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Archaeological Survey of the Union Grove Water Supply Corporation Utilities Project, Upshur County, Texas

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Abstract

Upshur County has applied for a Texas Community Development Block Grant (TxCDBG) Small Towns Environment Program through the Texas Department of Agriculture – Office of Rural Affairs to construct additional new waterline service. This is on behalf of the Union Grove Water Supply Corporation (WSC) to provide first-time water service to 24 households east of the City of Union Grove and northwest to the community of West Mountain in the southeast portion of Upshur County. The TxCDBG is administered by the Texas Department of Agriculture, and the funding is provided by the U. S. Department of Housing and Urban Development. The project is subject to Section 106 of the National Historic Preservation Act. Also, the proposed utilities improvement project will be constructed by Union Grove WSC on land owned and/or controlled by the Texas Department of Transportation and Upshur County. Accordingly, this project also comes under the purview of the Antiquities Code of Texas, as amended, and its implementing regulations. An Antiquities Permit was needed for the completion of this archaeological survey and the preparation of the report of findings.

Upshur County requested an archaeological survey for the Union Grove WSC Waterline project through Tejas Archaeology. The proposed project consists of installing 28,700 ft. (5.44 miles) of waterline in a 30 ft. construction right of way to depths of 3 ft. or less below the surface. The new waterline will tie into existing waterlines of the Union Grove WSC. The proposed waterlines are to be installed in Upshur County road and TxDOT right of ways.

The archaeological survey of the Union Grove WSC Waterline project was conducted with a combination of visual examination of the project area, a pedestrian walk-over, and through shovel testing, along with where possible the examination of any exposed surfaces or cut banks. Shovel testing intensity followed the Texas Historic Commission's guidelines for shovel test intervals. The archaeological survey investigations completed by Tejas Archaeology consisted of a pedestrian survey, accompanied by the excavation of 117 shovel tests, in the 5.44 mile long by 30 ft. wide construction right of way, which comprises around 19.6 acres. Approximately 5.97 shovel tests were excavated per acre of proposed waterline right of way.

One new prehistoric archaeological site (41UR346, the Moody Creek site), was identified and recorded in the project right of way; it is suspected that the site extends well outside the right of way. The shallow depth of the archaeological deposits at the Moody Creek site, as well as the low density of recovered artifacts—consisting of only four pieces of lithic debris—combined with previous disturbances along the existing

North White Oak Road right of way indicate that the site does not have any potential to contribute to research problems proposed in the Texas Historical Commission's Eastern Planning Region document (see Kenmotsu and Perttula 1993). It does not warrant designation as a State Archeological Landmark. The portion of the Moody Creek site within the proposed Union Grove Water Supply Corporation utilities right of way does not meet any of the four National Register of Historic Places criteria (36 CFR Part 60.4a-d), nor do its deposits possess archaeological integrity. It t is our determination that this portion of the site is not eligible for inclusion in the National Register of Historic Places.

Based on the results of the pedestrian archaeological survey and intensive shovel testing of the proposed Union Grove Water Supply Corporation Utilities project area, there is the absence of any archaeological sites in the project area that are eligible for inclusion in the National Register of Historic Places or warrant designation as a State Archeological Landmark (SAL). Taken together with the extent of past disturbances in the project area, it is our recommendation that the proposed project will not have an effect on any sites worthy of designation as an SAL or eligible for inclusion in the NRHP. Consequently, the proposed Union Grove Water Supply Corporation project should be allowed to proceed without further consultation under the Antiquities Code of Texas and the National Historic Preservation Act and their implementing regulations.

Introduction and Project Description

Upshur County has applied for a Texas Community Development Block Grant (TxCDBG) Small Towns Environment Program (STEP) through the Texas Department of Agriculture-Office of Rural Affairs (TDA) to construct additional new waterline service (Upshur County TXCDBG #7218036-STEP). This is on behalf of the Union Grove Water Supply Corporation (WSC) to provide first-time water service to 24 households east of the City of Union Grove and northwest to the community of West Mountain in the southeast portion of Upshur County near the Upshur and Gregg County line in Northeast Texas (Figure 1). The TxCDBG is administered by the Texas Department of Agriculture, and the funding is provided by the U. S. Department of Housing and Urban Development (HUD). Accordingly, the project is subject to Section 106 of the National Historic Preservation Act and 36 CFR Part 800, its implementing regulations. Also, the proposed utilities improvement project will be constructed by Union Grove WSC on land owned and/or controlled by the Texas Department of Transportation (TxDOT) and Upshur County. Consequently, this project also comes under the purview of the Antiquities Code of Texas, as amended, and its implementing regulations. An Antiquities Permit is necessary for the completion of this archaeological survey and the preparation of the report of findings.

Upshur County requested an archaeological survey for the Union Grove WSC Waterline project through Tejas Archaeology (Pittsburg, Texas). The proposed project consists of installing 28,700 ft. (5.44 miles) of 4-inch, 6-inch, and 8-inch new waterline in a 30 ft. (9.1 meters) right of way to depths of 3 ft. or less below the surface (see Figure 1). The new waterline will tie into existing waterlines of the Union Grove WSC. The proposed waterline will be installed in Upshur County road and TxDOT right of ways. The waterline route in the south will travel east along North White Oak Road, turning north on Seagull Road to Farm to Market Road 1844 (FM 1844) and traveling west in the Texas Department of Transportation (TxDOT) right of way, then will turn north at Bob-O-Link Road, then traveling west along Pheasant Road (Old FM 1845) before angling southwest onto the FM 726 TxDOT right of way, ending in the community of West Mountain in Upshur County, Texas. The project is located on the Gladewater 7.5’ USGS topographic quadrangle.

The proposed Union Grove WSC water line project is in the eastern part of Upshur County in Northeast Texas. The proposed project lies in the upper Sabine River basin. The setting is the rolling uplands of the West Gulf Coastal Plain (Fenneman 1938), bisected by the headwaters of small streams that drain southeast into the Sabine River valley. While now mainly second growth pines and hardwoods, with scattered pastures, this part of Upshur County was originally an area of mixed oak woodlands and mixed pine-hardwood forests (Brown et al. 1998; Diamond et al. 1987) and bottomland hardwood forests.

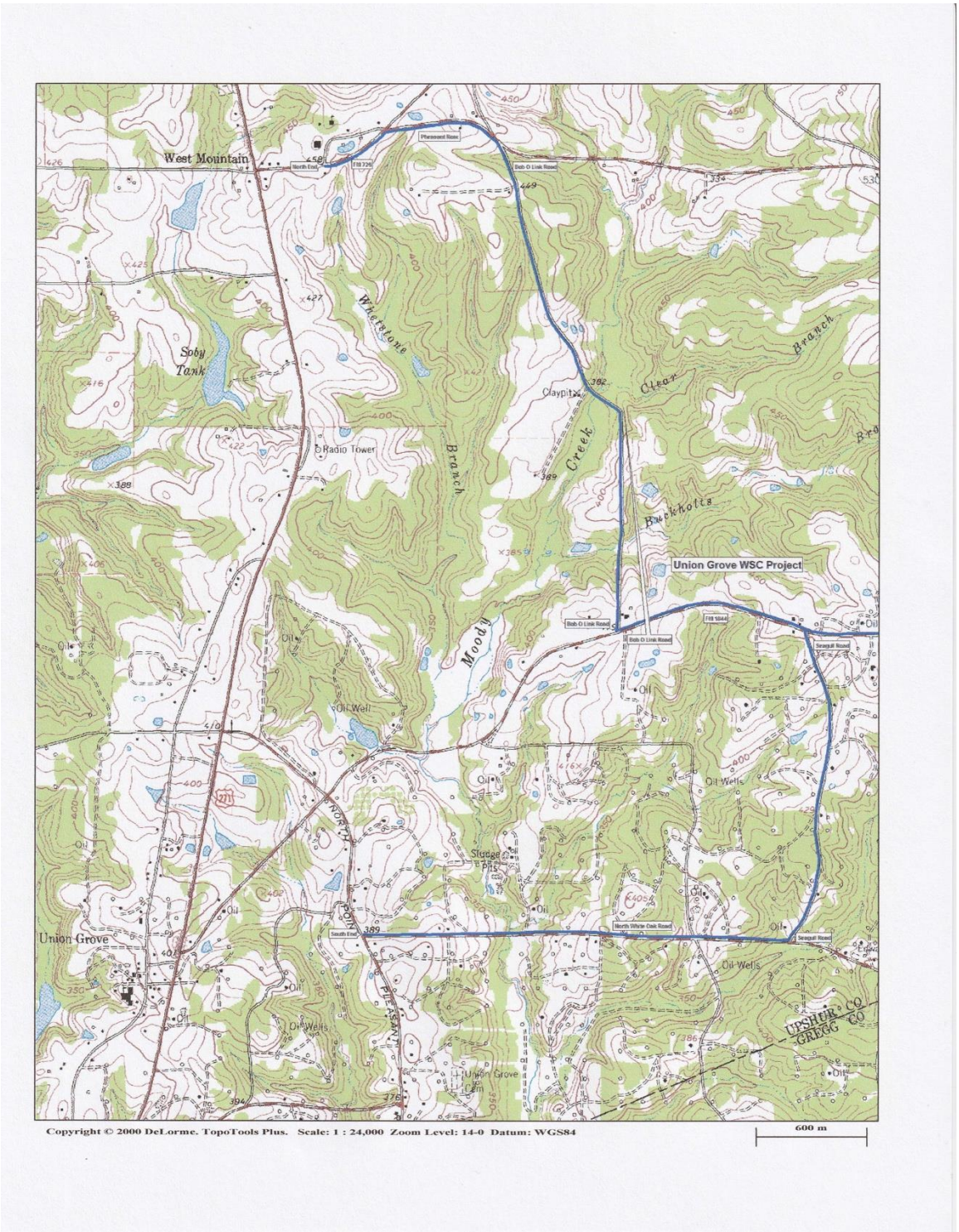

Figure 1. Union Grove Water Supply Corporation Utilities project area map, Gladewater 7.5' USGS topographic quadrangles.

Previous Archaeological Investigations in the Area

Upshur County is within the Northeast Texas Archeological Study region defined by the Texas Historical Commission (Kenmotsu and Perttula 1993:Figure 1.1.2).

Previous archaeological investigations in the county and in adjoining counties—including extensive archaeological surveys, test excavations, and data recovery efforts at prehistoric sites—have occurred mainly along the Sabine River and tributaries or on Little Cypress Creek and tributaries. In particular, archaeological investigations have occurred prior to the construction of Lake Fork Reservoir in Wood County (Bruseth 1987; Bruseth and Perttula 1981), Lake Gilmer (Parsons 2011, 2015; Parsons et al. 1992; Nichols et al. 1997), and at Lake O' the Pines in Camp, Marion, and Upshur counties (Davis et al. 2010; Jelks and Tunnell 1959), and limited survey efforts were completed at the proposed Big Sandy, Mineola, and Waters Bluff reservoirs on Big Sandy Creek (Perttula et al. 1986) and the Sabine River, respectively (Malone 1972; Perttula 1986).

The 2019 literature search and records review of the Texas Archeological Site Atlas found four Cultural Resource Management archaeological survey projects and no archaeological sites within 1.6 kilometers of the project area. The projects included a State Department of Highway and Public Transportation survey for a new section of FM 1845 (Bell 1986), a waterline project survey by Tejas Archaeology (Nelson and Perttula 2005), a survey by Geo-Marine, Inc. of a section of U S Highway 271 at the intersection of FM 726 (Alliday, et al. 2011), and a Sphere 3 Environmental, Inc. survey for a new gymnasium and auditorium for the Union Grove ISD (Tiemann and Ryan 2015). During the course of these four archaeological surveys no cultural resources or archaeological sites were recorded.

Tejas Archaeology has conducted three additional archaeology surveys within five miles of the Union Grove WSC project. These three projects were water line, sewer line, and road related improvements (Nelson and Perttula 2009, 2012, 2018). A total of 9.20 miles within TxDOT and County Road right of ways were surveyed with one new archaeological site (41GG127), a prehistoric site containing lithic debris, recorded during the course of these three projects (Nelson and Perttula 2018).

Historical Resources in the Project Vicinity

The review of the National Register of Historic Places and Official Texas Historical Markers, including Recorded Texas Historic Landmarks and recorded historic cemeteries on the Texas Historic Sites Atlas, did not identify any currently listed historical resources within the survey area. The historical resources located within a 1.6 kilometers radius of the project area include three cemeteries, and four Official Texas Historic Markers, with two of the historic markers located at cemeteries.

The Union Grove Cemetery, also known as the Phillips Cemetery, is located approximately 0.85 km southeast of the beginning of the project at North White Oak Road. The cemetery was established on a two-acre plot of property donated by William M. Phillips in 1888, and his daughter is the first internment (Rhodes 1978). The cemetery has been in constant use since 1888 with several hundred burials.

The West Mountain Cemetery is located about 0.60 km northeast of the northwest end of the project at FM 726 in the Community of West Mountain. The cemetery has a Texas Historical Marker stating:

Part of a Republic of Texas land grant formerly occupied by Caddo and Cherokee Indians, this cemetery was established in the mid-1850s by plantation owner Alpha Phillips. The first grave, that of his father, William, is marked with a stone cairn. The family cemetery came to be used by neighbors, West Mountain community residents, and transients. A volunteer association was begun in the late 1920s to maintain the grounds, and its members have added acreage to the graveyards over the years. Originally known as Old Phillips Cemetery, it has been called West Mountain Cemetery since 1933.

The Official Texas Historic Marker located at the Edwards Cemetery is just east of the project near the intersection of North White Oak Road and Seagull Road. The text on the Texas Historic Marker reads:

This site was used as a graveyard for settlers of this area as early as the mid-1850s. The earliest recorded burial here was that of the infant Josephine Rucker in 1855. The cemetery is named for James William Cartwright Edwards (1836-1913, who with his parents John King and Elizabeth Billings Edwards, moved to Texas from Tennessee about 1850. James acquired 1.6 acres, which included this graveyard, for use as a family cemetery in 1912. His daughter, Margie, fenced a part of the cemetery in 1956 and set up a trust fund for its upkeep before her death in 1962.

An Official Texas Historical Marker is located at the Union Grove ISD approximately 1.3 km. to the west of the southern beginnings of the project at North White Oak Road. The Texas Historic Marker states:

The earliest recorded school in this area was held at the home of pioneer settler John O'Byrne. In 1888, a public school opened with J.H. Sheppard as the teacher. The first half of the 20th Century say much growth for Union Grove schools, with the creation of Union Grove Common School District No. 42 in 1907; the construction of new buildings in 1909, 1920 and 1933; and the 1930s oil boom, which greatly increased the tax base and population of the district. Over the years, the Union Grove school campus expanded to include elementary, junior, and senior high schools, an auditorium, cafeteria, library, shop buildings and a football stadium. In 1965, Union Grove became an independent school district.

An Official Texas Historical Marker located about 1.5 km from the project along FM 1844 designates the location of a discovery well for oil in Upshur County. The Texas Historic Marker reads:

J. D. Richardson No. 1. Completed May 6, 1931; first of 2,000 county wells that produced over 225,000 barrels of oil. Drilled by Mudge Oil Co.; bought by General American Oil Co., (1952). Total depth of well: 3,754 ft.; initial daily production: 35,000 barrels of oil and 10,000,000 cu. ft. of gas. Contractor was Clark and Cowden Drilling Co. Drilling

supervisor: T. P. Kirk; Dave McCullough and R. D. Kirk, drillers. Crew: Jess Wright, John Bloomfield, W. B. Stroheim, Grady Williams, R. E. Powers, C. O. Kirk, W. D. Emerson, Tommie Thompson. Is in extension of East Texas oil field, one of world's largest.

Prehistoric and Historic Background

This part of Northeast Texas was settled first by mobile hunter-gatherers as early as 13,000 years ago (the Paleoindian period), and used by Archaic foragers for millennia (Fields and Tomka 1993). About 2500 years ago in Northeast Texas, however, during the Woodland period, the prehistoric Native Americans living in the Sabine River basin began to settle down in small hamlets and camps dispersed across recognizable territories (Perttula et al. 1993). These Native American groups made moderately thick and plain grog-tempered and sandy paste pottery, and used Gary and Kent dart points for hunting and other tasks (Schambach 1982; Story 1990; Webb et al. 1969). About A.D. 700, these groups began to make and use small stemmed arrow points for hunting.

The principal occupation of Upshur County in prehistoric and early historic times (up to about A.D. 1800) was by ancestral Caddo speaking groups that lived in settled horticultural and agricultural communities, principally farmsteads and small hamlets, but larger villages were situated along the Sabine River and Big Cypress Creek and tributaries during much of the prehistoric and early historic era (e.g., Story 1990; Perttula 1992). Caddo archaeological sites in the region are known to be located on elevated landforms (alluvial terraces and rises, natural levees, and upland edges) adjacent to the major streams, as well as along the minor tributaries and spring-fed branches. They are also located in proximity to arable sandy loam soils, presumably for cultivation purposes.

These Caddo groups were powerful theocratic chiefdoms that built mounds for political and religious purposes and functions, traded extensively across the region and with non-Caddoan-speaking groups, and in certain settings, developed intensive maize producing economies. Due to diseases introduced by Europeans, and the incursions of the Osage and Choctaw to obtain deer hides and Caddo slaves, by the late 1700s, much of the Sabine River valley was abandoned by the Caddo groups, with the exception of the Nadaco. This Caddo group apparently moved into the middle portions of the Sabine River valley in the latter part of the 18th century (Smith 1995:74).

The project area is situated just east of early route called the Cherokee Trace. The Cherokee Trace travels from the vicinity of Nacogdoches north into Oklahoma and then into Arkansas. The Cherokee Indians are credited with the historic trail, but the trace probably evolved from one established and used by the Caddo. The Cherokee Trace evolved into a road that was used as a migration route for many settlers into the area (Jasinski 2010). One of the earliest settlers in this area was Isaac Moody, who settled on the Cherokee Trace near West Mountain in 1836 (Loyd 1966).

The first legislature of the State of Texas established Upshur County on April 27, 1846. Upshur County was originally part of Nacogdoches County, and for a short period from 1842 through 1846 part of Harrison County. In 1873, Gregg County was created out

of the northern portions of Upshur County, and then in 1874, Camp County was created from the northern portion of the County (Loyd 1966).

Settlers from the South moved into Upshur County after it was formed and began farming cotton and other plantation-style crops. Despite the growth in population, before the Civil War income from farming was very low. The county joined the Confederacy and experienced massive economic downturns afterward. Farmers lost a substantial portion of their work force after emancipation (Kirby 2001).

After Reconstruction, Upshur County recovered quickly with the railroads, which increased employment and the population as outsiders moved into the county. Improved transportation precipitated the improvement of timber mills and cotton production from the 1880s through the 1920s. Yet, the economy slowly eroded over the next decade despite the discovery of oil in 1931. Oil profits helped Upshur County through the Great Depression, however, because oilfield rigs provided additional employment (Kirby 2001).

After World War II and through the 1980s, the timber industry returned to Upshur County as supplemental income along with renewed oil industry production. Manufacturing, energy, agriculture-related livestock and poultry production provide for the current economy of Upshur County (Kirby 2001).

The Community of West Mountain is in the northern portion of the project area. The community began shortly after Isaac Moody, one of the earliest Anglo-American settlers, located in this area of Upshur County. In the late 1890s, the community had a post office, sawmill, general store, and a Baptist Church with an estimated population of 100 people. After 1900, two schools were present with an enrollment of 114. In the early 1930s, oil was discovered nearby, and the population grew rapidly with the influx of oilfield workers. After World War II, the population dwindled, falling to 65 people in the early 1970s. The area of West Mountain is now becoming a bedroom community for the nearby cities of Longview and Gladewater, and now the current population of the community is estimated at 495 people (Long 2010).

The southern portion of the project area is located just east of the City of Union Grove. Union Grove was first settled in the mid-1800s after John O'Byrne settled in the area and operated a sawmill. The settlement remained small until the 1930s. The discovery of oil fields in the 1930s oilfields attracted an influx of workers, and Union Grove became a boomtown. After World War II, the small town closed most of the businesses, leaving a community centered around a school facility (Long 2010). In 1990, the town has a population of 271; by 2010, the population increased to 357 with the current residents being attracted by the current Union Grove Independent School District.

Archaeological Survey Investigations

The objectives of this archaeological survey of the Union Grove WSC Utilities project are to locate prehistoric and historic cultural resources sites within the project survey areas. If sites were to be found during the archaeological survey, then the investigations would next delineate the vertical and horizontal extent of each site, determine each site's integrity, and provide a preliminary evaluation of each site's

potential for eligibility for inclusion in the National Register of Historic Places and State Archeological Landmark designation.

The archaeological survey was conducted with a combination of visual examination of the project area, a pedestrian walk-over and through shovel testing, along with where possible the examination of any exposed surfaces or cut banks. Shovel testing intensity for the project follows the Texas Historic Commission's guidelines for shovel test intervals. According to these guidelines, a linear number of 16 shovel tests should be excavated per each mile of the project area. Shovel tests 35 cm in diameter were accordingly excavated in 20 centimeter levels, down to the B-horizon clay sub-soils or 100 centimeters, the approximate maximum depth reachable by shovel. The excavated matrix was screened through a 0.635-centimeter wire mesh screen. The GPS location, the depth, texture, and color of the sediments in each shovel test, and the presence of cultural materials by depth, were recorded in the field and then included in this archaeological survey report produced at the conclusion of the project.

The survey employed a non-collection strategy, except for any recovered temporally diagnostic artifacts that would be recovered in the shovel testing. The diagnostic artifacts (e.g., projectile points, ceramics, historic materials with maker's marks) are to be collected, while the non-diagnostic artifacts (e.g., lithic debris, burned rock, historic glass, and metal scrap) are to be described, sketched, and/or photo-documented in the field and replaced in the same location in which they were found. Records, files, field notes, forms, and other documentation will be included in the curation package for the project. All field-generated documents will be temporarily curated at the Tejas Archaeology office in Pittsburg, Texas. These artifacts, documents and photographs will be organized and catalogued according to Stephen F. Austin State University Anthropology and Archaeology Laboratory curation standards.

The U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Upshur County, Texas (Roberts 1983), was used in determining soil types within the proposed survey areas. Additionally, the Natural Resources Conservation Service (NRCS) website was utilized to update current official soil series names and descriptions from earlier soil surveys (NRCS 2019). The soil series present within the project area are Bowie fine sandy loam 1 to 5% slope, Briley loamy fine sand 1 to 5% slope, Cuthbert fine sandy loam 8 to 25% slope, Darco fine sand 8 to 15% slope, Iulus fine sandy loam 0 to 1% slope, Kirvin very fine sandy loam 1 to 8% slope, Kirvin gravelly very fine sandy loam 1 to 5% slope, Lilbert loamy fine sand 2 to 5% slope, Sacul fine sandy loam 5 to 12% slope, and Tenaha loamy fine sand 8-20% slope.

Road construction has altered the original sediments in much of the project area by both the building up and cutting down of the original land surface to achieve the desired grade, and by the formation of the drainage ditches (Figure 2). Additionally, numerous utilities have been placed and replaced within the highway right of ways through the years. There are above ground power lines with power poles placed in the right of ways, and several underground phone cables, fiber optic lines (ETX Phone Coop has ran fiber optic cable along every roadway in Upshur County), a natural gas pipeline, and existing waterlines. These utilities parallel the highways and from the signs marking

Figure 2. Looking east at the right-of-way along old FM 1845/Pheasant Road.

the routes, they appear to extend at least from the private property boundary into the proposed waterline right of way. Also, there are several large gas pipelines that cross the roadways.

Other notable disturbances impacting the proposed waterline right of way are driveways, property entrance roads, and oilfield related drives crossing from the roads onto private property. These drives are from 4 to 6 meters in width, paved or covered in gravel, and usually have a drainage culvert for water runoff midway in the entranceway.

The construction right of way for the proposed waterline is 30 ft. (9.1 meters) with a 10 ft. (3.1 meter) permanent right of way (Figure 3). In most instances along the roadways, the construction right of way extends onto the paved section of the road, since the majority of available exposed surface between the road and private property dictates the size of the waterline right of way. The waterline is usually placed 5 ft. (1.5 meters) from the private property boundary in an 8-inch wide trench up to 3 ft. (0.91 meter) below the ground surface.

The archaeological survey investigations completed by Tejas Archaeology consisted of a pedestrian survey, accompanied by the excavation of 117 shovel tests (Table 1), in the 8.7 km (5.44 mile) length by 30 ft. (9.1 m) wide construction right of way, which comprises around 19.6 acres. Approximately 5.97 shovel tests were excavated per acre of proposed waterline right of way, and 20.5 shovel tests per linear mile of the project area. The proposed waterline was divided into five segments for the ease of recording information about the survey—such as shovel test locations and archaeological sites—along the proposed waterline route.

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas.

ST No.	Description
ST 1	0-22 cm, yellowish-brown very fine sandy loam; 22-27 cm+, strong brown clay
ST 2	0-25 cm, yellowish-brown very fine sandy loam; 25-29 cm+, strong brown clay
ST 3	0-19 cm, yellowish-brown very fine sandy loam; 19-26 cm+, strong brown clay
ST 4	0-8 cm, grayish-brown loamy fine sand; 8-26 cm, yellowish-brown loamy fine sand; 26-29 cm+, strong brown clay

Figure 3. Looking west at the project right of way along North White Oak Road.

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 5	0-10 cm, grayish-brown loamy fine sand; 10-28 cm, yellowish-brown loamy fine sand; 28-32 cm+, strong brown clay
ST 6	0-12 cm, grayish-brown loamy fine sand; 12-30 cm, yellowish-brown loamy fine sand; 30-35 cm+, strong brown clay
ST 7	0-9 cm, grayish-brown loamy fine sand; 9-26 cm, yellowish-brown loamy fine sand; 26-29 cm+, strong brown clay
ST 8	0-5 cm, grayish-brown loamy fine sand; 5-28 cm, yellowish-brown loamy fine sand; 28-31 cm+, strong brown clay
ST 9	0-8 cm, grayish-brown loamy fine sand; 8-36 cm, yellowish-brown loamy fine sand; 36-40 cm+, strong brown clay
ST 10	0-13 cm, grayish-brown loamy fine sand; 13-27 cm, yellowish- brown loamy fine sand; 27-30 cm+, strong brown clay
ST 11	0-13 cm, grayish-brown very fine sandy loam; 13-51 cm, yellowish-brown very fine sandy loam; 51-54 cm+, strong brown clay
ST 12	0-10 cm, grayish-brown very fine sandy loam; 10-47 cm, yellowish-brown very fine sandy loam; 47-52 cm+, strong brown clay
ST 13	0-12 cm, grayish-brown very fine sandy loam; 12-50 cm, yellowish-brown very fine sandy loam; 50-53 cm+, strong brown clay
ST 14	0-16 cm, grayish-brown very fine sandy loam; 16-45 cm, yellowish-brown very fine sandy loam; 45-47 cm+, strong brown clay
ST 15	0-23 cm, grayish-brown very fine sandy loam; 23-35 cm, yellowish-brown very fine sandy loam; 35-39 cm+, strong brown clay
ST 16	0-27 cm, grayish-brown very fine sandy loam; 27-32 cm, yellowish-brown very fine sandy loam; 32-35 cm+, strong brown clay
ST 17	0-13 cm, grayish-brown very fine sandy loam; 13-23 cm, brown very fine sandy loam; 23-27 cm+, red clay

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 18	0-15 cm, grayish-brown very fine sandy loam; 15-26 cm, brown very fine sandy loam; 26-29 cm+, red clay
ST 19	0-10 cm, grayish-brown very fine sandy loam; 10-21 cm, brown very fine sandy loam; 21-25 cm+, red clay
ST 20	0-20 cm, grayish-brown very fine sandy loam; 20-22 cm+, red clay
ST 21	0-13 cm+, red clay
ST 22	0-10 cm+, red clay
ST 23	0-19 cm, grayish-brown loamy fine sand; 19-33 cm, yellowish-brown loamy fine sand; 33-36 cm+, strong brown clay
ST 24	0-12 cm, grayish-brown loamy fine sand; 12-23 cm, yellowish-brown loamy fine sand; 23-27 cm+, strong brown clay
ST 25	0-10 cm, grayish-brown loamy fine sand; 10-21 cm, yellowish-brown loamy fine sand; 21-24 cm+, strong brown clay
ST 26	0-16 cm, grayish-brown loamy fine sand; 16-24 cm, yellowish-brown loamy fine sand; 24-26 cm+, strong brown clay
ST 27	0-15 cm, grayish-brown loamy fine sand; 15-21 cm, yellowish-brown loamy fine sand; 21-25 cm+, strong brown clay
ST 28	0-21 cm, very dark grayish-brown fine sandy loam; 21-27 cm+, red clay
ST 29	0-15 cm, mixed sediments; 15 cm+, red clay
ST 30	0-10 cm, very dark grayish-brown fine sandy loam; 10-20 cm+, red clay
ST 31	0-5 cm+, red clay
ST 32	0-21 cm, mixed sediments; 21 cm+, red clay
ST 33	0-13 cm, very dark grayish-brown fine sandy loam; 13-15 cm+, red clay
ST 34	0-5 cm, very dark grayish-brown fine sandy loam; 5-10 cm+, red clay

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 35	0-10 cm, very dark grayish-brown fine sandy loam; 10-14 cm+, red clay
ST 36	0-13 cm, very dark grayish-brown fine sandy loam; 13-18 cm+, red clay
ST 37	0-12 cm, very dark grayish-brown fine sandy loam; 12-17 cm+, red clay
ST 38	0-11 cm, very dark grayish-brown fine sandy loam; 11-18 cm+, red clay
ST 39	0-13 cm, very dark grayish-brown fine sandy loam; 13-28 cm, yellowish-brown fine sandy loam; 28-34 cm+, red clay
ST 40	0-10 cm+, red clay
ST 41	0-22 cm, yellowish-brown very fine sandy loam; 22-27 cm+, strong brown clay
ST 42	0-25 cm, yellowish-brown very fine sandy loam; 25-29 cm+, strong brown clay
ST 43	0-19 cm, very dark grayish-brown very fine sandy loam; 19-26 cm+, red clay
ST 44	0-8 cm+, red clay
ST 45	0-10 cm+, red clay
ST 46	0-12 cm, brown fine sandy loam; 12-14 cm+, red clay
ST 47	0-9 cm, brown fine sandy loam; 9-16 cm+, red clay
ST 48	0-5 cm, brown fine sandy loam; 5-10 cm+, red clay
ST 49	0-18 cm, brown fine sandy loam; 18-23 cm+, red clay
ST 50	0-13 cm, brown fine sandy loam; 13-17 cm+, red clay
ST 51	0-19 cm, brown fine sandy loam; 19-21 cm+, red clay
ST 52	0-10 cm+, red clay

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 53	0-12 cm, brown very fine sandy loam; 12-25 cm, yellowish-brown very fine sandy loam; 25-28 cm+, strong brown clay
ST 54	0-10 cm, brown very fine sandy loam; 10-25 cm, yellowish-brown very fine sandy loam; 25-27 cm+, strong brown clay
ST 55	0-13 cm+, strong brown clay
ST 56	0-24 cm, brown very fine sandy loam; 24-33 cm, yellowish-brown very fine sandy loam; 33-36 cm+, strong brown clay
ST 57	0-13 cm, brown very fine sandy loam; 13-23 cm, yellowish-brown very fine sandy loam; 23-27 cm+, strong brown clay
ST 58	0-15 cm, brown very fine sandy loam; 15-26 cm, yellowish-brown very fine sandy loam; 26-29 cm+, strong brown clay
ST 59	0-10 cm, brown very fine sandy loam; 10-21 cm, yellowish-brown very fine sandy loam; 21-25 cm+, strong brown clay
ST 60	0-20 cm, brown very fine sandy loam; 20-30 cm, yellowish-brown very fine sandy loam; 30-33 cm+, strong brown clay
ST 61	0-13 cm, brown loamy fine sand; 13-38 cm, yellowish-brown loamy fine sand; 38-41 cm+, red clay
ST 62	0-10 cm, brown loamy fine sand; 10-40 cm, yellowish-brown loamy fine sand; 40-44 cm+, red clay
ST 63	0-19 cm, brown loamy fine sand; 19-51 cm, yellowish-brown loamy fine sand; 51-53 cm+, red clay
ST 64	0-12 cm, brown loamy fine sand; 12-33 cm, yellowish-brown loamy fine sand; 33-37 cm+, red clay
ST 65	0-10 cm, brown loamy fine sand; 10-41 cm, yellowish-brown loamy fine sand; 41-44 cm+, red clay

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 66	0-16 cm, brown loamy fine sand; 16-44 cm, yellowish-brown loamy fine sand; 44-46 cm+, red clay
ST 67	0-15 cm, brown loamy fine sand; 15-51 cm, yellowish-brown loamy fine sand; 51-55 cm+, strong brown clay
ST 68	0-10 cm, brown loamy fine sand; 10-53 cm, yellowish-brown loamy fine sand; 53-56 cm+, strong brown clay
ST 69	0-19 cm, brown loamy fine sand; 19-56 cm, yellowish-brown loamy fine sand; 56-58 cm+, strong brown clay
ST 70	0-13 cm, brown fine sandy loam; 13-26 cm, yellowish-brown fine sandy loam; 26-29 cm+, strong brown clay
ST 71	0-10 cm, brown fine sandy loam; 10-26 cm, yellowish-brown fine sandy loam; 26-28 cm+, strong brown clay
ST 72	0-12 cm, brown fine sandy loam; 12-26 cm, yellowish-brown fine sandy loam; 26-30 cm+, strong brown clay
ST 73	0-24 cm, Disturbed Sediments; 24-29 cm+, strong brown clay
ST 74	0-15 cm, Disturbed Sediments; 15-20 cm+, strong brown clay
ST 75	0-10 cm, brown fine sandy loam; 10-21 cm, yellowish-brown fine sandy loam; 21-25 cm+, strong brown clay
ST 76	0-17 cm, Disturbed Sediments; 17-20 cm+, strong brown clay
ST 77	0-38 cm, yellowish-brown fine sandy loam; 38-41 cm+, strong brown clay
ST 78	0-40 cm, yellowish-brown fine sandy loam; 40-43 cm+, strong brown clay
ST 79	0-13 cm+, strong brown clay
ST 80	0-10 cm+, strong brown clay
ST 81	0-20 cm+, strong brown clay

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 82	0-12 cm, brown fine sandy loam; 12-15 cm+, strong brown clay
ST 83	0-12 cm, brown fine sandy loam; 12-24 cm, yellowish-brown fine sandy loam; 24-27 cm+, strong brown clay
ST 84	0-10 cm, brown fine sandy loam; 10-26 cm, yellowish-brown fine sandy loam; 26-29 cm+, strong brown clay
ST 85	0-16 cm, grayish-brown loamy fine sand; 16-68 cm, brown loamy fine sand; 68-74 cm+, red clay
ST 86	0-20 cm, grayish-brown loamy fine sand; 20-70 cm, brown loamy fine sand; 70-75 cm+, red clay
ST 87	0-24 cm, grayish-brown loamy fine sand; 24-65 cm, brown loamy fine sand; 65-68 cm+, red clay
ST 88	0-26 cm, grayish-brown loamy fine sand; 26-60 cm, brown loamy fine sand; 60 cm+, water table
ST 89	0-31 cm, grayish-brown loamy fine sand; 31-50 cm, brown loamy fine sand; 50 cm+, water table
ST 90	0-13 cm+, strong brown clay
ST 91	0-10 cm+, strong brown clay
ST 92	0-10 cm, brown very fine sandy loam; 10-16 cm+, strong brown clay
ST 93	0-12 cm+, strong brown clay
ST 94	0-16 cm, brown very fine sandy loam; 16-26 cm, yellowish-brown very fine sandy loam; 26-28 cm+, strong brown clay
ST 95	0-13 cm, brown very fine sandy loam; 13-25 cm, yellowish-brown very fine sandy loam; 25-29 cm+, strong brown clay
ST 96	0-7 cm+, red clay

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 97	0-13 cm, brown very fine sandy loam; 13-17 cm+, red clay
ST 98	0-15 cm, brown very fine sandy loam; 15-18 cm+, red clay
ST 99	0-10 cm+, red clay
ST 100	0-14 cm+, red clay
ST 101	0-13 cm+, red clay
ST 102	0-10 cm+, red clay
ST 103	0-16 cm, grayish-brown loamy fine sand; 16-33 cm, yellowish-brown loamy fine sand; 33-36 cm+, strong brown clay
ST 104	0-12 cm, grayish-brown loamy fine sand; 12-37 cm, yellowish-brown loamy fine sand; 37-40 cm+, strong brown clay
ST 105	0-10 cm, grayish-brown loamy fine sand; 10-31 cm, yellowish-brown loamy fine sand; 31-34 cm+, strong brown clay
ST 106	0-16 cm, grayish-brown loamy fine sand; 16-24 cm, yellowish-brown loamy fine sand; 24-26 cm+, strong brown clay
ST 107	0-21 cm, brown very fine sandy loam; 21-25 cm+, red clay
ST 108	0-24 cm, brown very fine sandy loam; 24-27 cm+, red clay
ST 109	0-27 cm, brown very fine sandy loam; 27-30 cm+, red clay
ST 110	0-10 cm, brown fine sandy loam; 10-20 cm+, red clay
ST 111	0-5 cm+, red clay
ST 112	0-21 cm, mixed sediments; 21 cm+, red clay
ST 113	0-13 cm, brown fine sandy loam; 13-15 cm+, red clay
ST 114	0-5 cm, brown fine sandy loam; 5-10 cm+, red clay

Table 1. Shovel test descriptions for the Union Grove WSC Utilities project, Upshur County, Texas, cont.

ST No.	Description
ST 115	0-10 cm, brown fine sandy loam; 10-14 cm+, red clay
ST 116	0-13 cm, brown fine sandy loam; 13-18 cm+, red clay
ST 117	0-12 cm, brown fine sandy loam; 12-17 cm+, red clay

The proposed project began in the southern portion of the project area in Segment 1 along North White Oak Road east to the intersection with Seagull Road (Figure 4). The proposed waterline will travel on the north side of the road for about 1.84 km (1.14 miles) in length. The road pavement is 7 meters (23 ft.) in width with a 4 meter (13.1 ft.) to 5 meter (16.4 ft.) wide right of way adjacent to a private property boundary.

The proposed waterline right of way is mostly bordered by a mixture of small to large hardwood and pine trees (Figure 5) with the exception of the few residences near the west end at the beginnings of the waterline. The terrain is hilly, dipping and rising from the drainage areas of Moody Creek and two of its tributaries. The elevation along Segment 1 ranges from 340 to 400 ft. amsl.

The disturbances along the proposed waterline right of way along North White Oak Road include deep ditching, road bank cuts, nine driveways/property entrances, five oilfield roads, and four gas pipe line right of ways crossing the waterline, as well as underground phone and fiber optic cables. About 43 percent of the proposed Segment 1 waterline right of way has been previously disturbed.

The soils in the Segment 1 right of way are a combination of Bowie, Cuthbert, Iulus, Sacul fine sandy loam, and Lilbert loamy fine sand. The archaeological survey excavated 39 shovel tests (1-39) in Segment 1 (see Table 1). A total of three shovel tests recovered prehistoric cultural materials. These positive shovel tests were designated as the Moody Creek site (41UR346) (see below).

Segment 2 begins at the North White Oak Road and the Seagull Road intersection traveling northward along Seagull Road to FM 1844 (see Figure 4). The proposed waterline right of way is about 1.75 km (1.09 miles) in length on the west side of the road. Seagull Road is an oil-topped road approximately 6 meters wide with a 2 meter to 4 meter-wide right of way usually marked by a fence line on the private property boundary.

In Segment 2, the proposed waterline right of way is bordered mostly by a mixture of small to large hardwood and pine trees. The terrain gradually rises from 360

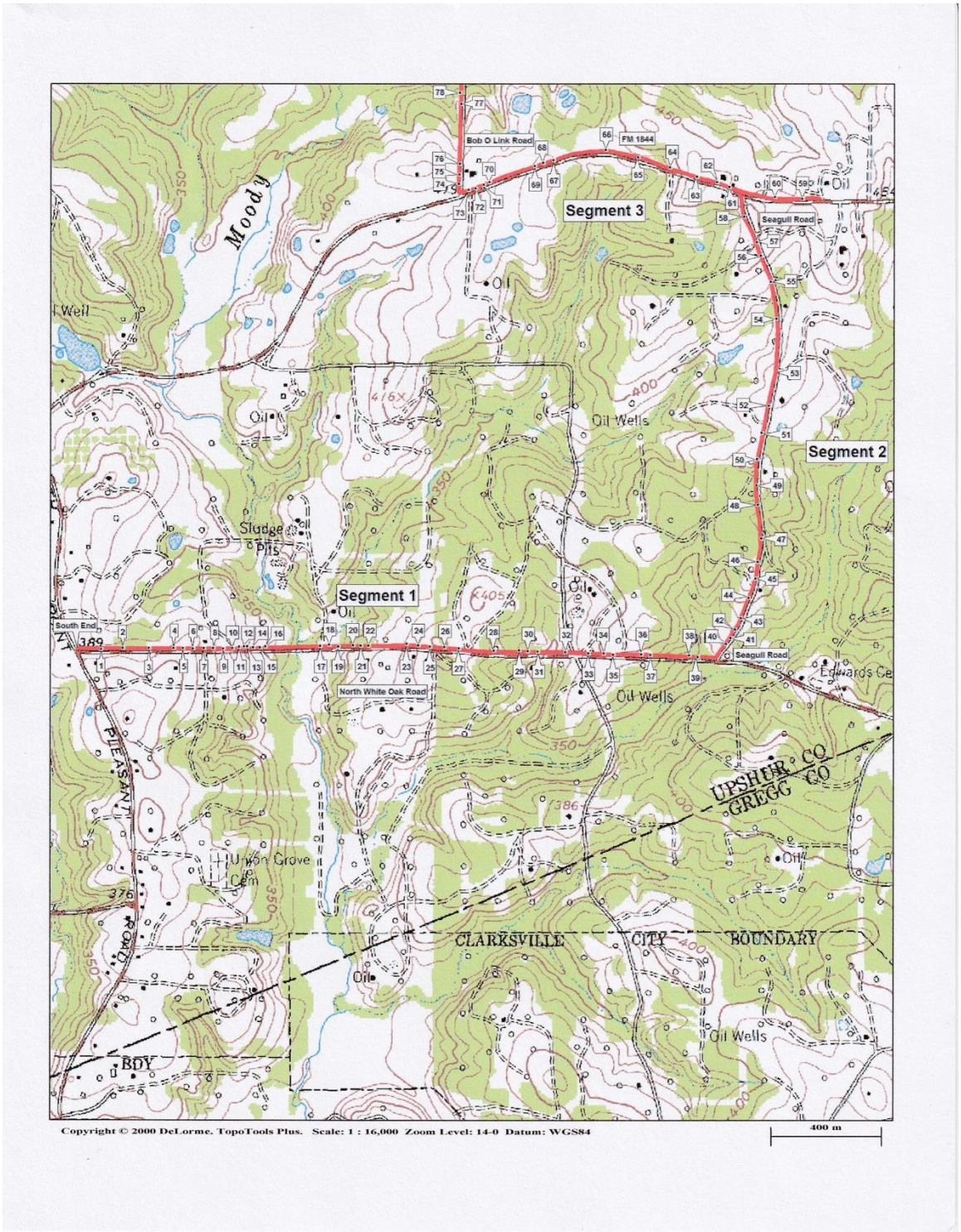

Figure 4. Segments 1, 2, and the southern part of Segment 3 of the Union Grove WSC Utilities project archaeological survey.

Figure 5. Looking east at the beginning of Segment 1 of the archaeological survey area.

ft. to 450 ft. amsl) in elevation from the southern to the northern end. The nearest water source is a small tributary to Moody Creek that basically parallels the entire route of Seagull Road. The small tributary at its nearest is 250 meters, and up to 450 meters away, from the proposed waterline.

The disturbances along Segment 2 in the proposed waterline right of way include ditching, six driveways/property entrances, eight oilfield roads, and four gas pipe line right of ways crossing the waterline, as well as underground phone and fiber optic cables. An estimated 31 percent of the proposed available water line right of way has been previously disturbed.

The soils in the Segment 2 right of way are a combination of Bowie, Cuthbert, Kirvin, Kirvin gravelly fine sandy loam, and Briley loamy fine sand. The archaeological survey excavated 19 shovel tests (40-58) in Segment 2 (see Table 1 and Figure 4). No cultural materials were recovered in any of the archaeological survey shovel tests along Segment 2.

The designated Segment 3 section of the proposed waterline is located along FM 1844. At the intersection of Seagull Road on FM 1844, the waterline travels east for about 275 meters to tie into an existing waterline, and west of the intersection with Seagull Road, the waterline will travel west for approximately 1.09 km to the intersection with Bob O Link Road (Figure 6; see also Figure 4). The total length of the waterline along FM 1844 is around 1.37 km, and the right of way will be located on the north side of the highway. FM 1844 is a 9 meter (29.5 ft.) wide paved road with a 9 meter (29.5 ft.) wide right of way.

Along the Segment 3 route, the proposed waterline right of way borders mainly pastures with few scattered small hardwood trees along the private property boundary. There are several residences located along FM 1844 in the project area, but only three are close enough to have manicured yards abutted up to the waterline right of way. The terrain is relatively flat along the proposed waterline route with elevations ranging from 430 ft. to 460 ft. amsl. The headwaters of a tributary to Moody Creek is located about midway in Segment 3, but does not extend to FM 1844.

The disturbances along Segment 3 in the proposed waterline right of way include ditching, eight driveways/property entrances, one oilfield roads, and one gas pipeline right of ways crossing the waterline, as well as underground phone and fiber optic cables. An estimated 23 percent of to the proposed available waterline right of way has been previously disturbed

The soils in the Segment 3 right of way are a combination of Bowie fine sandy loam, Sacal fine sandy loam, Kirvin gravelly fine sandy loam, Briley loamy fine sand, and Lilbert loamy fine sand. The archaeological survey excavated 15 shovel tests (59-73) in Segment 3 along FM 1844 (see Table 1 and Figures 4 and 6). No cultural materials were recovered in any of the archaeological survey shovel tests along Segment 3.

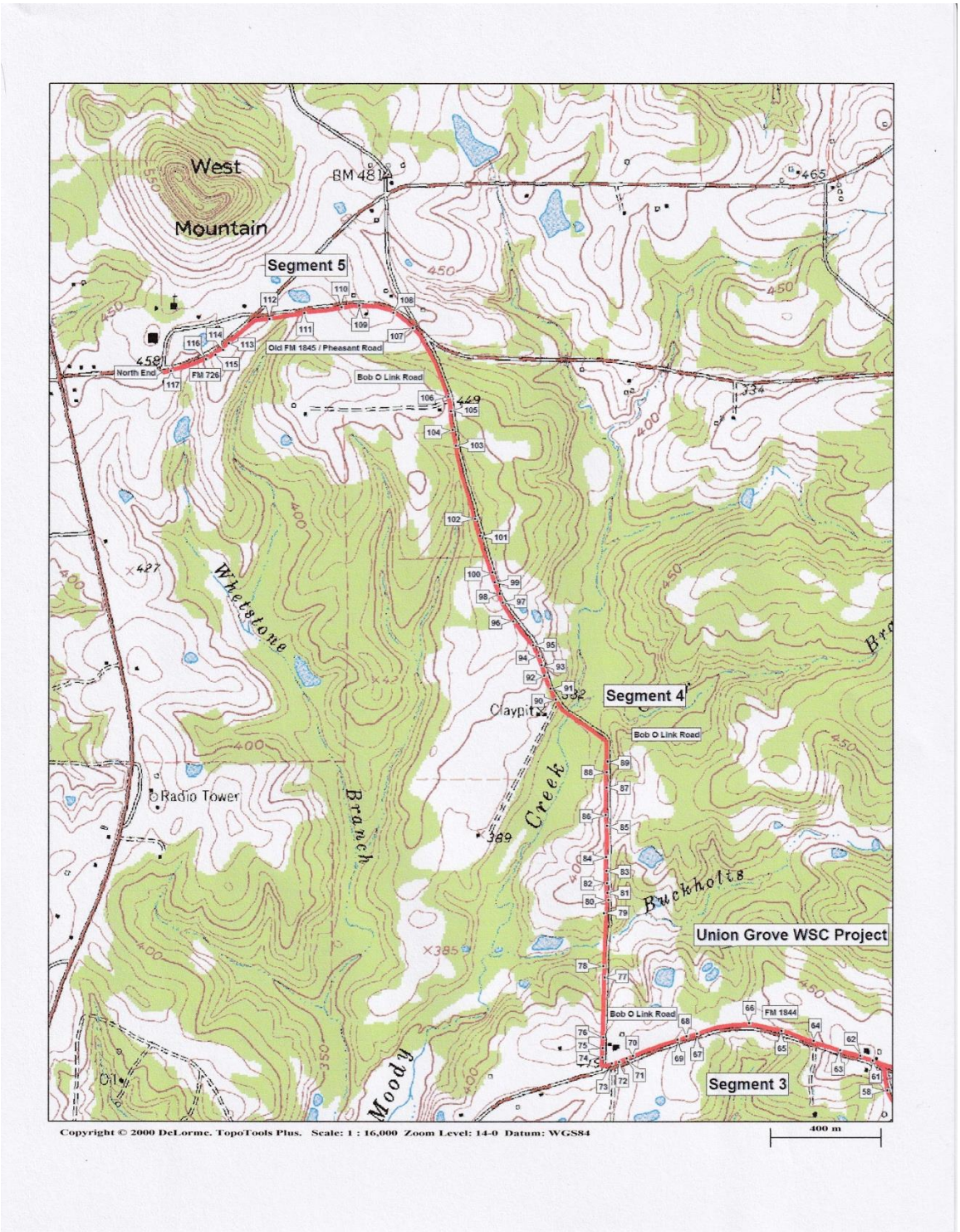

Figure 6. The location of excavated shovel tests in the western part of Segment 3, Segment 4, and Segment 5 of the proposed Union Grove WSC project area.

In Segment 3, there are two residences located near to FM 1844 that are older than 45 years of age. The first structure is just northwest of the intersection of FM 1844

and Seagull road near to ST 61 and ST 62 (see Figure 4). The house structure is a frame house about 30 meters north of the proposed waterline right of way. According to the Upshur County Appraisal District records the house was built in 1938. Since the proposed waterline will be under ground, and no cultural features or artifacts associated with the house structure extend to the waterline area, there will be no effect to the structure.

The second residence is located northeast of the FM 1844 at the intersection with Bob O Link Road near ST 72 and ST 73 (see Figure 4). The house structure is a 2-story frame house about 60 meters north of FM 1844 and 35 meters east of Bob O Link Road (Figure 7). The Upshur County Appraisal District records indicate the house was constructed in 1928. A feature associated with the structure is a rock wall and a rock lined driveway leading to the structure. The rock wall is on private property at the proposed right of way boundary. The rock wall begins at Bob O Link Road and runs parallel to FM 1844 and spans the property boundary for approximately 70 meters. The wall is constructed from large local obtained sandstone rocks mortared together with concrete. The wall is 12 to 18 inches in height and width with two rock columns at 4 ft. in height on either side of the driveway (Figure 8). There are additional mortared rocks lining either side of the driveway from the property boundary wall almost to FM 1844. The drive walls are about 6 to 10 inches in width ca. 20 ft. in length surrounding a metal culvert that is 1.1 ft. in diameter. The culvert is situated in the FM 1844 ditch for drainage underneath the driveway. The rocks surround the culvert at varying depths up to 20 inches below the surface of the driveway, and are about 6 inches above the surface of the driveway.

Tejas Archaeology recommends that the Union Grove WSC place the proposed waterline at least 2 meters from the property rock wall, so as to not disturb or destabilize the wall, and to bore underneath the rock lined driveway. These avoidance measures should insure the rock features will not be impacted by construction activities, and we recommend no further protective measures.

Segment 4 is located along Bob O Link Road beginning at the intersection with FM 1844 and traveling northward ending at the intersection with Pheasant Road (see Figure 6). The Segment 4 route is about 2.82 km (1.75 miles) in length with the proposed waterline right of way located on the west side of Bob O Link Road. The Bob O Link Road is oil-topped and about 7 meters wide with a 4-5-meter strip of right of way between the road and private property.

Along the Segment 4 route, the proposed waterline right of way borders mainly wooded areas of small to large hardwood and pine trees along the private property boundary. There are a few scattered residences along the Segment 4 that have manicured yards bordering the waterline route. In addition to Moody Creek (Figure 9), Buckholts Branch and Clear Branch are crossed the proposed waterline right of way. The terrain along Bob O Link Road is hilly, undulating from 370 ft. to 450 ft. amsl in elevation in and out of the drainages crossing the road.

Figure 7. Structure near ST 71 and ST 72 on Segment 3, looking north.

Figure 8. Rock wall near the old structure shown in Figure 7.

Figure 9. Moody Creek, looking north.

The disturbances along Segment 4 in the proposed waterline right of way include ditching, 13 driveways/property entrances, five oilfield roads, and three gas pipe line right of ways crossing the waterline, as well as underground phone and fiber optic cables. At Buckholts Branch and Clear Branch (see Figure 6), the landforms were cut into to provide borrow soil for road construction, leaving only clay subsoil in the area of the proposed waterline right of way. Also, there is a livestock pond near the southern end of Segment 4 and two livestock ponds in the northern part of Segment 4 along Bob O Link Road that have portions of the pond dams extending into the proposed waterline right of way. An estimated 24 percent of the proposed available water line right of way has been previously disturbed.

The soils in the Segment 4 right of way are a combination of Bowie fine sandy loam, Cuthbert fine sandy loam, Darco fine sandy loam, Kirvin fine sandy loam, Kirvin gravelly fine sandy loam, Iulus fine sandy loam, Lilbert loamy fine sand, and Tenaha loamy fine sand. The archaeological survey excavated 33 shovel tests (74-106) in Segment 4 (see Table 1 and Figure 6). No cultural materials were recovered in any of the archaeological survey shovel tests along Segment 4.

Segment 5 is Pheasant Road at the intersection of Bob O Link Road and FM 725, at the intersection of Pheasant Road traveling westward ending where Thrush Road intersects with FM 726 (see Figure 6). The combined distance of the waterline route along Pheasant Road and FM 726 is 1.03 km (0.64 mile). Since this portion of Pheasant Road was once a portion of a re-routed FM 1845, the pavement width of 9 meters is the same size as FM 726, and both roads have a 9 meter-wide right of way. The proposed waterline right of way is located on the south side of both of the roads.

Along the Segment 5 route, the proposed waterline right of way is bordered by approximately half pasture and half wooded lands with small to large hardwood and pine trees along the private property boundary. No drainages cross the proposed waterline route in Segment 5. The headwaters of Whetstone Branch, a tributary to Moody Creek, are located south of Segment 5. The terrain along the two roadways is relatively flat between 450 ft. to 470 ft. amsl in elevation.

The disturbances along Segment 5 within the proposed waterline right of way include ditching, seven driveways/property entrances, one oilfield road, and one gas pipeline right of way crossing the waterline, as well as electric power poles, underground phone and fiber optic cables. An estimated 20 percent of the proposed available waterline right of way has been previously disturbed.

The soils in the Segment 5 right of way are a combination of Bowie fine sandy loam, Cuthbert fine sandy loam, and, Kirvin gravelly fine sandy loam. The archaeological survey excavated 11 shovel tests (107-117) in Segment 5 (see Table 1 and Figure 6). No cultural materials were recovered in any of the archaeological survey shovel tests along Segment 5.

No backhoe trenches were excavated in the proposed water line right of way as part of our investigations. In no area were A and E-horizon sediments encountered that were more than 69 cm in thickness overlying the clay B-horizon (see Table 1). Given

these circumstances (i.e., the sediments with the potential to contain archaeological materials were shallower than the proposed depth of the water lines), it was our determination that backhoe trenching was not warranted for this particular undertaking along any part of the proposed right of way.

Moody Creek Site (41UR346)

The completion of the pedestrian archaeological survey and shovel testing of the proposed waterline right of way did result in the identification and recording of one archaeological site (41UR346) with prehistoric lithic debris in shallow loamy fine sand sediments. The site area is located within the North White Oak Road right of way with hardwoods and pines lining a fence line at the private property boundary (Figure 10). A total of thirteen shovel tests (ST 4-16) were placed across the proposed right of way in the general site area, and three shovel tests (ST 11, 12, and 13) over a 200 square meter area (of an assumed much larger site area outside of the proposed right of way) contained prehistoric lithic artifacts.

The Moody Creek site is a prehistoric site of unknown age identified in ST 11-13 along the project right of way. The three positive shovel tests cover a ca. 200 square meter area of an upland ridge (ca. 360 feet amsl) within the right of way and about 180 m west of Moody Creek (Figure 11 and Appendix 1). Shovel tests recovered prehistoric lithic debris (n=4) between 0-40 cm bs in Bowie fine sandy loam sediments (see Roberts 1983).

The density of prehistoric artifacts in the positive shovel tests at the site is a low 1.3, or ca. 10.4 artifacts per square meter. The prehistoric artifacts from the site are heat-treated quartzite lithic debris, 75 percent of which have a smoothed cortical surface (Table 2 and Figure 12), indicating these pieces are from the knapping of quartzite available in local stream gravels.

Table 2. Prehistoric lithic artifacts recovered in shovel tests at the Moody Creek site (41UR346).

ST # and depth (cm bs)	Artifact description
ST 11, 20-40	1 heat-treated quartzite lithic debris with smoothed cortical surface
ST 12, 20-40	2 heat-treated quartzite lithic debris with smoothed cortical surfaces
ST 13, 0-20	1 heat-treated quartzite lithic debris, non-cortical

Figure 10. Looking east at 41UR346 at the tree line.

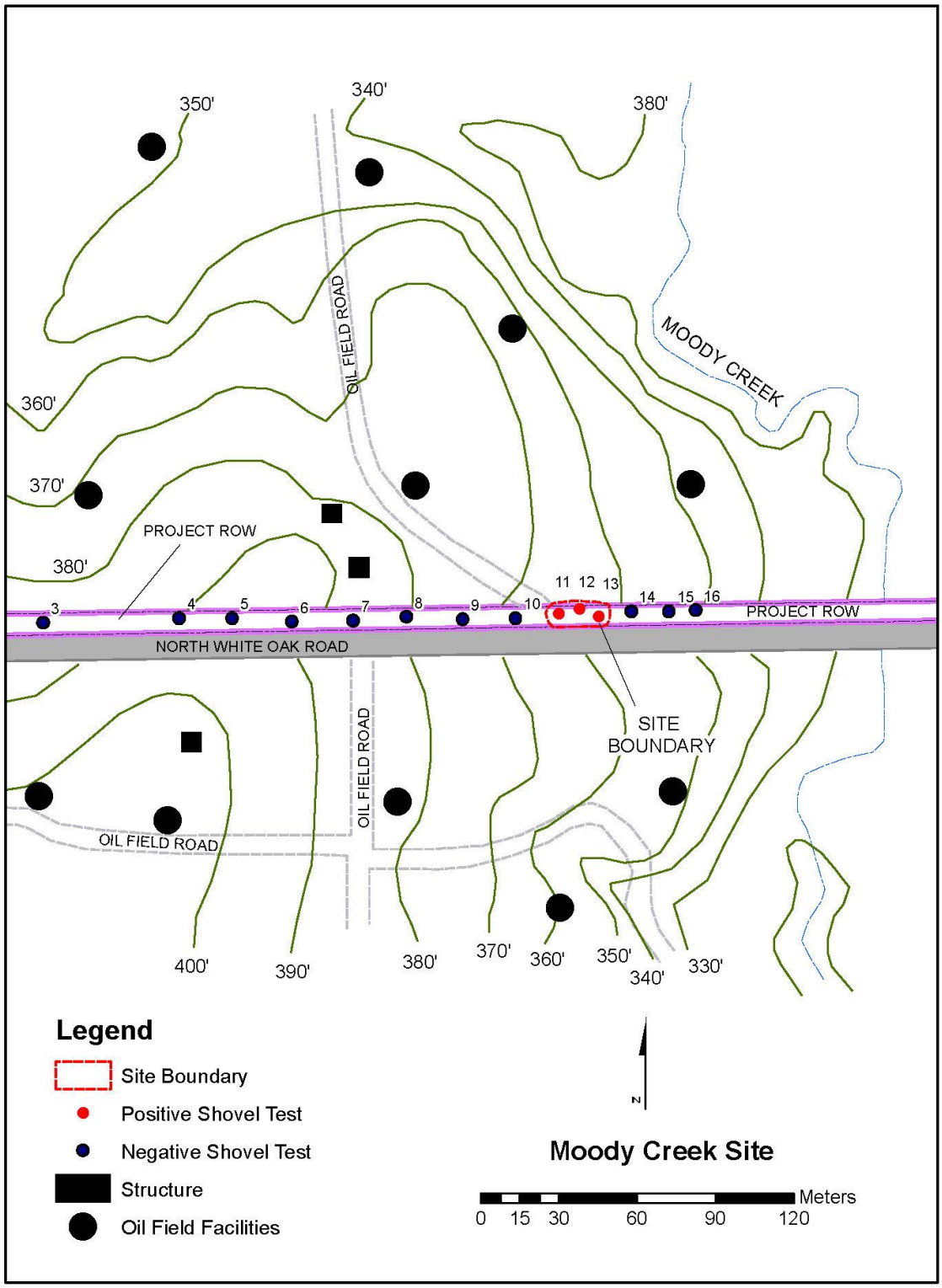

Figure 11. Map of the Moody Creek site (41UR346).

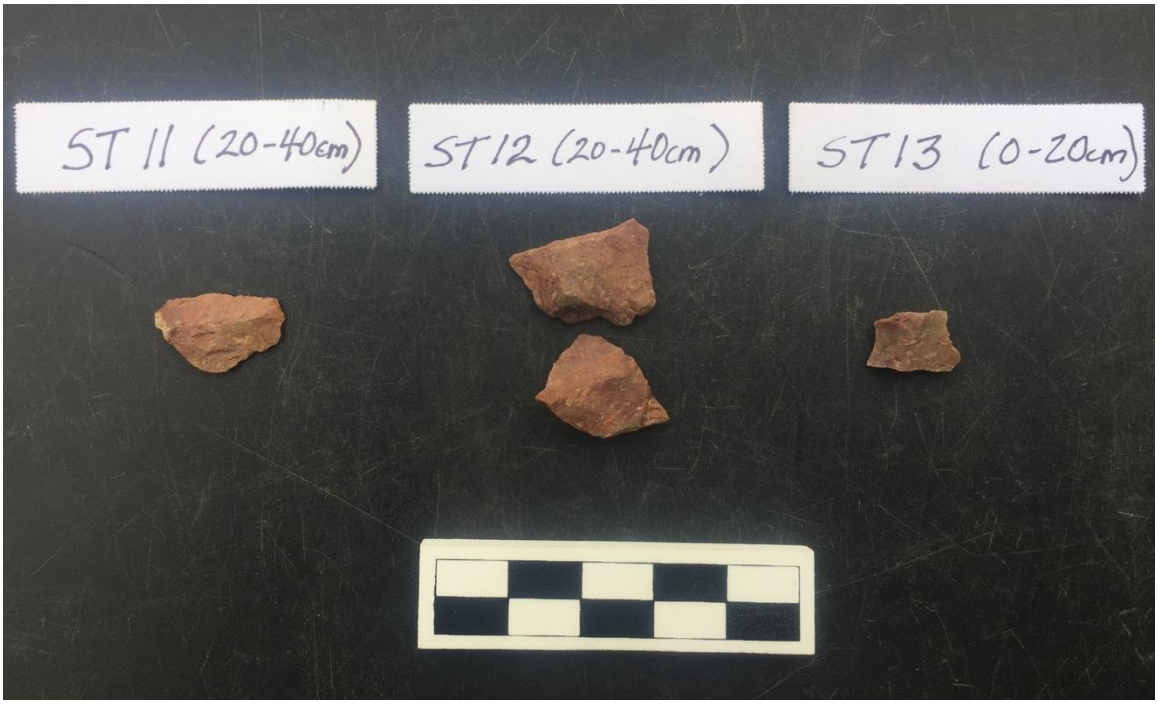

Figure 12. Lithic debris from ST 11-13 at the Moody Creek site (41UR346).

The shallow depth of the archaeological deposits at the Moody Creek site, as well as the low density of recovered artifacts—consisting of only four pieces of lithic debris—combined with previous disturbances along the existing North White Oak Road right of way indicate that the site does not have any potential to contribute to research problems proposed in the Texas Historical Commission's Eastern Planning Region document (see Kenmotsu and Perttula 1993). It does not warrant designation as a State Archeological Landmark.

Under 36 CFR Part 60 (National Register of Historic Places), and the authority of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470 et. seq.), cultural resources and sites affected by federal undertakings under Section 106 of the NHPA will be evaluated for their National Register of Historic Places (NRHP) as a means "to indicate what properties should be considered for protection from destruction or impairment" (36 CFR Part 60.2).

According to 36 CFR Part 60.4, districts, sites, buildings, structures, and objects eligible for inclusion in the NRHP will have a "quality of significance in American history, architecture, archaeology, engineering, and culture [that] is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association," and meet four basic criteria (36 CFR Part 60.4a-d):

a. That are associated with events that have made a significant contribution to the broad patterns of our history; or

b. That are associated with the lives of significant persons in or past; or
c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d. That have yielded or may be likely to yield, information important in history or prehistory."

The portion of the Moody Creek site (41UR346) within the proposed Union Grove Water Supply Corporation utilities right of way does not meet any of the four NRHP criteria, nor do its deposits possess archaeological integrity. It is our determination that this portion of the site is not eligible for inclusion in the NRHP.

Summary and Recommendations

Upshur County has applied for a Texas Community Development Block Grant (TxCDBG) Small Towns Environment Program through the Texas Department of Agriculture – Office of Rural Affairs to construct additional new waterline service. This is on behalf of the Union Grove Water Supply Corporation (WSC) to provide first-time water service to 24 households east of the City of Union Grove and northwest to the community of West Mountain in the southeast portion of Upshur County. The TxCDBG is administered by the Texas Department of Agriculture, and the funding is provided by the U. S. Department of Housing and Urban Development. The project is subject to Section 106 of the National Historic Preservation Act. Also, the proposed utilities improvement project will be constructed by Union Grove WSC on land owned and/or controlled by the Texas Department of Transportation (TxDOT) and Upshur County. Accordingly, this project also comes under the purview of the Antiquities Code of Texas, as amended, and its implementing regulations. An Antiquities Permit was needed for the completion of this archaeological survey and the preparation of the report of findings.

Upshur County requested an archaeological survey for the Union Grove WSC Waterline project through Tejas Archaeology. The proposed project consists of installing 28,700 ft. (5.44 miles) of waterline in a 30 ft. construction right of way to depths of 3 ft. or less below the surface. The new waterline will tie into existing waterlines of the Union Grove WSC. The proposed waterlines are to be installed in Upshur County road and TxDOT right of ways.

The archaeological survey of the Union Grove WSC Waterline project was conducted with a combination of visual examination of the project area, a pedestrian walk-over, and through shovel testing, along with where possible the examination of any exposed surfaces or cut banks. Shovel testing intensity followed the Texas Historic Commission's guidelines for shovel test intervals. The archaeological survey investigations completed by Tejas Archaeology consisted of a pedestrian survey, accompanied by the excavation of 117 shovel tests, in the 5.44 mile length by 30 ft. wide construction right of way, which comprises around 19.6 acres. Approximately 5.97 shovel tests were excavated per acre of proposed waterline right of way.

One new prehistoric archaeological site (41UR346, the Moody Creek site), was identified and recorded in the project right of way; it is suspected that the site extends well outside the right of way. The shallow depth of the archaeological deposits at the Moody Creek site, as well as the low density of recovered artifacts—consisting of only four pieces of lithic debris—combined with previous disturbances along the existing North White Oak Road right of way indicate that the site does not have any potential to contribute to research problems proposed in the Texas Historical Commission's Eastern Planning Region document (see Kenmotsu and Perttula 1993). It does not warrant designation as a State Archeological Landmark (SAL). The portion of the Moody Creek site within the proposed Union Grove Water Supply Corporation utilities right of way does not meet any of the four National Register of Historic Places criteria (36 CFR Part 60.4a-d), nor do its deposits possess archaeological integrity. It t is our determination that this portion of the site is not eligible for inclusion in the National Register of Historic Places.

Based on the results of the pedestrian archaeological survey and intensive shovel testing of the proposed Union Grove Water Supply Corporation Utilities project area, there is the absence of any archaeological sites in the project area that are eligible for inclusion in the National Register of Historic Places or warrant designation as a SAL. Taken together with the extent of past disturbances in the project area, it is our recommendation that the proposed project will not have an effect on any sites worthy of designation as an SAL or eligible for inclusion in the NRHP. Consequently, the proposed Union Grove Water Supply Corporation project should be allowed to proceed without further consultation under the Antiquities Code of Texas and the National Historic Preservation Act and their implementing regulations.

Acknowledgements

We would like to thank the Upshur County Commissioners Court, County Judge Todd Tefteller, David Beavers, manager of the Union Grove Water Supply Corporation (WSC), and the personnel at the Union Grove WSC. Stan Hayes and Joey Scott with Hayes Engineering, Inc. provided necessary information about the project. We also appreciate the assistance and coordination efforts for the project by Karibeth Smith, Melinda Smith, and Janine Welch with Traylor & Associates, Inc.

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