavated.

Area 20

This area is 200 meters long and is on the east side of Acorn Drive where it crosses an unnamed intermittent tributary of Harmon Creek. The area was visually inspected, and clay was observed on the surface on both sides of the creek. No shovel tests were excavated.

Area 21

This area is 120 meters long and is on the west side of an old, unnamed subdivision road at the western boundary of site 41WA89 (Figure 7). At the time of this study, the sandy mantle in this portion of the site had been removed by activities associated with road construction, leaving clay at the surface. The remaining portion of the site is on the hill to the east of the road. Due to recent pipeline construction in the area, the surface visibility was estimated at 90 percent. This area was investigated by a surface inspection; shovel probes, and two shovel tests.

Area 22

This area is 200 meters long and parallels an old unnamed subdivision road on the north and west sides. Part of the route is on a rise above an unnamed tributary of Harmon Creek. Recent pipeline activity has resulted in 90 percent surface visibility. The area was inspected visually, and no shovel tests were excavated.

Area 23

This area is 300 meters long and is on the east side of Wood Farm Road where it crosses an unnamed intermittent tributary of Rocky Creek. The area was visually inspected, and clay was observed on the surface on both sides of the dry creek. No shovel tests were excavated.

Area 24

This area is 200 meters long and is on the east side of Wood Farm Road where it crosses an unnamed intermittent tributary of Caney Creek. The area was visually inspected, and shallow sand over clay was observed on the surface. The area had been disturbed by erosion. No shovel tests were excavated.

Area 25

This area is 115 meters long and is on the east side of Wood Farm Road. Previously recorded site 41WA290 is on the east side of the road, but it is outside the project area. Area 25 was visually inspected, and no shovel tests were excavated. The area had been previously surveyed in 2008 by Bo Nelson who recorded this site.



Figure 7. 41WA89

Area 26

This area is 150 meters long and is on the south side of Wood Farm Road where it crosses a small, unnamed intermittent tributary of Harmon Creek, which is only a small swale at this location. This area was visually inspected, and no shovel tests were excavated.

Area 27

This area is 890 meters long and is on the southeast side of Wood Farm Road where it crosses Caney Creek. The area was visually inspected and found to be disturbed by agricultural practices. A visual inspection revealed clay at the surface over much of the area. The proposed water line passes through the plotted location of site 41WA73 (Figure 8). Six shovel tests were excavated on the hill overlooking the floodplain and in the area where the site is plotted on the maps at TARL. These tests revealed shallow sand over clay on the hill and upper slope, deep sand on the toe slope, and clay in the bottomland. The site was recorded as two flakes found in sand along the road cut. They were probably found on the toe slope where sandy soil is present. No artifacts were observed or collected. The entire road cut area and the site area in the proposed easement was visually inspected.



Figure 8. 41WA73

PREVIOUSLY RECORDED SITES IN OR NEAR THE PROJECT AREA

41SJ42

James E. Corbin recorded this site in 1990 during an archaeological survey for a proposed water line expansion project (*Archaeological Background* above). It was identified by the presence of “a few flint flakes” eroding out of the upper portions of a buried soil that was exposed in the road cut on the west side of State Highway 980 approximately 2.0 meters below the existing ground surface at the edge of the uplands adjacent to East Carolina Creek. Artifacts present included debitage made from local materials and burned rock. Due to an absence of diagnostic artifacts, the age of this site is not known. Although that portion of this site in Corbin’s project area has been disturbed through road construction activities, Corbin (1990:10) states in his report that that significant undisturbed portions of this site may be present on the west side of the highway out of his project area. Corbin recommended that construction be allowed to proceed since the APE did not reach the level of the buried soil at the site. There is no site form on file at TARL for this site. The location of this site is depicted on the Staley topographic quadrangle in Appendix I.

41SJ43

James E. Corbin recorded this in 1990 during an archaeological survey for a proposed water line expansion project (see *Archaeological Background* above). It was identified by the presence of cultural materials that he describes as “primarily flakes” eroding from a buried soil identical to that of 41SJ42 at a depth of 2.5 meters below the existing ground surface at the edge of the uplands adjacent to East Carolina Creek on the east side of State Highway 980. Artifacts present include debitage made from silicified wood and a core made from coarse-grained quartzite. Due to an absence of diagnostic artifacts, the age of this site is not known. Although that portion of this site in Corbin’s project area has been disturbed through road construction activities, Corbin (1990:10) states it “is probable that the largest portion of the remainder of the site is on the east side of the road in the immediate construction area. Corbin recommended that construction be allowed to proceed since the APE did not reach the level of the buried soil at the site. There is no site form on file at TARL for this site. The location of this site is depicted on the Staley topographic quadrangle in Appendix I.

41WA73

Bill Moore recorded this site in 1974 during his informal survey of Walker County (see *Archaeological Background* above). It was identified on the basis of two flakes observed in a road cut on the north side of Wood Farm Road and on the west side of Caney Creek. No shovel testing was conducted, and the only documentation of this site is the original site form on file at TARL, the report authored by Moore (1976:16) that describes it as disturbed, and the artifacts that are in his possession. Due to an absence of diagnostic artifacts, the age of this site is not known. According to the site form, Moore did not recommend future work at the site. The site boundary as depicted on the Atlas is not correct. Moore only examined the exposed cut bank at the toe slope where sandy soil was present. The Atlas shows the site to be much larger, and it includes part of the floodplain adjacent to the creek. When identifying and recording sites during his informal survey of Walker County, Moore often drew site boundaries to encompass the entire hill where artifacts were observed because he believed the site probably occupied the entire landform. The location of this site is depicted on the Riverside topographic quadrangle in Appendix I.

41WA89

Bill Moore recorded this site in 1975 during his informal survey of Walker County (see *Archaeological Background* above). It was identified when debitage consisting of chert, quartzite, silicified wood, and manning fused glass; ceramics; and one projectile point fragment were observed in a dirt road on the north side of Harmon Creek in an area of a proposed subdivision. No shovel testing was conducted, and the only documentation of this site is the original site form on file at TARL, the report authored by Moore (1976:19), and the artifacts that are in his possession. Due to an absence of diagnostic artifacts, the age of this site is not known. Moore recommended that additional surface collecting be conducted in order to learn more about the age and function of this site. The location of this site is depicted on the Riverside topographic quadrangle in Appendix I.

41WA187

This site was recorded by Moore Archeological Consulting in 1996 (Moore et al. 1999) during an archaeological survey of a proposed water line project (see *Archaeological Background* above). This site is located on the north side of Farm-to-Market Road 980 and was identified based on the recovery of one chert flake and one silicified wood flake found in shovel tests. The sandy mantle was very shallow with clay and sandstone bedrock between 30 and 40 cm. The nearest source of water is Turkey Creek 100 meters to the north. This site was not considered to be worthy of additional work. Therefore, it was not viewed as eligible for listing in the National Register of Historic Places or as a State Archeological Landmark. The location of this site is depicted on the Riverside topographic quadrangle in Appendix I.

41WA283

Sandra E. Rogers recorded this site, known as Camp Huntsville, in 2005 (see *Archaeological Background* above). Ms. Rogers is a member of the Texas Archeological Stewards Network. This site consists of an 837-acre tract that was built in 1942 and used as a Prisoner of War camp for German prisoners in World War II. When the site was visited by Ms. Rogers, it consisted of dirt roads, wooden buildings, segments of the original chain link (concertina) wire fence, an earthen levy built by the prisoners along the creek to prevent flooding in the fields, remains of the concrete sewage system, and several fire hydrants. Structures remaining at the time of her visit included the army headquarters building, hospital, mess hall, and water plant. The camp had a cemetery, but the graves were moved following the war. In 1945, Japanese prisoners of war were brought to the camp and contracted out to farmers and ranchers as laborers. In 1946, the camp was given to Sam Houston State Teachers College, and it became an annex to house the overflow of students after the war. Existing buildings were used as dormitories and classrooms, and the area was referred to as the Country Campus. A post office was established in 1948. The Sam Dominey family of Trinity, Texas is the current owner of this site. The western boundary of Camp Huntsville is State Highway 19. Therefore, the water line will be installed within a portion of the original footprint of the camp. When the camp was constructed in 1942, this road was in use as the main artery from Huntsville to Trinity and beyond. According to a map of the camp (circa 1942-1945) on file at TARL, there are no features along the highway and within the APE as depicted on the maps provided by the client. The only feature in this area is the entrance to the camp that was on this highway. Sandra E. Rogers, who researched this site for the centennial project, stated to the primary author that it is her opinion that the installation of the water line as currently proposed should have no effect on any undisturbed portions of this site.

Documents, photographs, blueprints, legal papers, newspaper articles, and a history of the Country Campus by Francis Bowers (1950) are on file at the University Archives at Sam Houston State University. The location of this site is depicted on the Riverside topographic quadrangle in Appendix I.

RESULTS AND CONCLUSIONS

This study investigated 27 potential high to medium probability areas to be affected by construction of the water distribution line as depicted on the maps supplied by the client. This survey did not identify any archaeological sites that had not been previously recorded. It is our opinion that some of these high to medium probability areas were not selected by prehistoric groups due to a lack of sandy soil and distance to a dependable water source. No evidence of a historic site was observed. Although historic sites can be found in a variety of settings and they are not always tied to water, they are not commonly found close to the road. This is one possible explanation for the lack of historic materials within the narrow APE. The six previously recorded sites within the APE were visited and assessed, but no evidence of undisturbed deposits was found during the surface inspection or through the medium of shovel testing. Our findings at these sites or discussed below.

41SJ42

Since this site is on the west side of the road and outside the APE, no shovel tests were excavated in the site area. The area was visited on July 29, 2009, and two shovel tests were excavated in the APE on the east side of the road (Appendix I). In addition, the cut bank on the west side of the road was visually inspected. No evidence of this site in the APE was found as a result of investigation. This is consistent with Corbin's (1990:i) statement that most of this site had been destroyed by highway construction.

41SJ43

This site area was visited on July 29, 2009, and three shovel tests were excavated in the APE (Appendix I) on the east side of the road. In addition, a visual inspection of the road cut bank and pasture was conducted. No evidence of this site in the APE was found as a result of investigation. This is consistent with Corbin's (1990:i) statement that most of this site had been destroyed by highway construction.

41WA73

This site area was visited on July 31, 2009, and six shovel tests were excavated (Appendix I). In addition, a visual inspection of the road cut bank and pasture was conducted. No evidence of this site in the APE was found as a result of investigation. Moore only observed two flakes that were eroding from the cut bank along the road. Since additional cultural materials were not found in the six shovel tests excavated during this survey, it is possible that this is a very low density site in terms of numbers of artifacts, or the two flakes found by Moore might better be referred to as isolated finds.

41WA89

This site area was visited on July 30, 2009, and two shovel tests were excavated (Appendix I). In addition, a visual inspection of the road cut was conducted. No evidence of this site in the APE was found as a result of investigation. Although Moore found a variety of artifact types at this site, no additional cultural materials were observed during this study. This suggests that this site has been disturbed to the extent that intact deposits are not present within the APE as currently planned.

41WA187

This site area was visited on July 28, 2009, and the area was examined through a visual inspection of the road cut bank and pasture. No shovel tests were excavated. No evidence of this site in the APE was found as a result of investigation. When this site was recorded by Moore Archeological Consulting in 1996, the only cultural materials recovered consisted of one chert flake and one silicified wood flake in shallow soils over clay and bedrock. It is possible that the chert flake is the only artifact since silicified wood is difficult to positively identify as cultural unless it is found in the form of a formal tool. Therefore, what was recorded by Moore Archeological Consulting as a prehistoric site might be regarded by others as an isolated find.

41WA283

This site area was visited on July 30, 2009, and the area was examined through a visual inspection of the pasture. No shovel tests were excavated. No evidence of this site in the APE was found as a result of investigation. Based on a map of the site area and statements by the recorder and others who are knowledgeable of this site, it is unlikely that any features associated with Camp Huntsville are within the APE. Those portions of the site where the standing structures and other features are located are well away from State Highway 19 and the route of the proposed easement. At the time of the study a pipeline had recently been installed across the southern portion of the site.

RECOMMENDATIONS

Since no previously unrecorded archaeological sites were found in the project area as currently proposed and no intact deposits or features of previously recorded sites were identified in the APE, it is recommended that construction be allowed to proceed as planned. Should cultural materials be exposed during any phase of the construction phase of this project, all work must cease until the situation at the locus of the find (or finds) can be assessed by the THC. Also, should the route of the water line or the location of any auxiliary facilities such as water treatment plants be changed, the THC must be notified in case additional survey by a professional archaeologist is necessary.

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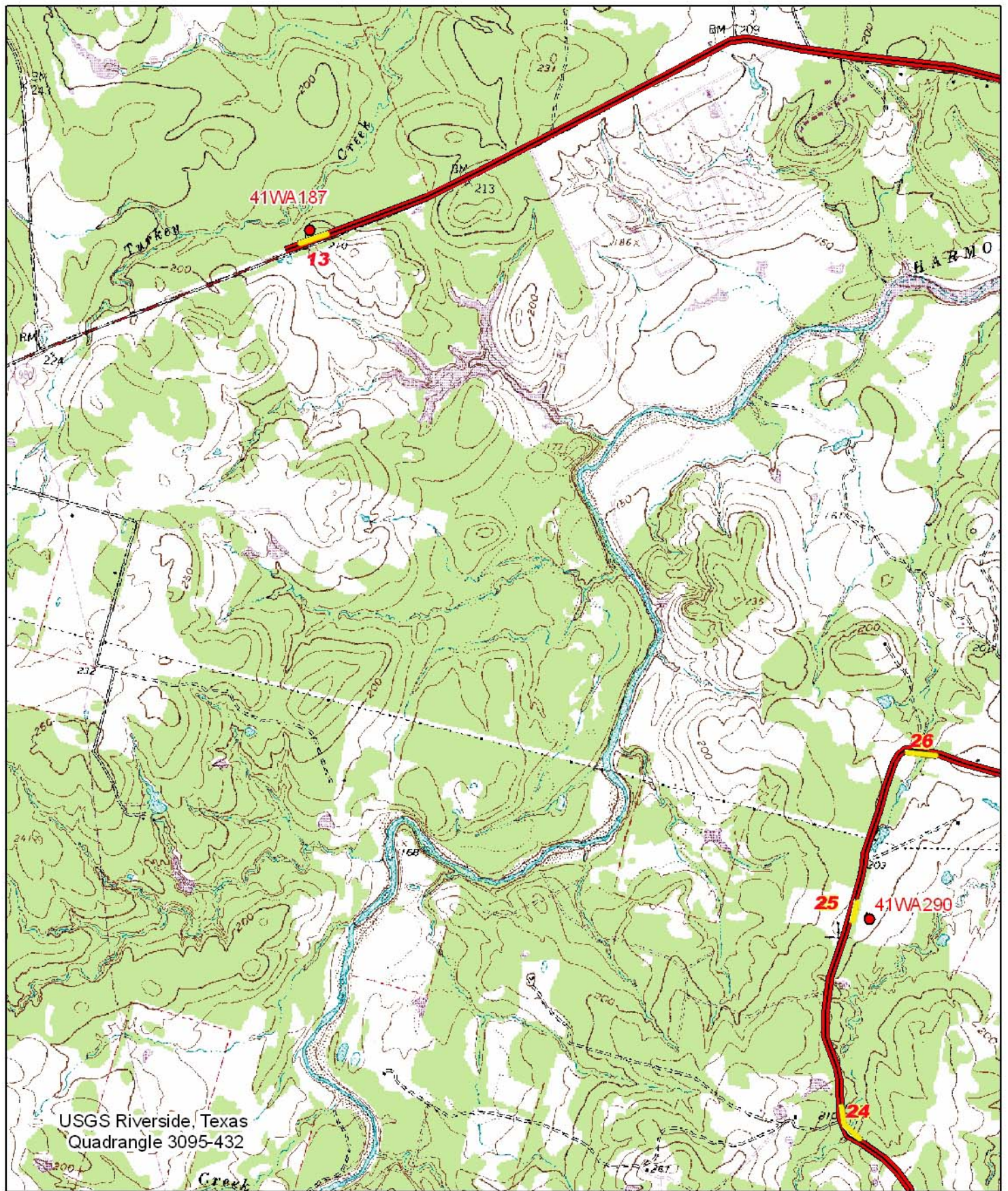
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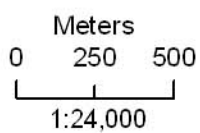
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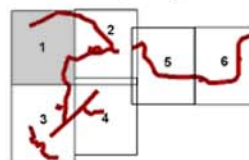
APPENDIX I
PROJECT AREA MAPS



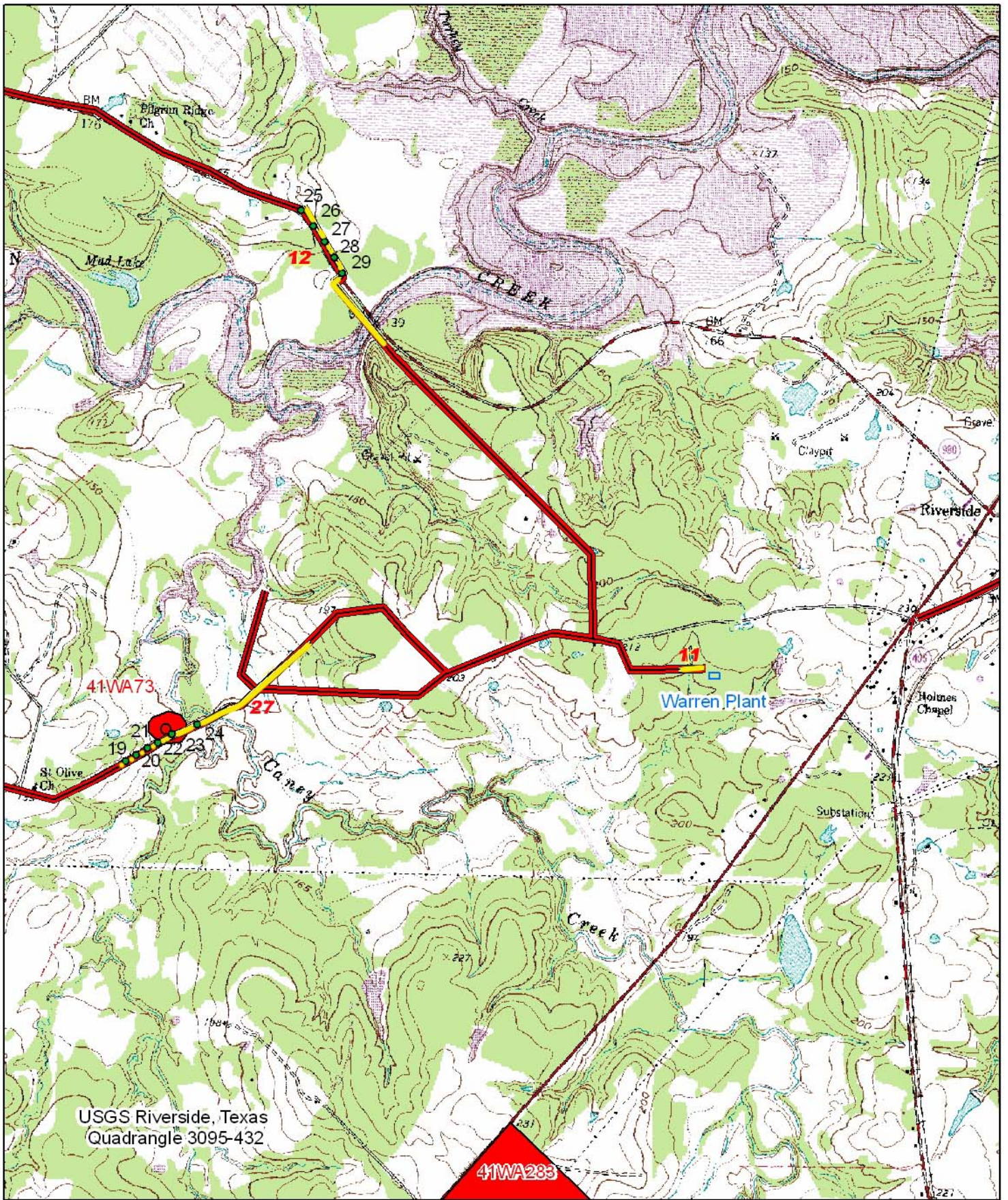
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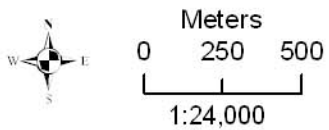
Map Key



- Archaeological Site
- Survey Area
- Proposed Waterline



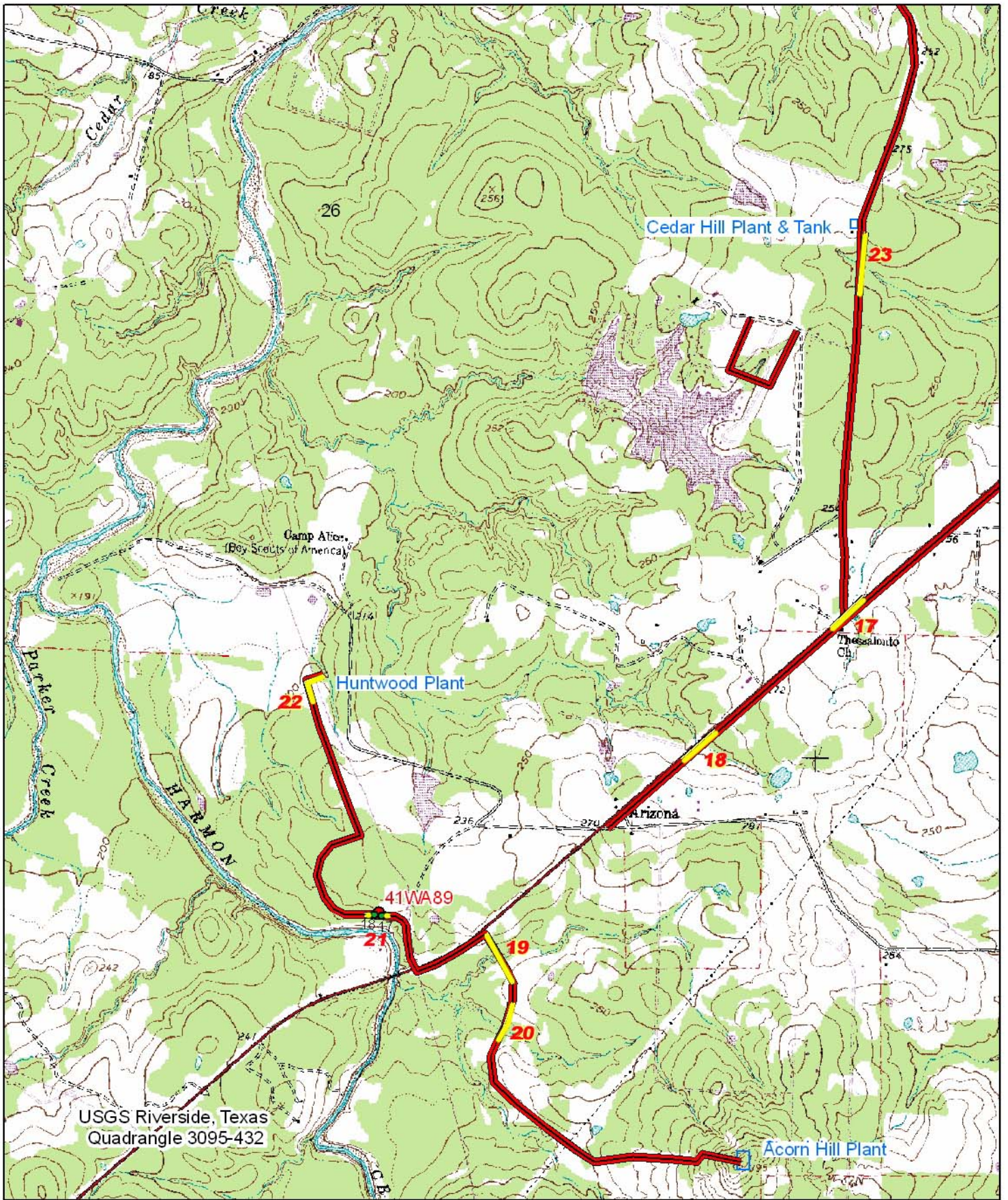
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Map 2



- Shovel Test
- Archaeological Site
- Survey Area
- Proposed Waterline
- Structures



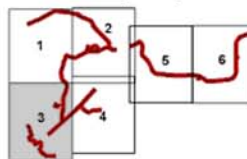
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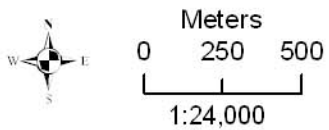
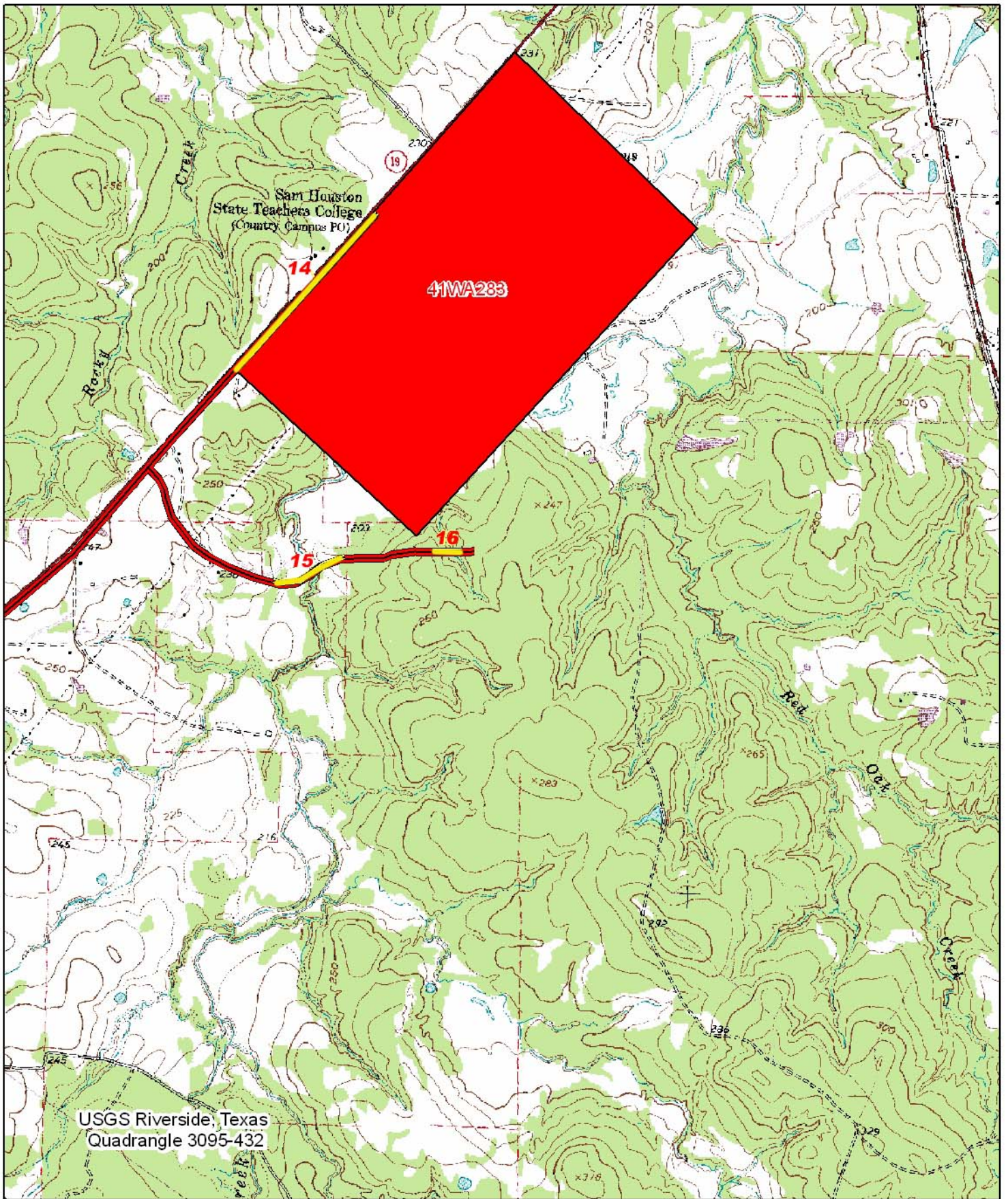
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Map 3

Map Key

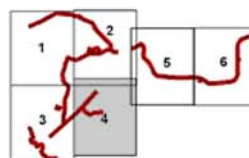





- Shovel Test
- Archaeological Site
- Survey Area
- Proposed Waterline
- Structure

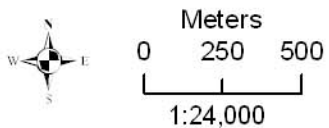
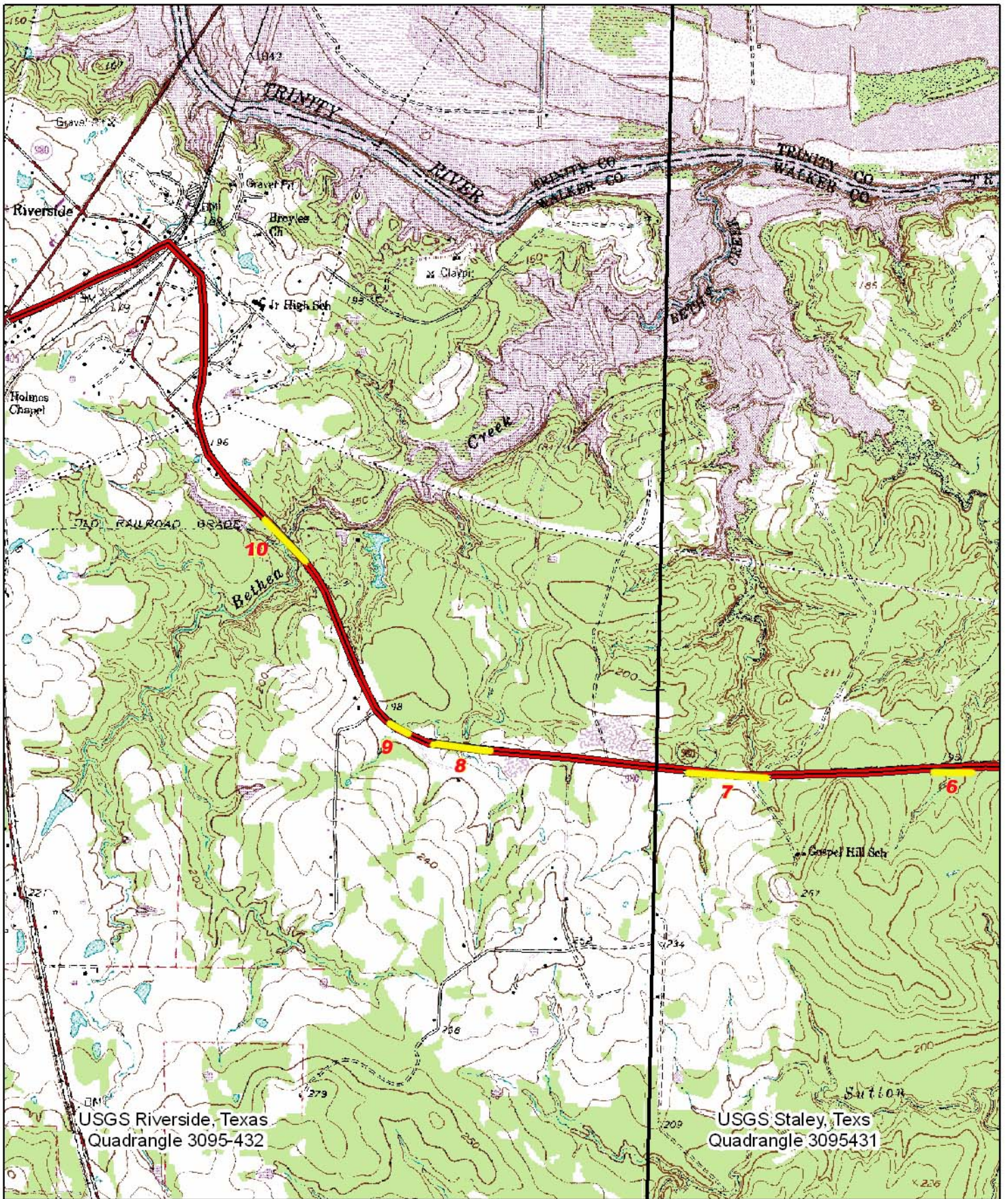


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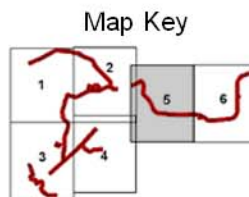
Map Key



-  Survey Area
-  Proposed Waterline
-  Archaeological Site



Map 5



- Survey Area
- Proposed Waterline

APPENDIX II: SHOVEL TEST LOG

SHOVEL TEST NUMBER	DEPTH IN CM	SOIL TYPE	AREA INVESTIGATED
1	15	sand/clay	Area 4; clay @ 10 cm (41SJ43)
2	15	sand/clay	Area 4; clay @ 10 cm (41SJ43)
3	15	sand/clay	Area 4; clay @ 10 cm (41SJ43)
4	20	sand/clay	Area 3 (south of creek on a hill)
5	30	sand/clay	Area 3, south of creek on a hill
6	10	clay	Area 3 (south of creek in bottom land)
7	10	clay	Area 3 (south of creek in bottom land)
8	10	clay	Area 3 (south of creek in bottom land)
9	10	sand/clay	Area 3 (north of creek on a slope)
10	20	sand/clay	Area 3 (north of creek on a rise)
11	20	sand/clay	Area 3 (north of creek on a slope)
12	20	sand/clay	Area 3 (north of creek on a rise opposite 41SJ42)
13	20	sand/clay	Area 3, north of creek on a rise opposite 41SJ42
14	30	sand/clay	Area 3 (north of creek on a loop around a swamp)
15	80	sand/clay	Area 3 (north of creek on a loop around a swamp)
16	40	sand/clay	Area 3 (north of creek on a loop around a swamp)
17	10	clay	Area 21 (adjacent to 41WA89)
18	10	clay	Area 21 (adjacent to 41WA89)
19	30	sand/clay	Area 27 (on a hill near 41WA73)
20	40	sand/clay	Area 27 (on a slope near 41WA73)
21	60	sand/clay	Area 27 (on a slope near 41WA73)
22	10	clay	Area 27 (in a flat area near 41WA73)
23	10	clay	Area 2 (in a flat area at 41WA73)
24	10	clay	Area 27 (n a flat area near 41WA73)
25	40	sand/clay	Area 12 (on a slope)
26	50	sand/clay	Area 12, on a slope
27	30	sand/clay	Area 12 (on a slope)
28	10	clay	Area 12 (in a flat area)
29	10	clay	Area 12 (in a flat area)