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A Cultural Resources Survey of the Farmersville Sewer System Improvements Collin County, Texas

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**A Cultural Resources Survey of the
Farmersville Sewer System
Improvements
Collin County, Texas**

Antiquities Permit #7990

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ABSTRACT

In August 2017, Deep East Texas Archaeological Consultants (DETAC) conducted a cultural resource management survey of the proposed Farmersville sewer system improvements in Collin County, Texas (TWDB/THC #201700814) under Texas Antiquities Permit #7990. Proposed improvements include 12.3 km (7.6 mi) along seven pipelines along with modifications to three lift stations and the construction of four lift stations. Total project area was 7.7 hectares (19.1 acres). Shovel testing and visual examination did not find any evidence of cultural resources; no artifacts were collected. DETAC is requesting a concurrence with the determination of “no effect” to previously recorded archaeological sites, State Archaeological Landmarks, or NRHP eligible properties for the proposed project as applied to jurisdiction under the Antiquities Code of Texas (ACT). If dark greasy soils, artifacts, or bones are encountered during construction, then all excavation should stop and a qualified archaeologist should be contacted to investigate the site before continuing with the proposed work.

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INTRODUCTION

In August 2017, Deep East Texas Archaeological Consultants (DETAC) conducted a cultural resources survey of the proposed Farmersville sewer system improvements in Collin County, Texas (Figure 1). Proposed capital improvements for the project are provided by the Texas Water Development Board Clean Water State Revolving Fund provided by the Environmental Protection Agency (TWDB/THC #201700814). The survey was conducted at the request of the City of Farmersville in compliance with the Texas Antiquities Code. The report was reviewed by the Texas Historical Commission (THC) under Texas Antiquities Permit #7990.

The purpose of this survey was to locate, describe and record any cultural resources within the project area boundaries. The report was prepared following the short report format outlined by the Council of Texas Archaeologists (CTA) (2005a). No cultural resources were found during the survey. Based on the archaeological fieldwork, DETAC recommends a determination of “no effect” to previously recorded archaeological sites, State Archaeological Landmarks, or cultural resources eligible to the National Register of Historic Places.

DEFINITION OF STUDY AREA

The projects include seven pipelines and seven lift stations. The pipelines total 12.3 kilometers (km) (7.6 miles (mi)) of 30 cm (12 in) sewer force main and interceptor pipelines in a 20 ft permanent easement with a 20 ft construction easement. Work at the lift stations includes modifications to three existing stations and construction of four stations. The total project area was 7.7 hectares (19.1 acres). The one cross-county pipeline right-of-way was staked at the time of the survey. Descriptions of topography, vegetation and modern disturbances are included in the individual section descriptions.

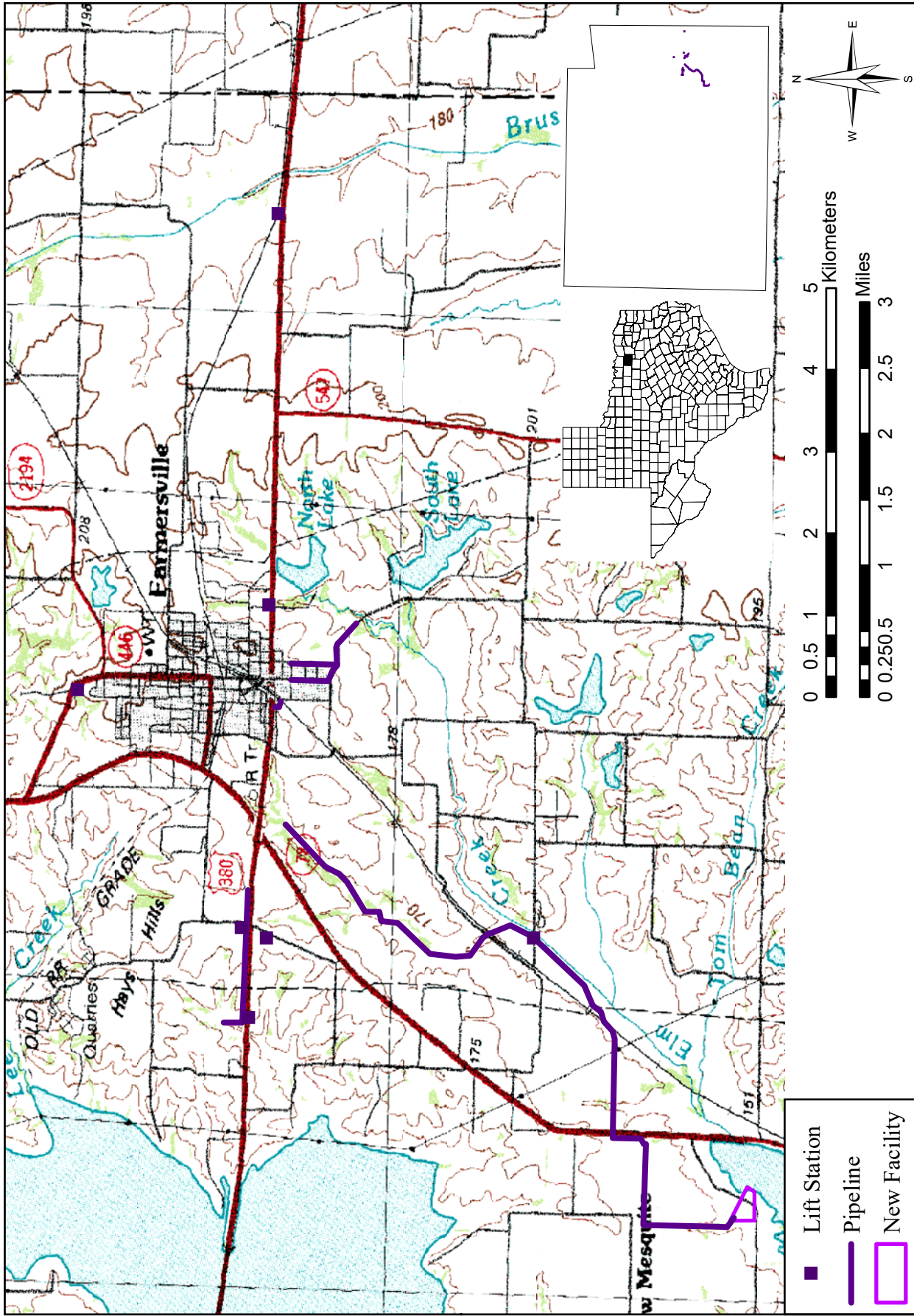


Figure 1. Project areas on McKinney 100k topographic map

PREVIOUS RESEARCH AND CULTURAL HISTORY

Overall, Collin County has been part of broad studies and investigated in both larger examinations and in numerous smaller surveys. The larger investigations focused on salvage surveys for Lake Ray Hubbard in Rockwall County and Lake Lavon in Collin County. These and subsequent investigations nearby found, tested and conducted data recovery efforts on a variety of historic and prehistoric sites. The numerous smaller surveys in the area include both upland and lowland settings and were conducted primarily for county utility services, e.g., Shelton and others (2009), and roads, e.g., Butler (2008) near Lake Lavon.

A total of six documented cultural resources surveys were conducted near the proposed improvements along with additional archaeological sites, historical markers, cemeteries, and a NRHP District in and around Farmersville. The earliest surveys show on the Site Atlas were for three areas along CR 550 for the Corps of Engineers in 1983 (no cultural resources were found) followed by investigations for the widening of Hwy 36. SDHPT documented two dilapidated homesteads (41COL63 and 41COL64) along the highway (Wormster 1987); neither site was considered eligible for the NRHP. Site 41COL64 was located along the north side of the existing road close to the proposed pipeline. Other poorly documented work includes survey for the NRCS of three properties east of Farmersville; no cultural resources were recorded.

More recent cultural resources surveys were conducted by DETAC for the Copeville waterline (Galan 2011), AR Consultants for a waterline (Davis et al 2012), and SWCA's survey of high probability areas along a pipeline. The DETAC survey followed a proposed water pipeline and other improvements near Hwy 78; shovel testing and examination of stream bank profiles did not find any cultural resources or buried soils (Galan 2011).

AR Consultants (Davis *et al.* 2012) conducted a pedestrian survey of a water treatment plant and waterline. Eighteen archaeological sites were recorded along the 84 km (52 mile) long pipeline (four prehistoric and fourteen historic). Three of the sites (41COL 219; Lovell Cemetery, 41COL223; historic homestead, and 41COL228 historic homestead) are within one mile of the current project area. The Lovell Cemetery included 21 internments at the boundary of an agricultural field and a parking lot. Site

41COL223 included handmade bricks, earthenware, and a well. Site 41COL28, Redwine, was a late nineteenth to early twentieth century farmstead. All three sites were avoided by the proposed pipeline. Two other sites, 41COL230 and 41COL231, were recorded on a ridge summit overlooking Tom Bean Creek more than one mile from the current project area.

The SWCA survey focused on stream crossings along a pipeline route. The survey recorded 41COL243 as a historic period shed in an agricultural field on the toe slope of an upland ridge. No other cultural resources were recorded within one mile of the project area.

Other sites recorded within one mile of the proposed improvements include 41COL19 and 41COL51. Site 41COL19 was originally found in 1948 by R. L. Stephenson. The site is located on the north bank of Elm Creek roughly 680 m (2,231 ft) southeast of the project area. The landowner reported several fragmentary burials and projectile points found during cultivation. No pottery was reported. No further work was recommended for the site (Stephenson 1948). Site 41COL51 was recorded as a historic period artifact scatter of milk glass, bottle glass and wire nails in an agricultural field.

Within Farmersville, there is one NRHP District (100000670) for the commercial district and nine historic markers (one for Collin County, two for cemeteries, and six for buildings). One additional cemetery was recorded northeast of town along FM 2194.

In addition to the fieldwork referenced above, several documents have added significantly to available information on the archaeological record in this region. The documents of primary importance are D.A. Story's (1990) and J.A. Guy's (1990) discussions of the Gulf Coastal Plain. Fields (2004:347-369) describes the archaeology of the Post Oak Savanna of East-Central Texas which focuses on work in the Cooper Lake and Jewett Mine. Current research in the area, published in the *Archeological Journal of the Texas Prairie Savannah*, includes a study of *A Possible Association Of Worked Flakes With Proboscidean Bones Near Lake Lavon, Collin County, Texas* and *The Upper Farmersville South Site (41COL44): A Small Late Prehistoric Occupation In Collin County, Texas* both by Wilson Cook. 41COL44 is approximately 11 km (6.8 miles) south the project area.

The occupation of the area includes the Paleo-Indian (pre-700B.C.), Archaic foraging cultures (ca.700 B.C. – A.D. 800) and Late Prehistoric (A.D. 800) through the Historic European settlements. Within the Late Prehistoric period (A.D. 800 – 1680) the area includes site from the Henrietta phase to the north and west and the Caddo culture to the south and east. During the Historic period proto-historic populations, e.g., the Kickapoo were relocated to Oklahoma.

The Paleo-Indian period (pre-7000 B.C.) is characterized by small, mobile bands of hunters and gatherers that consumed a variety of native plants and animals (Story 1990). The Archaic (7000 B.C – A.D. 800) refers to hunter-gatherers who implemented more regionally specialized approaches toward exploiting their environment (Story 1990). The Late Prehistoric period (A.D. 800-1600) of the region includes both Plains Villagers from the north and west and the Caddoan culture from the east and south (Crook 2011:16). These later historic cultures exhibited a greater reliance on cultigens (Brown and Lebo 1990:16) and prolonged occupations at specific locales indicating an increasingly sedentary lifestyle (Ferring and Yates 1997:6). The local Henrietta Phase Plains villagers were influenced by Wichita groups of the southern plains while the Caddo culture was influenced by the Mississippian tradition of the Lower Mississippi Valley (Story 1990:323). Diagnostic artifacts from both cultures include distinctive types of pottery (Nocona Plain for Henrietta Phase versus Sanders and Williams Plain for Caddo) and arrow points. The Historic period (1680-present) describes both the history behind the current cultural setting of the area and marks a transition from the native population's domination of the area, to the American immigrants establishment of farms, towns and counties. Collin County was divided from Fannin County on 3 April 1846 as settlers established small, self-sustaining farms. Moving produce to rivers was costly until the railroad arrived in the 1870's connecting the county to larger cities to the north and south. Productivity increased until the Great Depression. Agriculture rebounded slowly, expanding the pre-Depression levels of productivity as late as the 1950's. Today the area continues to prosper with a mixture of agriculture and industry.

RESEARCH DESIGN AND METHODOLOGY

The investigations were performed in compliance with the Texas Antiquities Code, and the guidelines set forth by the CTA (2005b). The objectives of the survey were to locate prehistoric and historic cultural resources sites within the survey areas. If sites were found, then the investigations were to 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 SAL and NRHP eligibility.

Before initiating fieldwork, DETAC conducted a records and literature review using maps and files from the Texas Archaeological Site Atlas (THC 2017). The site location maps and cultural resources records were consulted to identify the location, types, and both SAL and NRHP eligibility of previously recorded sites within or in close proximity to the project area.

DETAC conducted an intensive pedestrian survey of the pipelines, facilities, and lift stations following the same methods as previous investigations. To locate sites, the pedestrian survey relied on visual examination and shovel testing. Visual examinations were conducted in areas with exposed soil surfaces in a continuous effort between shovel tests at all locations with exposed surfaces (i.e., eroded areas and agricultural fields). Visual inspections included archaeologists walking transects roughly 10 m (33 ft) apart. Shovel testing was conducted in accordance with the THC's guidelines for cultural resources surveys at 30 m (100 ft) intervals in elevated areas overlooking floodplains and at 100 m (330 ft) intervals in the floodplain or wide upland ridges. Shovel testing included excavating an area approximately 30 cm (12 in) in diameter in 10 cm (4 in) levels down to the clay substrate or 90 cm (35 in). Hard clay material was broken into small pieces and inspected. Where possible, silt material was screened through a 0.635 cm (0.25 in) wire mesh screen. The depth, soil type and color of each shovel test were recorded along with a GPS position.

RESULTS

The DETAC survey of the project area is divided into three sections. Each section is described by proposed construction, topography, vegetation, soils, previous investigations, and results of the pedestrian survey. In general, vegetation was limited to pasture grasses in the floodplains with stands of trees along drainage channels and in narrow drainages on the backslope of uplands. Uplands were almost exclusively agricultural fields. Soils were dominated by black clay with high shrink/swell potential. The upland soil series (Burlison, Engle, Ferris, Heiden, Houston, Lamar, and Lewisville) formed on residuum from calcareous sandstone, shale, and mudstone (NRCS 2017). Floodplain soil series (Tinn and Trinity) formed in clayey alluvium eroded from the adjacent uplands. Urban development in and around Farmersville has altered the vegetation and soils.

Section 1

The section includes 2,011 m (6,600 ft) of main pipeline along Hwy 380 west of Farmersville with additions to a lift station near the western end and additions to two lift stations along CR 607 north and south of the highway (Figure 2). Roughly 1,463 m (4,800 ft) of the section will follow the highway between several businesses and the road surface along the upland ridge. A 550 m (1,800 ft) segment will pass through a private residence yard ending near the confluence of three drainages. Vegetation along the highway is mixed pasture grasses while the yard is maintained San Augustine grass. Soils along the section include Houston black clay on the ridge summit with Heiden clay on the backslopes and toe slopes. The proposed pipeline will be adjacent to other buried utilities and parking lots. The structure documented during the highway widening survey (41COL64) was no longer standing and no evidence of their exact location was seen in the visual inspection. Shovel tests 39 to 44 (Appendix A) were excavated at 30 m (100 ft) intervals across the yard as this area has the least modern disturbance and it follows an intermittent drainage away from the highway (Figure 3). Shovel tests found black clay. No cultural material was observed in the surface inspection or in the shovel tests.

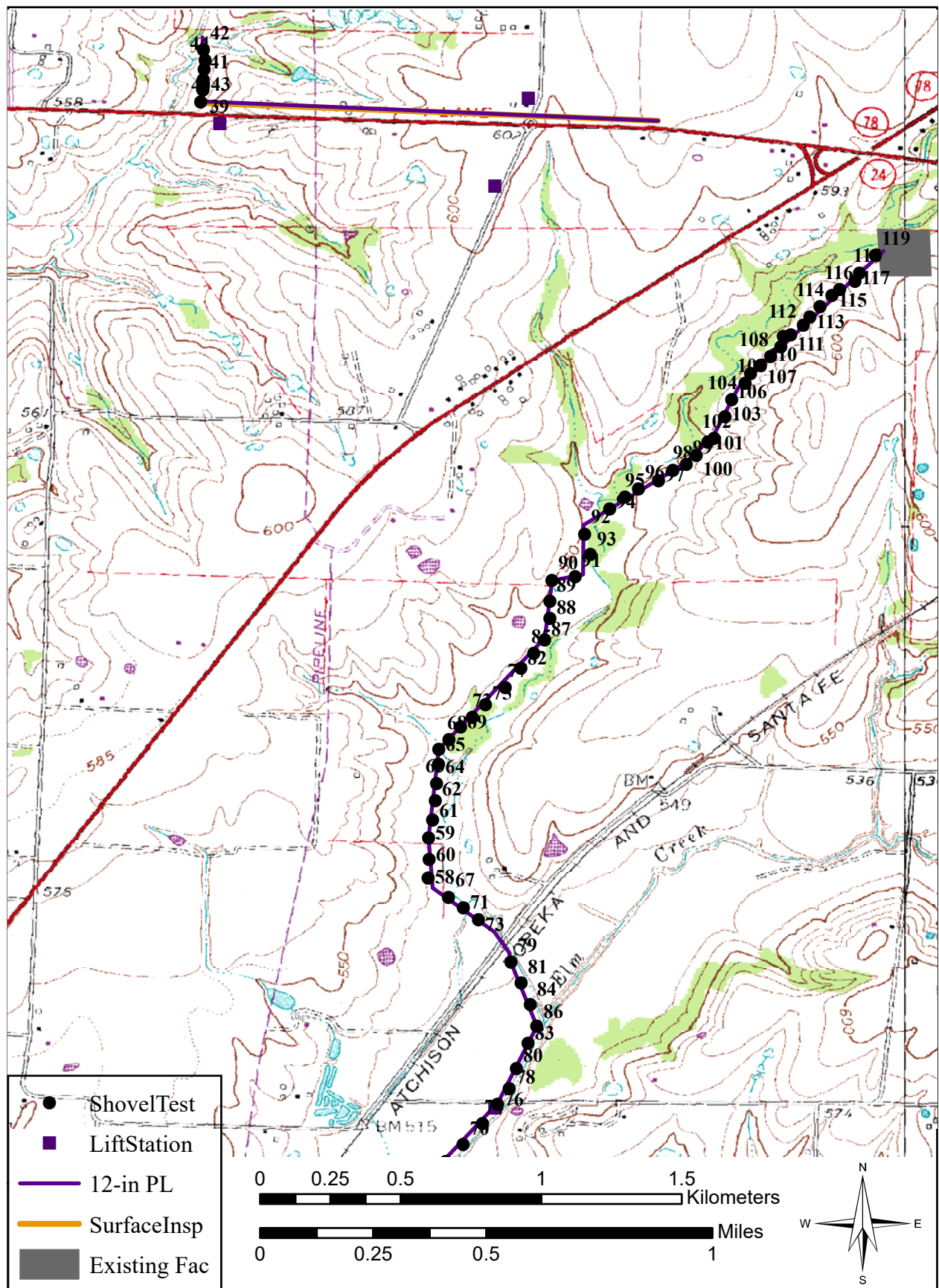


Figure 2. Section 1 (Hwy 380) and Section 2 (north) project areas and shovel tests.



Shovel testing in the yard on Section 1



Section 1 looking west from CR 607



Erosion feature profile near the north end of Section 2

Figure 3. Segment 1 photographs

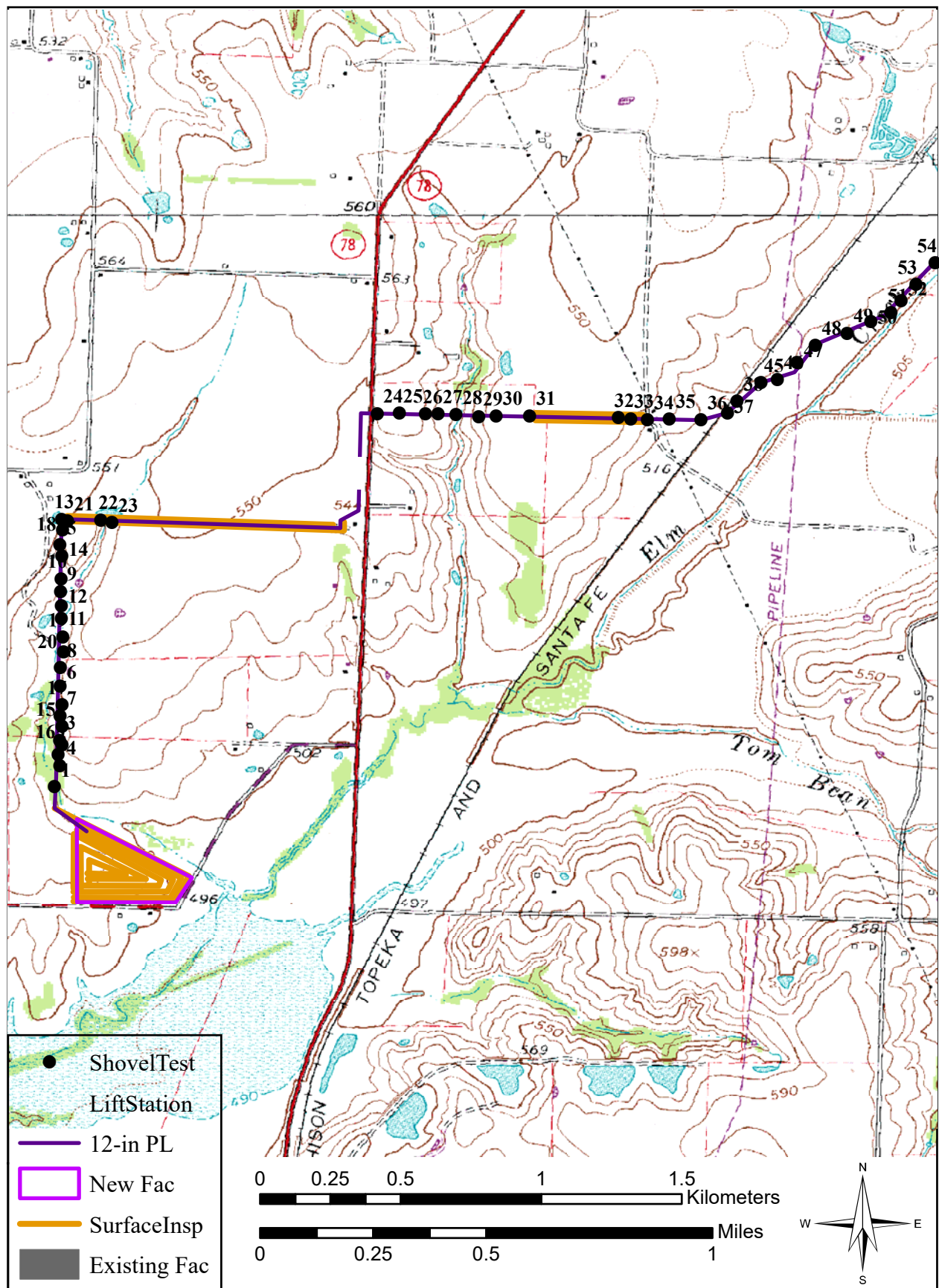


Figure 4. Section 2 (south) shovel tests.



Shovel test in cut agricultural field
Section 2



Upland drainage between agricultural
fields



Shovel test profile near drainage

Figure 5. Segment 1 photographs

Section 2

Segment 2 is an 8.6 km (5.3 mi) sewer interceptor line extending from an existing facility south of Farmersville to a proposed facility along CR 550. A sewer interceptor station will be built along the line near Elm Creek south of CR 605. The proposed facility is a roughly 4.0 ha (10.0 ac) property along CR 550. The pipeline generally follows the Elm Creek floodplain for the northern portion but turns across the adjacent uplands to cross Hwy 78 and enter the proposed facility. The pipeline passes through pasture within the floodplain and agriculture fields on the uplands. Isolated stands of trees were found along drainages. The facility is currently a corn field. Soil series in the floodplain floor are Tinn and Trinity with Houston on the ridge summits and both Heiden and Lewisville along the drainages. The surveys by DETAC, AR Consultants, and SWCA follow similar ranges in environment while the areas surveyed for the Corps of Engineers were limited to drainages. The sites discussed in these surveys were on uplands overlooking the floodplains. Examination of the Farmersville USGS 1930 and 1940 topographic maps (both based on surveys in 1916, 1922, and 1924) illustrate scattered houses along county roads on the edges of uplands but none along the proposed route (Old Maps Online 2017).

Surface inspections were conducted at areas exposed by erosion and in agricultural fields. The surface inspection followed crop rows with archeologists walking roughly 5 m (17 ft) on either side of the staked centerline or along transects at 10 m (33 ft) intervals across the new facility. Based on the results of the earlier surveys, shovel tests were excavated at 30 m (100 ft) intervals on elevated landforms overlooking the floodplains and adjacent to drainages. Tests were excavated at 100 m (330 ft) intervals across the floodplain. A total of 113 tests (ST1-38, 45-119) were excavated along the pipeline in black and dark brown clay and clay loam (Figures 4 and 5, Appendix A). Observed cultural material was attributed to modern residences along the highway and county roads.

Section 3

Section 3 includes force and gravity main pipelines totaling 1,716 m (5,778 ft) along Locust Street, South Main Street, Orange Street, and CR 648 along with three lift

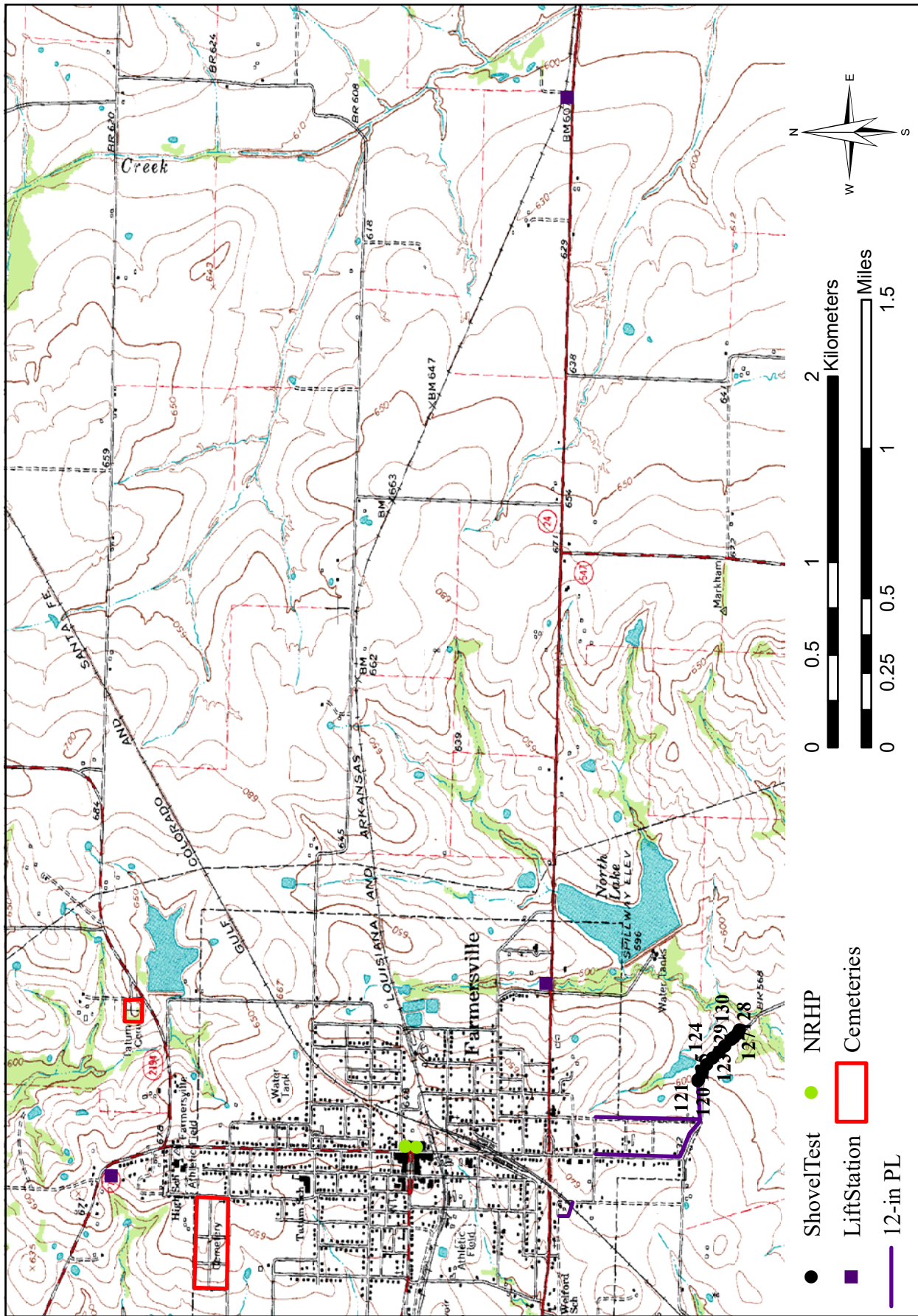


Figure 6. Section 3 pipelines, lift stations, and shovel tests.



Locust Street pipeline area



Orange Street looking north



Shovel test profile on CR 658

Figure 7. Segment 3 photographs

stations: 1) at the intersection of Hwy 380 and Floyd Street, 2) at north Main Street, and 3) along Hwy 380 near Brushy Creek (Figure 6). All of the pipelines and lift stations are on upland settings in areas highly disturbed by modern development except for the southern portion of CR 648 which was pasture adjacent to the road surface. Soils along the pipelines and at the lift stations are dominated by Houston series on the ridge summits with Engle and Heiden series on the backslopes. The closest cultural resources are the Farmersville and Tatum cemeteries along with the NRHP properties within Farmersville. None of these will be impacted by the proposed development (Figure 6). Visual inspections were conducted at the lift stations and along the city streets with shovel testing along CR 648 in the adjacent pasture. Eleven shovel tests (ST120-130) were excavated at 30 m (100 ft) intervals outside of the CR 648 ditch in a 330 m (1082 ft) portion of the pipeline away from residential development. No cultural material was found in the shovel tests.

SUMMARY AND RECOMMENDATIONS

The proposed Farmersville sewer system improvements will be built with funding from the TWDB Clean Water State Revolving Fund. Construction includes seven sewer, main, forced, and interceptor pipelines along 12.3 km (7.6 mi) of right-of-way with modifications or construction of seven lift stations around Farmersville, Texas. No previously recorded archaeological sites will be impacted. The surface inspection and shovel testing along the pipelines and at lift stations did not reveal any evidence of past prehistoric or historic period occupations. If dark greasy soils, artifacts or bones are encountered during construction, then work should stop in the immediate area. DETAC and the THC should be contacted immediately.

In conclusion, the investigations did not document any cultural resources. Based on the investigations, there is little chance of encountering cultural resources in the project area. DETAC is requesting a concurrence with the determination of “no effect” on NRHP eligible properties, State Archaeological Landmarks, or archaeological sites for the proposed Farmersville sewer system improvements as applied under the Antiquities Code of Texas.

REFERENCES CITED

- Brown, K., L. Lebo, and S. Lebo
1990 *Archaeological Testing of the Lewisville Lake Shoreline, Denton County, Texas*.
Institute of Applied Sciences, University of North Texas, Denton.
- Butler, J.
2008 *Archeological Survey Along SH78 Colin County, Texas*. Texas Antiquities Permit
No. 4541. Ecological Communications Corporation, Austin.
- Council of Texas Archaeologists
2005a Guidelines for Cultural Resources Management Reports in *Council of Texas
Archaeologists Guidelines*.
[http://www.counciloftexasarcheologists.org/index.php?option=com_content&task=view
&id=39&Itemid=55](http://www.counciloftexasarcheologists.org/index.php?option=com_content&task=view&id=39&Itemid=55)
- 2005b Guidelines for Professional Performance Standards in *Council of Texas
Archaeologists Guidelines*.
[http://www.counciloftexasarcheologists.org/index.php?option=content&task=view&id=3
7&Itemid=55](http://www.counciloftexasarcheologists.org/index.php?option=content&task=view&id=37&Itemid=55)
- Crook, W.
2011 *The Gilkey Hill site 941KF42/41DS406): a Large Late Prehistoric Occupation in
Dallas County, Texas*. In *Archeological Journal of the Texas Prairie Savannah*, 1(1).
Jesse Todd Editor. AJ Consulting.
- Davis, C., N. Coleman, A. Skinner, and D. Anglin
2012 *Archaeological Survey of the Proposed Late Texoma Outfall to Wylie Water
Treatment Plant Raw Water Line: A Survey of Upland Divides and Lower Order
Drainages on the Upper East Fork Watershed in Grayson, Fannin and Collin Counties,
Texas*. Texas Antiquities Permit #6146. AR Consultants, Inc, Richardson.
- Fering, C. R., and B. C. Yates
1997 *Holocene Geoarhaeology and Prehistory of the Ray Roberts Lake Area, North
Central Texas*. Institute of Applied Sciences, University of North Texas.
- Fields, R.
2004 The Archaeology of the Post Oak Savanna of East–Central Texas. Chapter 12 in
The Prehistory of Texas. Timothy K. Pertulla editor. Texas A&M University Press.
College Station.
- Galan, V.
2011 *A Cultural Resources Survey of the Copeville SUD Improvements Collin County,
Texas*. Antiquities Permit #5928. Deep East Texas Archaeological Consultants.
Nacogdoches.

Guy, J.A.

1990 Previous Archaeological Investigations. In *The Archaeology and Bioarchaeology of the Gulf Coastal Plain*, D.A. Story, Ed. Research Series No. 38. Arkansas Archaeological Survey, Fayetteville.

Natural Resources Conservation Services (NRCS)

2017 *Web Soil Survey*. Data downloaded from <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Old Maps Online

2017 Farmersville, Texas. USGS topographic maps 1930 and 1940. Web site visited on 25 July 2017. <http://www.oldmapsonline.org/>

Stephenson, R. L.

1948 Texas Archaeological Site Form: 41COL19.

Story, D.A.

1990 Environmental Setting. In *The Archaeology and Bioarchaeology of the Gulf Coastal Plain*, vols. 1 and 2. Arkansas Archaeological Survey Research Series No. 38. Fayetteville, Arkansas

Story, D.A. J.A. Guy, B.A. Burnett, M.D. Freeman, J.C. Rose, D.G. Steele, B.W. Olive and K.J. Reinhard

1990 *The Archaeology and Bioarchaeology of the Gulf Coastal Plain*, vols. 1 and 2. Arkansas Archaeological Survey Research Series No. 38. Fayetteville, Arkansas.

Texas Historical Commission

2017 *Texas Archaeological Site Atlas*. <http://nueces.thc.state.tx.us/> (25 July 2017).

Wormster

1987 *Letter Report: US 380 From SH 289 to SH 78 in Farmersville, Cultural resources Assessment, Collin County*. SDHPT. Austin.

Appendix B Project Area Soil Series

Series	MUSYM	Epipedon		Pedon		Parent Material
		Texture	Depth (cm)	Texture	Depth (cm)	
Burleson	BcB	cl	50	cl	152	Pleistocene calcareous clayey alluvium
Engle	EnC2	cIl	30	cIl	122	Residuum from calcareous sandstone
Ferris	FeE3	cl	15	cl	203	Residuum from calcareous shale
Heiden	FeE3, HcC2, HcD2	cl	25	cl	203	Residuum from calcareous shale
Houston	HoA, HoB, HoB2	cl	12	cl	203	Residuum from mudstone
Lamar	LaD2	cIl	15	cl	203	Quaternary calcareous alluvium
Lewisville	LeC2	sicI	30	cIl	163	Alluvium from mudstone
Tinn	Tf	cl	45	cl	203	Calcareous clayey alluvium
Trinity	To	cl	15	cl	190	Calcareous clayey alluvium