

**Appendix 2-6**

**Historic-age Resources Due Diligence Report**





# Dallas North Tollway Extension

## Phase 4B/5A

### From FM 428 to FM 121

Historic-age Resources Due Diligence Report

February 2011





**HISTORIC-AGE RESOURCES DUE DILIGENCE REPORT**

**FOR**

**A RECONNAISSANCE SURVEY OF  
NON-ARCHEOLOGICAL HISTORIC RESOURCES  
OF THE  
DALLAS NORTH TOLLWAY EXTENSION PHASE 4B/5A  
FROM FM 428 TO FM 121**

**COLLIN, DENTON, AND GRAYSON COUNTIES, TEXAS**

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**for**

**NORTH TEXAS TOLLWAY AUTHORITY**

**FEBRUARY 2011**

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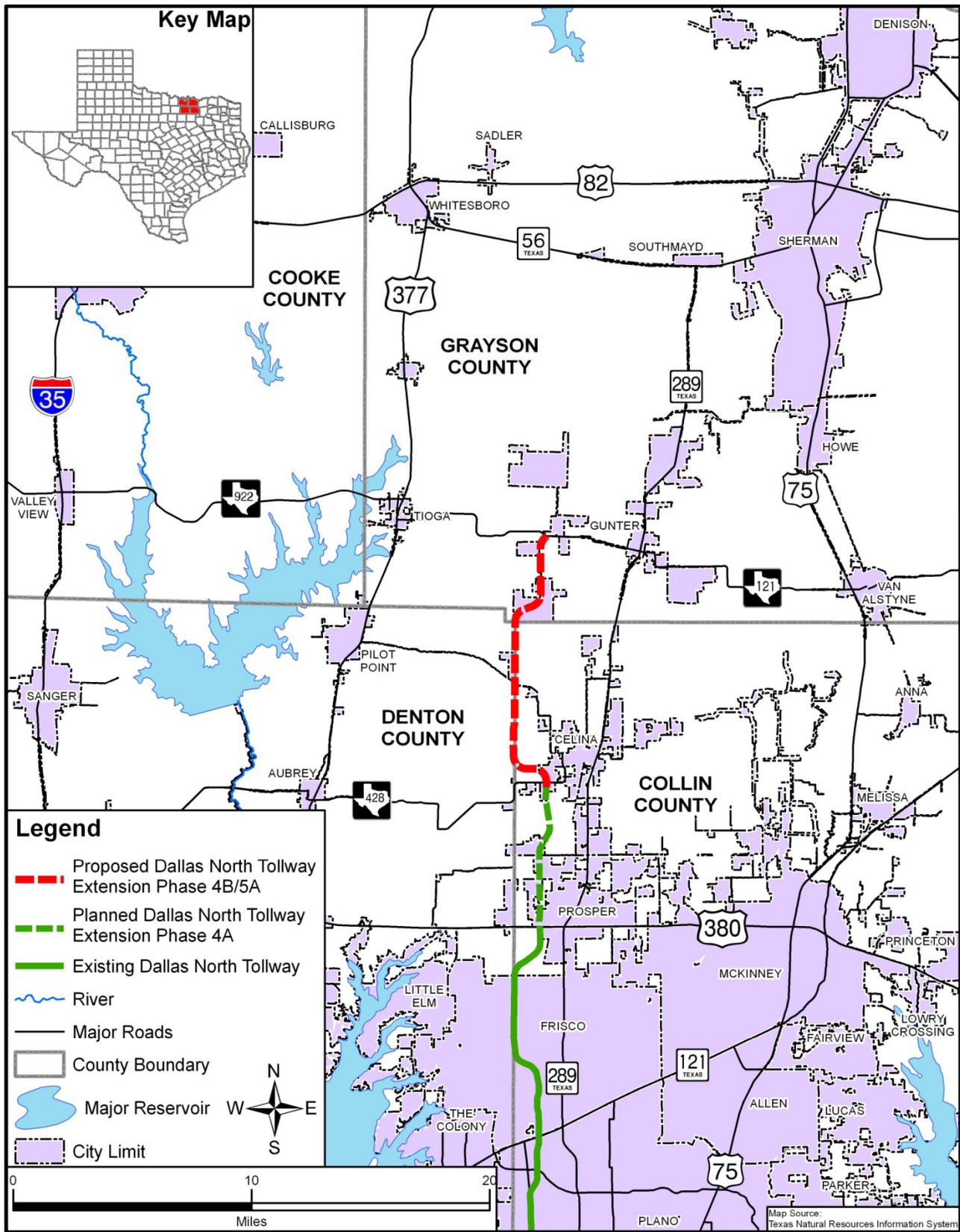
## 1.0 INTRODUCTION

A reconnaissance survey of non-archeological historic-age resources was conducted October 19, 2010 and February 17, 2011 for the North Texas Tollway Authority's (NTTA) proposed 12-mile extension of the Dallas North Tollway Phase 4B/5A (DNT 4B/5A) from its future southern terminus at Farm to Market Road (FM) 428 in Collin County northward to FM 121 in Grayson County. The survey identified eight areas with historic-age resources, all of which have multiple resources, within the area of potential effects (APE) for the proposed DNT 4B/5A.

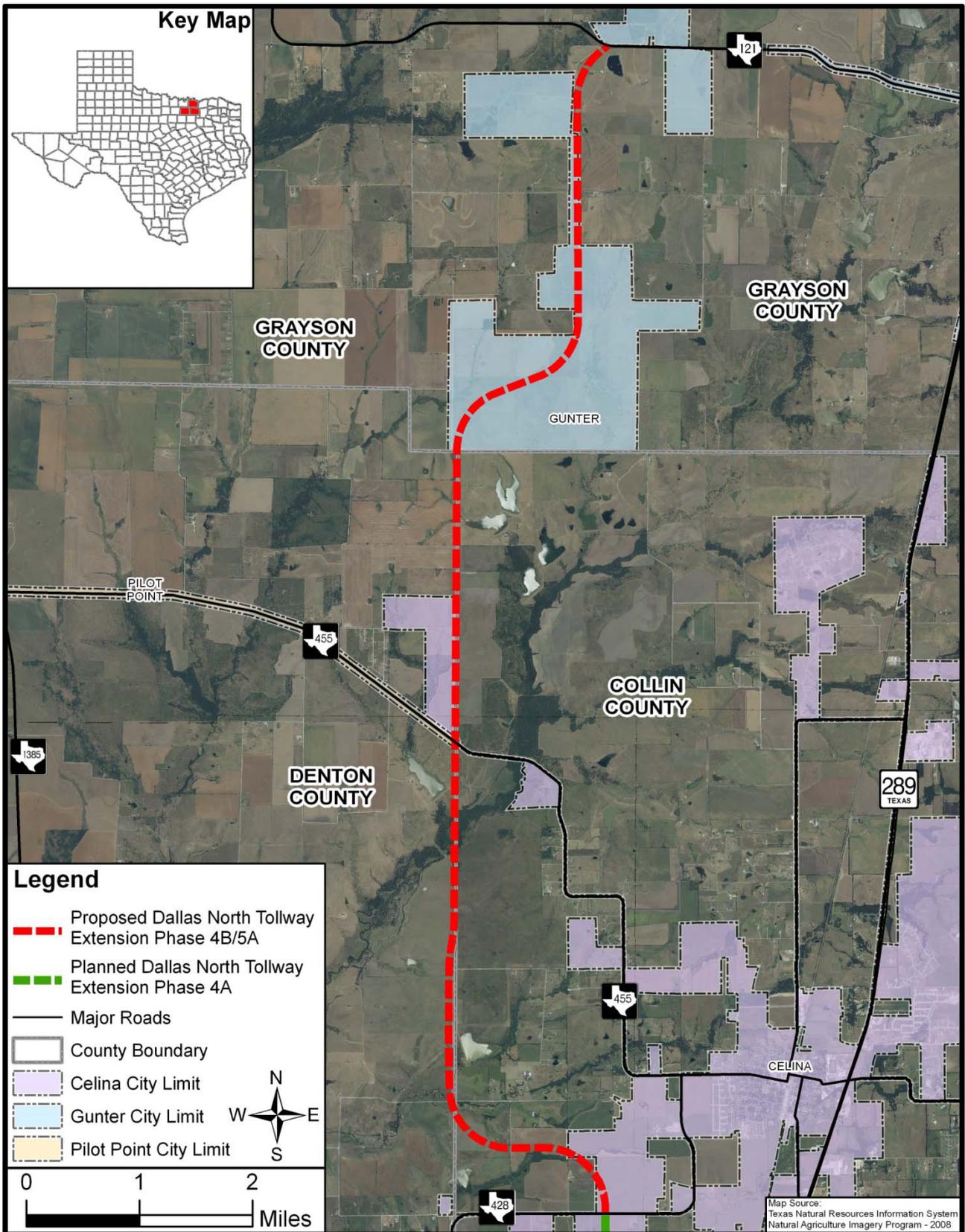
The NTTA is a political subdivision of the State of Texas and as such is subject to compliance with Chapter 26 of the Antiquities Code of Texas (ACT). Because the proposed NTTA DNT 4B/5A project does not include any federal funding participation and due to the absence of any known federal involvement, this reconnaissance survey is not regulated by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, or the 2005 Programmatic Agreement for Transportation Undertakings (PA-TU) among the Federal Highway Administration (FHWA), the Texas Historical Commission (THC)/State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and the Texas Department of Transportation (TxDOT). However, in the interest of full disclosure, this reconnaissance survey and report have been conducted and prepared to conform to the standards set forth by Chapter 26 of the ACT and Section 106 of the NHPA. In the event that a federal permit is required for impacts resulting from the proposed DNT 4B/5A, the NTTA will coordinate the findings of this survey and report with the federal agency responsible for issuing the permit to fully comply with Section 106 of the NHPA.

## 2.0 PROJECT DESCRIPTION

The proposed DNT 4B/5A would extend the DNT from its future terminus at FM 428 in Collin County, north along the Collin-Denton county line to FM 121 in Grayson County, a distance of approximately 11.9 miles. The proposed new location tollway would pass through the western portions of the City of Celina in Collin County and the City of Gunter in Grayson County. The proposed DNT 4B/5A would be constructed as a six-lane limited access expressway, and would be flanked by three-lane frontage roads in each direction. **Figure 1** shows the proposed DNT 4B/5A within its regional context, and **Figure 2** provides a vicinity map showing the proposed DNT 4B/5A overlaid onto an aerial photograph. The proposed DNT 4B/5A would have a typical right-of-way (ROW) 400 feet wide which would comprise an area of approximately 583.5 acres.



**Figure 1. Regional Context Map**  
Dallas North Tollway Extension Phase 4B/5A from FM 428 to FM 121



**Project Vicinity Map**  
Dallas North Tollway Extension Phase 4B/5A from FM 428 to FM 121

### **3.0 METHODOLOGY**

The Secretary of the Interior's Guidelines for National Register of Historic Places (NRHP) eligibility prescribes a criterion of 50-year old resources for consideration for inclusion in the NRHP. The aforementioned PA-TU also calls for a 50-year cutoff date for historic-age. However, the NTTA prefers to use a 45-year cutoff (45 years prior to the estimated project letting date) to allow for unforeseen delays in letting and for consistency with TxDOT guidelines. Accordingly, "historic-age," as used in this report, includes buildings, structures, bridges, cemeteries, districts, and objects that are at least 45 years of age or older at the time of project letting for construction. As the projected letting date for DNT 4B/5A is expected to be 2023, 1978 was used as the cutoff date for identifying historic-age resources.

The APE for the proposed DNT 4B/5A is defined as 300 feet beyond the proposed ROW to be consistent with the requirements for new construction road work in the aforementioned PA-TU. Historic-age resources located outside the APE were nevertheless included in the survey in those instances where a portion of the property parcel for a resource was within the APE and the actual resource was no more than 500 feet beyond the APE limit.

The historic-age resource study area is defined as 1,300 feet from the proposed DNT 4B/5A ROW (i.e., 1,000 feet beyond the APE). A review of the THC's Texas Historic Sites Atlas, the NRHP, Recorded Texas Historic Landmarks, State Archaeological Landmarks, Official Texas Historical Markers, and other previously recorded historic resources was conducted in October 2010. No recorded resources are located within 1,300 feet of the proposed DNT 4B/5A ROW. The architectural historian also performed a comparative analysis of historic aerial photographs (from Texas Natural Resources Information Service, years 1942, 1952, 1964, 1972, 1984, 1989, and 2004) and historic U.S. Geological Survey (USGS) topographic maps (years 1960 and 1961) to current aerial photographs (from Landiscor, 2009) to assist in the identification of extant buildings, structures, bridges, and other physical features that may be historic-age resources within the project area. In addition, historical aerial photographs contained in county soil surveys (Soil Conservation Service, 1969 – 1980) and general highway maps prepared in 1939, 1940, and 1961 (Texas State Highway Department, 1939 – 1961) were used to aid in the identification of historic-age resources.

### **4.0 HISTORY OF THE PROJECT AREA**

#### ***Collin County***

Collin County is located in northeast Texas, approximately 30 miles south of the Red River and borders Grayson County to the north and Denton County to the west. The county lies within the Blackland Prairie Region, described topographically as level to gently rolling with elevations ranging between 450 to 700 feet above sea level and drained by the Trinity River. The earliest substantial settlement in Collin County began in the mid-1830s through the Peters' Colony, and

was established in 1846. The county and county seat (McKinney, TX) are named for Collin McKinney, who was a signer of the Texas Declaration of Independence and one of the earliest settlers in the county.

During its first decade, the county grew slowly mainly due to a lack of transportation routes. In 1872, the Houston and Texas Central Railroad arrived, and by the mid-1890s, a network of six railroads functioned within Collin County. With this new form of transportation and accessibility to other markets, Collin County became agriculturally viable producing mass quantities of corn, cotton, and wheat.

Like many other Texas counties, agricultural production declined during the Great Depression. In the mid-1940s, the Texas Research Foundation and the Collin County Soil Conservation District were established to help prevent flooding in the area and work to improve soil-conservation practices, thus aiding post-Depression revitalization.

Over the next several decades, the economy became diversified from the introduction of new industries, such as light industry and commerce, and the expansion of the Dallas metropolitan area. The population rose dramatically from 41,692 in 1960 to 144,576 in 1980, driven largely by suburban development in and around Plano. According to the North Central Texas Council of Governments (NCTCOG), the 2010 population is estimated at 786,250.

A portion of the southern end of the project area lies within the city limits of Celina. Established in 1879, Celina developed around the St. Louis, San Francisco, and Texas Railway. The population drifted around 1,000 during and after the Great Depression and grew to 1,861 by the year 2000. Celina boasts the first road built in the county exclusively for automobiles.

### ***Denton County***

Denton County is located in north central Texas, bordering Dallas and Tarrant counties to the south and Cooke and Grayson counties to the north. Land in the west Denton County area consists of black soil of the Grand Prairie, to the east is a small part of Blackland Prairie, and the central area of the county is in the East Cross Timbers Region. The topography ranges in elevation from 500 to 900 feet above sea level. Like Collin County, the earliest substantial settlement in Denton County began in the mid-1830s through the Peters' Colony after Texas Independence in 1836. The City of Denton became the county seat in 1856.

Growth was slow in Denton County until after the Civil War, and by 1880 the population had increased, leading to the cultivation of approximately half the county. Specifically, German families were attracted to the area around the 1870s, and some remain in the area today. The majority of the population relied on subsistence agriculture until the railroad entered the county in the 1880s, converting subsistence agriculture to cash crops consisting mainly of cotton and wheat.

After 1900, population growth was mainly influenced by The University of North Texas and Texas Woman's University as well as the proximity to the City of Dallas and access provided by Interstate Highway 35 in the 1950s. The population rose dramatically from 47,432 in 1960 to 143,126 in 1980. According to the NCTCOG, the 2010 population is estimated at 637,750.

The project area passes to the east of the City of Pilot Point. First organized in 1847, Pilot Point's progress was influenced by a telegraph line running through the town in the 1870s and railroad tracks passing through the city came into use by two railroads in the 1880s. Literature was published by Emil Flushe in the 1890s, encouraging German Catholics to settle in the area. German influence is seen in the architecture of buildings constructed during this time. The population lingered around 1,100 during and after the Great Depression and grew to 3,538 by the year 2000.

### ***Grayson County***

Grayson County is located in north central Texas and is bordered by the Red River, as well as by Fannin, Collin, Denton, and Cooke counties. The northern part of the county is drained by Lake Texoma and the Red River, and the southern part of the county is drained by tributaries of the Trinity River. Most of the county lies within the Blackland Prairie Region, except for the western edge of the county which is within the East Cross Timbers Region. Grayson County is described topographically as level with some low hills and with elevations ranging between 600 to 800 feet above sea level. The earliest settlement in Grayson County began in 1836-1837 from French and Spanish expeditions, but rapid settlement occurred in the 1840s after the Peter's Colony settlement. The county is named for Peter W. Grayson, the general of the Republic of Texas, and the county seat (City of Sherman) is named for General Sidney Sherman.

The county developed into a trading and market center in the 1850s, using Preston Bend as a landing in the river trade. Population growth occurred in the late 1850s attributable to the status of the City of Sherman as a station on the Butterfield Overland mail route in 1858. In 1872, the Houston and Texas Central Railroad in the City of Sherman and the Missouri, Kansas, and Texas Railroad in the City of Denison instigated population growth from 14,387 in 1870 to 38,108 in 1880. During the 1870s through the 1890s, Grayson County became a milling and market center, but agriculture was dominant producing corn, wheat, and cotton.

The county struggled during the Great Depression, but the construction of the Lake Texoma dam in 1938 and Perrin Air Force Base in 1941 created an economic boom for the county. Starting in the 1930s, oil became a primary contributor to the county's economy. According to the 2000 census, the Grayson County population was 110,595, and the 2009 population was estimated at 120,030.

The project area traverses the western portion of the City of Gunter. Organized in 1902, Gunter formed around the St. Louis, San Francisco, and Texas Railway and was one of the later cities

to become established in Grayson County. The city was used as a retail and community center for the farmers in the area. The population fluctuated from 1914 until after the Great Depression, with a low of about 475 people and grew to 1,230 by the year 2000.

## 5.0 HISTORIC CONTEXTS

Historic contexts are organized by place, time, and theme, linking historic properties to important historic trends. A literature review was conducted to further assess the project area for historic contexts, as discussed in the previous section. These additional information sources included county soil surveys, general highway maps, an open space plan for Collin County, and a historical discussion in a regional botanical reference. Based upon this review, the following two historic contexts were identified and briefly developed for the project area:

### ***Agricultural Development in Collin, Denton, and Grayson Counties, Texas: 1850-1950***

As part of the Blackland Prairie Region, Collin, Denton, and Grayson counties attracted farmers with extremely fertile soils as early as 1840. The production of agricultural products has been the primary impetus for settlement in the region. Historical accounts make reference to sod plowing throughout this region in the 1840s and 1850s. However, the lack of transportation prevented large farm operations from succeeding. After the arrival of the railroads beginning in 1872, agricultural production increased significantly and farm operations became larger and more plentiful, producing mostly corn, cotton, and wheat.

Information contained in the U.S. Census for the period 1850 to 1950 provides insights into the history of settlement and agricultural development within Collin, Denton, and Grayson counties. A summary of changes in the general population and the number of farms within these three counties is provided in **Table 1**. These data indicate a sharp increase in population and the number of farms during the 1870s and 1880s, which coincides with the arrival of railroad connections to markets elsewhere. Also, while the data indicate a reduction in the total number of farms, this decrease is not the result in a reduction of the overall acreage within farms but is linked to a trend of increasing size of the remaining farms.

**Table 1. U.S. Census Combined Data for Collin, Denton, and Grayson Counties**

Census Data *	Census Decade					
	1850	1870	1890	1910	1930	1950
Total Number of Farms	470	2,295	11,854	16,530	15,201	10,200
Total General Population	4,599	35,651	111,236	146,275	144,845	153,524

\* Source: University of Virginia Library, Historical Census Browser (accessed January 31, 2011), <http://mapserver.lib.virginia.edu/php/county.php>.

Throughout its first century of agricultural history, this three-county region emphasized the production of cotton in addition to small grains and grain silage. Data from the U.S. Agricultural Census shown in **Table 2** for selected decades from 1890 to 1950 indicate the acreage and percentage of the three-county area used for several major crops. Approximately 90% of Collin, Denton, and Grayson counties has been either improved or unimproved farmland for over a century, and much of the land less suited to fiber and grain production has been used for hay meadows and livestock grazing.

**Table 2. Agricultural Census Combined Data for Collin, Denton, and Grayson Counties**

Ag. Census Data <sup>1</sup>	Census Decade			
	1890	1910	1930	1950
Land Farmed for Cotton (acres / % <sup>2</sup> )	202,331 11.4%	387,872 21.9%	477,359 26.9%	268,863 15.2%
Land Farmed for Wheat and Oats (acres / % <sup>2</sup> )	119,066 6.7%	148,460 8.4%	209,190 11.8%	163,163 9.2%
Land Farmed for Corn/Sorghum (acres / % <sup>2</sup> )	187,066 10.5%	368,903 20.8%	178,540 10.1%	188,732 10.6%

1. Source: U.S. Department of Agriculture, National Agricultural Statistics Service, Census of Agriculture (accessed January 31, 2011), [http://www.agcensus.usda.gov/Publications/Historical\\_Publications/index.asp](http://www.agcensus.usda.gov/Publications/Historical_Publications/index.asp).  
2. Percentage reflects the amount of the three-county area farmed for this product as compared to the total acreage for the three-county area (i.e., 1,774,080 acres).

Farmsteads generally include many buildings, structures and landscape features that support agricultural production and the individual components comprise a recognizable, cohesive unit. The farmsteads of the late 1840s usually included a log house, a kitchen, a smokehouse, and various other outbuildings. Post oak was preferred for cabin construction, and the logs were chinked with mud to keep out the cold and hold in the heat. Log houses later replaced cabins as early settlers began to establish their roots and secure a reliable living from farming. According to an open space plan for Collin County (RMA, 1986), "Few if any of the early houses exist, and there are very few log structures remaining in Collin County although they are abundant in Denton County."

***Transportation in Collin, Denton, and Grayson Counties, Texas: 1850-1950***

In 1872, the Houston and Texas Central Railroad was extended to Collin, Denton, and Grayson counties connecting McKinney and Plano to Houston. This was followed shortly after by the Missouri, Kansas, and Texas Railroad and was joined 10 years later by the Gulf, Colorado, and Santa Fe Railroad. In addition to larger farmsteads, the railroads encouraged commercial and residential development in Collin, Denton, and Grayson counties. The Frisco (formerly St. Louis-San Francisco and Texas) Rail Line is located to the east of the proposed DNT 4B/5A corridor. As no railroad lines either cross or are within a mile of the proposed DNT 4B/5A corridor, commercial buildings associated with former and existing railroads would be expected within the project area.

## 6.0 SURVEY RESULTS

Representative historic resources identified within the project area are summarized in **Appendix A**, and include farmhouses and associated agricultural buildings from the early to late 20<sup>th</sup> century. There are two occupied residences within the project area. These residences were constructed in the late 20<sup>th</sup> century and are associated with agricultural development. Other agricultural buildings within the APE include wood and/or metal barns with gabled roofs, one (Location ID 6B) with a gambrel roof, and one (Location ID 7G) with a barrel open web frame. The farmsteads exhibit the characteristic grouping of buildings, structures and features that were evident of the development of the early farmsteads but evolved to include structures for mechanized farming and grain storage. Most of these are in disrepair and are either used for storage or are vacant. Although several century-old farmsteads may be found within the project area, no extant log structures were observed. Also, no historic-age commercial buildings were observed within the project corridor.

The historic-age resources within the APE are associated with eight different farmsteads, all of which are observable on historic aerial photographs and are also believed to correspond with farmsteads shown on one or more of the 1939 – 1961 general highway maps for the three counties in the project area. **Appendix A** lists each historic-age resource identified within the project area and includes a location identification number which corresponds to the survey forms in **Appendix B** and the survey maps in **Appendix C**. A total of 30 historic-age resources were identified within the project area including two habitable residences. The remaining structures consist of agricultural outbuildings, barns, water troughs, windmills, and silos.

## 7.0 EVALUATION CRITERIA

The following criteria and considerations from 36 Code of Federal Regulations Section 60.4 are used by the National Park Service (NPS) in evaluating properties for nomination to the NRHP in reviewing nominations and for evaluating National Register eligibility of properties.

*National Register Criteria for Evaluation.* *The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and*

*A – 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 persons significant in our 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 prehistory or history.*

Criteria Considerations. *Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria of if they fall within the following categories:*

- (a) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or*
- (b) A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or*
- (c) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life.*
- (d) A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or*
- (e) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or*
- (f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or*
- (g) A property achieving significance within the past 50 years if it is of exceptional importance.*

In addition to the foregoing eligibility criteria and considerations in NPS regulations, the NPS has published guidelines for evaluating the integrity of historic-age resources. As defined in the NPS guidelines, the integrity of a cultural resource is the ability of the resource to convey its significance. Consequently, before a resource may be included in the NRHP it must both meet the National Register criteria and demonstrate integrity. The evaluation of integrity focuses on a resource's physical features as related to its significance. In essence, to retain its historic integrity, a property must possess at least several, and usually most, of the seven specific aspects of integrity that the NPS has identified. These seven aspects of the integrity are listed below and briefly described:

1. Location – the place where the historic property was constructed or the place where the historic event occurred.
2. Design – the combination of elements that create the form, plan, space, structure, and style of a property.
3. Setting – the physical environment of a historic property.

4. Materials – the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. Workmanship – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. Feeling – a property's expression of the aesthetic or historic sense of a particular period of time.
7. Association – the direct link between an important historic event or person and a historic property.

## 8.0 NRHP ELIGIBILITY EVALUATION RESULTS

Each of the 30 historic-age resources identified within the APE of the project area was assessed for NRHP criteria eligibility using the aforementioned eligibility criteria/considerations and aspects of integrity. The application of these criteria is summarized below for the 30 resources, which are grouped by the farmsteads where they are located. Based on this review of historic-age resources, none of the resources meet the standards of both eligibility criteria and integrity that are necessary to be recommended as a candidate for the NRHP. The precise locations of historic-age resources are shown in **Appendix C**, and a detailed description and photographs of the resources are in **Appendix B**. The resources and key characteristics are summarized in the table in **Appendix A**.

Location 1 is a farmstead with three historic-age resources including an inhabited residence (1A), a metal barn currently in use (1B), and a wood/metal barn not in use (1C). The residence and metal barn are in good condition, but the wood/metal barn is in severely deteriorated condition with pervasive holes in the roof and missing boards and/or metal panels on the sides. These aspects of Resource 1C's condition indicate it no longer maintains the integrity of design, setting, materials, workmanship, feeling, and association; therefore, this resource is recommended Not Eligible for the NRHP under Criterion C. In addition, Resources 1A – 1C are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history; accordingly, all three of these resources are recommended Not Eligible for the NRHP under Criteria A and B.

Location 2 is an abandoned farmstead with a barn (2A), chicken coop (2B), horse shed (2C), and dwelling (2D) that are all in severely deteriorated condition. These four resources no longer maintain integrity of design, setting, materials, workmanship, feeling, and association because the roofs are partly or completely collapsed, doors/windows are open to the elements, and walls either have portions missing or are collapsed; therefore, these resources are recommended Not Eligible for the NRHP under Criterion C. The resources are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history. These resources are also recommended Not Eligible for the NRHP under Criteria A and B.

Location 3 is an abandoned farmstead with a collapsed dwelling (3A) and concrete stock tank (3B) which is not functioning and in a general state of disrepair. The dwelling no longer maintains integrity of design, setting, materials, workmanship, feeling, and association because it is completely collapsed; therefore, this resource is recommended Not Eligible for the NRHP under Criterion C. The concrete stock tank is also recommended Not Eligible under Criterion C because it is in a state of general disrepair, is not functioning, and is not connected or associated with any significant historical resources. Both of these resources are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history. Accordingly, these resources are recommended Not Eligible for the NRHP under Criteria A and B.

Location 4 is an abandoned farmstead with two concrete stock tanks (4A and 4B), a corrugated steel silo (4C), and a standing windmill (4D) that are all in disrepair. The concrete stock tanks are in a state of general disrepair (one with damage to a side wall), are not functioning, and are not connected or associated with any significant historical resources. The steel silo is missing its roof and door and is exposed to the elements, and the windmill, while intact, is in deteriorated condition and exhibits bullet holes in the wind vane. These four resources no longer maintain integrity of design, setting, materials, workmanship, feeling, and association because of their generally deteriorated condition and substantial damage to each; therefore, these resources are recommended Not Eligible for the NRHP under Criterion C. As these four resources are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history, they are recommended Not Eligible for the NRHP under Criteria A and B.

Location 5 is an abandoned farmstead with a concrete storm/storage cellar (5A), a cistern (5B), and two windmills (5C and 5D) that are all in disrepair. The storm/storage cellar is in a state of general deterioration with the entrance door missing and several inches of standing water in the bottom of the cellar; other than a natural gas pipe nearby, there are few vestiges of the farm house that was likely located near the cellar. The brick-lined cistern has been filled with soil and farm debris, and some of the bricks and plaster from the upper portion of this feature have fallen out of place. One of the windmills is collapsed and severely damaged. The remaining windmill is standing but is not functioning and exhibits bullet holes in its wind vane. All four of these resources no longer maintain integrity of design, setting, materials, workmanship, feeling, and association because of their generally deteriorated condition and substantial damage to each; therefore, these resources are recommended Not Eligible for the NRHP under Criterion C. As these four resources are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history, they are recommended Not Eligible for the NRHP under Criteria A and B.

Location 6 is an abandoned farmstead with a dwelling (6A), barn (6B), concrete stock tank (6C), and windmill (6D) that are all in severely deteriorated condition. The dwelling and barn no longer maintain integrity of design, setting, materials, workmanship, feeling, and association because of holes in walls and roofs, and open doors and windows that have exposed the building interiors to the elements and resulted in a generally deteriorated condition; therefore, these

resources are recommended Not Eligible for the NRHP under Criterion C. The stock tank and windmill are also recommended Not Eligible under Criterion C because the stock tank is not functioning and in a general state of disrepair, and the windmill is missing its fan blades and has bullet holes in the wind vane. All four of these resources are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history, and are also recommended Not Eligible for the NRHP under Criteria A and B.

Location 7 is an operational farmstead with seven historic-age resources including an inhabited residence (7A), four corrugated steel silos not apparently in use (7B), and five barn or shed structures that appear to be currently in use (7C – 7G). The residence is in fair condition, but exhibits evidence of deterioration and modification (e.g., satellite dish, enclosed porch, and changes to windows). The four steel silos are generally intact, but the door is missing from one structure and the roofs of all silos are heavily rusted. Portions of four of the barns (7C – 7F) are exposed to the elements as the result of missing doors and/or gaps in walls and roofs, and all exhibit a generally deteriorated condition. One barn (7G) is in reasonably good condition. The general condition of Resource 7A – 7F indicate these structures no longer maintain the integrity of design, setting, materials, workmanship, feeling, and association; therefore, these resources are recommended Not Eligible for the NRHP under Criterion C. In addition, all seven resources are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history; accordingly, all of these resources are recommended Not Eligible for the NRHP under Criteria A and B.

Location 8 is an abandoned farmstead with a dwelling (8A) and adjacent barn (8B) that are both in severely deteriorated condition. The dwelling no longer maintains integrity of design, setting, materials, workmanship, feeling, and association because the windows and doors are missing, exposing the interior to the elements, and metal siding is partially missing from exterior walls. Similarly, the barn no longer maintains integrity of design, setting, materials, workmanship, feeling, and association because the roof and over half of all wall panels are missing. Therefore, these resources are recommended Not Eligible for the NRHP under Criterion C. As, these resources are not associated with a known significant individual nor are they associated with events that have made a significant contribution to the broad patterns of our history, they are also recommended Not Eligible for the NRHP under Criteria A and B.

## **9.0 PROJECT EFFECTS**

The proposed DNT 4B/5A would extend the DNT with a new location, six-lane limited access expressway from its future southern terminus at FM 428 in Collin County, Texas to FM 121 in Grayson County, Texas. There would be no displacements by the proposed DNT 4B/5A. As the historic-age resources within the 300-foot APE are not eligible for listing in the NRHP, the proposed DNT 4B/5A would have no effects to historic resources and individual project coordination with the SHPO is not required.

## 10.0 BIBLIOGRAPHY

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**APPENDIX A**  
**TABLE OF HISTORIC-AGE RESOURCES**

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Table of Historic-Age Resources									
ID	Location *		Property Type	Subtype	Stylistic Influence	Form — Plan	Date	Integrity Issues	NRHP Eligibility Recommendation
	County — Ownership	Description							
1A	14376 FM 428		residence	single dwelling	contemporary	U-plan — gable & shed	1974		Not Eligible
1B	— Collin County — King 428 Farms, Ltd.		agri-cultural	agri. barn		rectangular	1955		Not Eligible
1C			agri-cultural	agri. barn		rectangular	c. 1920s	deterioration of roof and loss of metal side panels	Not Eligible
2A			agri-cultural	agri. barn		rectangular	c. 1920s	half of roof collapsed and side boards missing	Not Eligible
2B	East of CR 54 (between CR 8 and FM 428)		agri-cultural	agri. out-building		rectangular	c. 1920s	east side missing, generally deteriorated side boards	Not Eligible
2C	— Collin County — Godwin Investments, Ltd.		agri-cultural	agri. barn		rectangular	c. 1920s	metal side panels partially disconnected or missing	Not Eligible
2D			residence	single dwelling		rectangular — gable & shed	c. 1915 — 1940s	roof nearly completely collapsed, few walls remain	Not Eligible
3A	West of CR 54		residence	single dwelling		unidentifiable	c. 1920s	building completely collapsed	Not Eligible
3B	— Collin County — H. Buchanan Howard, Trustee		agri-cultural	water trough			c. 1920s	general disrepair; not functioning	Not Eligible
4A			agri-cultural	water trough			c. 1935 — 1950s	general disrepair; not functioning	Not Eligible
4B	South of CR 8 and CR 9 intersection		agri-cultural	water trough			c. 1935 — 1950s	large chip in side wall; not functioning	Not Eligible
4C	— Denton County — H. Buchanan Howard, Trustee		agri-cultural	agri. silo			c. 1935 — 1950s	door and roof missing; general disrepair	Not Eligible
4D			agri-cultural	windmill			c. 1935 — 1950s	general disrepair; bullet holes in wind vane	Not Eligible
5A			agri-cultural	storm cellar			c. 1930 — 1940s	door missing and standing water in cellar	Not Eligible
5B	East of CR 9, north of CR 8		agri-cultural	cistern			c. 1930 — 1940s	filled with debris; brick lining partially collapsed	Not Eligible
5C	— Collin County — Old Celina, Ltd.		agri-cultural	windmill			c. 1940 — 1950s	collapsed and severely damaged	Not Eligible
5D			agri-cultural	windmill			c. 1940 — 1950s	general disrepair; bullet holes in wind vane	Not Eligible

Table of Historic-Age Resources									
ID	Location *		Property Type	Subtype	Stylistic Influence	Form — Plan	Date	Integrity Issues	NRHP Eligibility Recommendation
	County	Ownership							
6A			residence	single dwelling		rectangular — gable	c. 1950s	open windows and holes in roof; deteriorated interior	Not Eligible
6B		North of FM 455, west of CR 10 (County Line Rd) — Denton County — Parkwood, LP	agri-cultural	agri. barn		rectangular — gambrel & shed	c. 1930s	open windows, doors, and holes in sides and roof; general deterioration	Not Eligible
6C			agri-cultural	water trough			c. 1930s	general disrepair; not functioning	Not Eligible
6D			agri-cultural	windmill			c. 1930s	fan blades missing and bullet holes in wind vane	Not Eligible
7A			residence	single dwelling		rectangular — gable	c. 1930s	alterations to porch and windows; some disrepair	Not Eligible
7B			agri-cultural	agri. silo			c. 1960s	door missing on one silo; generally rusted condition	Not Eligible
7C			agri-cultural	agri. barn		rectangular — gable / pole	c. 1960s	door and portion of side missing	Not Eligible
7D		South side of Stiff Chapel Rd, east of Scharff Rd — Grayson County — Martinek Farming, LLC	agri-cultural	agri. barn		rectangular — shed / pole	c. 1960s	portions of front and side missing	Not Eligible
7E			agri-cultural	agri. barn		rectangular — gable / pole	c. 1960s	metal siding partially missing; general disrepair	Not Eligible
7F			agri-cultural	agri. barn		rectangular — gable / pole	c. 1960s	general disrepair; gap in roof	Not Eligible
7G			agri-cultural	agri. barn		rectangular — barrel	c. 1950s		Not Eligible
8A		West of Scharff Rd, north of Stiff Chapel Rd — Grayson County — Martinek Farming, LLC	agri-cultural	2-room / 2/family dwelling		rectangular — side gable	c. 1930s	windows and doors open; some metal siding missing	Not Eligible
8B			agri-cultural	agri. barn		rectangular — shed / pole	c. 1940s	roof and over half of wall panels missing	Not Eligible

\* The locations of farmsteads and individual historic-age resources within the APE are shown in Appendix C.

**APPENDIX B**  
**HISTORIC-AGE RESOURCES SURVEY FORMS**

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**Location ID:** 1A

**Location and Ownership:** 14376 FM 428, Collin County; Parcel—King 428 Farms Ltd.

**Description:** Two-story, brick, U-shaped residence with gable and shed roof, and exterior chimney.

**Date of Construction/Source:** 1974/CCAD.



**View northeast.**



**View east.**

Appendix B, Page 2

**Location ID:** 1B

**Location and Ownership:** 14376 FM 428, Collin County; Parcel—King 428 Farms Ltd.

**Description:** One-story metal barn with two bays, gable roof and shed extension.

**Date of Construction/Source:** 1955/CCAD.



**View northwest.**

**Location ID:** 1C

**Location and Ownership:** 14376 FM 428, Collin County; Parcel—King 428 Farms Ltd.

**Description:** One-story wood and metal barn with steeply-pitched gable roof.

**Date of Construction/Source:** c. 1920s/estimate.



**View northeast.**

**Location ID:** 2A

**Location and Ownership:** East of CR 54 (between CR 8 and FM 428), Collin County; Parcel—Godwin Investments Ltd.

**Description:** Two-story barn, rectangular plan with front facing gable roof. Dimensional lumber frame with vertical board siding, deteriorated condition.

**Date of Construction/Source:** 1920s/estimate.



**View north.**



**View east.**

Appendix B, Page 4

**Location ID:** 2B

**Location and Ownership:** East of CR 54 (between CR 8 and FM 428), Collin County; Parcel—Godwin Investments Ltd.

**Description:** One-story, rectangular, corrugated metal and wood shed roof chicken coop in disrepair.

**Date of Construction/Source:** c. 1920s/estimate.



**View west.**

**Location ID:** 2C

**Location and Ownership:** East of CR 54 (between CR 8 and FM 428), Collin County; Parcel—Godwin Investments Ltd.

**Description:** One-story, rectangular, corrugated metal and wood shed roof horse barn in disrepair.

**Date of Construction/Source:** c. 1920s/estimate.



**View northeast.**

**Location ID:** 2D

**Location and Ownership:** East of CR 54 (between CR 8 and FM 428), Collin County; Parcel—Godwin Investments Ltd.

**Description:** One-story, rectangular plan, gable roof residence with shed roof additions on the east and west facades. Standing structure represents original construction, later addition on south has collapsed. Hybrid construction consisting post and beam walls with gable rafters, exterior materials added over time consisting of vertical board, ship lap and finally stucco. Deteriorated condition.

**Date of Construction/Source:** c. 1915 – 1940s/estimate.



**View northeast.**



**View northeast.**

**Location ID:** 3A

**Location and Ownership:** West of CR 54, Collin County; Parcel—H. Buchanan Howard, Trustee.

**Description:** Collapsed residence, wood frame construction supported on bois d'arc post foundation.

**Date of Construction/Source:** 1920s/estimate.



**View west.**

**Location ID:** 3B

**Location and Ownership:** West of CR 54, Collin County; Parcel—H. Buchanan Howard, Trustee.

**Description:** Concrete stock tank.

**Date of Construction/Source:** 1920s/estimate.



**View west.**

**Location ID:** 4A

**Location and Ownership:** South of CR 8 and CR 9 intersection, Denton County; Parcel—H. Buchanan Howard, Trustee.

**Description:** Concrete stock tank.

**Date of Construction/Source:** 1935 – 1950s/estimate.



**View north.**

**Location ID:** 4B

**Location and Ownership:** South of CR 8 and CR 9 intersection, Denton County; Parcel—H. Buchanan Howard, Trustee.

**Description:** Concrete stock tank.

**Date of Construction/Source:** c. 1935 – 1950s/estimate.



**View northwest.**

Appendix B, Page 8

**Location ID:** 4C

**Location and Ownership:** South of CR 8 and CR 9 intersection, Denton County; Parcel—H. Buchanan Howard, Trustee.

**Description:** Corrugated "Butler" steel silo.

**Date of Construction/Source:** c. 1935 – 1950s/estimate.



**View northwest.**

**Location ID:** 4D

**Location and Ownership:** South of CR 8 and CR 9 intersection, Denton County; Parcel—H. Buchanan Howard, Trustee.

**Description:** Aermotor 6-foot diameter windmill.

**Date of Construction/Source:** c. 1940 – 1950s/estimate.



**View south.**

**Location ID:** 5A

**Location and Ownership:** East of CR 9 and north of CR 8, Collin County; Parcel—Old Celina Ltd.

**Description:** Storm/storage cellar. Cast in place concrete.

**Date of Construction/Source:** c. 1930 – 1940s/estimate.



**View west.**

**Location ID:** 5B

**Location and Ownership:** East of CR 9 and north of CR 8, Collin County; Parcel—Old Celina Ltd.

**Description:** Brick-lined cistern with 30-inch surface opening, expanding to 5 feet, at least 8 feet deep.

**Date of Construction/Source:** c. 1930 – 1940s/estimate.



**View from cistern opening, toward the north.**

**Location ID:** 5C

**Location and Ownership:** East of CR 9 and north of CR 8, Collin County; Parcel—Old Celina Ltd.

**Description:** Collapsed Aermotor 6-foot diameter windmill.

**Date of Construction/Source:** c. 1940 – 1950s/estimate.



**View southeast.**

**Location ID:** 5D

**Location and Ownership:** East of CR 9 and north of CR 8, Collin County; Parcel—Old Celina Ltd.

**Description:** Standing Aermotor 6-foot diameter windmill, steel tower.

**Date of Construction/Source:** c. 1940 – 1950s/estimate.



**View southeast.**

**Location ID:** 6A

**Location and Ownership:** North of FM 455, and west of CR 10, Denton County; Parcel—Parkwood, LP.

**Description:** One-story, rectangular plan residence with gable roof, vertical wood and shingle siding.

Concrete foundation. Closed soffits, modern mechanical system and interior finishes indicative of 1950s construction or significant renovation of existing structure. Deteriorated condition.

**Date of Construction/Source:** c. 1950s/estimate.



**View southeast.**



**View north (interior).**

**Location ID:** 6B

**Location and Ownership:** North of FM 455, and west of CR 10, Denton County; Parcel—Parkwood, LP.

**Description:** Two-story, rectangular plan barn with gambrel roof and shed addition on south, horizontal shiplap wood siding on principal structure, corrugated steel on shed addition. Concrete pier foundation. Deteriorated condition.

**Date of Construction/Source:** c. 1930s/estimate.



**View west.**



**View north.**

**Location ID:** 6C

**Location and Ownership:** North of FM 455, and west of CR 10, Denton County; Parcel—Parkwood, LP.

**Description:** Concrete stock tank.

**Date of Construction/Source:** c. 1930s/estimate.



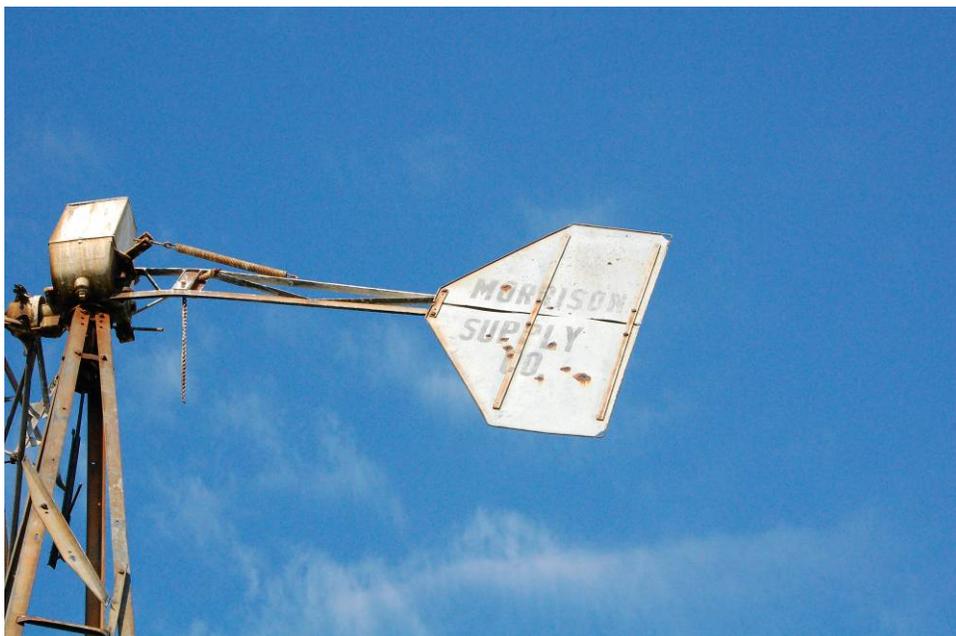
**View northeast.**

**Location ID:** 6D

**Location and Ownership:** North of FM 455, and west of CR 10, Denton County; Parcel—Parkwood, LP.

**Description:** Standing Morrison Supply windmill, steel tower, w/o blades.

**Date of Construction/Source:** c. 1930s/estimate.



**View west.**

**Location ID:** 7A

**Location and Ownership:** South side of Stiff Chapel Road, east of Scharff Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** One-story, rectangular plan residence with front facing gable roof, asbestos siding.  
Concrete foundation. Exposed rafter tails indicative of 1930s construction with later alterations  
and window replacement.

**Date of Construction/Source:** c. 1930s/estimate.



**View southwest.**



**View west.**

**Location ID:** 7B

**Location and Ownership:** South side of Stiff Chapel Road, east of Scharff Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Four corrugated “SIOUX” steel silos.

**Date of Construction/Source:** c. 1960s/estimate.



**View west.**

**Location ID:** 7C

**Location and Ownership:** South side of Stiff Chapel Road, east of Scharff Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Gable roof pole barn (equipment storage and shop) with prefabricated plate truss roof structure. Corrugated steel siding and roofing panels.

**Date of Construction/Source:** c. 1960s/estimate.



**View southwest.**

**Location ID:** 7D

**Location and Ownership:** South side of Stiff Chapel Road, east of Scharff Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Shed roof pole barn (Storage Building) with dimensional lumber roof structure. Corrugated steel siding and roofing panels.

**Date of Construction/Source:** c. 1960s/estimate.



**View southeast.**

**Location ID:** 7E

**Location and Ownership:** South side of Stiff Chapel Road, east of Scharff Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Gable roof pole barn (Horse Barn) with dimensional lumber roof structure. Corrugated steel siding and roofing panels.

**Date of Construction/Source:** c. 1960s/estimate.



**View southwest.**

**Location ID:** 7F

**Location and Ownership:** South side of Stiff Chapel Road, east of Scharff Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Gable roof steel pipe barn (Scale and Shelter Building) with dimensional lumber roof structure. Corrugated steel siding and roofing panels.

**Date of Construction/Source:** c. 1960s/estimate.



**View southeast.**

Appendix B, Page 18

**Location ID:** 7G

**Location and Ownership:** South side of Stiff Chapel Road, east of Scharff Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Rectangular plan, barrel roof barn with corrugated steel siding and roof covering. Building structure is comprised of proprietary curved pipe and rod truss system. Wall system is similar construction.

**Date of Construction/Source:** c. 1950s/estimate.



**View east.**



**View southwest (interior).**

**Location ID:** 8A

**Location and Ownership:** West of Scharff Road, and north of Stiff Chapel Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Rectangular plan, side facing gable roof two room, two family duplex dwelling with corrugated steel siding and roof covering. Wall construction is board and batten, no wall studs. Deteriorated condition.

**Date of Construction/Source:** c. 1930s/estimate.



**View north.**

**Location ID:** 8B

**Location and Ownership:** West of Scharff Road, and north of Stiff Chapel Road, Grayson County;  
Parcel—Martinek Farming LLC.

**Description:** Rectangular plan, pipe truss roof structure barn with corrugated steel siding and roof covering.

**Date of Construction/Source:** c. 1940s/estimate.

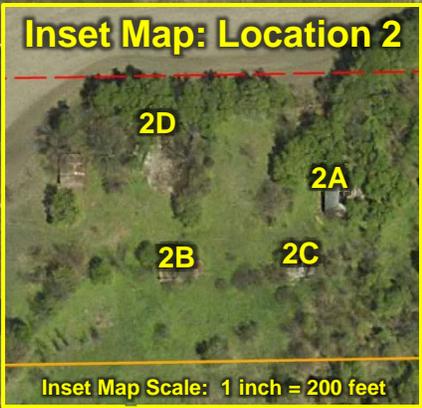
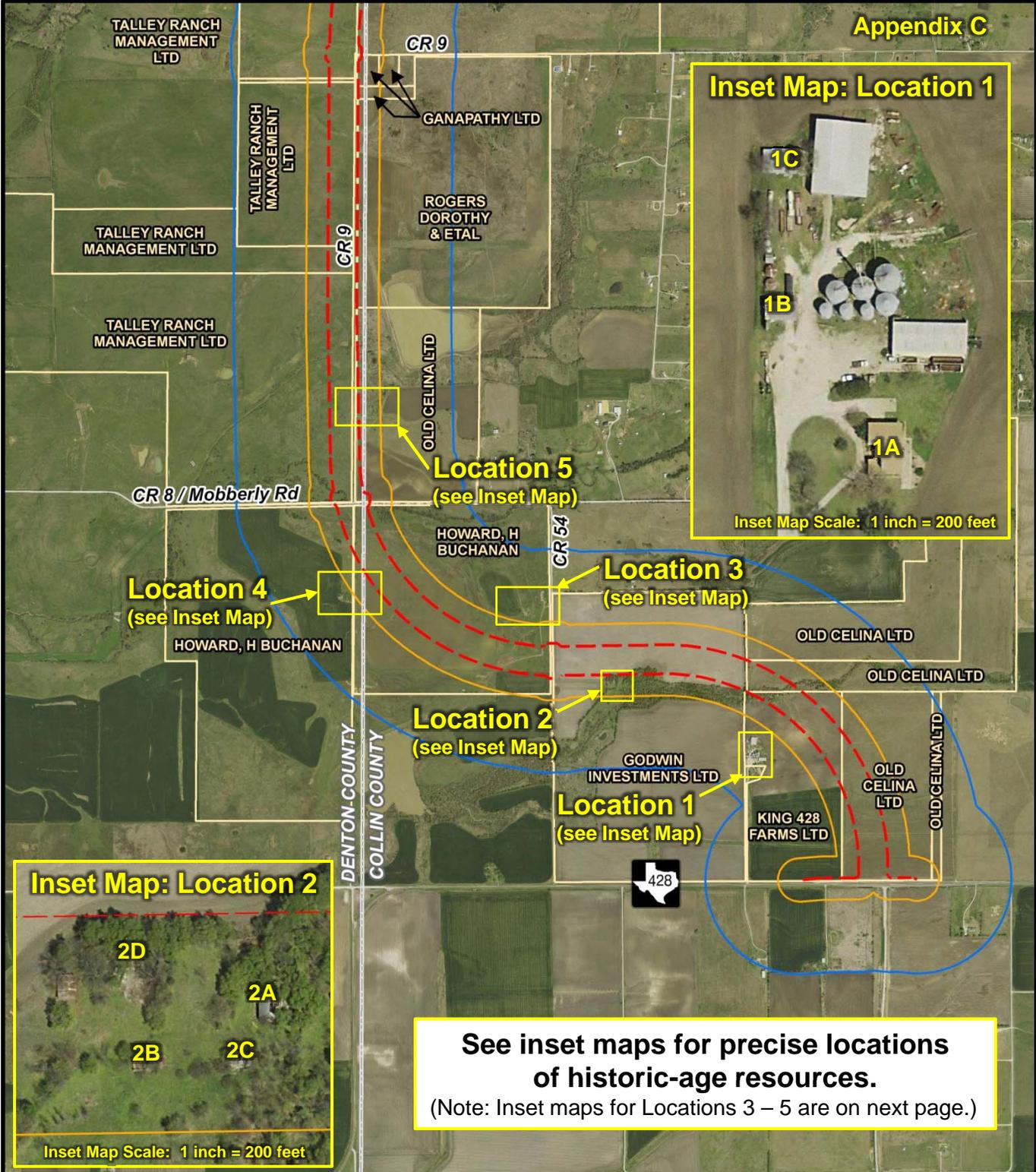


**View northwest.**

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**APPENDIX C**  
**HISTORIC-AGE RESOURCES LOCATION MAP**

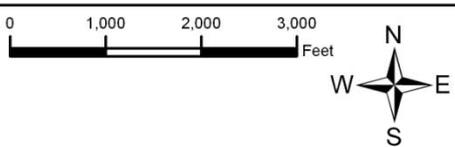
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**See inset maps for precise locations of historic-age resources.**  
 (Note: Inset maps for Locations 3 – 5 are on next page.)

**Legend**

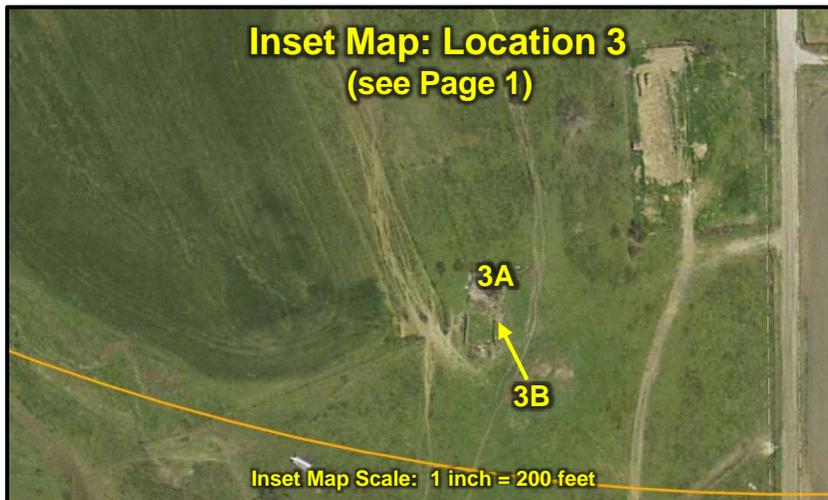
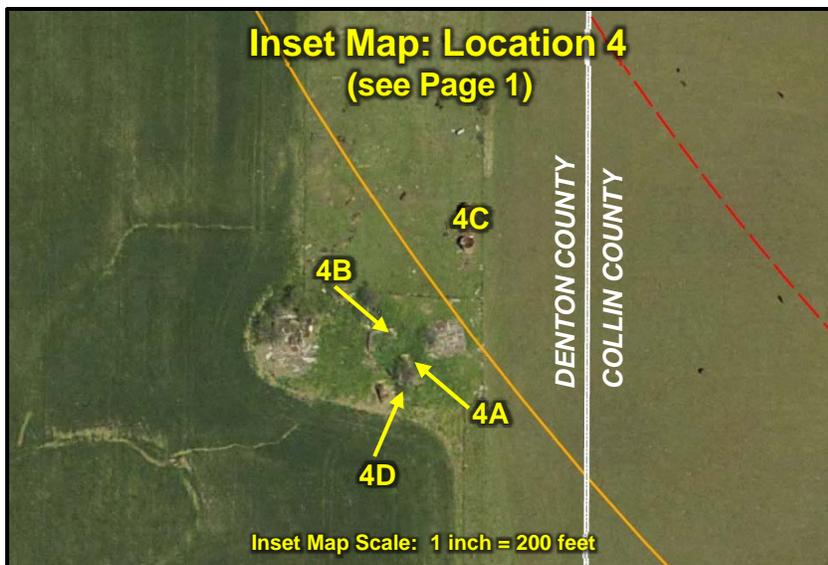
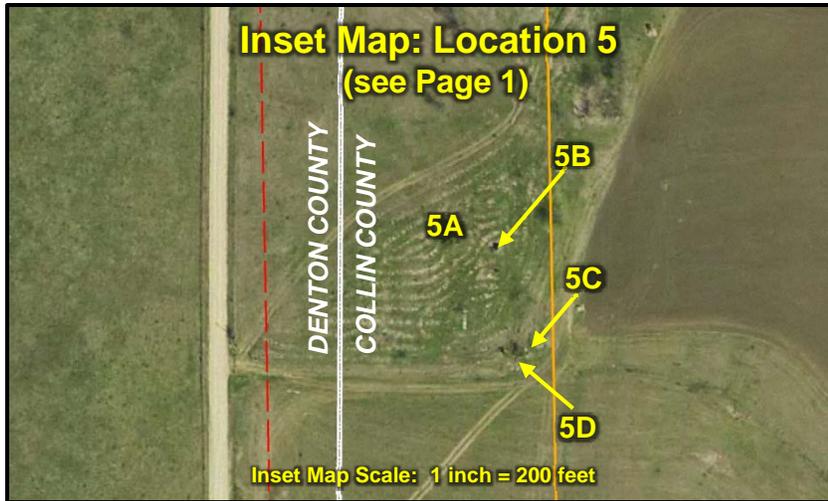
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- Historic Resources Study Area (1,300 feet beyond ROW)
- Area of Potential Effects (300 feet beyond ROW)
- Parcel Boundary



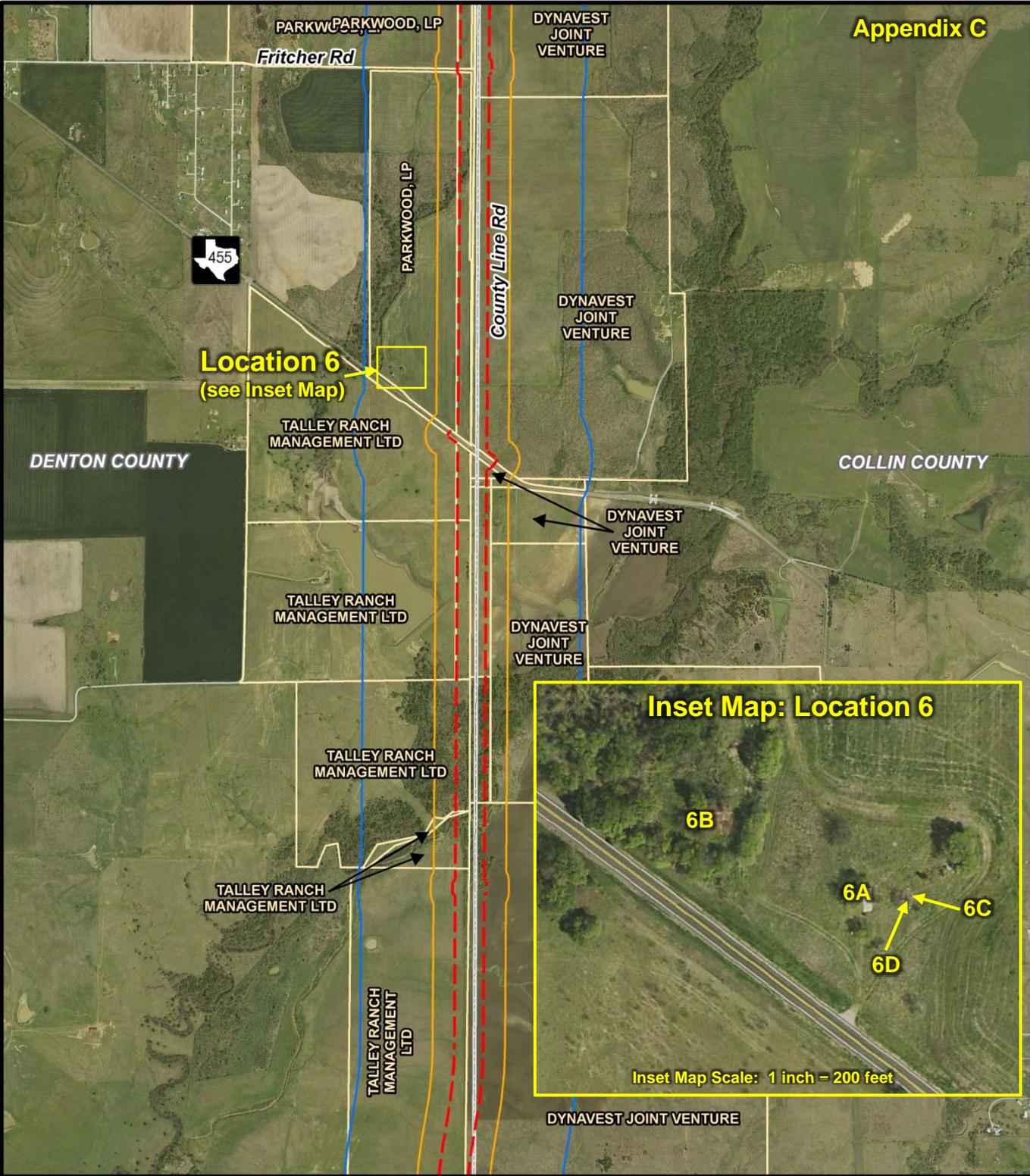
SOURCE/YEAR OF AERIAL PHOTOGRAPH: LANDISCOR/2009

**Historic-age Resources Location Map (Page 1 of 5)**  
 Dallas North Tollway Extension Phase 4B/5A from FM 428 to FM 121

Appendix C

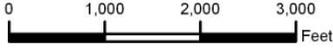


**Historic-age Resources Location Map (Page 2 of 5)**  
Dallas North Tollway Extension Phase 4B/5A from FM 428 to FM 121



**Legend**

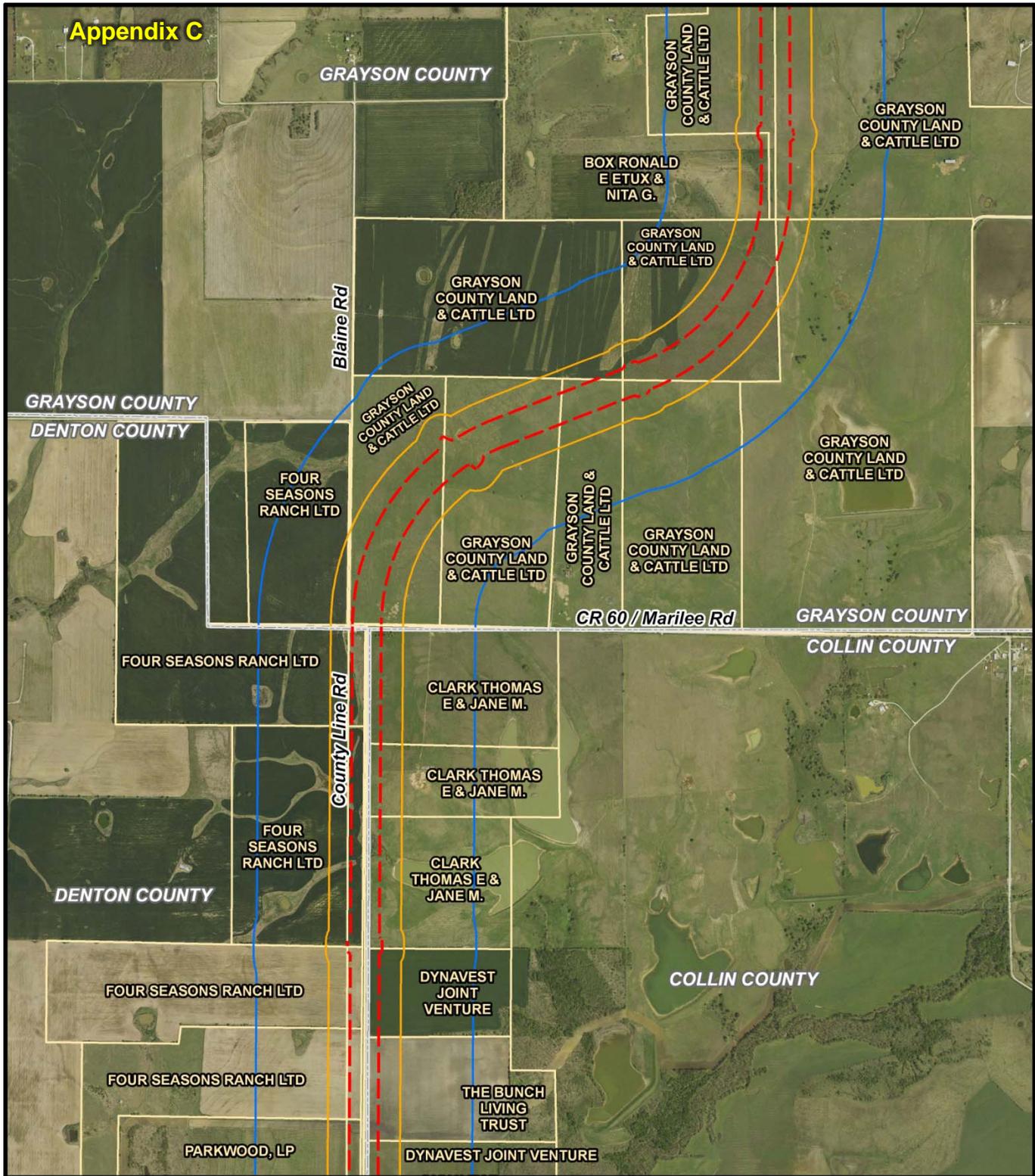
- Proposed Right of Way (ROW)
- Historic Resources Study Area (1,300 feet beyond ROW)
- Area of Potential Effects (300 feet beyond ROW)
- Parcel Boundary



SOURCE/YEAR OF AERIAL PHOTOGRAPH: LANDISCOR/2009

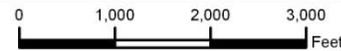
**Historic-age Resources Location Map (Page 3 of 5)**  
 Dallas North Tollway Extension Phase 4B/5A from FM 428 to FM 121

**Appendix C**



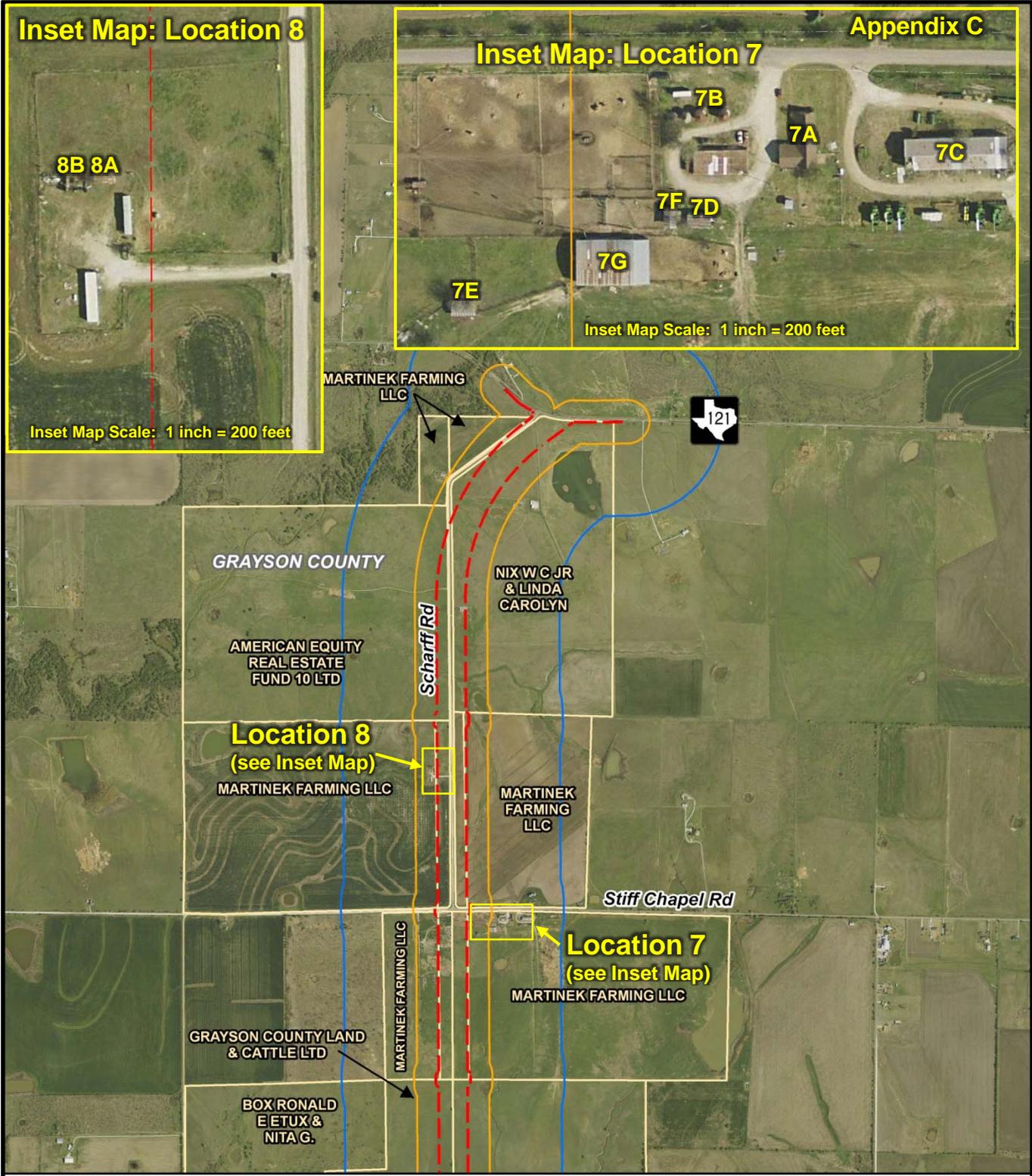
**Legend**

- - - Proposed Right of Way (ROW)
- Historic Resources Study Area (1,300 feet beyond ROW)
- Area of Potential Effects (300 feet beyond ROW)
- Parcel Boundary



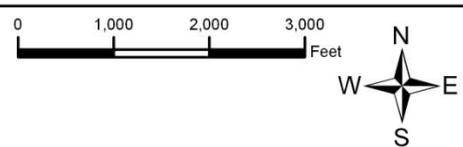
SOURCE/YEAR OF AERIAL PHOTOGRAPH: LANDISCOR/2009

**Historic-age Resources Location Map (Page 4 of 5)**  
 Dallas North Tollway Extension Phase 4B/5A from FM 428 to FM 121



**Legend**

- - - Proposed Right of Way (ROW)
- Historic Resources Study Area (1,300 feet beyond ROW)
- Area of Potential Effects (300 feet beyond ROW)
- Parcel Boundary



SOURCE/YEAR OF AERIAL PHOTOGRAPH: LANDISCOR/2009

**Historic-age Resources Location Map (Page 5 of 5)**  
 Dallas North Tollway Extension Phase 4B/5A from FM 428 to FM 121

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**Appendix 2-7**  
**Archeological Evaluation Report**



AR Consultants, Inc. \_\_\_\_\_

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*ARCHAEOLOGICAL EVALUATION OF THE*

*DALLAS NORTH TOLLWAY*

*EXTENSION PHASE 4B/5A*

*COLLIN, DENTON, AND*

*GRAYSON COUNTIES, TEXAS*

Cameron Turley, BS

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Cultural Resources Report 2010-33  
September, 2010

## **ABSTRACT**

An archaeological evaluation of the proposed Dallas North Tollway Expansion Phase 4B/5A was conducted to determine the potential of encountering historic and prehistoric archaeological resources along and within the 12 mile long alignment. The proposed alignment begins at FM 428 in Collin County and parallels the Denton and Collin County line. The route follows the county line north to Grayson County, where it terminates at FM 121. The evaluation identified several areas of high potential for historic resources, primarily where the alignment parallels roads, as well as high potential for prehistoric resources at the crossing of Little Elm Creek. AR Consultants, Inc. recommends comprehensive survey and testing of the Little Elm Creek crossing, and pedestrian survey for upland sections of the alignment.

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Figure 15. Area of high prehistoric archaeological potential highlighted on a section of the Celina, TX 7.5' USGS Map..... 19

r-arc: Dallas North Tollway 4B 5A 100801

## INTRODUCTION

AR Consultants, Inc. (ARC) was contracted to perform an evaluation of the archaeological potential of a corridor that is being considered to extend the Dallas North Tollway from FM428 in Collin County to FM121 in Grayson County (**Figure 1**). The archaeological evaluation was conducted for Halff Associates, Inc. of Dallas, Texas, acting on behalf of the North Texas Tollway Authority (NTTA). This extension is phase 4B/5A of the Dallas North Tollway. In 2002, ARC conducted an evaluation for several proposed Dallas North Tollway Extension options (Todd and Skinner 2002a). In the past report investigators evaluated portions of what is now the 4B/5A alignment. Specifically, they assessed archaeological potential along a portion of the alignment between FM428 and the Grayson County line, then designated “Alignment B.” Since the time of that evaluation, the placement of the alignment has been modified somewhat where it begins to parallel the Collin and Denton county lines, and has been extended into Grayson County.

The purpose of the investigation was to conduct an initial evaluation of the proposed 12 mile long alignment that extends north from the terminus of Phase 4A (i.e. FM428) in Collin County. This study includes records review of previous archaeological investigations near the proposed Phase 4B/5A alignment and a review of historic maps in Collin, Denton, and Grayson counties. Additionally, field reconnaissance was performed for all accessible portions of the right-of-way (ROW).

Beginning at FM428, the Phase 4B/5A alignment travels north and turns west to cross CR54 before reaching the Collin and Denton county line. Upon reaching the county line the alignment is plotted north, paralleling the county divide until it reaches Grayson County. In Grayson County the alignment curves east, it then curves north again before reaching the Walnut Fork of Little Elm Creek. From here the alignment continues north to its terminus at FM121. This alignment takes the proposed extension through various topographies of the uplands, past many minor, unnamed tributaries, past Little Elm Creek, and parallel to many historic roads. The ROW for the Phase 4B/5A alignment will be 400’ wide and drainage easements adjacent to the ROW are expected to extend no more than 100 additional feet on either side at the point of crossing. Therefore, this background study is to consider an area of potential effect (APE) that extends 300’ either side of the proposed centerline, creating a total APE of 600’.

The study was conducted to begin the environmental review process needed to meet relevant federal and state environmental legislative requirements for the project’s construction. These requirements include compliance with Section 404 of the Clean Water Act that is administered by the Fort Worth District of the US Army Corps of Engineers. Other relevant legislation includes the National Historic Preservation Act of 1966, as amended (PL-96-515), the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291), Executive Order No. 11593 “Protection and Enhancement of the Cultural Environment” and Procedures for the Protection of Historic and Cultural Properties (36 CFR 800), Appendix C.

HISTORICAL BUILDINGS

ARCHAEOLOGY

NATURAL SCIENCES

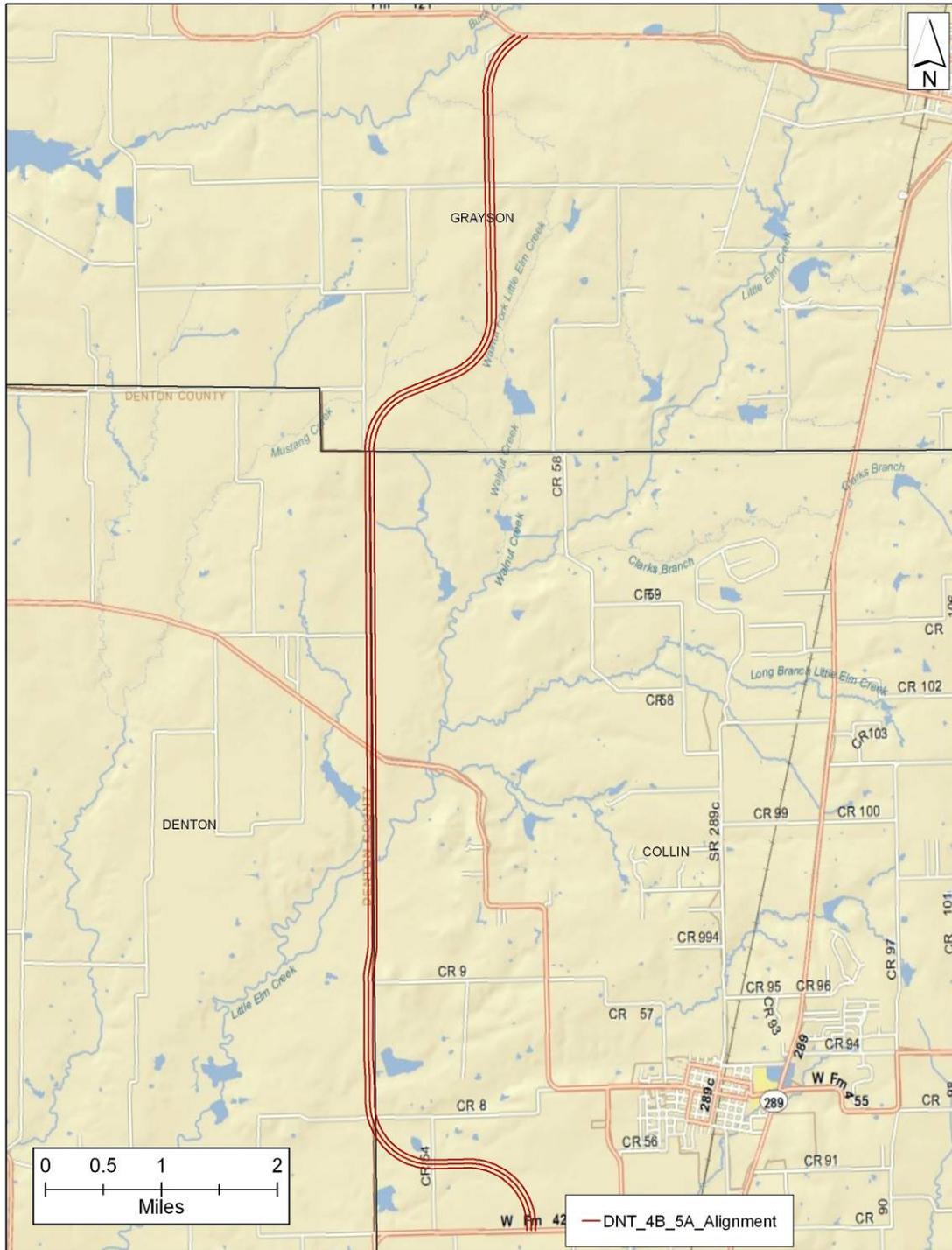


Figure 1. Dallas North Tollway Extension Phase 4B/5A shown on a section of highway map.

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Administrative Information

Sponsor: North Texas Tollway Authority and Halff Associates, Inc.  
Review Agency: Archeology Division of the Texas Historical Commission  
Principal Investigator: S. Alan Skinner, PhD  
Field Crew: Cameron Turley and S. Alan Skinner  
Field Days: August 21, 2010  
Acres Surveyed: N/A  
Sites Recorded:  
    Prehistoric: N/A  
    Historic: N/A  
Curation Facility: N/A

## ENVIRONMENTAL TRANSECT

The underlying geology of much of the 4B/5A extension is the Eagle Ford Formation, broken by two narrow bands of alluvium and terrace deposits (Bureau of Economic Geology 1991: Sherman Sheet). The southern length of the alignment crosses this Eagle Ford Formation in western Collin County, and continues through it as the extension follows the Collin and Denton county lines. Thickness of the formation ranges from 300 to 400 feet. North and south of the alignment's crossing of Little Elm Creek, the geology changes to alluvium for approximately 3000 feet. These alluvial deposits are generally 30 feet thick. North of these alluvial deposits the geology again changes, now to fluviate terrace deposits that continue for just over two miles. Again moving north, underlying geology reverts to the Eagle Ford Formation for the remainder of the alignment.

The soil types in the alignment are Houston clays (Hanson and Wheeler 1969) until it exits into Denton County. There, the soil types are Burleson, Ellis, Ferris-Houston, Houston, Navo, Ovan, Trinity, Vertel, and Wilson Clays and Wilson clay loam (Ford and Pauls 1980). Both the Trinity and Ovan clays are associated with Little Elm Creek and its floodplain, through which the proposed alignment extends for some distance. The rest of the soils are upland clays.

The upland surface has been cleared of most trees and supports bermuda and other grasses that have been invaded by mesquites. The vast majority of this area has been subject to farming in the past. Much of the route is now farmed or maintained as pasture lands. This entire upland area supports scattered young and old trees including *bois d'arc*, American elm, cedar elm, hackberry, and honey locust along with various weeds and masses of greenbriars. According to various authors, the prairie once supported a cover of tall grasses and was inhabited by now absent herbivores including bison and antelope. Certainly, deer inhabited the narrow bottomland forest that hugs Little Elm Creek.

Water is a limited resource in the prairie environment. Little Elm Creek is mapped as a perennial drainage on the USGS maps, which would have provided habitat for game. Reliable water and game could have made this crossing an attractive location to prehistoric peoples. The Little Elm Creek watershed begins about 12 miles northeast of the project zone at foothills that run in a generally north-south direction, separating the drainage area from that of the East Fork of the Trinity River. From the project area, Little Elm Creek flows southwest into Lake Lewisville.

The 4B/5A alignment begins north of Doe Branch and just southwest of Celina, Texas at FM428. From here the alignment curves west then north to the Collin and Denton county line, traveling through relatively level uplands of the Little Elm Creek watershed. Plotted on a north-south orientation along the county line, the route crosses several minor tributaries of Little Elm Creek. Through this area topography begins to vary slightly until the wide floodplain of Little Elm Creek is reached. After passing the floodplain the route continues to follow the county line into the uplands. Upon reaching Grayson County, the alignment curves back to the east. It then continues north to terminate at FM121.

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### PREVIOUS INVESTIGATIONS

As part of the cultural resource evaluation ARC compiled a list of previous investigations near Extension 4B/5A of the Dallas North Tollway (**Figure 2**). These past studies are discussed chronologically in this chapter.

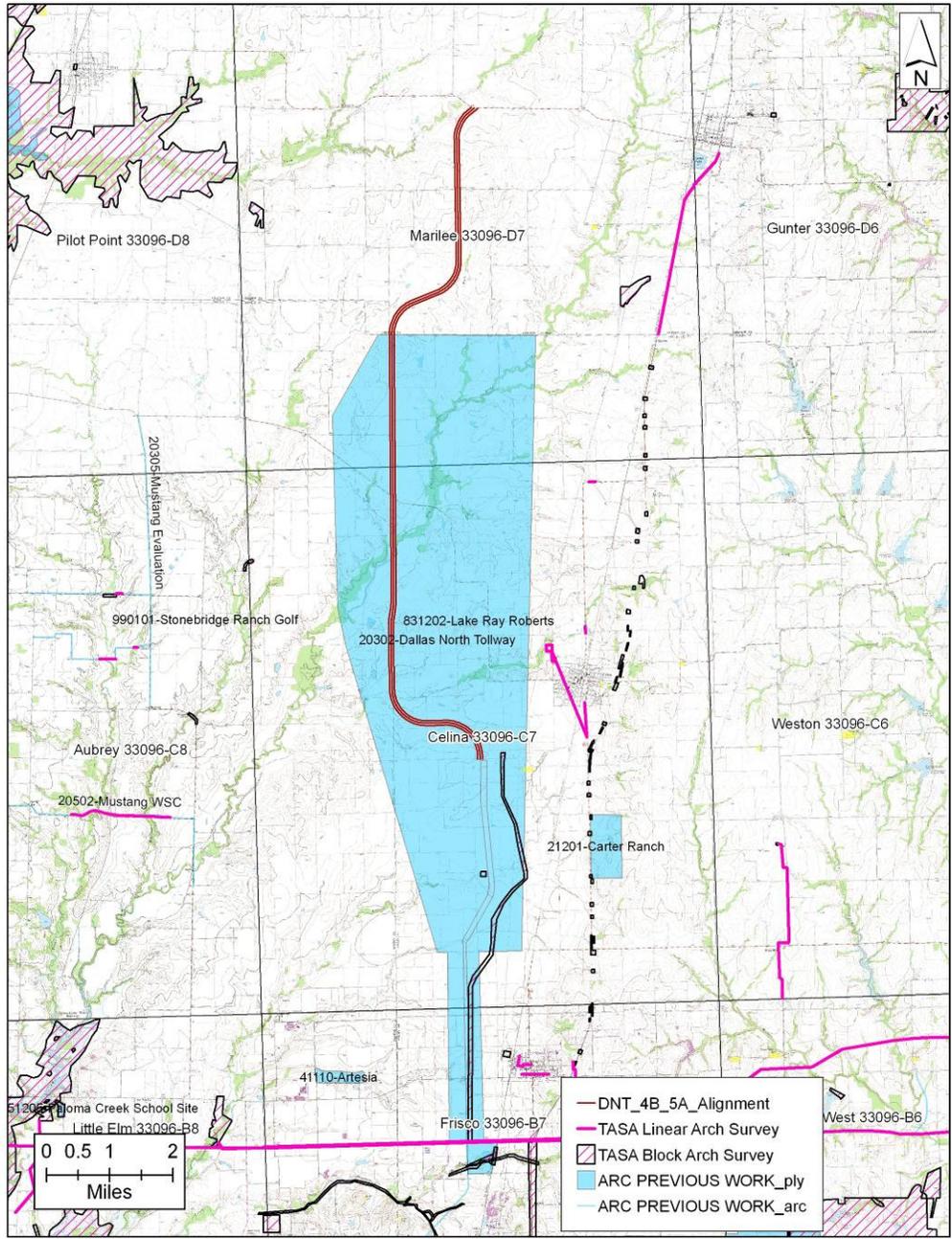


Figure 2. Previous investigations near the proposed Dallas North Tollway Expansion 4B/5A ROW.

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A large lake survey was conducted west of the northern terminus of the 4B/5A alignment for Lake Ray Roberts (Skinner and Baird 1985). Findings here were analogous to those of the Lewisville Lake study. Prehistoric sites were recorded adjacent to drainages, most commonly on low upland edges and knolls. Excavation of six of these prehistoric sites suggested that occupation in the area was likely seasonal from the Middle Archaic to the Late Neo-American. Historic occupation, including cemeteries, was also well represented in the area with most sites dating to the turn-of-the century or later.

Just over seven and a half miles southwest of the 4B/5A alignment is the survey area conducted for the planning of Lewisville Lake, formerly Lake Dallas, in 1990. This large survey recorded a very large number of prehistoric sites along the Elm Fork of the Trinity River and its tributaries, including Little Elm Creek. Significant patterns for prehistoric occupation emerged during the course of this study, finding that such sites in the area occur primarily along tributaries that provide a reliable source of water. More specifically, these sites are situated on floodplain knolls or on the low upland edges adjacent to these drainages. Upland edges and knolls near the confluence of drainages appear particularly dense with prehistoric occupation. Historic sites were located near drainages and roadways.

A series of small block surveys and one linear stretch was performed for TxDOT in 1996 primarily along portions of FM289, between Frisco and Gunter, Texas. The project focused on all tributary crossings on the path. Nearly all of these crossings were minor, intermittent tributaries near headwaters. The survey recorded no historic or prehistoric sites.

In 2002, ARC conducted an evaluation for several proposed Dallas North Tollway Extension options (Todd and Skinner 2002a). Their evaluation recommended survey for the selected alignment. Four years later, ARC conducted an archaeological survey of the selected Section 4 Route of the Dallas North Tollway (Todd 2006). Investigation covered 6.7 miles of new road from US380 to FM428, the southern terminus of the proposed 4B/5A alignment. Survey resulted in the discovery and recording of one historic site, 41COL191, which consisted of a single cistern. No prehistoric sites were found during the study.

A survey of portions of right-of-ways for the Mustang Creek Water Supply Corporation was performed by ARC west of the southern end of the NTTA 4B/5A extension (Todd and Skinner 2002b). The study focused on crossings of Pecan and Mustang creeks, as well as adjacent upland edges. Comprehensive survey and shovel testing of the alignments revealed no evidence of prehistoric or historic occupation.

In 2002, ARC performed an archaeological survey near the project location (Todd and Skinner 2002c). This survey was within the Carter Ranch Development, primarily in the foothills east of Doe Branch at the eastern edge of its watershed before crossing the ridge to Wilson Creek. Six acres along two intermittent drainages were investigated for the existence of cultural materials. Seventeen shovel tests, ground survey, and inspection of drainage banks failed to find extant cultural resources.

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An archaeological survey was conducted by ARC in conjunction with the Doe Branch Wastewater Treatment Plant (Todd and Skinner 2002d). The 20 acre survey is located southwest of the previously described Section 4 survey, further downstream along Doe Branch. The remains of a windmill were discovered, but not recorded as an archaeological site. A total of 19 shovel tests, some supplemented with auger testing, were all culturally sterile.

A small, 10 acre block of land northwest of Doe Branch, was surveyed by ARC in 2004 (Todd 2004). Pedestrian survey and 21 shovel tests, excavated to a mean 50 cmbs, all returned negative results for extant cultural deposits.

In 2009 ARC conducted a 137 acre study for the Light Farms residential development (Turley, Skinner, and Lang 2009). This survey focused on Doe Branch, several of its minor intermittent tributaries, and the adjacent low upland benches. Extensive shovel testing, 44 all told, and bank inspection identified no evidence of prehistoric occupation in the area. Four historic sites were recorded during the survey, all attributed to the early and mid 20<sup>th</sup> century.

## HISTORIC SETTLEMENT

European settlement in the study area began by the mid-1800s with the establishment of the Peter's Colony after Texas independence. Collin County was established in 1846 and the county seat was at Buckner until 1848 when it was moved to McKinney. Settlement has continued to the present. By the turn of the century, all of the major communities had been established and some had been abandoned. The best summary of the history and prehistory of Collin County, and adjacent Denton County, is the document, *An Open Space Plan for Collin County* (RMA/Texas 1986).

The first established European settlement in Denton County began, like in Collin County, before the mid-1800s with the establishment of the Peter's Colony after Texas gained independence. These early settlers were farmers who selected bottomland along the Elm Fork of the Trinity (Bridges 1978). Denton became the county seat in 1856. Commercial farming was not important until after the Civil War, and the early settlers were essentially self-sufficient. Besides the plants and animals they grew, wild varieties were commonly consumed. By 1875, cotton, corn, and wheat were the main cash crops. Up to half of these crops were grown by tenant farmers who either paid rent to the land owner for their house, tools, and seed or by tenants who gave the landowner a third of the grain and a quarter of the cotton or other cash crops. By the turn of the century, all of the major communities were established and some had passed away.

Grayson County and indeed many of the counties bordering on the Red River have played an important role in the Anglo-American settlement of Texas. It has been suggested that settlers began arriving in the county as early as 1835 (Webb 1952:726). During the Republic of Texas (1836-1846), two forts were established in Grayson County, one at Preston Bend and the other, Fort Johnson, a few miles north of Pottsboro. In 1846, Grayson County was created from Fannin County and named for Peter W. Grayson. Sherman was ultimately selected as the county seat in March of 1846.

A series of five historic maps were reviewed to assess settlement patterns along the 4B/5A extension itself. ArcGIS was utilized to georeference in the project centerline and total easement of 600 feet. This method provides a useful baseline for assessment, but because of inaccuracies in the historic maps the process might not achieve perfect line placement. The earliest map reviewed was the 1918 Denton County Soils map (**Figure 3**). Six historic structures are plotted along the Denton and Collin county line. Software aberration has caused alignment plotting to occur west of the county line. Next, the 1930 Collin County Soils map was reviewed (**Figure 4**). The accuracy of the 1930 map is improved over the earlier 1918 map, resulting in much diminished aberration. Eight historic structures are plotted within or adjacent to the 4B/5A ROW on the Collin County side of the county line. The 1936 Collin County Highway Map was also reviewed (**Figure 5**). Occupation in the area has clearly increased, as 11 structures are now plotted within or adjacent to the ROW. The 1936 Denton County Highway map shows an apparent decrease in structures adjacent to the alignment, reduced from six to two (**Figure 6**). Finally, the 1936 Grayson County Highway map was reviewed for potential historic structures (**Figure 7**). Eight structures are plotted adjacent to the proposed ROW in Grayson County.

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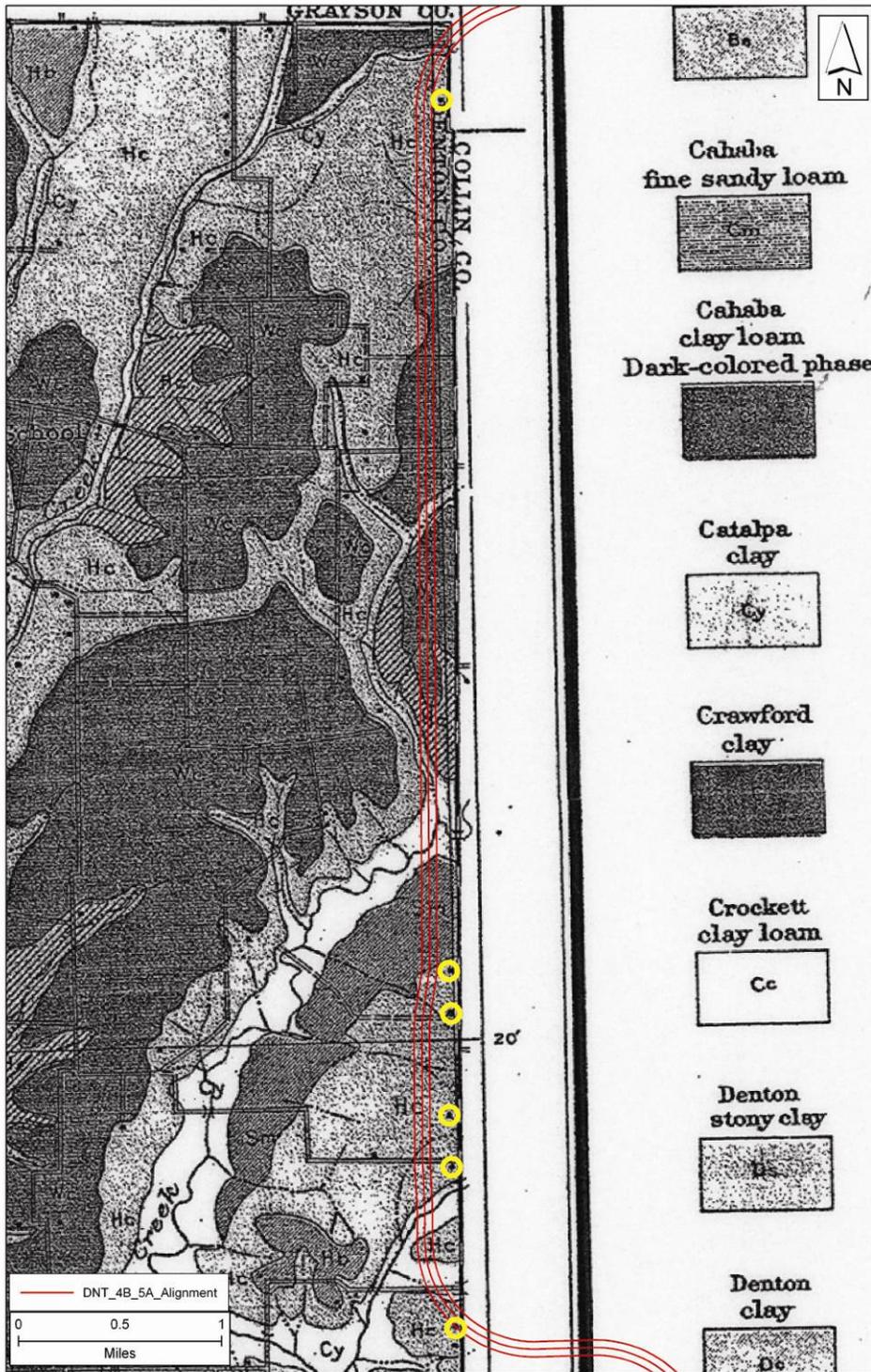


Figure 3. Dallas North Tollway Extension 4B/5A plotted on a section of the 1918 Denton County Soils Map. Structures are circled in yellow.

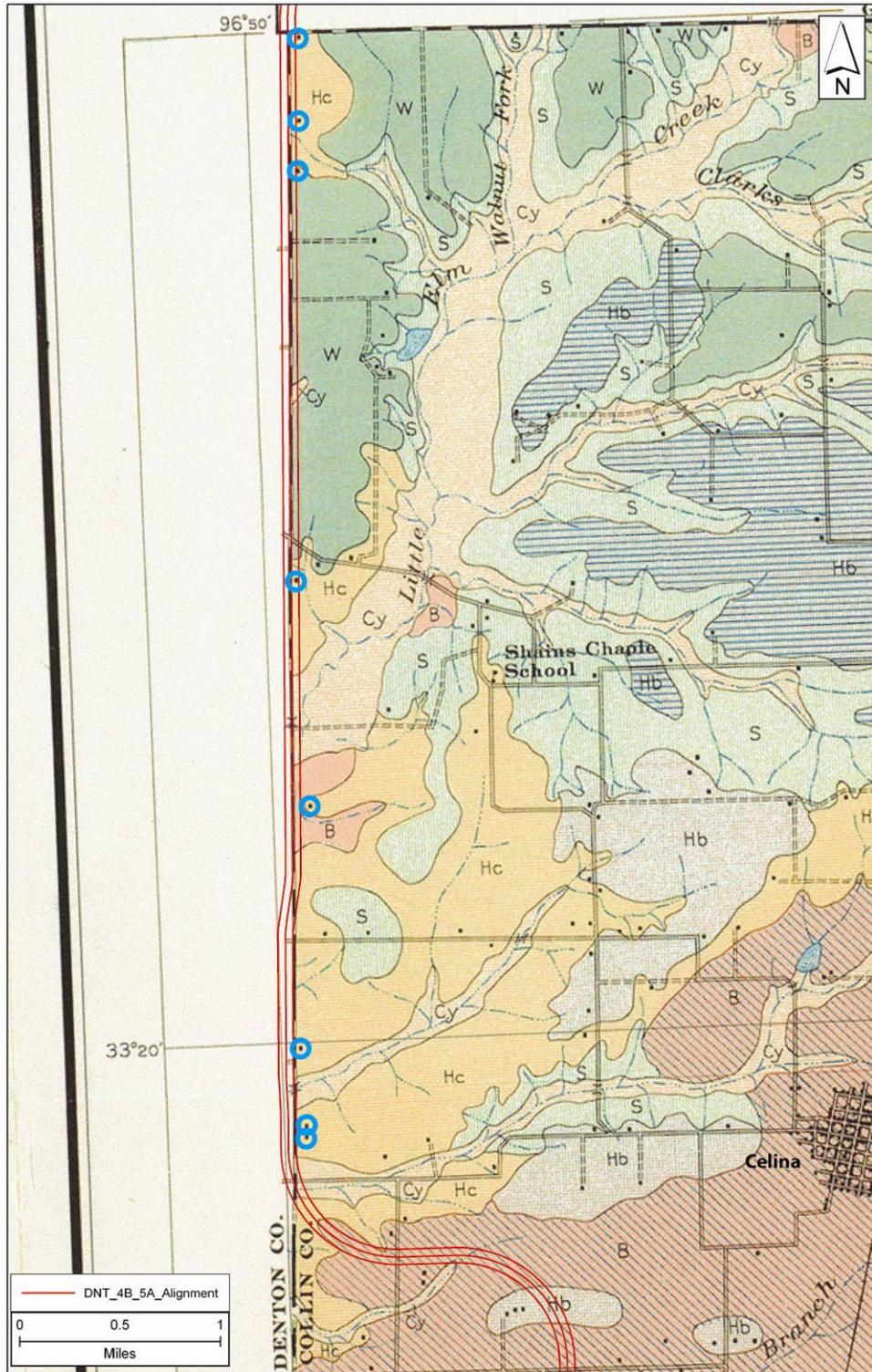


Figure 4. Dallas North Tollway Expansion 4A/5B plotted on a section of the 1930 Collin County Soils Map. Structures are circled in blue.

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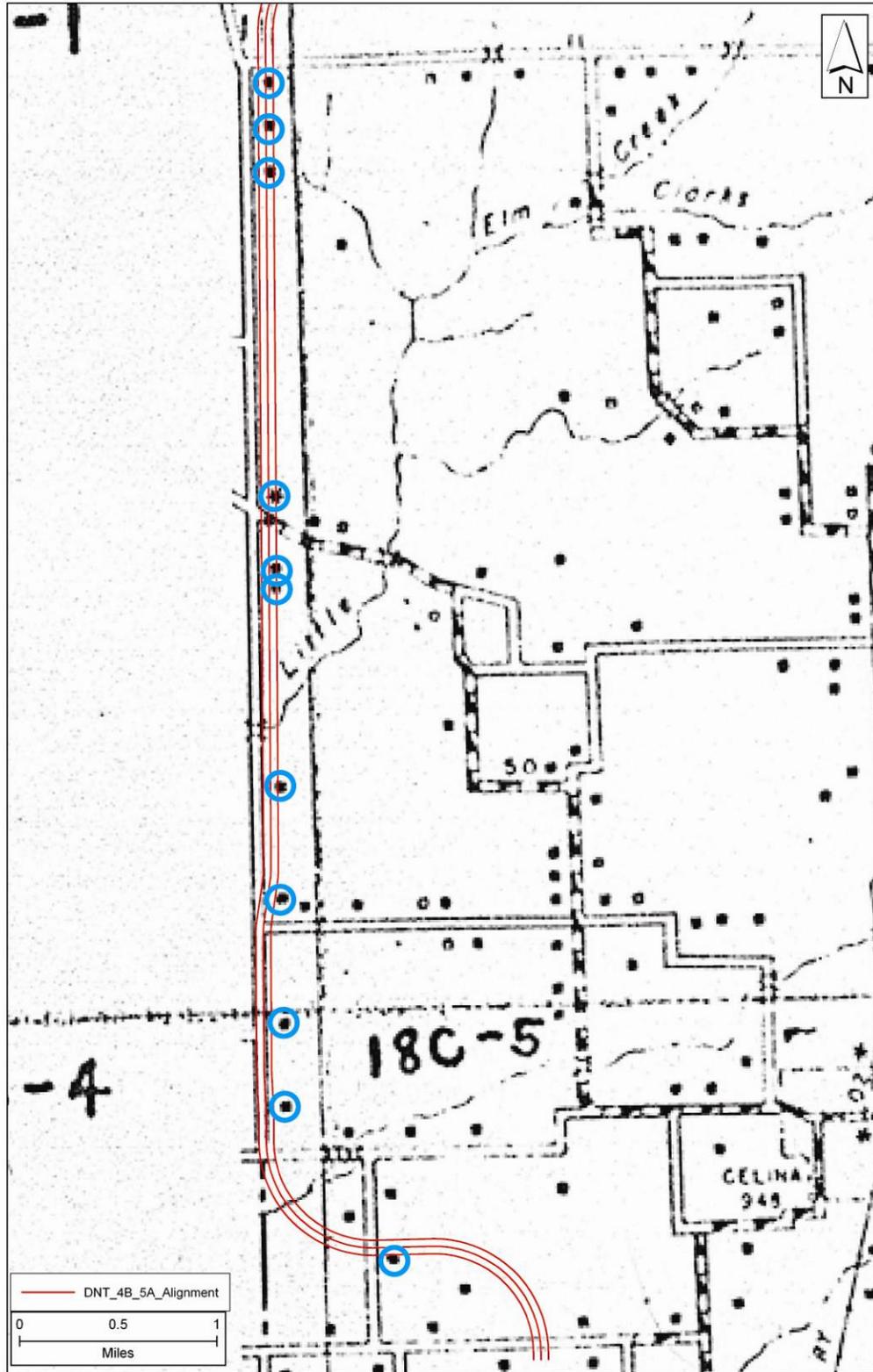


Figure 5. Dallas North Tollway Extension 4B/5A plotted on a section of the 1936 Collin County Highway Map. Structures are circled in blue.

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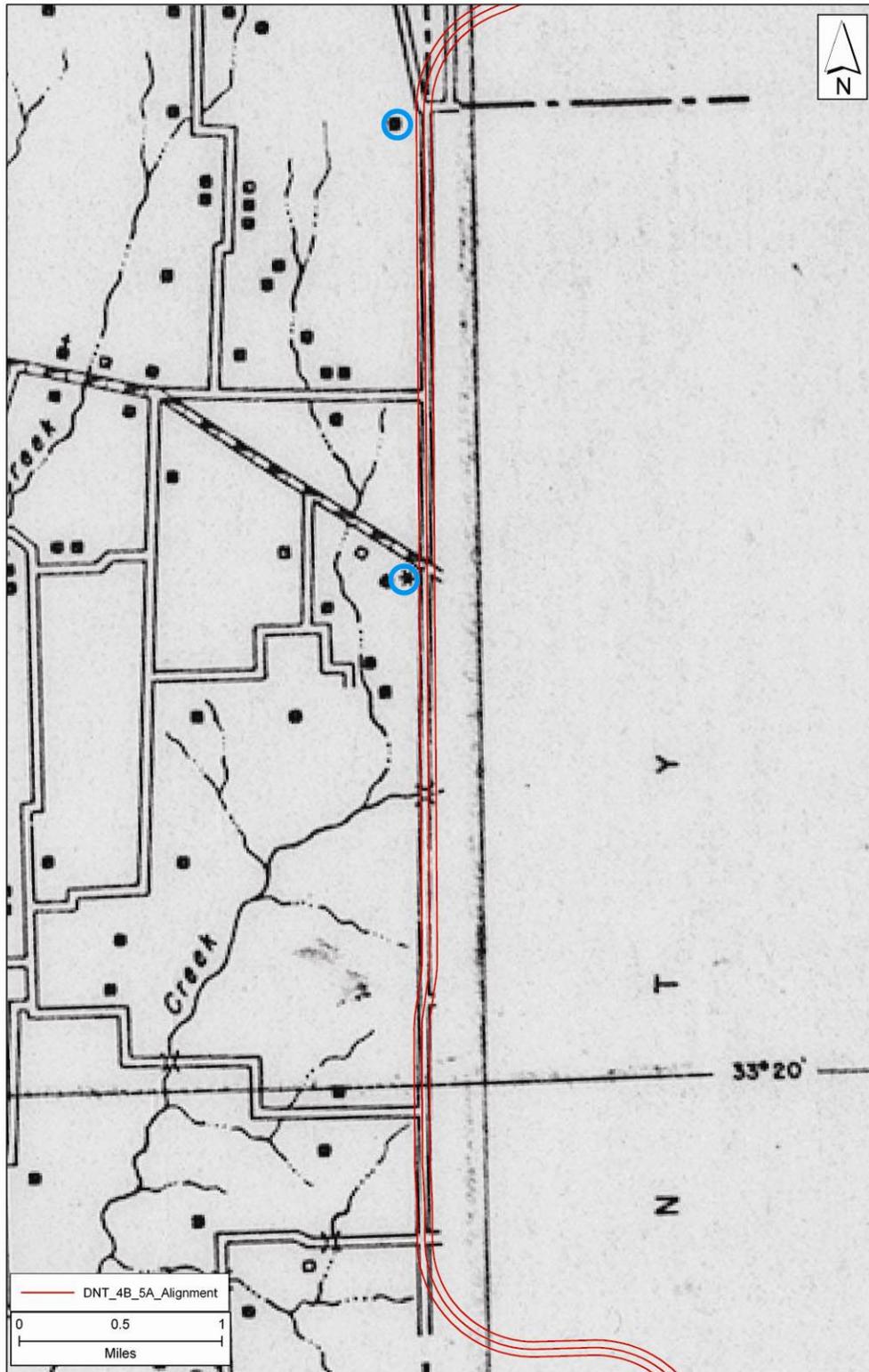


Figure 6. Dallas North Tollway Expansion 4B/5A plotted on a section of the 1936 Denton County Highway Map. Structures are circled in blue.

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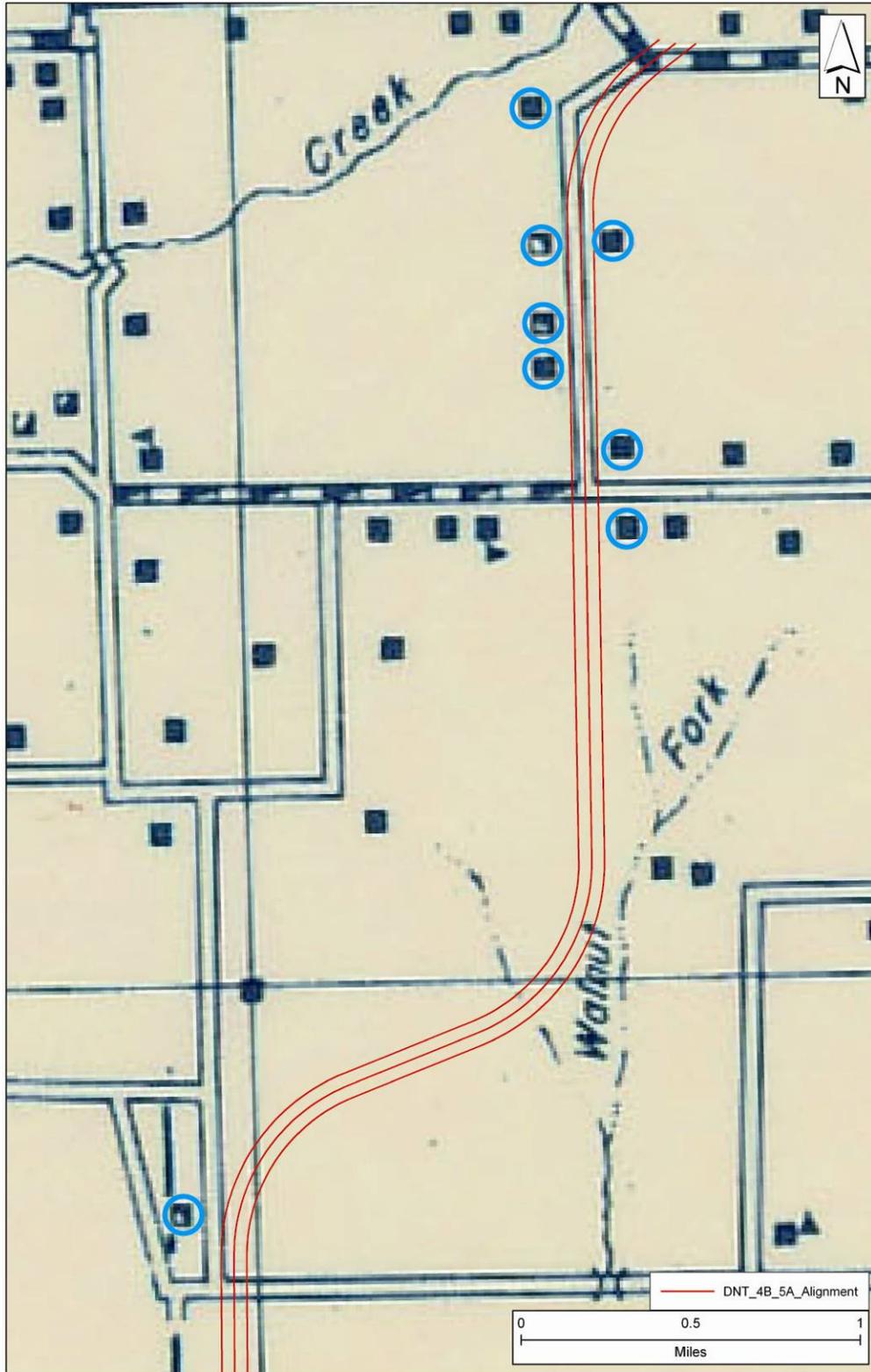


Figure 7. Dallas North Tollway Extension 4B/5A plotted on a section of the 1936 Grayson County Highway Map. Structures are circled in blue.

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## FIELD RECONNAISSANCE

As this study was performed at the evaluation level, the ARC field crew did not have access to private properties crossed by the 4B/5A extension. Thus, the “windshield survey” was limited to portions of the study area visible from or parallel to public roads.

Field reconnaissance began at the southern terminus of the alignment where Dallas Parkway intersects FM428 in Collin County. From this point the alignment is plotted north, curving to the west to make for the Collin and Denton County line. The area visible is improved pasture and plowed fields (**Figure 8**).



Figure 8. Looking north through improved pasture from the southern terminus is the alignment at FM428.

After traveling east across pasture and plowed fields, the alignment turns north again to parallel the Collin and Denton County line along CR9. Along the stretch down CR9, the alignment parallels the road, but is situated on the Denton County side of the road, instead of having the centerline directly down the road. This portion of the alignment is in gently rolling uplands currently maintained as improved pasture, with small plowed sections (**Figure 9**). Here, the alignment crosses several minor, very shallow tributaries that were dry at the time of survey. These channels likely only carry rainwater runoff. None of the structures noted on the historic maps remained along this section.

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Figure 9. Looking north along CR9. The alignment is plotted through the improved pasture in the left of the frame.

Once the alignment clears CR9, it is then plotted slightly further east to follow exactly the county line. Public access was not available from this point until the alignment reached CR10/County Line Rd., north of the Little Elm Creek crossing. Little Elm Creek was observed where it crosses FM455, further upstream than the alignment. The floodplain narrows significantly at this point when compared to the actual alignment crossing, but the channel was carrying water. After exiting the Little Elm Creek floodplain and adjacent low upland edge, the alignment parallels CR10/County Line Rd. Terrain here is level to gently rolling, kept as improved pasture on the west and plowed fields on the east (**Figure 10, 11**). A few small drainages are crossed, but they were dry and extremely shallow; they likely carry only runoff like the previously described drainages. No structures were observed within the proposed ROW. One structure, likely a barn, which may correspond to a building on the historic maps, was seen within a stand of trees west of the road, but it was at least 700' from the project centerline and will not be impacted. This segment of the alignment continues to follow CR10/County Line Rd. north to its intersection with CR60 at the Grayson County Line. After entering Grayson County, the alignment veers east, then back north through improved pasture until meeting up with Scharff Rd. AR Consultants, Inc. did not have access to this portion, but some of the rolling pasture was visible from CR60 (**Figure 12**).

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Figure 10. Looking north along the west side of CR10/County Line Rd. showing improved pasture.



Figure 11. Looking north along the east side of CR10/County Line Rd. showing plowed fields.

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Figure 12. Looking northeast from CR60 through gently rolling pasture.

Near the northern terminus of the alignment, it joins and parallels Scharff Rd. at the intersection with Stiff Rd. At this point it passes near a group of historic structures that may correspond to those identified on the 1936 Grayson County Highway Map (**Figure 13**). The nearest of the structures is approximately 300' east of the project centerline, and could be impacted by construction.



Figure 13. Structure nearest the project centerline, south of Stiff Rd. and Scharff Rd.

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Another structure was encountered along Scharff Rd., this time about 150' east of the centerline (**Figure 14**). The building likely corresponds to one plotted on the historic map. None of the other mapped structures along Scharff Rd. are standing today, nor was any evidence of them visible from the road. Like the other segments, this one passed through gently rolling terrain kept as a combination of improved pasture and plowed fields. The alignment continues to parallel this road until it terminates at FM121.



Figure 14. Historic structure west of Scharff Rd., approximately 150' from the project centerline.

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### Archaeological Potential

Previous investigations have revealed patterning for prehistoric cultural resources in the project area. Based on these investigations, it is apparent that the greatest potential for prehistoric sites is near perennial drainages, specifically on elevations above flooding. Such locations include knolls above the floodplain and the low upland edges set back from the drainage. Areas at the confluence of drainages also have proven to hold high potential for prehistoric archaeological resources. Sites within floodplains may also exist buried in sediments deposited during flooding events. In the study area for the Dallas North Tollway Extension Phase 4B/5A, the high potential areas as identified occur at the ROW intersection with Little Elm Creek. The most likely place to encounter prehistoric sites within this area is on the low upland edge north of Little Elm Creek, behind a confluence with a smaller, unnamed tributary (**Figure 15**). As demonstrated by previous investigations, potential for prehistoric archaeological sites drops significantly as the alignment moves into the uplands. Sites may still exist, but density drops significantly. Sites encountered in upland settings are often ephemeral hunting camps, lithic procurement sites, or small artifact scatters. Furthermore, in an erosional setting like the uplands, sites are more likely to be deflated onto the ground surface, losing primary context. Though potential for prehistoric archaeological resources exists within the project APE, none have been discovered at this point.

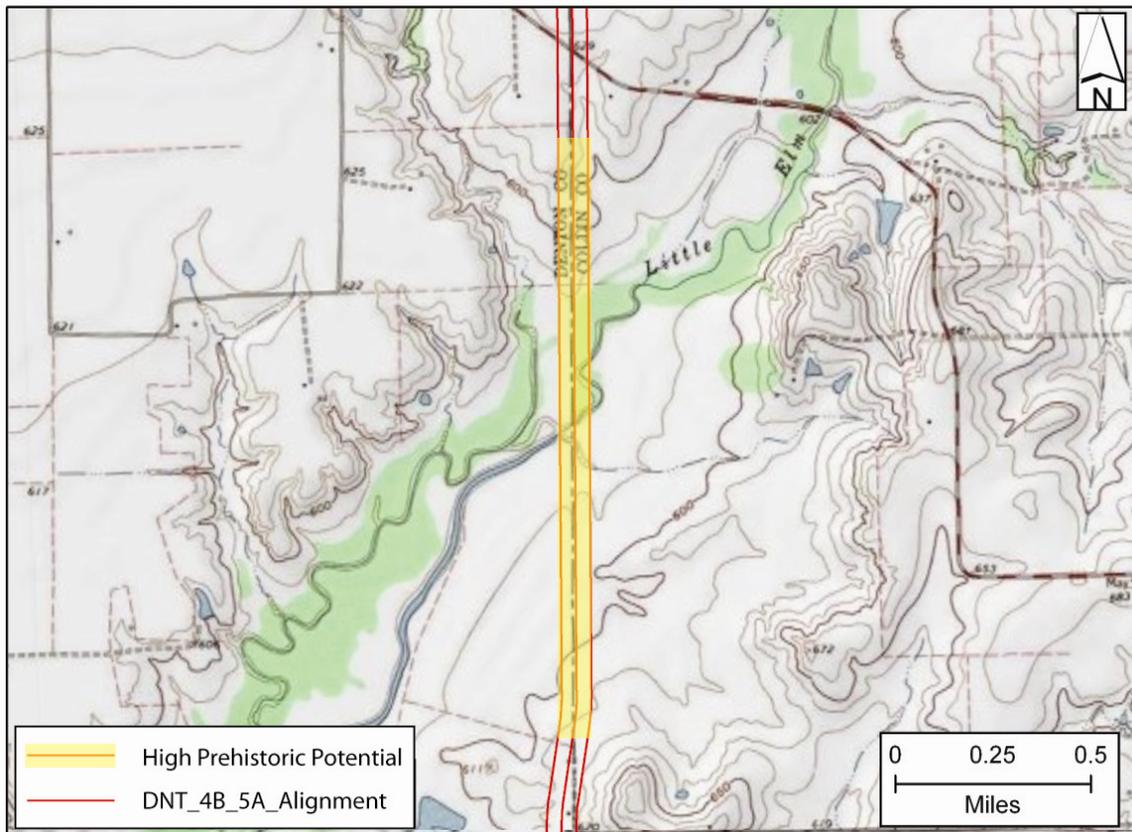


Figure 15. Area of high prehistoric archaeological potential highlighted on a section of the Celina, TX 7.5' USGS Map.

Historic settlement patterns are clearly discernable from the previous investigations as well as from the review of historic maps and the field reconnaissance (see: Historic Settlement; Field Reconnaissance). The vast majority of structures are situated near historic roads, many of which have been in existence since the early 20<sup>th</sup> century. The proposed ROW parallels many of these historic roads, all of which have potential for historic structures. Field reconnaissance identified two potential historic structures that could be impacted. Additionally, historic artifact scatters are likely to occur along any drainage, or may appear as sheet middens near structures. There is clear potential for historic archaeological resources within the APE, but none are yet recorded.

### RECOMMENDATIONS

The recommendations of ARC are based on site patterning derived from the findings of previous investigations, the assessment of historic settlement along the ROW, and the field reconnaissance. AR Consultants, Inc. recommends trenching in the floodplain of Little Elm Creek to determine if buried site deposits are present. Pedestrian survey and shovel testing of the adjacent upland edges and terraces is also recommended for the exploration of potential prehistoric sites. We recommend that only a pedestrian survey is warranted in the uplands as site density is expected to be low and the majority of the area has been subject to farming for over a century.

Pedestrian survey is recommended at all areas where the ROW crosses or parallels historic roads. Evaluation of historic settlement and the field reconnaissance suggests that these areas have high potential for historic archaeological resources.

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**Appendix 2-8**  
**Archeological Survey Report**





# Dallas North Tollway Extension

## Phase 4B/5A

### From FM 428 to FM 121

Archeological Survey

***DRAFT***

April 2011

**NTTA**  
NORTH TEXAS TOLLWAY AUTHORITY



**ARCHEOLOGICAL SURVEY  
OF THE  
DALLAS NORTH TOLLWAY EXTENSION PHASE 4B/5A  
FROM FM 428 TO FM 121**

**COLLIN, DENTON, AND GRAYSON COUNTIES, TEXAS**

**TEXAS ANTIQUITIES PERMIT NUMBER 5866**

**Prepared by  
Cameron Turley, BS  
Rebecca Shelton, MA  
Principal Investigator  
and Nick Coleman, BA  
AR Consultants, Inc.**

**for**

**NORTH TEXAS TOLLWAY AUTHORITY**

**APRIL 2011**

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Appendix A	Texas Historical Commission Recommendation Letter
Appendix B	Table of General Shovel Tests
Appendix C	Shovel Test and Trench Locations Shown on USGS 1:24,000 Topographic Maps

1 **1.0 ABSTRACT**

2  
3 The North Texas Tollway Authority (NTTA) is proposing to construct the Dallas North Tollway  
4 Extension Phase 4B/5A (DNT 4B/5A) in Collin, Denton, and Grayson counties, Texas. The  
5 proposed DNT 4B/5A, approximately 12 miles (19.3 kilometers, or "km") in length, begins at  
6 Farm to Market Road (FM) 428 in Collin County and curves west toward the Denton/Collin  
7 county line. The proposed alignment follows the county line north into Grayson County, where it  
8 terminates at FM 121. The proposed DNT 4B/5A would require 400 feet (121.9 meters, or "m")  
9 of new right-of-way (ROW) and drainage easements that extend no more than 100 feet (30.5 m)  
10 beyond the proposed ROW limit on either side at drainage crossings. However, the proposed  
11 drainage easement in the Little Elm Creek floodplain is 200 feet (61.0 m) to 500 feet (152.4 m)  
12 beyond the proposed DNT 4B/5A ROW. The proposed DNT 4B/5A would require approximately  
13 584 acres (236.3 hectares, or "ha") of new ROW and 34 acres (13.8 ha) of drainage easements.  
14 AR Consultants, Inc. (ARC) was contracted by Halff Associates, Inc. to conduct an  
15 archeological evaluation and an intensive pedestrian survey of the proposed DNT 4B/5A ROW.  
16 Halff is conducting the overall environmental evaluation of the proposed DNT 4B/5A on behalf of  
17 the NTTA.

18 Four historic sites were recorded during the archeological survey for the proposed DNT 4B/5A.  
19 Sites 41DN577, 41DN578, and 41DN579 are all associated with mapped historic structures  
20 near historic roadways, with 41DN577 and 41DN579 also located on elevations overlooking the  
21 landscape. Site 41GS221 is an upland trash scatter washed down an erosional gully. Although  
22 two additional isolated structural foundations likely correlate to structures shown on historic  
23 maps, neither was recorded as a site because it had been pushed away from its original  
24 context.

25  
26 Extensive shovel testing of the uplands and upland edge between Little Elm Creek and FM 455  
27 found no subsurface evidence of prehistoric use. Four trenches were excavated to explore for  
28 buried sites near the present drainage channel, to look for sites associated with an older  
29 channel farther north, and to test the upland edge for occupation. These deep testing efforts did  
30 not uncover any prehistoric archeological sites.

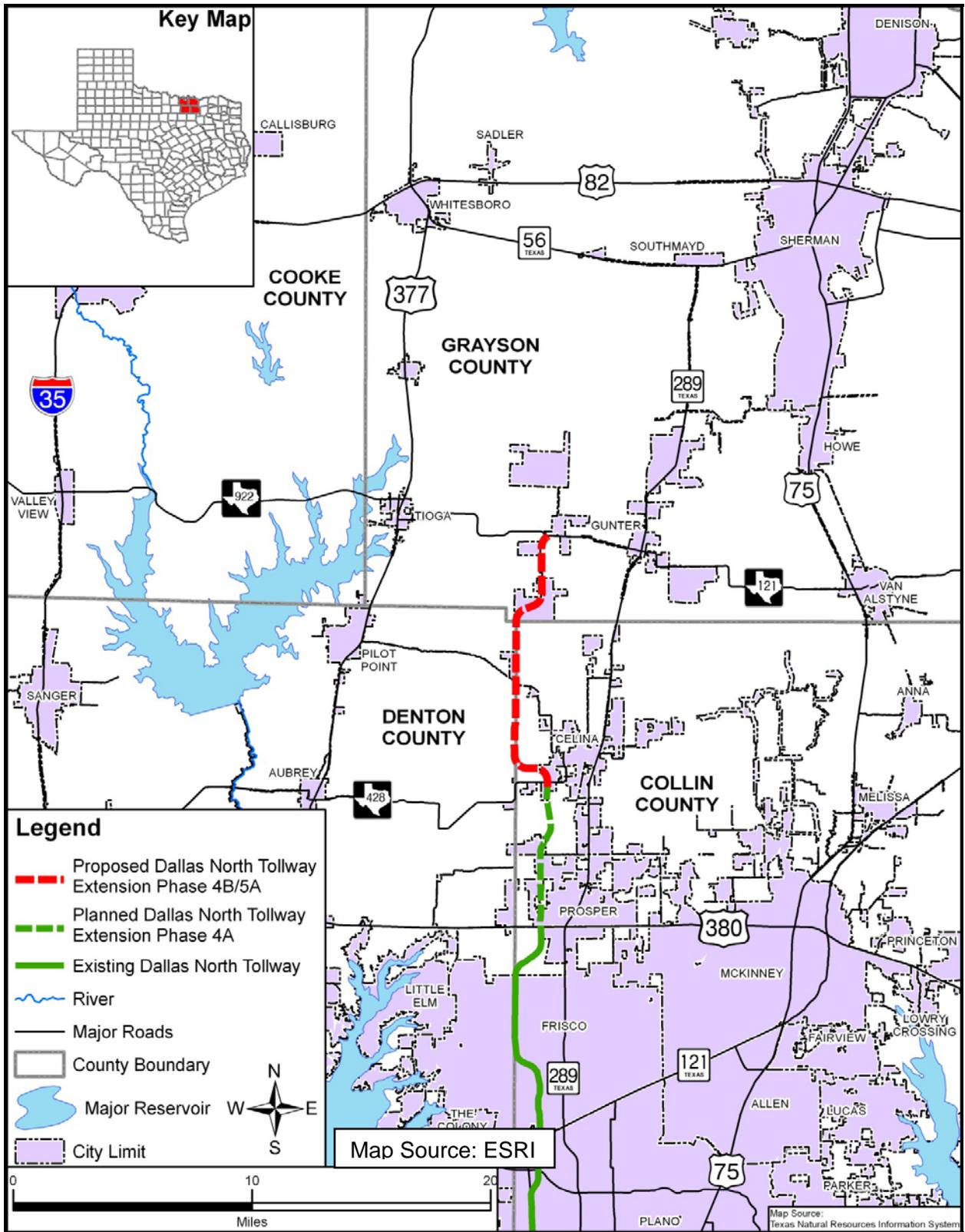
31  
32 ARC recommends that the four historic sites (41DN577, 41DN578, 41DN579, and 41GS221) do  
33 not meet the minimum requirements for listing on the National Register of Historic Places  
34 (NRHP). Investigations performed during the archival research and survey have contributed  
35 more information to the understanding of historic settlement in Collin, Denton, and Grayson  
36 counties, Texas. A lack of site integrity in all four cases leads ARC to recommend that further  
37 investigations are unwarranted. Extensive exploration for prehistoric sites found none to exist in  
38 the proposed DNT 4B/5A project area. In light of these results, ARC recommends that the NTTA  
39 be allowed to proceed with construction with no need of additional archeological investigation. If  
40 buried cultural resources are encountered during construction, work in that area should cease  
41 immediately and the Archeology Division of the Texas Historical Commission (THC) should be  
42 contacted.

1 **2.0 INTRODUCTION**

2  
3 The NTTA is proposing to construct the proposed DNT 4B/5A in Collin, Denton, and Grayson  
4 counties, Texas (**Figure 1**). The proposed DNT 4B/5A, approximately 12 miles (19.3 km) in  
5 length, begins at FM 428 in Collin County, curves to the west toward the Collin/Denton county  
6 line, and follows the county line north into Grayson County where it terminates at FM 121. The  
7 proposed DNT 4B/5A would require 400 feet (121.9 m) of new ROW and drainage easements  
8 typically extending no more than 100 feet (30.5 m) beyond the proposed DNT 4B/5A ROW limit  
9 on either side at drainage crossings; however, the drainage easement in the Little Elm Creek  
10 floodplain is 200 feet (61.0 m) to 500 feet (152.4 m) beyond the proposed DNT 4B/5A ROW.  
11 The total ROW requirement for the proposed DNT 4B/5A project is approximately 584 acres  
12 (236.3 ha), plus 34 acres (13.8 ha) of drainage easements.

13 A desktop evaluation and literature review of the proposed DNT 4B/5A project area with  
14 recommendations regarding survey of the high potential areas was conducted by ARC and  
15 reviewed by the THC in October 2010. The evaluation recommended survey of approximately  
16 5.5 miles (8.9 km) of the proposed DNT 4B/5A, which contain high potential areas for cultural  
17 resources. These sections include investigating both sides of the proposed DNT 4B/5A where  
18 the proposed DNT 4B/5A ROW traverses or parallels historic roads and the portion where the  
19 proposed DNT 4B/5A crosses the Little Elm Creek floodplain. In a letter dated October 28,  
20 2010, the THC recommended that the entire proposed ROW receive a pedestrian archeological  
21 survey (**Appendix A**). ARC was contracted by Halff to conduct the archeological survey of the  
22 proposed DNT 4B/5A ROW and drainage easements. Halff is conducting the overall  
23 environmental evaluation of the proposed DNT 4B/5A on behalf of the NTTA.

24 This report was written in accordance with report guidelines developed by the Council of Texas  
25 Archeologists (n.d.) and adopted by the Archeology Division of the THC. The report begins with  
26 a brief description of the natural environment and then a summary of previous archeological  
27 investigations in the proposed DNT 4B/5A project area as known from published sources. This  
28 is followed by a description of the research design and methodology. The results of the field  
29 investigation constitute the majority of the report. The last section presents recommendations  
30 that arise from the study. A list of references cited concludes the report and is followed by the  
31 aforementioned THC letter in **Appendix A**, a table of general shovel test results in **Appendix B**,  
32 and maps showing the locations of shovel tests and trenches in **Appendix C**.

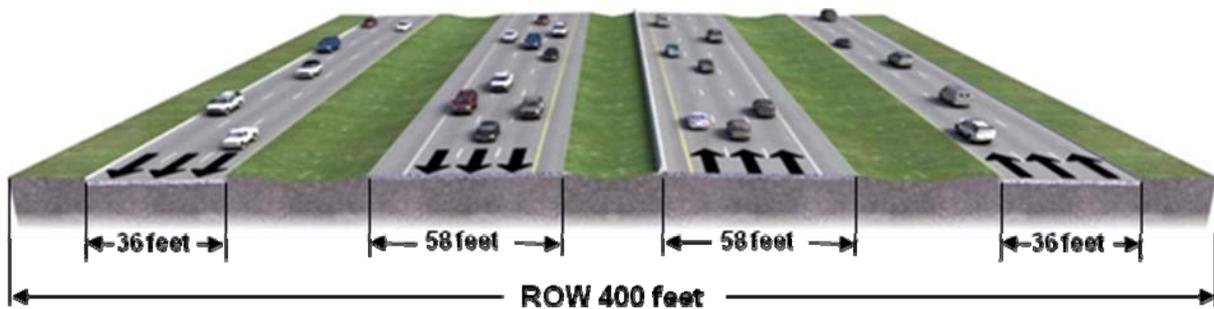


1  
2  
3  
4

**Figure 1. Proposed DNT 4B/5A shown on a regional map.**

1 **3.0 PROJECT DESCRIPTION**

2  
3 Construction of six proposed DNT 4B/5A mainlanes (three lanes in each direction) and frontage  
4 roads (three lanes in each direction) would generally result in excavation of soil to a depth of  
5 5 feet (1.5 m) or less, but excavation to a maximum depth of 10 feet (3.0 m) may be required at  
6 some locations (**Figure 2**). Excavation of soil for mainlanes to a depth of up to 35 feet (10.7 m)  
7 would occur at five locations where the proposed tollway would pass under the following cross  
8 streets: County Road (CR) 54, FM 455, CR 60, a future street 0.5 mile (0.8 km) south of Stiff  
9 Chapel Road, and at Stiff Chapel Road; frontage roads at these locations would remain at  
10 grade.



13  
14  
15 **Figure 2. Representative cross section of the proposed DNT 4B/5A ROW showing three**  
16 **mainlanes and three frontage road lanes in each direction.**

17  
18  
19 The proposed facility would require 11 bridges, eight of which would support mainlane crossings  
20 of cross streets. The other three bridges would support mainlane and frontage road crossings of  
21 stream channels, two of which are located at the intersection of CR 8 and CR 9 and 2,000 feet  
22 (609.6 m) north of this intersection, with the largest bridge crossing located over Little Elm  
23 Creek. At this stage of project design, there has been no geotechnical survey of soil conditions  
24 at these bridge crossings so it is not possible to estimate the depth of excavation necessary for  
25 drilled bridge shafts. Grading of the Little Elm Creek floodplain to an estimated maximum depth  
26 of 5 feet (1.5 m) would be necessary to preserve the hydraulic functioning of the floodplain;  
27 grading to a depth of 4 feet (1.2 m) to 8 feet (2.4 m) would be necessary for the other two bridge  
28 stream crossings. The proposed DNT 4B/5A design is also planned to include a storm sewer  
29 system to accommodate storm runoff from the facility.

30  
31 At this stage of project development, there has been no comprehensive survey of utilities that  
32 may be affected by the proposed DNT 4B/5A. As the proposed tollway would be located in a  
33 rural area, few utilities are expected to occur within the proposed DNT 4B/5A ROW. The only  
34 known utilities that would need to be relocated are above-ground electrical distribution lines  
35 along some of the existing roads within the proposed DNT 4B/5A ROW. A buried natural gas  
36 pipeline crosses the proposed tollway near its southern end, which may need to be relocated,  
37 depending on its depth and on the final design of the proposed DNT 4B/5A.

1 This archeological survey has been completed pursuant to Texas Antiquities Permit Number  
2 5866, issued by the THC on January 25, 2011. The following administrative information applies  
3 to this archeological study:  
4

5 Sponsor: North Texas Tollway Authority.  
6 Review Agency: Archeology Division of the Texas Historical Commission.  
7 Principal Investigator: Rebecca Shelton, MA.  
8 Field Crew: Nick Coleman, Cameron Turley, Cody S. Davis,  
9 and Rebecca Shelton.  
10 Field Work Dates: February 8, 14, 16-17, 25 and March 3, 2011.  
11 Area Surveyed: 618 acres (250.1 ha).  
12 Sites Recorded:  
13 Prehistoric: None.  
14 Historic: 41DN577, 41DN578, 41DN579, 41GS221.  
15  
16

#### 17 **4.0 NATURAL SETTING** 18

19 The underlying geology of much of the proposed DNT 4B/5A is the Eagle Ford Formation,  
20 broken by a narrow band of alluvium and terrace deposits (Bureau of Economic Geology 1991).  
21 The southern portion of the proposed DNT 4B/5A alignment crosses the Eagle Ford Formation  
22 in western Collin County and continues over this formation as it follows the Collin/Denton county  
23 line. The formation ranges in thickness from 300 feet (91.4 m) to 400 feet (121.9 m). North and  
24 south of the proposed DNT 4B/5A crossing of Little Elm Creek, the valley is filled with Trinity  
25 clay alluvium for approximately 2,200 feet (670.6 m). These alluvial deposits are up to 30 feet  
26 (9.1 m) thick. North of these alluvial deposits, the geology changes to fluviate terrace deposits  
27 that continue for just over 2 miles (3.2 km). As the proposed DNT 4B/5A continues north, the  
28 underlying geology reverts to the Eagle Ford Formation for the remainder of the proposed DNT  
29 4B/5A alignment.

30 In Collin County, the soil types within the proposed DNT 4B/5A ROW are Houston and Ellis  
31 clays (Hanson and Wheeler 1969). In Denton County, the soil types are Burleson, Ellis, Ferris-  
32 Houston, Houston, Navo, Ovan, Trinity, Vertel, and Wilson clays and Wilson clay loam (Ford  
33 and Pauls 1980). Both the Trinity and Ovan clays are associated with Little Elm Creek and its  
34 floodplain, through which the proposed DNT 4B/5A extends for some distance. The rest of the  
35 soils are upland clays.

36 The upland surface has been cleared of most trees and supports Bermuda grass (*Cynodon*  
37 *dactylon*) and other grasses that occasionally have been invaded by mesquite trees (*Prosopis*  
38 *glandulosa*). The vast majority of this area has been subject to farming in the past. Much of the  
39 proposed DNT 4B/5A is now farmed or maintained as pasture lands. This entire upland area  
40 supports scattered young and old trees including *bois d'arc* (*Maclura pomifera*), American elm  
41 (*Ulmus americana*), cedar elm (*Ulmus crassifolia*), hackberry (*Celtis laevigata*), and honey  
42 locust (*Gleditsia triacanthos*) along with various weeds and masses of greenbrier vines (*Smilax*  
43 spp.). According to various authors, the prairie once supported a cover of tall grasses such as

1 big bluestem (*Andropogon gerardii*) and was inhabited by now absent herbivores including  
2 bison and antelope. Certainly, deer inhabited the narrow bottomland forest that hugs Little Elm  
3 Creek.

4 Little Elm Creek is mapped as a perennial drainage on the U.S. Geological Survey (USGS)  
5 topographic maps (1:24,000 scale) and the valley would have provided habitat for large and  
6 small game. Reliable water and game could have made this crossing an attractive location to  
7 prehistoric peoples. The Little Elm Creek watershed begins approximately 12 miles (19.3 km)  
8 northeast of the proposed DNT 4B/5A project area at foothills that run in a generally north-south  
9 direction, separating the drainage area from that of the East Fork Trinity River. In addition to  
10 Little Elm Creek, 12 intermittent or ephemeral drainages are crossed by the proposed DNT  
11 4B/5A, most of them unnamed tributaries to Little Elm Creek. These channels typically serve as  
12 upland drainages for rainwater and are generally dry during much of the year. From the  
13 proposed DNT 4B/5A project area, Little Elm Creek flows southwest into Lewisville Lake.

14  
15

## 16 5.0 CULTURAL HISTORY

17

### 18 *Historical Background*

19 The history and prehistory of Collin, Denton, and Grayson counties are summarized in several  
20 reports prepared by the University of North Texas (Lebo and Brown 1990; Brown and Lebo  
21 1991; Ferring and Yates 1998). The most commonly used chronology for the region was  
22 established by Prikryl (1990) which divides the Late Prehistoric, the time from the use of the  
23 bow and pottery to the Historic Indian, into two periods: Late Prehistoric I (A.D. 700 to 1200) and  
24 Late Prehistoric II (A.D. 1200 to 1700) as shown in **Table 1**.

25  
26

**Table 1. Temporal Framework of North Central Texas Modeled after Prikryl**

Historic European	A.D. 1800 to Present
Historic Native American	A.D. 1700 to A.D. 1850
Late Prehistoric II	A.D. 1200 to A.D. 1700
Late Prehistoric I	A.D. 700 to A.D. 1200
Late Archaic	2,000 B.C. to A.D. 700
Middle Archaic	4,000 B.C. to 2,000 B.C.
Early Archaic	6,000 B.C. to 4,000 B.C.
Paleoindian	ca. 11,000 B.C. to 6,000 B.C.

27  
28

29 Prehistoric Native American settlement in the region began at least 10,000 years ago as  
30 attested to by the presence of distinctively shaped dart points at the Lewisville site (Crook and  
31 Harris 1957) and the Aubrey Clovis site (Ferring 2001) in Denton County. Moreover, artifact  
32 collectors report the presence of Clovis, Folsom, Scottsbluff, and other Paleoindian points from

1 the surface of sites in the region. The presence of exotic, non-local lithic resources indicates  
2 that these early people traveled to territory where higher quality lithics were available or they  
3 were involved in a system of raw material trading. These early people hunted now extinct large  
4 game but probably also foraged off the land.

5 The subsequent period, the Archaic, lasted from 6,000 B.C. to as late as A.D. 700. The Archaic  
6 peoples lived throughout the counties, with particular focus along the major and minor stream  
7 valleys where they were able to hunt and gather native foods. Large Archaic sites are generally  
8 located on terraces or ridges that overlook the Elm Fork of the Trinity River. Smaller lithic  
9 scatters have been recorded in upland areas throughout the counties. These sites appear to be  
10 Archaic in age, but few have been thoroughly studied. Dart points, grinding stones, fire-cracked  
11 rock, and scrapers are common artifacts found in Archaic sites. The earliest Archaic peoples  
12 continued using exotic cherts for dart points, but as time passed, there was a shift toward the  
13 use of locally available stone for chipped stone tools. These materials are described as Uvalde  
14 Gravels (Menzer and Slaughter 1971).

15 During Late Prehistoric I, a small amount of pottery appears at the Baggett Branch site,  
16 41DL149 (Prikryl and Perttula 1995:189). From A.D. 1000 to 1300, pottery appears in North  
17 Central Texas that has similarities to Caddo pottery. Genuine Caddo and Jornada Mogollon  
18 ceramics also occur at sites in North Central Texas (Prikryl and Perttula 1995:189). Arrowheads  
19 appear approximately this same time, signaling the introduction of the bow and arrow to the  
20 hunting toolkit. In addition, houses were found at the Cobb-Pool site, 41DL148 (Peter and  
21 McGregor 1988:140). Fritz (1993) mentions the use of corn for food in North Central Texas  
22 during this time and Todd (1999) suggests that the presence of mussel shell hoes in North  
23 Central Texas indicates some form of farming.

24 It has been suggested that the climate was drier during the Late Prehistoric II. Bison may have  
25 been utilized more than in Late Prehistoric I times. The presence of bison-scapula hoes,  
26 especially in northern North Central Texas, suggests an increase in horticulture or, at least, its  
27 first appearance. This concept is supported by the presence of sites along sandy terraces  
28 instead of the floodplain area where Late Prehistoric I sites are found. Also, there is a marked  
29 Plains influence in North Central Texas during this time (Prikryl 1990:80).

30 At the end of the Late Prehistoric period, there appears to have been a general abandonment of  
31 the North Central Texas area (Skinner 1988). Along the Red River in Montague and Cooke  
32 counties and across the Red River in Oklahoma, there is both archeological and ethnographic  
33 evidence of historic Taovayas, Wichitas, and Yscanis Indians (Bell, Jelks and Newcomb 1967;  
34 John 1992:204). Because the Spanish could not subdue these tribes, they made them their  
35 allies with promises of help against the Osages.

36 There is tantalizing evidence found on the Trinity River in Dallas County of a possible visit by  
37 Spanish explorer Hernando de Soto (Bruseh 1992). Artifacts found consist of a chain-mail  
38 gauntlet, a halberd, and a spur. Current research, however, seems to indicate that Anglo  
39 settlers were the first non-Indians to settle in North Central Texas.

1 Early European settlement of Collin County took place from *circa* 1840 to 1860, after  
2 establishment of the Peter's Colony, when farmers immigrated to the area establishing small,  
3 family farmsteads (Minor 2011a; RMA/Texas 1986). Collin County was established in 1846, and  
4 the county seat was at Buckner until 1848 when it was moved to McKinney. The early  
5 pioneering economy in Collin County consisted primarily of wheat and corn production.  
6 Construction of the Houston and Texas Central Railway in 1872, and others in the years to  
7 come, provided the impetus for significant change to the county's economy. Over a 50-year  
8 period between 1870 and 1920, farmland in Collin County increased in value to nearly 30 times  
9 the pre-railroad estimation. The Great Depression did not hit the county as hard as others in  
10 Texas, and economic recovery was evident by the 1950s.

11 As it was in Collin County, European settlement in Denton County began before the mid-1800s  
12 with the establishment of the Peter's Colony after Texas gained independence. These early  
13 settlers were farmers who farmed the bottomland along the Elm Fork of the Trinity River  
14 (Bridges 1978). Denton became the county seat in 1856. Commercial farming was not important  
15 until after the Civil War, and the early settlers were essentially self-sufficient. Besides the plants  
16 and animals they grew, wild varieties were commonly consumed. By 1875, cotton, corn, and  
17 wheat were their main cash crops. Up to half of these crops were grown by tenant farmers who  
18 either paid rent to the land owner for their house, tools, and seed or by tenants who gave the  
19 landowner a third of the grain and a quarter of the cotton or other cash crops. By the turn of the  
20 century, all of the major communities were established and some had been abandoned.

21 European visitation of Grayson County began with Spanish and French expeditions, while  
22 settlement began along the Red River in the 1830s (Kumler 2011). Establishment of the Peters  
23 Colony resulted in the rapid population growth of the region. During these early years, grain and  
24 livestock were the cornerstone of the economy in Grayson County. Access to the Red River  
25 allowed residents to exploit and develop river trade, and, combined with the Preston Bend  
26 landing on the river, the north end of the Preston Road trail, helped to stay many economic  
27 pains of the Reconstruction era. The advent of the railroad affected Grayson County in a  
28 manner similar to Collin and Denton counties, inaugurating a period of rapid population and  
29 economic growth. The county's population declined during the Great Depression and did not  
30 fully recover until the taking of the census in 1970. The primarily agricultural economy was  
31 supplanted first by oil from the 1930s, then by manufacturing during the 1970s.

32 The two closest communities to the proposed DNT 4B/5A are Celina and Gunter, Texas. Celina  
33 is located east of the southern end of the proposed alignment in Collin County, and Gunter is  
34 located east of the northern end of the proposed alignment in Grayson County. Celina was  
35 originally established in 1879. In 1902, the community moved 1 mile north to be in closer  
36 proximity to the St. Louis, San Francisco, and Texas Railway. Although the population of Celina  
37 dropped below 1,000 during the Great Depression, a steady increase brought the population to  
38 1,821 by 2000 (Minor 2011b). Gunter had an official post office in 1898 and was organized as a  
39 community in 1902 when the railroad reached the area. The population of Gunter was 800 in  
40 1914, fell below 500 in 1936 as a result of the Great Depression, and increased to 1,230 by  
41 2000.

42

1 **Previous Investigations**

2 One of the most significant archeological investigations near the proposed DNT 4B/5A project  
3 area took place in Denton County. Stephenson (1949) originally surveyed the Garza-Little Elm  
4 Reservoir, now known as Lewisville Lake. A total of 27 sites were recorded, though it should be  
5 noted that this survey focused upon recording prehistoric sites, and no historic sites were  
6 recorded. During dam construction, the Lewisville site (41DN72) was found during a borrow pit  
7 excavation on a terrace 70 feet above the level of the Elm Fork of the Trinity River. Between  
8 1951 and 1957, 21 hearths were discovered as were Late Pleistocene faunal remains and a  
9 Clovis point. The site was originally dated to 37,000 years before present (BP); however, the  
10 date was later questioned and further testing indicated that lignite contaminated the dated  
11 samples. A revised date of *circa* 12,000 years BP is attributed to the site (Crook and Harris  
12 1957 & 1961; Banks 2010).

13 Nunley (1973) and students from Richland College surveyed the lake edge and recorded 58  
14 historic and prehistoric sites for the U.S. Army Corps of Engineers. Lebo and Brown (1990)  
15 conducted an archeological survey of approximately 14,000 acres (5,665.8 ha) of shoreline and  
16 recorded or relocated 66 prehistoric and 85 historic sites, many of which had originally been  
17 recorded by Stephenson and Nunley. The sites ranged in age from the Archaic to 1950, and 39  
18 of the sites were recommended for further testing which was conducted the next year (Brown  
19 and Lebo 1991). Of the 39 sites, five were then recommended for intense testing which was  
20 done in 1997 (Ferring and Yates 1998). Significant patterns for prehistoric occupation emerged  
21 during the course of this study, finding that such sites in the area occur primarily along  
22 tributaries that provide a reliable source of water. More specifically, these sites are situated on  
23 floodplain knolls or on the low upland edges adjacent to these drainages. Upland edges and  
24 knolls near the confluence of drainages appear particularly dense with prehistoric occupation.  
25 Historic sites were located near drainages and roadways.

26 A large lake survey was conducted west of the northern terminus of the proposed DNT 4B/5A  
27 alignment for Lake Ray Roberts (Skinner and Baird 1985). Findings here were analogous to  
28 those of the Lewisville Lake studies. Prehistoric sites were recorded adjacent to drainages, most  
29 commonly on low upland edges and knolls. Excavation of six of these prehistoric sites  
30 suggested that occupation in the area was likely seasonal from the Middle Archaic to the Late  
31 Prehistoric II. Historic occupation, including cemeteries, was also well represented in the area  
32 with most sites dating to 1900 or later.

33 A series of small block surveys and one linear stretch was performed for the Texas Department  
34 of Transportation in 1996 primarily along portions of FM 289, between Frisco and Gunter,  
35 Texas. The surveys focused on all tributary crossings along the project. Nearly all of these  
36 crossings were minor, intermittent tributaries near headwaters. The survey recorded no historic  
37 or prehistoric sites.

38 In 2002, ARC conducted an evaluation for several conceptual alternatives for extending the  
39 Dallas North Tollway north of United States Highway (US) 380 (Todd and Skinner 2002a). The  
40 evaluation recommended survey for the selected alignment. ARC conducted an archeological  
41 survey 4 years later of the alignment selected for the planned Dallas North Tollway Extension

1 Phase 4A (DNT 4A) (Todd 2006). The investigation covered 6.7 miles (10.8 km) of proposed  
2 new tollway from US 380 to FM 428, the southern terminus of the proposed DNT 4B/5A  
3 alignment. The survey resulted in the discovery and recording of one historic site, 41COL191,  
4 which consisted of a single cistern. No prehistoric sites were found during the study.

5 A survey of portions of ROW for the Mustang Creek Water Supply Corporation was performed  
6 by ARC west of the southern end of the proposed DNT 4B/5A (Todd and Skinner 2002b). The  
7 study focused on crossings of Pecan and Mustang creeks, as well as adjacent upland edges.  
8 Comprehensive survey and shovel testing of the alignments revealed no evidence of prehistoric  
9 or historic occupation.

10 In 2002, ARC performed an archeological survey near the proposed DNT 4B/5A project area  
11 (Todd and Skinner 2002c). This survey was within the Carter Ranch Development, primarily in  
12 the foothills east of Doe Branch at the eastern edge of its watershed before crossing the ridge to  
13 Wilson Creek. This investigation for cultural materials covered 6 acres (2.4 ha) along two  
14 intermittent drainages. Ground survey, 17 shovel tests, and inspection of drainage banks failed  
15 to find extant cultural resources.

16 An archeological survey was conducted by ARC in conjunction with the Doe Branch Wastewater  
17 Treatment Plant (Todd and Skinner 2002d). The 20-acre (8.1-ha) survey is located southwest of  
18 the previously described planned DNT 4A survey, farther downstream along Doe Branch. The  
19 remains of a windmill were discovered, but not recorded as an archeological site. A total of 19  
20 shovel tests, some supplemented with auger testing, were all culturally sterile.

21 A small, 10-acre (4.0-ha) block of land northwest of Doe Branch was surveyed by ARC in 2004  
22 (Todd 2004). Pedestrian survey and 21 shovel tests, excavated to a mean 50 centimeters (cm)  
23 (19.7 inches) below surface (cmbms), all returned negative results for extant cultural deposits.

24 In 2009 ARC conducted a 137-acre (55.4-ha) study for the Light Farms residential development  
25 (Turley, Skinner, and Lang 2009). This survey focused on Doe Branch, several of its minor  
26 intermittent tributaries, and the adjacent low upland benches. Extensive shovel testing (44 total)  
27 and bank inspection identified no evidence of prehistoric occupation in the area. Four historic  
28 sites were recorded during the survey, all attributed to the early and mid 20<sup>th</sup> century.

29 A search on the Texas Archeological Site Atlas (TASA) was conducted to determine if any  
30 recorded cultural resources were within the proposed DNT 4B/5A ROW. Each quadrangle map  
31 was examined, yet no archeological sites, cemeteries or State Historic Markers are within the  
32 proposed DNT 4B/5A ROW or within 0.25 mile (0.4 km) of the proposed DNT 4B/5A alignment.  
33

34 Preceding the survey, historic maps of Denton, Collin, and Grayson counties were reviewed.  
35 The proposed DNT 4B/5A was georeferenced using ArcGIS over a series of early 20<sup>th</sup> century  
36 maps. In addition to the USGS topographic maps which dated 1960 and 1961, the map review  
37 included the following:

- 38 1930 Collin County Soil Map;
- 39 1936 Collin County Highway Map;

1 1959 Collin County General Highway Map;  
2 1918 Denton County Soil Map;  
3 1936 Denton County Highway Map;  
4 1959 Denton County General Highway Map; and  
5 1936 Grayson County Highway Map.  
6  
7

## 8 **6.0 RESEARCH DESIGN AND METHODOLOGY**

9

### 10 ***Research Design***

11 From the evaluation conducted in 2010, ARC identified areas of low and high potential for  
12 prehistoric and historic cultural resources within and adjacent to the proposed DNT 4B/5A study  
13 area for the proposed DNT 4B/5A (Turley 2010). The greatest potential for prehistoric sites is  
14 near perennial drainages, specifically on elevations above flooding. Such locations include  
15 knolls above the floodplain and the low upland edges set back from the drainage. Areas at the  
16 confluence of drainages also have proven to hold high potential for prehistoric archeological  
17 resources. Sites within floodplains may also exist buried in sediments deposited during flooding  
18 events.

19 In the proposed DNT 4B/5A project area, the highest potential areas for prehistoric resources  
20 are in the floodplain of Little Elm Creek. The most likely place to encounter prehistoric sites  
21 within this area is on the low upland edge north of Little Elm Creek, upstream from a confluence  
22 with a smaller, unnamed tributary. As demonstrated by previous investigations, the potential for  
23 prehistoric archeological sites drops significantly as the proposed DNT 4B/5A alignment moves  
24 into and across the uplands. Sites may still exist, but density drops significantly. Sites  
25 encountered in upland settings are often ephemeral hunting camps, lithic procurement sites, or  
26 small artifact scatters. Furthermore, in an erosional setting like the uplands, sites are more likely  
27 to be deflated onto the ground surface, losing primary context. Although the potential for  
28 prehistoric archeological resources exists within the proposed DNT 4B/5A project area of  
29 potential effects (APE), which includes the area within the proposed DNT 4B/5A ROW and  
30 drainage easements, none have been discovered at this point.

31 Based on a review of historic maps and from the field reconnaissance, it appears that the  
32 majority of structures are situated near historic roads or on hill tops, ridges, or knolls overlooking  
33 the landscape. Many of the roads have been in existence since the early 20<sup>th</sup> century. The  
34 proposed ROW parallels these historic roads, all of which have potential for historic structures.  
35 Field reconnaissance identified two potential historic structures that could be impacted.  
36 Additionally, historic artifact scatters are likely to occur along any drainage or may appear as  
37 sheet middens near structures.  
38

### 39 ***Methodology***

40 The field teams walked parallel transects spaced 20 m (65.6 feet) to 30 m (98.4 feet) apart  
41 within the 400-foot (121.9-m) ROW and made thorough field notes about ground exposure, soil  
42 types, and disturbed areas. Survey was also conducted within the 100-foot (30.5-m) drainage  
43 easements on the intermittent tributaries and within the 200-foot (61.0-m) to 500-foot (152.4-m)

1 drainage easement on either side of Little Elm Creek. Field survey teams were able to access  
2 all of the 618-acre (250.1-ha) APE except for 21.4 acres (8.7 ha), which represents 3.5% of the  
3 APE. Lack of right-of-entry to this property prevented access to an area extending 4,400 feet  
4 (1,341.1 m) south of CR 60 along the east side of County Line Road (CR 10). This portion of the  
5 APE was assessed by making observations from the adjacent County Line Road (CR 10) ROW  
6 and by examining detailed aerial photography.

7 Throughout the accessible APE, shovel tests were excavated at an interval of approximately  
8 100 meters (328.1 feet), where ground visibility was less than 30%, and where hills or upland  
9 edges overlooked drainage crossings. Each shovel test was excavated to the bottom of the  
10 Holocene deposit according to THC standards (THC n.d). Shovel tests averaged 30 cm  
11 (11.8 inches) in diameter and were supplemented by an auger when necessary. The clay fill  
12 from the shovel tests was inspected visually and broken into smaller chunks in order to  
13 determine if cultural materials were present. Sandy soils from the shovel tests were screened  
14 through 0.25-inch (0.6-cm) hardware cloth. Photographs were taken throughout the survey area  
15 using a Canon PowerShot SD1100 IS Digital Elph 8.0 mega pixel digital camera. Backhoe  
16 trenches were excavated and stepped according to Occupational Safety and Health  
17 Administration standards. Soil profiles were described following the procedures developed by  
18 Vogel (2002) and photographs were taken. Soil from trench walls, floors and backdirt was  
19 screened or sorted in order to explore for artifacts. Shovel test and trench matrices were  
20 described on the basis of texture and color. The Munsell Soil Color Chart was used to identify  
21 the specific soil colors in each test. Shovel test and trench locations were recorded using either  
22 a Garmin GPS Map 76 or a Garmin Colorado 400t handheld global positioning system (GPS)  
23 receiver.

24 Standing structures 45 years or older, located outside the proposed DNT 4B/5A ROW but within  
25 the 300-foot (91.4-m) historic-age resources survey APE, were noted during the archeological  
26 pedestrian survey; these resources were evaluated by Halff and documented in a separate  
27 Historic Resources Due Diligence Report (HRDDR) (Terrell 2011).

28 Metric units are used in this report when describing transect intervals, shovel test intervals,  
29 shovel test depths and profiles, and trench depths and profiles. Conversely, English  
30 measurements are used to describe historic sites and features as well as general features of the  
31 proposed DNT 4B/5A. Throughout this report the units of measurement applicable to a  
32 particular scenario are given first, followed by a conversion to the opposing unit system in  
33 parentheses.

34 Sites recorded in the proposed DNT 4B/5A ROW were evaluated to determine if they met the  
35 significance criteria for State Archeological Landmarks or the NRHP. Recommendations for  
36 handling cultural resources located within the proposed DNT 4B/5A study area have been made  
37 based on the archeological site eligibility criteria set forth in Section 106 of the National Historic  
38 Preservation Act. The National Register criteria for evaluating archeological sites are  
39 summarized below:

- 40 a) the site is associated with events that have made a significant contribution to the
- 41 broad patterns of our history; or

- b) the site is associated with the lives of persons significant in our past; or
- c) the site embodies distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d) a site has yielded, or may be likely to yield, information important in prehistory or history.

## 7.0 SURVEY RESULTS

This section is separated into five subsections, the first describes the terrain and natural setting of the proposed DNT 4B/5A study area. The results of the survey, site discussions, and trenching results follow. Conclusions derived from the results end this section. Although shovel tests are described generally within the text, a complete description of those shovel tests not associated with site delineation (i.e., described in **Table 2** and **Table 3**, below) can be found in **Appendix B**.

### ***Survey Area***

The proposed DNT 4B/5A alignment begins northwest of Doe Branch and southwest of Celina, Texas at FM 428. The proposed alignment curves west then north to the Collin/Denton county line, traveling through relatively level uplands of the Little Elm Creek watershed. Plotted on a north-south orientation along the county line, the proposed DNT 4B/5A crosses several intermittent tributaries of Little Elm Creek. Through this area, topography begins to vary slightly until the wide floodplain of Little Elm Creek is reached. After crossing the floodplain, the proposed DNT 4B/5A continues to follow the county line into the uplands. Upon reaching Grayson County, the proposed alignment curves to the east then north to terminate at FM 121.

### ***The Survey and Shovel Testing***

#### ***FM 428 to CR 8***

Beginning at FM 428, the proposed DNT 4B/5A travels north, then west to intersect CR 54, and then turns north again towards CR 8 as shown in **Appendix C, Exhibit 1**. Immediately north of FM 428, the proposed DNT 4B/5A crosses through recently plowed fields where ground visibility was 100%. The first drainage crossing had no distinguishable banks or cut channel in a relatively level field. The proposed DNT 4B/5A continues across plowed fields to the northwest, crosses an unnamed intermittent drainage of Little Elm Creek and turns to the west. This second drainage was well defined on the landscape and was flanked by a band of trees on either bank. The width of the sinuous channel was 20 m (65.6 feet) to 25 m (82.0 feet) in some locations, with a surface water width of 1 m (3.3 feet) to 2 m (6.6 feet) and with the stream banks 2 m (6.6 feet) to 3 m (9.8 feet) high. Concrete, a car, and modern debris had been dumped near the edges of the channel, most likely to prevent gullies from eroding the banks further (**Figure 3**). Within the channel, limestone and shale gravel bars were present. Shovel

1 tests B217 through B221 were excavated on the upland edges and elevated areas near the  
2 channel edge. The topsoil was very dark gray clay loam with limestone pebbles, followed by  
3 dark gray clay loam with sand and gravel subsoil between 24 cmbs (9.4 inches) and 27 cmbs  
4 (10.6 inches). No cultural materials were recorded in the fields, channel, or shovel tests.  
5



6  
7  
8 **Figure 3. Unnamed tributary of Little Elm Creek, note the concrete and lumber debris,**  
9 **view is facing south.**  
10  
11

12 West of the drainage, the surveyors' route crossed through a pasture and a second plowed field  
13 to the edge of CR 54 where ground visibility ranged between 50% and 100%. At the edge of the  
14 plowed field and tree line, a historic feature was recorded (**Figure 4**). The feature was a  
15 concrete, brick and cinderblock retaining wall encountered on the edge of the 400-foot  
16 (121.9-m) ROW. It appears to be associated with the Historic Resource Location 1 in the  
17 Historic-Age Resource Due Diligence Report (HRDDR) (Terrell 2011:11). This retaining wall  
18 was most likely built to facilitate drainage of the pasture and to keep the soil from eroding  
19 downslope into the farmstead. No other historic artifacts were identified on the surface, and the  
20 majority of the historic resources including two barns, a garage, and a collapsed house are  
21 outside the proposed DNT 4B/5A ROW.  
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**Figure 4. Retaining wall in the proposed DNT 4B/5A ROW located northeast of Historic Resource Location 1.**

From CR 54, the proposed DNT 4B/5A curves again to the northwest toward the intersection of CR 8 and CR 9. This entire portion of the proposed DNT 4B/5A crosses through short grass pasture and avoids an historic farmstead, Historic Resource Location 4 in the HRDDR (Terrell 2011:12). Ground visibility was between 70% and 80%, and no cultural resources were identified on the surface in the proposed DNT 4B/5A ROW. At the junction with CR 8, the ground surface had been modified to create two ponds near the third drainage crossing.

*CR 8 to CR 9*

On the north side of CR 8, two shovel tests (B222 and B223) were placed in the western drainage easement where the upland edge overlooked the sinuous drainage channel. The topsoil was dark gray loamy clay, to 27 cmbs (10.6 inches) and 28 cmbs (11.0 inches) respectively, and the subsoil was dark gray clay mottled with yellowish brown sand. Small limestone pebbles and gravels were at the bottom of the channel, which had flowing water and was 2 m (6.6 feet) to 3 m (9.8 feet) wide. The banks were steep, 3 m (9.8 feet) to 4 m (13.1 feet) in height. Mussels were present in the channel bottom, predominantly the invasive Asian variety, but some were large, white native mussels. The eastern drainage easement was in a short grass pasture with ground visibility at 40% to 50%, and the ground had been modified due to the construction of a culvert.

1 Continuing north along CR 9, the setting was short grass pasture with ground visibility between  
2 40% and 50%. Shovel tests (N132 and N133) were placed on the upland edges overlooking a  
3 fourth drainage crossing. The channel was much narrower than the preceding one, less than  
4 2 m (6.6 feet) deep and 4 m (13.1 feet) wide. Dark gray sandy clay loam overlaid dark grayish  
5 brown loamy clay, with the subsoil being encountered at 35 cmbs (13.8 inches) and 50 cmbs  
6 (19.7 inches) for shovel tests N132 and N133, respectively. No cultural resources were  
7 encountered on the surface or in the shovel tests.

8  
9 *Site 41DN577*

10 Upslope, on a horseshoe shaped knoll at 620 feet (189.0 m) above sea level (asl), a scatter of  
11 “PALMER” bricks and limestone footing stones were encountered during the survey (**Figure 5**,  
12 and **Appendix C, Exhibit 1**). The 1960 Celina, TX 7.5’ USGS topographic map shows an  
13 unoccupied structure mapped at this location. Ground visibility was less than 30%, and a total of  
14 eight shovel tests (**Table 2**) were excavated to determine the site boundaries.

15  
16 Recorded as site 41DN577, additional cultural materials included various colors of glass shards,  
17 whiteware, brown slipped earthenware sherds, and a small piece to a red slipped tea cup  
18 handle consistent with late 19<sup>th</sup> early 20<sup>th</sup> century household artifacts. Artifacts were in the top  
19 30 cm (11.8 inches). The glass included clear window pane shards, circular and square bottle  
20 bases (unstamped) of opaque white, brown, opalized clear, and amber colors. Shovel test B231  
21 had the highest density of material, including charcoal flecks and a bone fragment. Three  
22 hackberry trees grew in the area where the bricks and limestone cobbles were concentrated  
23 (**Figure 6**). Because the grass was greener there than in the surrounding pasture, it is most  
24 likely that the vegetation had tapped into a cistern or septic tank. The brick scatter could be the  
25 remains of a cistern collar or from the house itself. A shovel test (B265) was placed in the  
26 concentration and extended approximately 1 m (3.3 feet) in length and 30 cm (11.8 inches) in  
27 depth to determine if the shoulder of a cistern or septic tank opening was present, but neither  
28 was located. A heavy concentration of glass, broken brick, metal hinge fragments and limestone  
29 rock was in the first 20 cm (7.9 inches) followed by the dark gray mottled with olive clay subsoil.

30  
31 A concise history of the Palmer Pressed Brick Works was prepared for a historic resource  
32 survey of Ellis County (Hardy, Heck and Moore 1990). “PALMER” bricks were manufactured by  
33 the Palmer Pressed Brick Works, which began operation in 1902 then merged with the Standard  
34 Brick Company to form the Barron Brick Company which operated until 1973 (Texas Secretary  
35 of State n.d.). The bricks were marked “PALMER” to distinguish them from others (Steinbomer  
36 1980). Overall, very little of the cultural material is *in situ*, and much of the site appears to have  
37 been cleared of cultural resources; therefore, the integrity is poor. The presence of the  
38 “PALMER” bricks suggests that the site could date to the early 20<sup>th</sup> century.

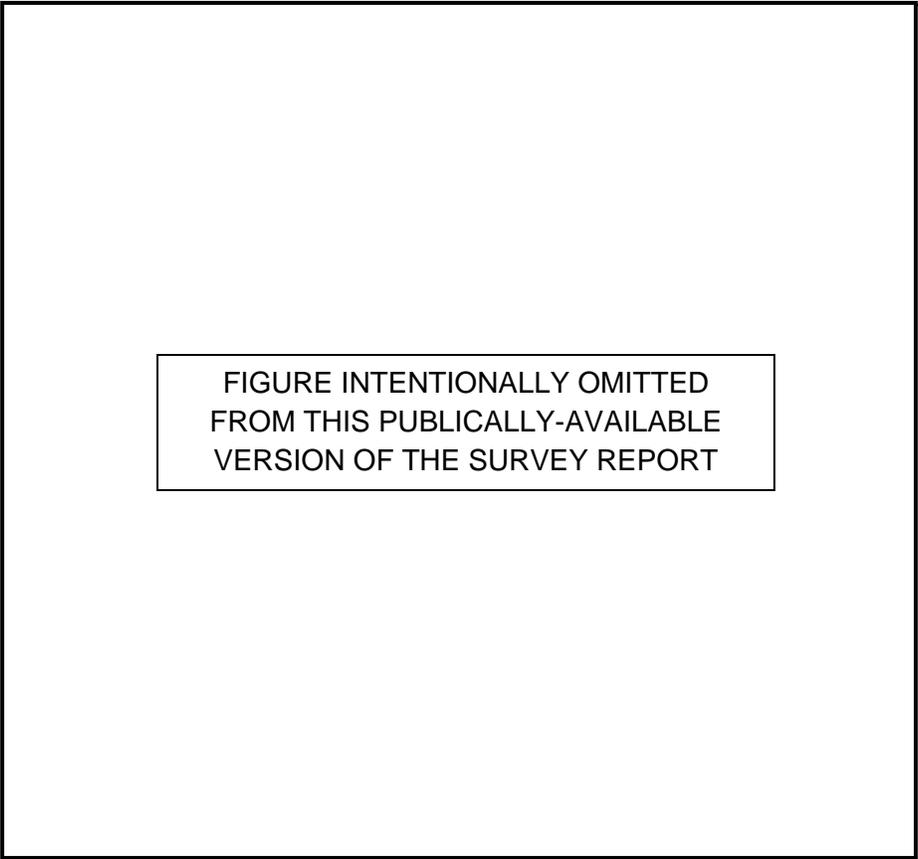


Figure 5. Plan map of Historic Site 41DN577.

Table 2. Shovel Tests for 41DN577 on West Side of CR 9

Shovel Test #	Depth (cm) <sup>1</sup>	Description <sup>2</sup>	Comments/Artifacts
B224	0-24 24-30	Dark gray (2.5Y4/2) clay Dark gray clay mottled with 40% light olive brown (2.5Y5/3) clay	Whiteware and glass
B225	0-26 26-31	Dark gray clay Dark gray clay mottled with 40% light olive brown clay	Glass, whiteware, and earthenware
B226	0-30 30-32	Dark gray clay Dark gray clay mottled with 40% light olive brown clay	Negative
B227	0-25 25-27	Dark gray clay Dark gray clay mottled with 40% light olive brown clay	Negative
B228	0-27 27-30	Dark gray clay Dark gray clay mottled with 40% light olive brown clay	Negative
B229	0-27 27-30	Dark gray clay Dark gray clay mottled with 40% light olive brown clay	1 piece clear glass
B230	0-27 27-35	Dark gray clay Dark gray clay mottled with 40% light olive brown clay	Whiteware, brick fragment
B231	0-28 28-31	Dark gray clay Dark gray clay mottled with 40% light olive brown clay	Glass, whiteware, brick fragments, earthenware, china, bone and charcoal
B265	0-30	Dark gray clay mottled with 40% light olive brown clay	Glass, whiteware, brick fragments, metal fragments

1. 1 centimeter = 0.3937 inch.  
2. Munsell colors are listed only the first time encountered within this table.



1  
2  
3 **Figure 6. Historic Site 41DN577 with “PALMER” bricks and limestone cobbles**  
4 **surrounding the hackberry trees, view is facing southwest.**  
5

6 The approximate site size is 2 acres (0.8 ha), and artifact densities of a sheet midden indicate a  
7 house was located adjacent to the cistern. Due to the paucity of artifacts recorded in the shovel  
8 tests and on the surface, it is apparent that the remains of the structure were removed from the  
9 pasture.

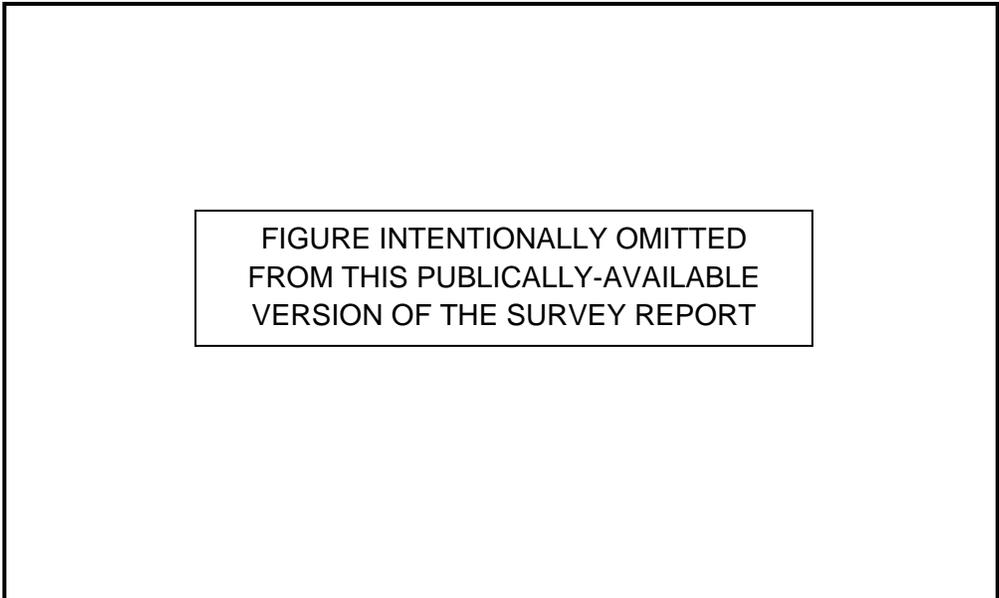
10 Though originally much smaller, the tract of land on which site 41DN577 and 41DN579 are  
11 located is part of a much larger tract that is currently owned by Talley Ranch Management, Ltd.  
12 (Denton County Document No. 2004-156276). Prior to being owned by the Talley family, this  
13 series of plots was cobbled together by Max Williams, who presumably assembled it as ranch  
14 land, running it periodically through Dynavest Joint Venture, Ltd. (Denton County Deed (DCD)  
15 Vol. 1800, Page 330). Along with numerous other properties, Williams purchased the smaller  
16 tract on which the sites are located from Robert and Carol King in 1984 (DCD Vol. 1323, Page  
17 487). The Kings had purchased this plot from Leonard Harper, who had in turn secured the land  
18 in two separate purchases: first from W. Barrow and K.P. Massey in 1954 (DCD Vol. 399, Page  
19 144) and then from O.T. Atkins Stroope in 1956 (DCD Vol. 422, Page 536). The deed between  
20 Harper and Stroope refers back to a deed in which J.E. Conatser purchased his portion of the  
21 land from Guy R. Bunch and others in 1945 (DCD Vol. 319, Page 592). Unfortunately, the only  
22 ownership that could be discerned in the deed record prior to this purchase is Bunch’s purchase  
23 of the land from Bankers Life Company in 1943 (DCD Vol. 301, Page 614). The deed referred  
24 back to in the 1943 deed was completely unrelated to this plot of land, suggesting that it must  
25 be a misprint. However, the 1954 deed between Harper, Barrow and Massey refers to a 1918  
26 deed in which Bess Sheppard purchased her portion of the land from A.M. Walker (DCD Vol.  
27 158, Page 328). Walker had purchased the land from William and Mary F. Neal in 1881 (DCD

1 Vol. S, Page 157), which would place the construction of the cistern in 41DN577 tentatively  
2 during his ownership of the land. A search of the Handbook of Texas Online Web site indicates  
3 that none of the numerous owners of this property are regionally famous (2011). Based on the  
4 data collected, the occupation date range of the site is from 1900 until the 1950s, as the house  
5 shows as an abandoned structure on the 1960 USGS topographic map. In addition to the  
6 mapped structure noted on the USGS topographic map, a mapped structure was present in the  
7 same location as site 41DN577 when the 1918 Denton County Soil Map and 1959 Denton  
8 County General Highway Map were georeferenced with the proposed DNT 4B/5A.

9 Because there were no intact features that are unique to historic sites or that would contribute  
10 more to our understanding of early settlers' lifeways in Denton County or that the structure was  
11 not associated with any persons of significance to state or local history, ARC suggests that the  
12 site is ineligible for listing on the NRHP and no additional work is recommended.

13  
14 *Site 41DN579*

15 An intermittent tributary, barely discernable as a depression on the landscape with no  
16 pronounced channel or bank edges, was crossed just north of the site. At the corner of CR 9  
17 where the road turns to the east and intersects the Collin/Denton county line, a scatter of  
18 weathered, cut lumber and two large aggregate concrete foundation footings were located  
19 (**Appendix C, Exhibits 1 and 2**). The 1960 Celina, TX 7.5' USGS topographic map shows three  
20 structures within a single fenced parcel, and the lumber and foundation footings coincide with  
21 the first of these mapped structures. Concurrent with the location of the two additional mapped  
22 structures, three features were recorded: a large-aggregate 13 feet x 8 feet (4.0 m x 2.4 m)  
23 concrete foundation, a cistern, and a sheet midden (**Figure 7**). Recorded as historic farmstead  
24 site 41DN579, 21 shovel tests, with details shown in **Table 3**, were placed around the features  
25 and the mapped structure locations to identify the site boundaries and to determine if a sheet  
26 midden was present.  
27



28  
29

**Figure 7. Plan map of Historic Site 41DN579.**

**Table 3. Shovel Tests for 41DN579 at CR 9 and the Collin/Denton County Line**

Shovel Test #	Depth (cm)*	Description	Comments/Artifacts
B232	0-26 26-30	Dark gray (2.5Y4/1) clay Dark grayish brown (2.5Y4/2) clay mottled with 40% light olive brown (2.5Y5/3) clay	Negative
B235	0-20	Dark gray (2.5Y4/1) clay, at 20 cm encountered conduit	Negative
B236	0-24 24-30	Dark gray (2.5Y4/1) clay Dark grayish brown (2.5Y4/2) clay mottled with 40% light yellowish brown (2.5Y6/4) clay	Negative
B237	0-30 30-38	Dark gray (2.5Y4/1) clay Dark grayish brown (2.5Y4/2) clay mottled with 40% light yellowish brown (2.5Y6/4) clay	Brown glass
B244	0-22 22-25	Dark grayish brown (2.5Y4/2) clay Dark grayish brown (2.5Y4/2) clay mottled with strong brown (7.5YR5/6) clay	Negative
B245	0-10 10-25 25-35	Dark grayish brown (2.5Y4/2) clay, mottled Limestone rocks in clay with wood fragments Dark grayish brown (2.5Y4/2) clay	Cobalt glass shard, 2 clear glass, brick fragment and white limestone rocks
B246	0-28 28-32	Dark grayish brown (2.5Y4/2) clay Dark grayish brown (2.5Y4/2) clay mottled with strong brown (7.5YR5/6) clay	Stoneware sherd, to large storage vessel
B247	0-26 26-30	Very dark gray (10YR3/1) clay Olive brown (2.5Y4/3) coarse sandy clay	Negative
B248	0-24 24-31	Very dark grayish brown (2.5Y3/2) clay Very dark grayish brown (2.5Y3/2) clay mottled with 40% dark yellowish brown (10YR4/6) coarse sandy clay	Negative
B249	0-24 24-28	Dark grayish brown (2.5Y4/2) clay Dark grayish brown (2.5Y4/2) clay mottled with strong brown (7.5YR5/6) clay	Negative
B250	0-24 24-30	Very dark grayish brown (2.5Y3/2) clay Very dark grayish brown (2.5Y3/2) clay mottled with 40% dark yellowish brown (10YR4/6) coarse sandy clay and 10% olive brown (2.5Y4/3) clay	Negative
B251	0-26 26-30	Dark grayish brown (2.5Y3/2) clay Dark grayish brown (2.5Y3/2) clay mottled with strong brown (7.5YR3/6) clay	Negative
B256	0-20 20-24	Very dark gray (10YR3/1) clay Olive brown (2.5Y4/3) coarse sandy clay	1 shard opalized clear, curved glass
T901	0-15 15-30	Dark grayish brown (10YR4/2) loamy clay Grayish brown (2.5Y5/2) clay	Blue wire
T902	0-25 25-33 33-38	Dark grayish brown (10YR4/2) clay Yellowish red (5YR5/6) clay mottled with 70% dark gray (7.5YR4/1) clay Dark grayish brown (2.5Y4/2) clay	Negative
T916	0-80	Very dark grayish brown (10YR3/2) loamy clay	Ceramic sherds, various colors of glass shards, brick fragment, bolts, nuts, and wire nails
T931	0-30 30-35	Dark grayish brown (10YR4/2) clay Olive brown (2.5Y4/3) clay	Pull tab cans, clear glass, plastic comb, misc. metal, faunal rib bone
T932	0-40 40-48	Dark grayish brown (10YR4/2) clay Olive brown (2.5Y4/3) clay	Negative
T933	0-32 32-35	Dark grayish brown (10YR4/2) clay Olive brown (2.5Y4/3) clay	Negative
T935	0-40 40-50	Dark grayish brown (10YR4/2) clay Very dark gray (2.5Y3/2) clay	Negative
T936	0-28 28-40	Crushed rock (limestone) road bed material and 40% dark grayish brown (10YR4/2) clay Dark grayish brown (2.5Y4/2) clay	Concrete and plastic wrapper

\* 1 centimeter = 0.3937 inch.

1 The southernmost feature appears to be the remains of a pole barn. A modified cattle guard,  
2 which corresponds to a road visible on aerial photographs that pre-date 1980, is located  
3 approximately 300 feet (91.4 m) northwest of the barn location. The rectangular (11 feet x 5  
4 feet; 3.4 m x 1.5 m) guard has anchor bolts in each corner that match torch-cut bolts, and the  
5 shovel test east of the guard confirmed the existence of crushed road bed gravel, now grown  
6 over. A broken concrete foundation (~13 feet x 8 feet; 4.0 m x 2.4 m) is approximately 70 feet  
7 (21.3 m) east-northeast of the cattle guard. The function of the slab foundation is unclear, but a  
8 lack of nearby cistern and the small size suggests either a shed or tenant house. Shovel tests  
9 around the foundation had low artifact densities that could suggest a residence (e.g., cans,  
10 glass, and hair comb).

11 Approximately 700 feet (213.4 m) north of the slab foundation was a cistern, which corresponds  
12 to a mapped structure on the USGS topographic map. Very few artifacts were recorded in the  
13 shovel tests (less than 10 per test) and within the top 20 cm (7.9 inches) of soil. Bricks and  
14 glass were concentrated around the cistern, and shovel test T916, which was placed at the  
15 edge of the cistern, contained the highest density of artifacts to a depth of 80 cmbs  
16 (31.5 inches). Within the cistern, ceramics (white tile, whiteware, glazed earthenware,  
17 porcelain), burned brick, charcoal, wire nails, bolts, and various colors of glass were recorded.  
18 None of the bricks had any markings or labels on them. The site was apparently cleared of  
19 above ground features based on the low density scatter of brick fragments and no other building  
20 material present. The cistern collar was cut off, and then the cistern was filled with burned  
21 debris and soil. During the excavation of shovel test T916, the surveyors were able to view the  
22 profile of the cistern opening, and it was consistent with a beveled-shoulder cistern which dates  
23 to *circa* 1860s to late 1870s (Denton 2007). The exposed opening of the cistern was 3 feet (0.9  
24 m) across with the shoulders buried beneath the ground surface. The cistern was constructed of  
25 brick, then cement lined. The bricks were intact and no marked surfaces were seen. Although  
26 cisterns themselves can be dated, the cultural material within dates to the terminal period of a  
27 site occupation, as they would have been kept clean of debris while being used for freshwater  
28 storage (Denton 2007). Less than 100 feet (30.5 m) to the north of the cistern were the remains  
29 of a windmill.

30 The site appears to be the remnants of a farmstead that was placed along the county line. The  
31 features are not unique for early settlement in Denton County, and the overall integrity of the  
32 site is poor. Archival research determined that much of the land west of CR 9 was owned by the  
33 trusts or individuals, and the deed research for site 41DN579 identified that the same series of  
34 landowners applies to site 41DN577. Based on the data collected, the occupation date range of  
35 the site is from the 1880s until the 1960s, as the house shows as an abandoned structure on  
36 the 1960 USGS topographic map. In addition to mapped structures noted on the USGS  
37 topographic map, mapped structure(s) were present in the same location as site 41DN579 when  
38 the 1918 Denton County Soil Map and 1959 Denton County General Highway Map were  
39 georeferenced with the proposed DNT 4B/5A. Due to poor site integrity and because the  
40 structures were not associated with any persons of significance to state or local history, ARC  
41 recommends that the site is ineligible for listing on the NRHP, and no additional work is  
42 recommended.

43

1 *CR 9 to FM 455*

2 North of the mapped structures, the proposed DNT 4B/5A continues cross country to the Little  
3 Elm Creek floodplain and drainage channel (**Appendix C, Exhibit 2**). Ground visibility within the  
4 proposed DNT 4B/5A ROW is variable, between 30% and 50%, through a pasture on the west  
5 side of the county line and between 50% and 90% on the east side through plowed fields. When  
6 the proposed DNT 4B/5A ROW reaches the drainage, where there is dense tree cover and the  
7 grass has not been mowed, visibility drops below 30%. In lieu of shovel testing in the floodplain,  
8 trenching was recommended to determine if buried cultural deposits are present. The terrain in  
9 the floodplain on the south of Little Elm is relatively level, and the pasture ends within several  
10 meters of the creek bank.

11  
12 The floodplain north of Little Elm Creek is dissected by sinuous channels, some of which are  
13 hydrologically active while others are inactive, and the proposed DNT 4B/5A ROW and drainage  
14 easements are interspersed with scattered wetlands. Two shovel tests were placed on a finger  
15 knoll in the western drainage easement (B239 and T904). Shovel test B239 was placed in an  
16 open area across from the drainage crossing, and the topsoil was very dark gray sandy loam  
17 followed by sandy clay mottled with light olive brown clay at 30 cmbs (11.8 inches). Conversely,  
18 shovel test T904 was placed in the tree line, and the topsoil was very dark gray clay followed by  
19 dark grayish brown sandy clay at 37 cmbs (14.6 inches). A third shovel test (T940) was placed  
20 near the Little Elm Creek crossing on an elevated bank overlooking the creek in the eastern  
21 drainage easement. Very dark gray loam was followed by very dark gray clay at 60 cmbs  
22 (23.6 inches), indicating the banks were floodplain deposits. All three were negative for cultural  
23 material.

24 Exiting the floodplain, the proposed DNT 4B/5A proceeds upslope to a prominent ridge  
25 overlooking the drainage valley. Ground visibility on the west side of the county line and along  
26 the fence line was less than 30%, while on the east side of the proposed DNT 4B/5A ROW it  
27 was between 50% and 70% through plowed fields. Shovel tests B242 and T913 were placed on  
28 the east side of the fence line on a level area of the ridge slope overlooking the Little Elm Creek  
29 valley. Shovel tests B240, B241, and T910-T912 were placed on the crest of the ridge.  
30 Additional shovel tests (B257-B260 and T937-T939) were placed on the slope leading towards  
31 the floodplain . Generally, the topsoil was black or dark gray clay loam followed by light olive  
32 brown sandy clay loam, sometimes mottled with yellowish red clay. The depth of the topsoil  
33 varied between 15 cmbs (5.9 inches) and 58 cmbs (22.8 inches). No cultural resources were  
34 recorded in the shovel tests or on the surface.

35  
36 On the east side of the fence line that follows the county line, it appeared that the surface had  
37 been leveled, or built up, to create a two-track road along the fence line. The road bed was not  
38 paved, but very shallow topsoil in shovel test B242 provided evidence that the topsoil was  
39 removed to level the ground surface and placed near the fence line. It does not appear that any  
40 fence line road crossed Little Elm Creek because no evidence of a bridge crossing the creek  
41 was found.

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43

1 *FM 455 to CR 60*  
2 North of FM 455, the proposed DNT 4B/5A ROW parallels either side of County Line Road  
3 (CR 10) until it reaches the Blaine Road/CR 60 intersection (**Appendix C, Exhibit 3**). The  
4 majority of this section crosses through recently plowed level fields, and the ground visibility was  
5 100% (**Figure 8**). A short section of the proposed DNT 4B/5A route closest to FM 455 crosses  
6 through a short grass pasture, where ground visibility was between 40% and 60%, and near the  
7 Grayson County line the proposed DNT 4B/5A passes through short grass pasture with ground  
8 visibility between 40% and 70%.  
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**Figure 8. Representative image of the proposed DNT 4B/5A ROW along County Line Road (CR 10), view is to the north.**

15 On the 1961 Marilee, TX 7.5' USGS topographic map, seven structures were mapped near the  
16 proposed DNT 4B/5A ROW, four near CR 60 and three approximately 3,700 feet (1,127.8 m)  
17 south of CR 60. Upon survey of the plowed fields in this area, no evidence of the mapped  
18 structures or artifact scatters was present. On the west side of County Line Road (CR 10) and  
19 within its ROW, a foundation was recorded (**Figure 9**). Shovel tests (N129-N131) were placed  
20 to the north, west, and south of the foundation. All three of these shovel tests were negative for  
21 cultural material, and the subsoil was relatively shallow (20 cmbs to 25 cmbs; 9.8 inches to  
22 7.9 inches) in two of the shovel tests. The foundation was broken up and appeared to have  
23 been pushed or dumped in the location. Due to the lack of any additional cultural material or  
24 features, it was determined that the foundation was out of context and not recorded as a site.



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2  
3 **Figure 9. Foundation debris on west side of County Line Road (CR 10), view is to the**  
4 **east.**  
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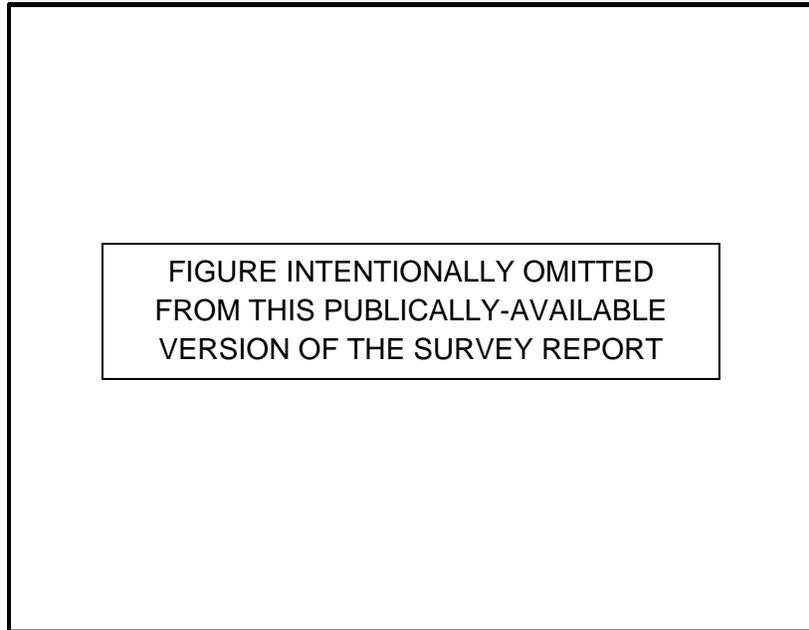
6 The two intermittent drainages that join on the east side of County Line Road (CR 10) and their  
7 easements were examined within this section of the proposed DNT 4B/5A ROW. Three shovel  
8 tests (C33-C35) were placed on the upland edges or on the elevation in between the two  
9 drainages on the west side of County Line Road (CR 10). These drainage features to the east of  
10 County Line Road (CR 10) were not accessible. The topsoil was dark grayish brown silty sandy  
11 clay or brown clay between 37 cmbs (14.6 inches) and 59 cmbs (23.2 inches) followed by  
12 subsoil of dark brown to very dark grayish brown clay. No cultural resources were recorded in  
13 the shovel tests or from field observations of the ground surface, with the exception of the  
14 trough described below (Site 41DN578). The drainages were shallow, with gently sloping banks  
15 towards a channel that was 20 cm (7.9 inches) deep and 50 cm (19.7 inches) to 80 cm  
16 (31.5 inches) wide.  
17

18 *Site 41DN578*

19 A small concrete trough (4 feet x 12 feet; 1.2 m x 3.7 m) was located on the east side of the  
20 proposed DNT 4B/5A ROW on the west side of County Line Road (CR 10) in the northeast  
21 corner of Denton County, where the Collin, Denton, and Grayson county lines converge  
22 (**Figures 10** and **11**, and **Appendix C, Exhibit 3**). The concrete was reinforced with rebar and  
23 filled with debris such as barbed wire, t-post, and chicken wire. Ground visibility was 80%. The  
24 trough is near a mapped structure shown on the 1961 Marilee, TX 7.5' USGS topographic map  
25 at approximately 660 feet (201.2 m) asl, yet no remains of the structure were present. The

1 trough appears to be *in situ* and related to the structure mapped in 1961; therefore, it was  
2 recorded as historic site 41DN578. There was no shovel testing at this site.

3



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6

**Figure 10. Plan map of Historic Site 41DN578.**

7



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10 **Figure 11. Concrete trough located on the west side of County Line Road (CR 10), view**  
11 **is to the east.**

12

1 Archival research determined that the plot of land has been in the hands of several large  
2 landowners since 1966, when it was purchased from Robert A. Yarber by the Nelson Bunker  
3 Hunt Trust Estate (DCD Vol. 544, Page 615). One of the members in this trust was the famous  
4 east Texas oil magnate H.L. Hunt. Since that time, it was utilized in a limited capacity for energy  
5 exploration, as can be gleaned from several oil and natural gas leases present in the deed  
6 record. However, the land has primarily been used for ranching, as it still is by its current owner,  
7 Four Seasons Ranch, Ltd. (DC Doc. No. 2009-030094). Prior to its purchase by Robert A.  
8 Yarber from Lena and Henry Noss in 1966 (DCD Vol. 544, Page 613), the land had been owned  
9 by members of the Noss family since 1917, when Nick Noss purchased it from Emelette and  
10 L.G. Below (DCD Vol. 154, Page 24). The Belows secured the land from W.D. Oliver in 1913  
11 (DCD Vol. 131, Page 342). Oliver had purchased the land from Joseph and Susannah Fritscher  
12 in 1911 (DCD Vol. 117, Page 25). The earliest purchase of the land which could be found was in  
13 1892, when Fritscher purchased the land from Elijah Emberson (DCD Vol. 47, Page 171).  
14 A search of the Handbook of Texas Online Web site indicates that, with the exception of H.L.  
15 Hunt, none of the owners of this property were regionally famous or significant (2011). Despite  
16 the connection with the Hunt family, there is little cultural material to provide unique information  
17 to early 20<sup>th</sup> century settlements in Denton County. The site dates to the first half of the 20<sup>th</sup>  
18 century based on the rebar style and map data. Due to the poor condition of the site, no  
19 additional work is recommended, nor is the site considered eligible for listing on the NRHP.

20

#### 21 *CR 60 to Stiff Chapel Road*

22 At the intersection of CR 60 and Blaine Road, the proposed DNT 4B/5A route continues to the  
23 north and then turns to the northeast cross-country until it reaches Stiff Chapel Road  
24 (**Appendix C, Exhibits 3 and 4**). Northeast of the intersection, the proposed DNT 4B/5A  
25 crosses through short grass cow pasture, and ground visibility is between 50% and 70%. The  
26 proposed DNT 4B/5A passes a large stock tank and then curves to the north to parallel the  
27 Walnut Fork drainage. The drainage easements are narrow; therefore, shovel tests (B216 and  
28 N128) were placed on the upland edges north and south of the drainage despite the excellent  
29 ground visibility. The channel was 1 m (3.3 feet) to 2 m (6.6 feet) wide and less than 1 m  
30 (3.3 feet) deep. Recent rains made the channel bottom muddy, but there was no water present  
31 at the time of survey. Dark grayish brown silty clay topsoil was followed by very dark grayish or  
32 grayish brown sandy clay subsoil at 40 cmbs (15.7 inches) and 47 cmbs (18.5 inches),  
33 respectively. Both shovel tests were negative for cultural material.

34

#### 35 *Site 41GS221*

36 Continuing north, the proposed DNT 4B/5A proceeds upslope to follow and ridge line. Ground  
37 visibility was excellent, and a historic trash scatter, designated site 41GS221, was located in the  
38 proposed DNT 4B/5A ROW near a fence line at 680 feet (207.3 m) asl in a low lying area  
39 downslope from a well defined ridge to the west (**Figure 12, and Appendix C, Exhibit 3**).  
40 A large variety of glass shards and bottles (consisting of clear, green, milkglass, and blue  
41 opalescent varieties) was present, as well as metal fragments and a few commercially  
42 manufactured brick fragments. The bottles were screw top rather than hand blown. One bottle  
43 had a square base similar to a medicine bottle. Milkglass, as well as the other material present,  
44 are typical of household goods, and the site dates to the early to mid-20<sup>th</sup> century. Historic trash

1 scatters are typically located in gullies or at the edges of property lines, and this trash scatter is  
2 most likely associated with a residence to the west where the USGS topographic map shows  
3 mapped structures. The structure locations are well out of the proposed DNT 4B/5A ROW and  
4 therefore were not investigated. Trash scatters are worth recording for their research value, but  
5 due to the ephemeral nature of the cultural material, these types of sites are not eligible for  
6 listing on the NRHP and no further investigations are recommended.

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**Figure 12. A portion of historic trash scatter at Site 41GS221.**

12

13 Flat limestone gravels were noted on the surface throughout the uplands, yet these were small  
14 in nature and not of a knappable material. The stretch of the proposed DNT 4B/5A before Stiff  
15 Chapel Road crossed through short grass pasture, ground visibility 40% to 50%, and through  
16 several pens that held hundreds of hay bales. The pens are associated with the farmstead,

1 identified as Historic Resource Location 7 in the HRDDR (Terrell 2011:13). Besides the pens,  
2 no features or structures associated with this farmstead are in the proposed DNT 4B/5A ROW.  
3

4 *Stiff Chapel Road to SH 121*

5 The final section of the proposed DNT 4B/5A parallels Scharff Road and crosses through  
6 relatively level pastures (**Appendix C, Exhibit 4**). Before crossing the two parallel intermittent  
7 channels, the proposed DNT 4B/5A crosses two mapped structures as shown on the 1961  
8 Marilee, TX 7.5' USGS topographic map, one at Stiff Chapel Road and the second which was  
9 west of Historic Resource Location 8 in the HRDDR (Terrell 2011:13). Heading north from Stiff  
10 Chapel Road, ground visibility was between 50% and 90% through plowed fields. Approximately  
11 700 feet (213.4 m) north of one of the mapped structures, there was a broken concrete  
12 foundation within the proposed DNT 4B/5A ROW at the corner of the fenced property line  
13 (**Figure 13**). Four shovel tests (C29-C32) were placed in each cardinal direction to determine if  
14 the foundation was associated with other artifacts such as an *in situ* foundation or if it was an  
15 isolated feature. The shovel tests were negative for cultural resources and contained brown  
16 loamy clay in the top 50 cm (19.7 inches). This foundation appears too far north to be directly  
17 associated with Historic Resource Location 8 recorded in the HRDDR, and to far east of the  
18 former structures mapped on the 1936 Grayson County Highway Map. Due to the lack of any  
19 additional cultural material or features, it was determined that the foundation was out of context  
20 and not recorded as a site.

21



22

23 **Figure 13. Broken foundation on west side of Scharff Road.**

24

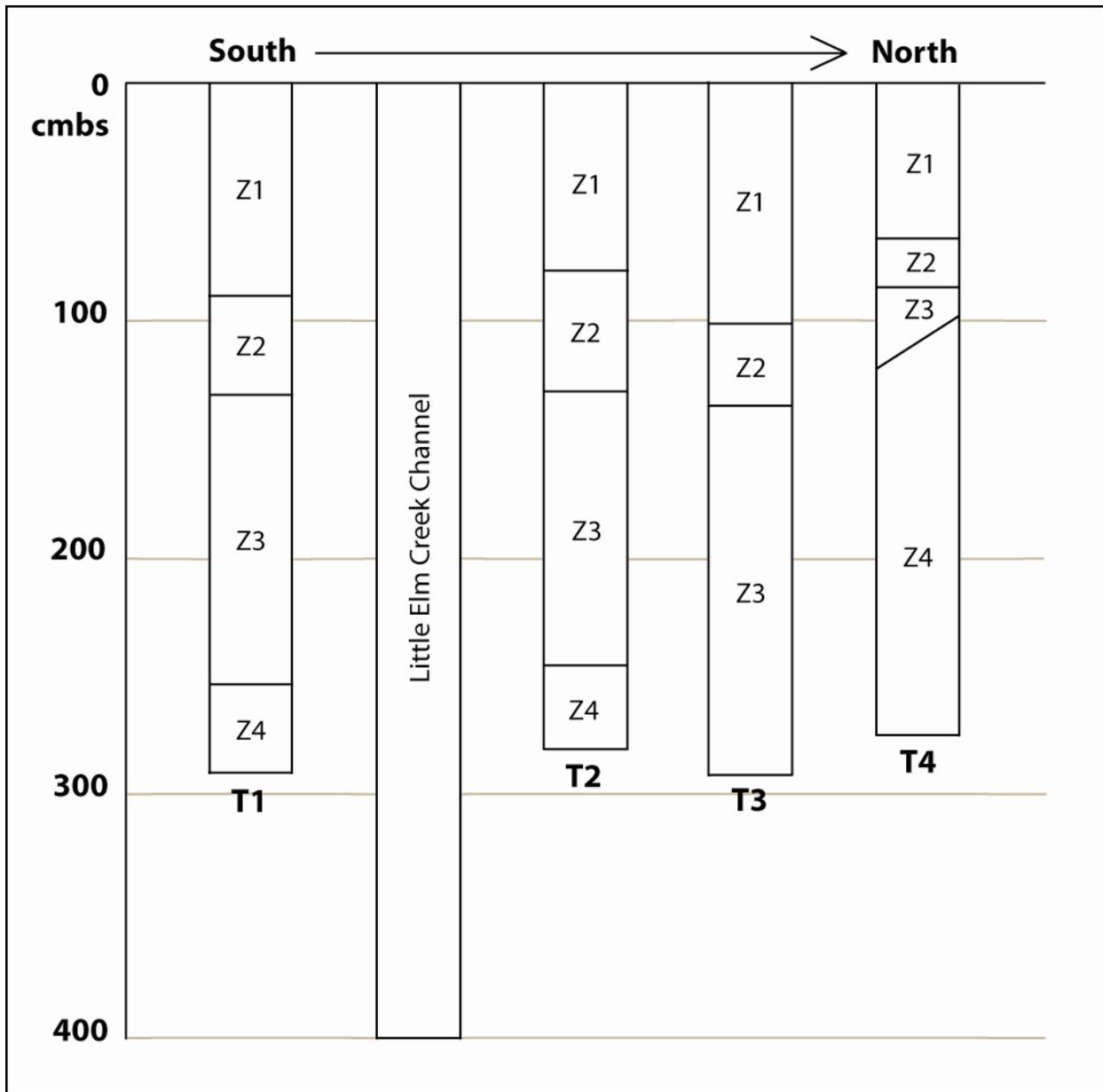
1 Shovel tests (C27, C28, C122, and N123) were also placed on upland edges overlooking the  
2 intermittent channels. The channels on the east side of road are shallow but are deeply incised  
3 on the west side of the road. The channels were 1.5 m (4.9 feet) to 2 m (6.6 feet) wide with  
4 running water at the time of survey. In the shovel tests, topsoil thickness was between 58 cmbs  
5 (22.8 inches) and 65 cmbs (25.6 inches). Towards the northern end of the line, two shovel tests  
6 (C26 and N119,) were placed on the upland edge of the final drainage. The drainage was  
7 ephemeral and not incised. All shovel tests in this section of the proposed DNT 4B/5A were  
8 negative for cultural material.

### 9 10 **Trenching Results**

11  
12 Four backhoe trenches were excavated in the Little Elm Creek floodplain. Each trench  
13 addressed a specific goal described in the narrative descriptions presented below. Following the  
14 narratives, a composite profile of the Little Elm Creek floodplain illustrates the relationship  
15 between the trenches and the topography of Little Elm Creek (**Figure 14**). Finally, **Table 4**  
16 contains specific information on the matrices excavated in each trench. The locations of all four  
17 trenches are shown in **Appendix C, Exhibit 2**.

18 Trench T1 was placed 10 m (32.8 feet) south of Little Elm Creek on the western edge of the  
19 proposed DNT 4B/5A ROW; a drainage easement for the creek extends 500 feet (152.4 m)  
20 farther west of the proposed DNT 4B/5A ROW and trench location. The goal of Trench T1 was  
21 to explore for buried deposits associated with the present drainage channel. Very dark gray  
22 loamy clays were found in the first two zones to a total depth of 131 cmbs (51.6 inches). These  
23 two zones (Z1 and Z2) represent matrices deposited during the Holocene, and, thus these  
24 zones had the potential for containing buried artifacts or features. No artifacts or features were  
25 discovered. Below the Holocene deposit were two layers of yellowish brown and brown  
26 extremely compact clays with a smoothly increasing density of calcium carbonate (CaCO<sub>3</sub>).  
27 Inclusions of CaCO<sub>3</sub> accounted for over 20% of the matrix upon reaching the bottom depth of  
28 290 cmbs (114.2 inches); these inclusions are an indicator of the very advanced age and  
29 stability of the soil in and below which no cultural deposits were expected. The intact, relatively  
30 shallow ancient soil suggests that the Little Elm Creek channel is presently at its farthest  
31 southern extent.

32  
33 Trench T2 was excavated north of Little Elm Creek with the same goal as that of Trench T1.  
34 Matrices throughout the trench were relatively consistent very dark gray, dark gray, and dark  
35 grayish brown loamy clays and sandy clays. Roots, biopores, and snail shells were common  
36 throughout the first three zones (0 cmbs to 245 cmbs; 0 inch to 96.5 inches). Zone Z4  
37 (245 cmbs to 280 cmbs; 96.5 inches to 110.2 inches) contained a mixture of dark gray clay and  
38 brown sandy clay with less than 5% CaCO<sub>3</sub> clasting. All of the matrices within Trench T2 date to  
39 the Holocene and show some degree of age and stability only in Zone Z4. In stark contrast to  
40 the south bank, this area appears to be within the migration area of the creek channel. As a  
41 result, any pre-Holocene cultural deposits would have been destroyed when the creek cut out  
42 the sediments. No artifacts or features of Holocene age were found in the trench.



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Figure 14. Composite profile of Little Elm Creek and Trenches T1 – T4.

**Table 4. Backhoe Trench Descriptions**

Trench #	Zone	Depth (cmbs) <sup>1</sup>	Description <sup>2</sup>	Comments
T1	Z1	0-89	Very dark gray (10YR3/1) – loamy clay. Subrounded peds, gloss linings, weak structure. Frequent coarse to very fine roots. Frequent biopores. Gradual, smooth boundary.	
	Z2	89-131	Very dark gray – compact loamy clay. Subangular peds, no linings, moderate structure. Frequent very fine roots. Occasional biopores. 2-12 millimeters (mm) CaCO <sub>3</sub> nodules, 5-10%. Gradual, smooth boundary.	
	Z3	131-153	80% Very dark grayish brown (10YR3/2), with 20% yellowish brown (10YR5/4) – extremely compact clay. Angular to subangular peds, no linings, strong structure. Occasional very fine roots. 1-5 mm CaCO <sub>3</sub> nodules/accretions, 5-10%. Gradual, smooth boundary.	Transition between zones Z2 and Z4.
	Z4	153-290	Brown (10YR4/3) – very compact clay. Subrounded peds, no linings, strong structure. Occasional very fine roots. Occasional very fine biopores. 1-2 cm CaCO <sub>3</sub> accretions, 10-20%.	Gradual increase in CaCO <sub>3</sub> accretions from zone Z3.
T2	Z1	0-79	Dark grayish brown (10YR4/2) – loamy clay. Subrounded peds, matte to gloss linings, moderate structure. Root stains, 30%. Frequent coarse to very fine roots, some 2-3 cmbs. Frequent biopores. Diffuse, smooth boundary.	
	Z2	79-130	Very dark gray – extremely crumbly clay. Angular to subangular peds, very glossy linings, very weak structure. Frequent fine to very fine roots. Trace CaCO <sub>3</sub> nodules. Abrupt, smooth boundary.	
	Z3	130-245	Dark grayish brown – sandy clay. Small subrounded peds, no linings, moderate structure. Calcium carbonate nodules, 5%. Occasional very fine roots. Occasional very fine biopores. Organic stains, 5%. Small pebbles, 5%. Gradual, smooth boundary.	Rodent tooth encountered at 155 cmbs. Snail shells encountered at 199 cmbs.
	Z4	245-280	40% dark gray (10YR4/1) – clay, with 60% brown (10YR5/4) – sandy clay. Subangular peds, slightly glossy linings, moderate to strong structure. Occasional very fine roots. Very small CaCO <sub>3</sub> nodules, <5%.	
T3	Z1	0-102	Very dark grayish brown – loamy sandy clay. Subrounded peds, no linings, weak structure. Frequent medium to very fine roots. Frequent very fine biopores. Occasional limestone pebbles, <5%. Smooth, diffuse boundary.	
	Z2	102-137	Dark grayish brown – loamy clay. Subrounded peds, no linings, weak structure. Limestone pebbles, <5%. 2-10 mm CaCO <sub>3</sub> nodules, 5%. Frequent fine to very fine roots. Occasional very fine biopores. Gradual, smooth boundary.	

Trench #	Zone	Depth (cmbs) <sup>1</sup>	Description <sup>2</sup>	Comments
	Z3	137-292	Brown – very compact clay. Subrounded to subangular peds, no linings, strong structure. Calcium carbonate filaments to nodules, 20-30%. Occasional very fine biopores and roots.	
T4	Z1	0-65	Very dark grayish brown – loamy clay, with 5-10% pockets of yellowish brown – sand. Subrounded peds, no linings, weak structure. Frequent medium to very fine roots. Abrupt boundary, which slopes to the south.	
	Z2	65-86	Very dark gray – slightly sandy clay, with 10% pockets of pale brown (10YR6/3) sand, and with mottling of brown – sandy clay. Subrounded peds, no innings, weak structure. Frequent very fine roots, 2 mm CaCO <sub>3</sub> nodules, 5%. Diffuse boundary.	Vertisolic action (fissures and sheets) results in sand, which punches out in northern end of trench.
	Z3	86-121	Brown – very moist sandy clay, with 10% very dark gray – clay. Subangular peds, no linings, weak structure. 1-2 mm CaCO <sub>3</sub> nodules, 5%. Occasional very small, smooth-edged limestone gravels. Few very fine roots. No biopores.	Features fissures of 50% brownish yellow (10YR6/4) and 50% very pale brown (10YR7/4) sand.
	Z4	121-275	Yellowish brown – sandy clay. Smooth gravels in uneven distribution, 10-20%. White (10YR8/1) – coarse sand present in pockets. 5 mm CaCO <sub>3</sub> nodules, 5-10%.	Similar sand fissures as seen in zone Z3, but in hue (10YR8/1-white) noted in description.
<p>1. 1 centimeter = 0.3937 inch.  2. Munsell colors are listed only the first time encountered within this table.</p>				

1  
2  
3 After exploring the current course of Little Elm Creek and finding the extent of its southern  
4 migration, the investigators moved north in an attempt to look for occupation associated with  
5 abandoned channels. Trench T3 contained two Holocene zones which reached a depth of  
6 137 cmbs (53.9 inches). No artifacts or cultural features were found in either zone. Zone Z3  
7 contained the same ancient, CaCO<sub>3</sub>-rich brown clay observed in Trench T1. The presence of  
8 this layer indicated that the channel, at or near its present elevation, has not migrated this far  
9 north.

10  
11 Trench T4 was excavated north of Trench T3 to explore the toe of the upland slope where  
12 occupation may have occurred at the floodplain edge. Alternatively, excavation at this location  
13 could reveal evidence of occupation that had eroded down from the upland. The former would  
14 be characterized by an intact deposit with features in primary context, and the latter would be  
15 characterized by artifacts which look to be in secondary context. Zone Z1 (0 cmbs to 65 cmbs; 0  
16 inch to 25.6 inches) contained the same dark colored Holocene sediments, although it was  
17 mottled with a low amount of brown sand. This particular topsoil is vertisolic which would allow

1 sand to enter the matrix. The mottled nature of the first zone is good evidence of the clearing  
2 that has occurred in the area. Zone Z2 (65 cmbs to 86 cmbs; 25.6 inches to 33.9 inches) is also  
3 a vertisolic Holocene deposit, but the sand-filled fissures are still relatively intact. Zone Z3 (86  
4 cmbs to 121 cmbs; 33.9 inches to 47.6 inches) appears to be an interface between the  
5 Holocene and the older soil observed at the bottom of Trenches T1 and T3. Inspection of the  
6 profile showed this zone to lens out at the north end of the trench with the underlying ancient  
7 soil rising in its place. This profile suggests the trench is located very near the upland and  
8 floodplain edge, but neither intact deposits nor washed out artifacts were found.

## 9 10 **Conclusions**

11 Four historic sites were recorded during the archeological survey for the proposed DNT 4B/5A.  
12 Sites 41DN577, 41DN578, and 41DN579 are all associated with mapped historic structures  
13 near historic roadways, with 41DN577 and 41DN579 also located on elevations overlooking the  
14 landscape. Site 41GS221 is an upland trash scatter washed down an erosional gully. Although  
15 two additional isolated structural foundations likely correlate to structures shown on historic  
16 maps, neither was recorded as a site because it had been pushed away from its original  
17 context. The types of historic sites and their locations on the landscape fit the predictive model  
18 developed from the cultural history and previous investigations from which the research design  
19 concerning historic settlement was derived.

20  
21 The area of Little Elm Creek was considered to have the highest potential for prehistoric  
22 archeological resources in the entirety of the proposed DNT 4B/5A project area. Careful  
23 pedestrian survey of the upland edges and the floodplain itself did not locate any surface  
24 manifestation of prehistoric activity. Extensive shovel testing of the uplands and upland edge,  
25 between Little Elm Creek and FM 455, found no subsurface evidence of prehistoric use.  
26 Because of the degrading nature of the upland and upland edge, any sites here were expected  
27 to be found in a deflated context as surface sites or shallowly buried in secondary context. Four  
28 trenches were excavated to explore for buried sites near the present drainage channel, to look  
29 for sites associated with an older channel farther north, and to test the upland edge for  
30 occupation. These deep testing efforts did not uncover any prehistoric archeological sites.

31  
32 Multiple explanations exist for the lack of prehistoric resources in the high potential area. First,  
33 this area is in an upland setting when compared to that farther downstream. Previous  
34 investigations south of the proposed DNT 4B/5A project area, particularly the Lewisville Lake  
35 studies, recorded numerous prehistoric sites adjacent to Little Elm Creek. This high density area  
36 falls within the East Cross Timbers, the higher biotic diversity of which may have served as a  
37 significant draw for more intensive use and occupation. An interview with the land manager for  
38 Talley Ranch, the property on which all four trenches were excavated, gives additional credence  
39 to this hypothesis. He also manages Talley Ranch property in the East Cross Timbers  
40 approximately 10 miles (16.1 km) west of the proposed DNT 4B/5A project area. Through  
41 personal communication, he informed the investigators that prehistoric artifacts were plentiful on  
42 the western property. In contrast, he has found only one arrow point on the Talley property in

1 the Blackland Prairie. His anecdotes mirror the findings of the proposed DNT 4B/5A study and  
2 the Lewisville Lake project.

3  
4 Second, floodplain deposition of Holocene sediments was a maximum of 153 cm (60.2 inches)  
5 with the exception of Trench T2 in the migration zone of the Little Elm Creek floodplain. The  
6 history of the floodplain may be one marked by intermittent aggradation and degradation, a  
7 situation that would be less ideal for site preservation when compared to more actively and  
8 reliably aggrading settings.

## 9 10 11 **8.0 RECOMMENDATIONS**

12  
13 ARC recommends that the four historic sites (41DN577, 41DN578, 41DN579, and 41GS221) do  
14 not meet the minimum requirements for listing on the NRHP. Investigations performed during  
15 the archival research and survey have contributed more information to the understanding of  
16 historic settlement in Collin, Denton, and Grayson counties, Texas. In all four cases, the lack of  
17 site integrity also leads to the recommendation that further investigations are unwarranted.  
18 Extensive exploration for prehistoric sites found none to exist in the proposed DNT 4B/5A  
19 project area. In light of these results, ARC recommends that the NTTA be allowed to proceed  
20 with construction with no need of additional archeological investigations. If buried archeological  
21 resources are encountered during construction, work in that area should cease immediately and  
22 the Archeology Division of the THC should be contacted.

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**APPENDIX A**

**TEXAS HISTORICAL COMMISSION RECOMMENDATION LETTER**

**TEXAS HISTORICAL COMMISSION**  
*real places telling real stories*



October 28, 2010

Elizabeth Mow  
North Texas Tollway Authority  
5900 West Plano Parkway, Suite 100  
Plano, TX 75093

Re: Project review under the Antiquities Code of Texas, Proposed Dallas North Tollway Extension 4B/5A Alignment, Cultural Resources Survey Needed (NTTA)

Dear Ms. Mow:

Thank you for your correspondence concerning the above referenced project. This letter presents the comments of the Executive Director of the Texas Historical Commission (THC), the state agency responsible for administering the Antiquities Code of Texas. We have recently reviewed your letter and the attached AR Consultants' desktop review concerning the above referenced proposed roadway development project, and while we generally concur with their recommendations we also believe the entire right-of way should receive a pedestrian archeological survey. Additionally, we need to know whether this roadway project will involve federal or TxDOT funding or permits.

If this project does include TxDOT involvement, or a federal undertaking a historic structures survey will also be required and NTTA should contact the History Programs Division of the THC to resolve the Area of Potential Effect for this project, and the pedestrian survey must conform to the "Archeological Survey Standards for Texas." Your archeological principal investigator must also contact us to obtain an Antiquities Permit for these investigations, and a report on the investigations will have to be produced in conformance with the report standards under the Chapter 26 Rules of the Antiquities Code of Texas.

Thank you for your cooperation in this state review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions, please contact Mark H. Denton, of our staff at (512) 463-5711.**

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Wolfe".

for  
Mark Wolfe  
Executive Director

MW/mhd



**APPENDIX B**

**TABLE OF GENERAL SHOVEL TESTS**

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**Appendix B: Table of General Shovel Tests for the Proposed DNT 4B/5A**

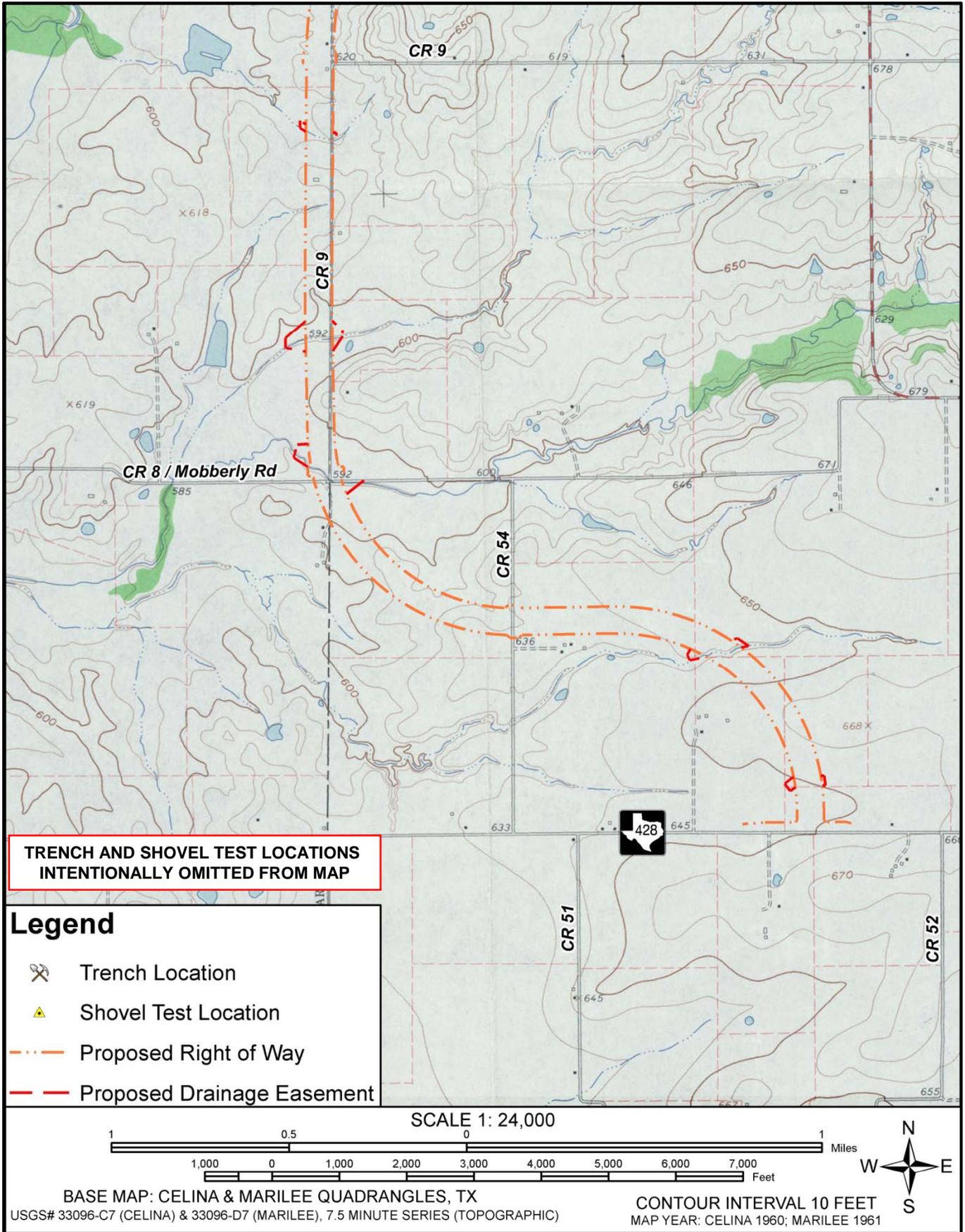
<b>Shovel Test #</b>	<b>Depth (cm)*</b>	<b>Description</b>	<b>Comments/ Artifacts</b>
<b>FM 428 to CR 8</b>			
B217	0-24 24-30	Very dark gray (10YR3/1) clay loam with pebbles and flat limestone rocks Dark gray (10YR4/1) clay loam with sand and gravels	Negative
B218	0-24 24-30	Very dark gray (10YR3/1) clay loam with pebbles and flat limestone rocks Dark gray (10YR4/1) clay loam with 10% brown silty gravel "pockets"	Negative
B220	0-27 27-30	Very dark gray (10YR3/1) clay loam with pebbles and flat limestone rocks Dark gray (10YR4/1) loamy clay with 30% light brownish gray (10YR6/2) very fine sandy clay	Negative
B221	0-26 26-31	Very dark gray (10YR3/1) clay loam with pebbles and flat limestone rocks Gray (10YR5/1) sandy loamy clay with CaCO <sub>3</sub> and pebbles	Negative
<b>CR 8 to CR 9</b>			
N132	0-35 35-60	Dark gray (10YR4/1) sandy clay loam Dark grayish brown (10YR4/2) loamy clay	Negative
N133	0-15 15-50 50-55 55-104	Dark gray (10YR4/1) sandy clay loam Dark grayish brown (10YR4/2) loamy clay Dark grayish brown (10YR4/2) loamy clay with pea sized gravels Dark grayish brown (10YR4/2) mottled with 30% brown (10YR4/3) very fine sandy clay	Negative
B222	0-27 27-32	Dark gray (7.5YR4/1) loamy clay Dark gray (10YR4/1) clay mottled with 20% yellowish brown (10YR5/4) sandy clay	Negative
B223	0-28 24-37	Dark gray (7.5YR4/1) loamy clay Dark gray (10YR4/1) clay mottled with brown (10YR5/3) sandy clay	Negative
<b>CR 9 to FM 455</b>			
B239	0-30 30-38	Very dark gray (2.5Y3/1) sandy loam Light olive brown (2.5Y5/3) sandy clay	Negative
B240	0-30 30-36 36-40	Very dark gray (2.5Y3/1) clay loam Very dark gray (2.5Y3/1) mottled with 10% light olive brown (2.5Y5/3) clay Light olive brown (2.5Y5/3) clay with CaCO <sub>3</sub>	Negative
B241	0-25 25-58 58-60	Black (2.5Y2.5/1) clay loam Very dark grayish brown (2.5Y3/2) clay loam Very dark grayish brown (2.5Y3/2) clay loam mottled with 10% light olive brown (2.5Y5/4) clay	Negative
B242	0-17 17-20	Dark gray (2.5Y4/1) clay loam mottled with light olive brown (2.5Y5/3) clay Light olive brown (2.5Y5/3) clay with CaCO <sub>3</sub> and eroded bedrock	Negative
B257	0-15 15-20	Dark gray (2.5Y4/1) clay loam mottled with light olive brown (2.5Y5/3) clay Light olive brown (2.5Y5/3) clay with CaCO <sub>3</sub> and eroded bedrock	Negative
B258	0-15 15-20	Dark gray (2.5Y4/1) clay loam mottled with light olive brown (2.5Y5/3) clay Light olive brown (2.5Y5/3) clay with CaCO <sub>3</sub> and eroded bedrock	Negative
B259	0-30	Dark brown (7.5YR3/3) sandy clay	Negative
B260	0-31 31-35	Dark brown (10YR3/3) very fine sandy loam Brown (10YR4/3) loamy sand	Negative
T904	0-37 37-45	Very dark gray (10YR3/1) clay Dark grayish brown (2.5Y4/2) sandy clay	Negative
T910	0-15 15-38	Very dark gray (10YR3/1) clay loam Light olive brown (2.5Y5/3) sandy clay loam	Negative
T911	0-19 19-51 51-62	Very dark gray (10YR3/1) clay loam Black (10YR2/1) loamy clay Black (7.5YR2.5/1) loamy sandy clay, mottled with 10% of strong brown (7.5YR4/6) sandy clay and light yellowish brown (10YR6/4) sandy clay	Negative
T912	0-30 30-43	Very dark gray (10YR3/1) clay loam Light olive brown (2.5Y5/3) sandy clay loam	Negative

Shovel Test #	Depth (cm)*	Description	Comments/Artifacts
T913	0-20 20-30	Dark grayish brown (10YR4/2) loamy clay 10% Dark gray (10YR4/1) clay mottled with 70% brown (10YR5/3) and 20% yellowish red (5YR4/6) clay	Negative
T937	0-20 20-32	Very dark grayish brown (10YR3/2) clay Olive brown (2.5Y4/3) clay	Negative
T938	0-40	Very dark grayish brown (10YR3/2) clay	Negative
T939	0-40 40-55	Very dark grayish brown (10YR3/2) sandy loamy clay Dark brown (10YR3/3) sandy loamy clay	Negative
T940	0-60 60-68	Very dark grayish brown (10YR3/2) loamy clay Very dark gray (10YR3/1) clay	Negative
<b>FM 455 to CR 60</b>			
N129	0-20 20-50	Dark grayish brown (10YR4/2) clay loam Dark gray (7.5YR4/1) loamy clay mottled with strong brown (7.5YR4/6) sandy loamy clay	Negative
N130	0-25 25-50	Dark grayish brown (10YR4/2) clay loam Dark gray (7.5YR4/1) loamy clay mottled with strong brown (7.5YR4/6) sandy loamy clay	Negative
N131	0-60	Brown (10YR4/3) sandy clay loam	Negative
C33	0-48 48-69	Brown (10YR4/3) sandy clay, very fine Very dark grayish brown (10YR3/2) clay	Negative
C34	0-37 37-58	Dark grayish brown (10YR4/2) slightly silty sandy clay Dark brown (10YR3/3) clay	Negative
C35	0-59 59-70	Dark grayish brown (10YR4/2) silty sandy clay Very dark grayish brown (10YR3/2) clay	Negative
<b>CR 60 to Stiff Chapel Road</b>			
B216	0-40 40-50	Dark grayish brown (10YR4/2) silty clay Very dark grayish brown (10YR3/2) sandy clay with iron redux	Negative
N128	0-47 47-70	Brown (10YR5/3) slightly loamy clay Grayish brown (10YR5/2) clay with 5% yellowish brown clay	Negative
<b>Stiff Chapel Road to SH 121</b>			
C26	0-53	Brown (10YR4/3) slightly loamy clay, very wet	Negative
C27	0-58	Very dark grayish brown (10YR3/2) clay, with few limestone rocks on surface	Negative.
C28	0-62	Very dark grayish brown (10YR3/2) clay	Negative
C29	0-52	Brown (10YR4/3) loamy clay	Negative
C30	0-55	Brown (10YR4/3) loamy clay	Negative
C31	0-55	Brown (10YR4/3) loamy clay	Negative
C32	0-50	Brown (10YR4/3) loamy clay	Negative
N119	0-45 45-55	Very dark grayish brown (10YR3/2) clay Dark grayish brown (10YR4/2) clay, mottled with 40% brown (10YR4/3) clay	Negative
C122	0-65 65-80	Very dark grayish brown (10YR3/2) clay Mottled brown (10YR4/3) clay (40%), very dark grayish brown (10YR3/2) clay (30%), and brownish yellow (10YR6/6) silty sand (30%)	Negative
N123	0-40 40-70 70-90	Very dark grayish brown (10YR3/2) clay Brown (10YR4/3) clay, with 45% 1-3 cm chunks of sandstone and limestone Brown (10YR4/3) clay	Negative
* 1 centimeter = 0.3937 inch.			

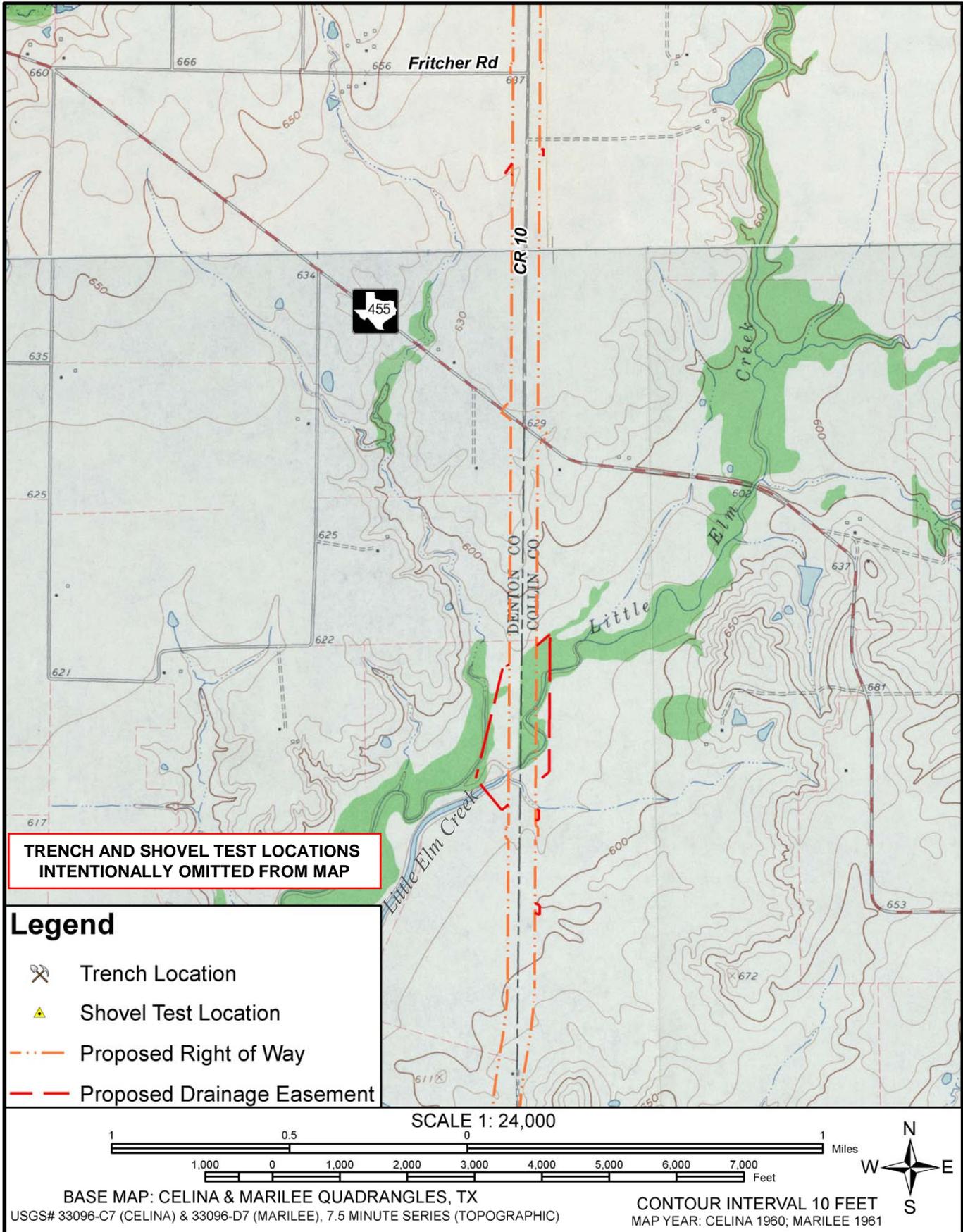
**APPENDIX C**

**SHOVEL TEST AND TRENCH LOCATIONS  
SHOWN ON USGS 1:24,000 TOPOGRAPHIC MAPS**

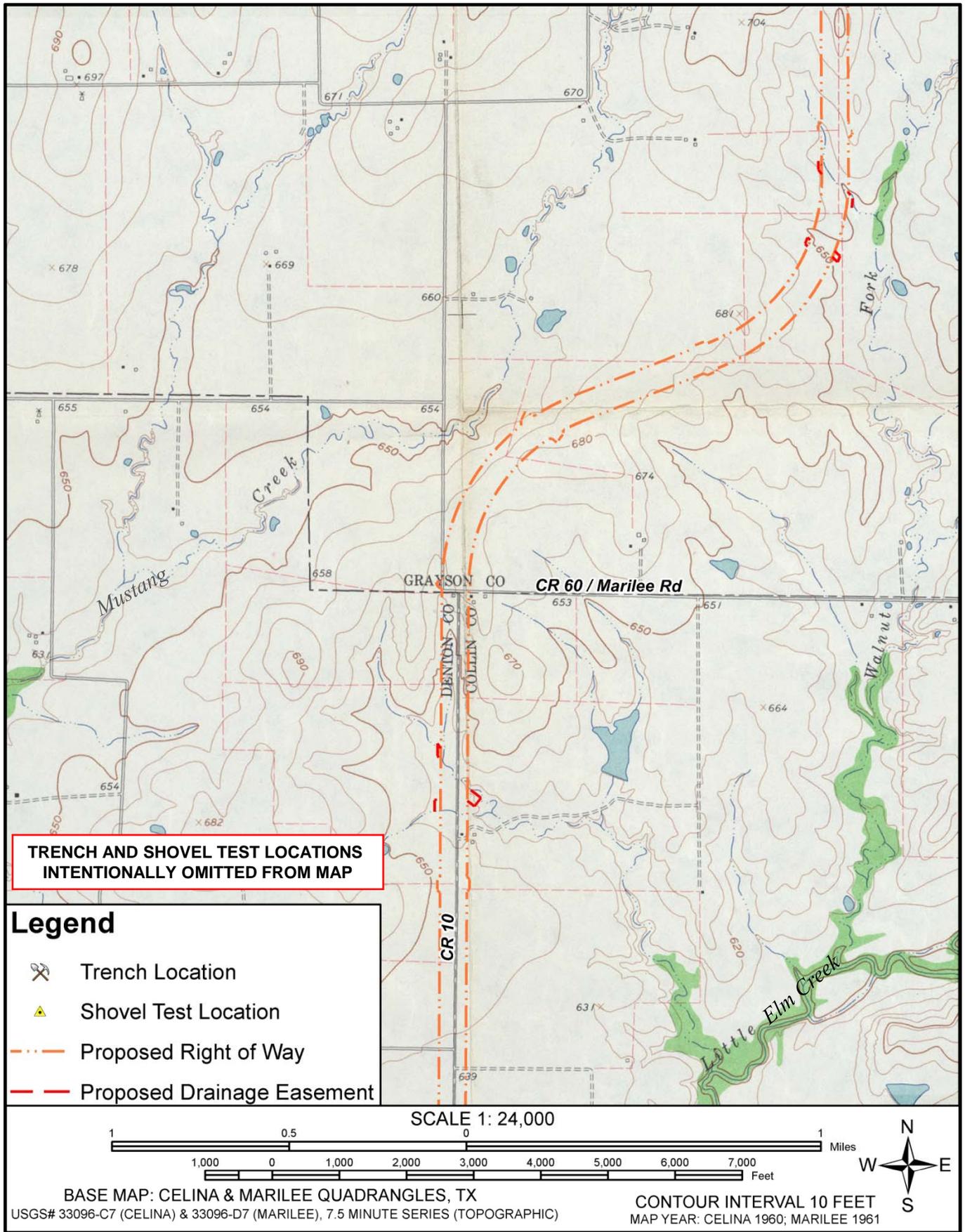
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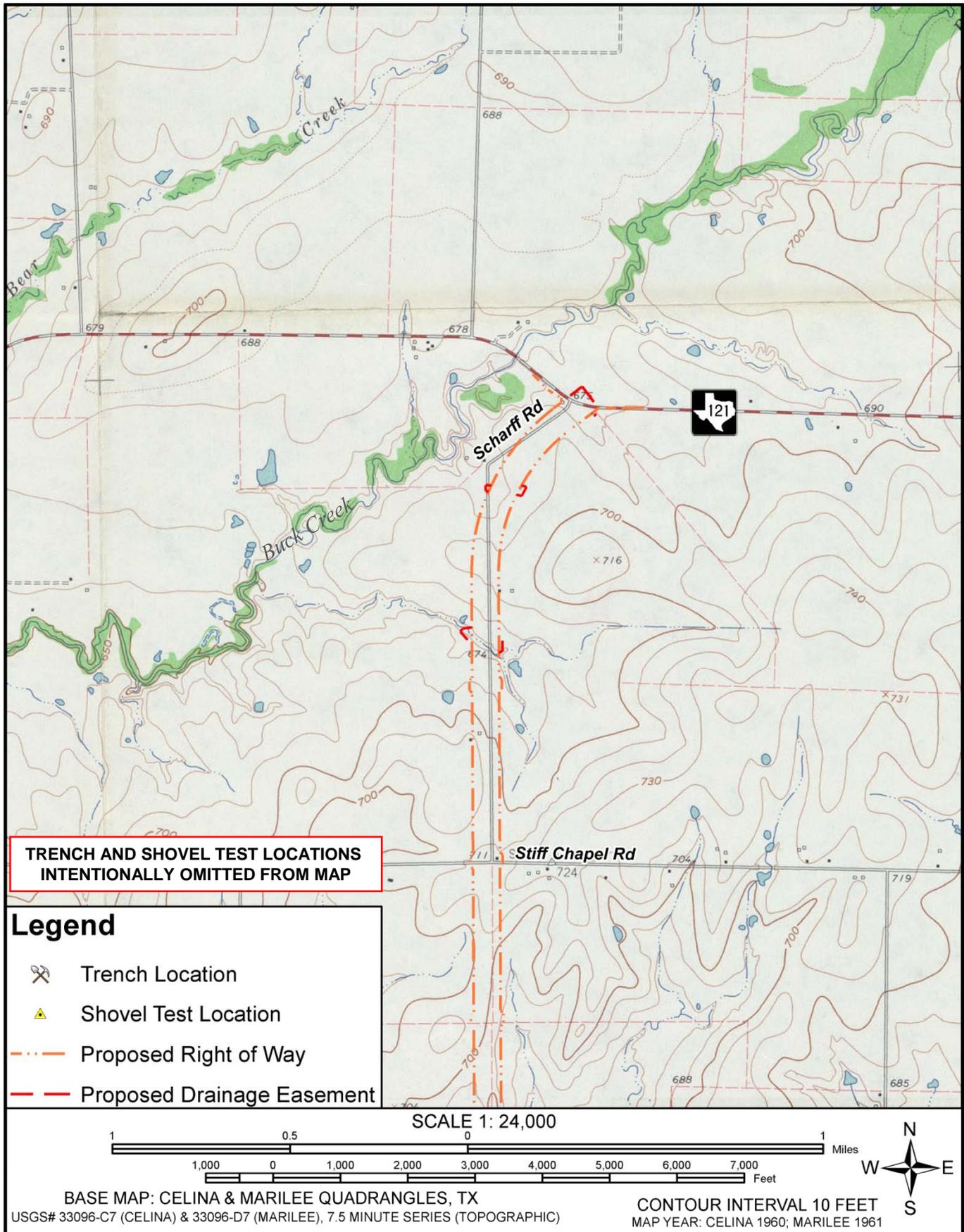
**Appendix C, Exhibit 1.** The proposed DNT 4B/5A from FM 428 to CR 9 with historic site and shovel test locations shown on a 7.5' USGS topographic map.



**Appendix C, Exhibit 2.** The proposed DNT 4B/5A from north of CR 9 to Fritcher Road with historic site, shovel test, and trench locations shown on a 7.5' USGS topographic map.



**Appendix C, Exhibit 3.** The proposed DNT 4B/5A from Fritcher Road to Jaresh Road with historic site and shovel test locations shown on a 7.5' USGS topographic map.



**Appendix C, Exhibit 4.** The proposed DNT 4B/5A from south of Stiff Chapel Road to FM 121 with shovel test locations shown on a 7.5' USGS topographic map.