Volume 2019 Article 110

2019

Archeological Survey for the Trinity Skyline Trail Phase II Project, City of Dallas, Dallas County, Texas

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ARCHEOLOGICAL SURVEY REPORT

ARCHEOLOGICAL SURVEY FOR THE TRINITY SKYLINE TRAIL PHASE II PROJECT, CITY OF DALLAS, DALLAS COUNTY, TEXAS

Prepared for:
Texas Historical Commission
Texas Antiquities Permit #8865

On Behalf of:

City of Dallas

September 2019

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ARCHEOLOGICAL SURVEY FOR THE TRINITY SKYLINE TRAIL PHASE II PROJECT, CITY OF DALLAS, DALLAS COUNTY, TEXAS

by

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Cultural Resources Report
September 2019

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ABSTRACT

This report documents the substantive findings and management recommendations of the cultural resources survey conducted by Integrated Environmental Solutions, LLC (IES) for the proposed Trinity Skyline Trail Phase II Project in the City of Dallas, Dallas County, Texas. The proposed project pertains to the construction of a 4.9-mile (9.6 acre) trail system within the Dallas Floodway from the Sylvan Avenue/Wycliff Avenue bridge to the Campion Trail within Trinity View Park. As the proposed project will be constructed within federal property regulated by the U.S. Army Corps of Engineers (USACE), the project is subject to the provisions of the National Historic Preservation Act of 1966 (NHPA), as amended. In addition, as the City of Dallas is a political subdivision of the State of Texas, the project must comply with the provisions of the Antiquities Code of Texas (ACT).

The goal of this survey was to locate archeological resources that could be adversely affected by the proposed construction and to provide an evaluation of the eligibility potential of each identified resource for listing in the National Register of Historic Places (NRHP) or for designation as a State Antiquities Landmark (SAL). All work conformed to 13 Texas Administrative Code 26, which outlines the regulations for implementing the ACT, and was conducted under Antiquities Permit No. 8865.

During the survey, no archeological resources were identified. No artifacts were collected as part of this survey. All project-related records and field data will be temporarily stored at the IES McKinney office and permanently curated at the Center for Archeological Research (CAR) at The University of Texas at San Antonio. No further archeological investigation or evaluation of the APE is recommended. However, if any archeological deposits are encountered during construction, the operators should stop construction activities in the vicinity of the inadvertent discovery, and immediately contact the project cultural resources consultant to initiate coordination with the USACE and Texas Historical Commission (THC) prior to resuming construction activities.

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CHAPTER 1: PROJECT DESCRIPTION

This report presents the results of an archeological survey conducted by Integrated Environmental Solutions, LLC (IES), under contract to Texas Standard Construction, Limited, on behalf of the City of Dallas. The purpose of these investigations was to conduct an inventory of archeological resources (as defined by Code of Federal Regulations, Title 36, Section 800.4 [36 CFR 800.4]) present within the proposed project area or Area of Potential Effects (APE) and to evaluate identified resources for their eligibility for inclusion in the National Register of Historic Places (NRHP), as per Section 106 (36 CFR 800) of the National Historic Preservation Act (NHPA) of 1966, as amended, or for designation as State Antiquities Landmarks (SAL) under the Antiquities Code of Texas (ACT; Texas Natural Resources Code, Title 9, Chapter 191 [9 TNRC 191]) and associated state regulations (Texas Administrative Code, Title 13, Chapter 26 [13 TAC 26]). This investigation was conducted in accordance with 36 CFR 60.4 and 13 TAC 26, which outline the regulations for implementing Section 106 of the NHPA and the ACT, respectively. Prepared in accordance with the Council of Texas Archeologists (CTA 1996) guidelines, this report satisfies the NHPA Section 106 and the ACT requirements of the proposed project. A description of the proposed project area, pertinent regulations, environmental and historical contexts, field and analytical methods, results of the investigations, and recommendations are provided in this document.

1.1 Project Description

The proposed Trinity Skyline Trail Phase II trail system project area will extend from the Sylvan Avenue/Wycliff Avenue bridge to the Campion Trail within Trinity View Park within the Dallas Floodway in the City of Dallas, Dallas County, Texas. The project corridor or Area of Potential Effects (APE) is plotted on recent aerial photography and the Dallas and Irving 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle maps (**Figures 1.1** and **1.2**).

1.2 Regulatory Framework

As the City of Dallas is a political entity of the State of Texas, the proposed project will be subjected to the provisions of the ACT. The ACT was passed in 1969 and requires that the Texas Historical Commission (THC) staff review an action that has the potential to disturb historic and archeological sites on public land. Actions that require review under the ACT include any project that will have ground-disturbing activities on land owned or controlled by a political subdivision of the site and include easements on private property. However, if the activity occurs inside a designated historic district, affects a recorded archeological site, or requires onsite investigations the project will need to be reviewed by the THC regardless of project size.

Section 405(a) of the 2010 Supplemental Disaster Relief and Summer Jobs Act (Public Law [PL] 111-212) states that the U.S. Army Corps of Engineers (USACE) is not required to make determinations of undertaking, eligibility, or effect, under the NHPA, for the Dallas Floodway Levee System as defined by the 1945 Rivers and Harbors Act. USACE Implementation Guidance, dated 19 October 2010, further directs the Fort Worth District not to make determinations under the NHPA, but to examine, describe, and consider the built environment and other evidence of human activity that comprises the Dallas Floodway as cultural resources within the context of the scope of impacts that must be analyzed under National Environmental Policy Act (NEPA).

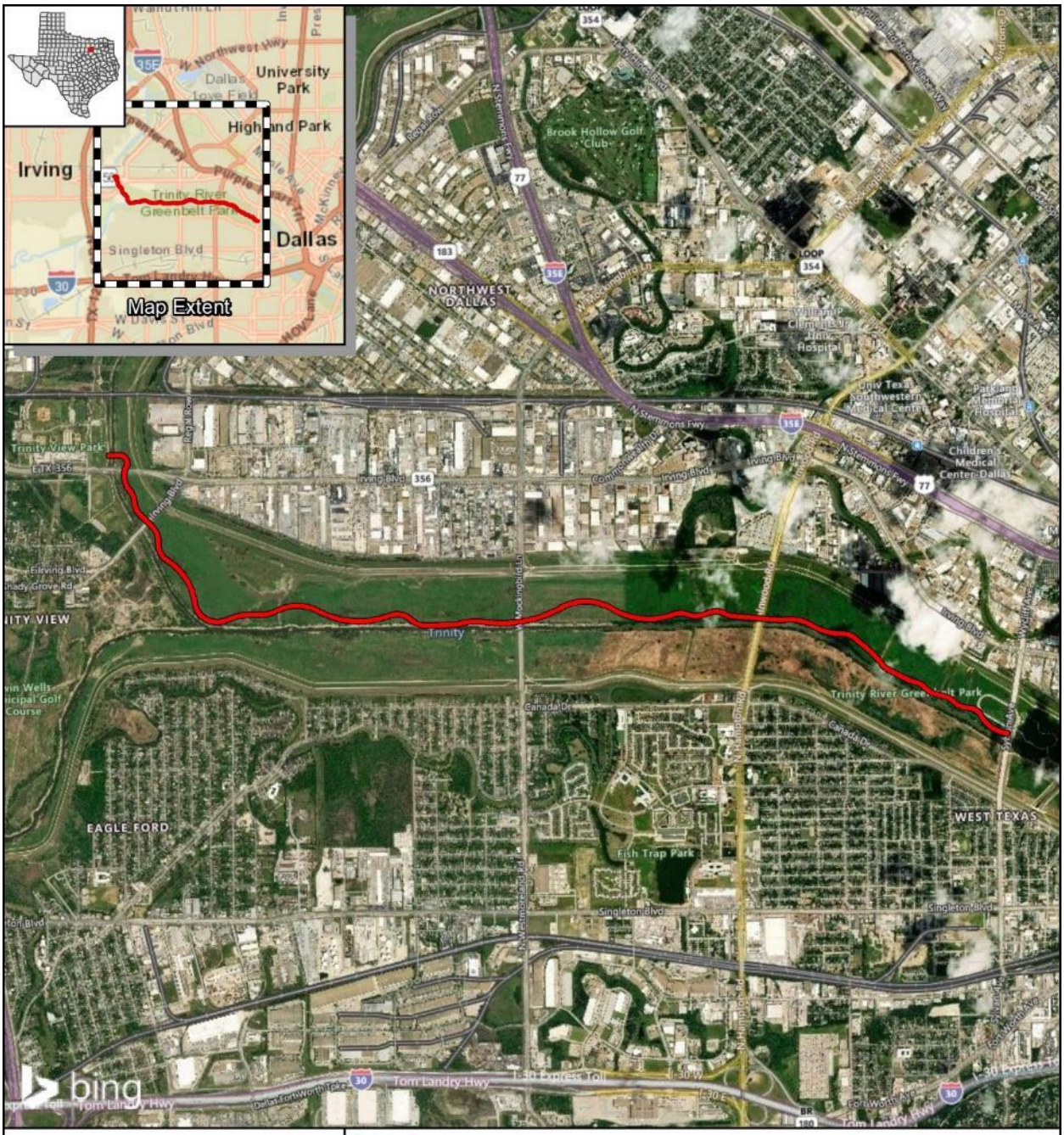

Figure 1.1
General Location Map

County: Dallas
State: Texas
Date map created: 5/8/2019
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5 Streetmap
IES Project Ref: 04.240.123

Area of Potential Effects

N

1 inch = 4,000 ft

0 4,000 8,000 ft

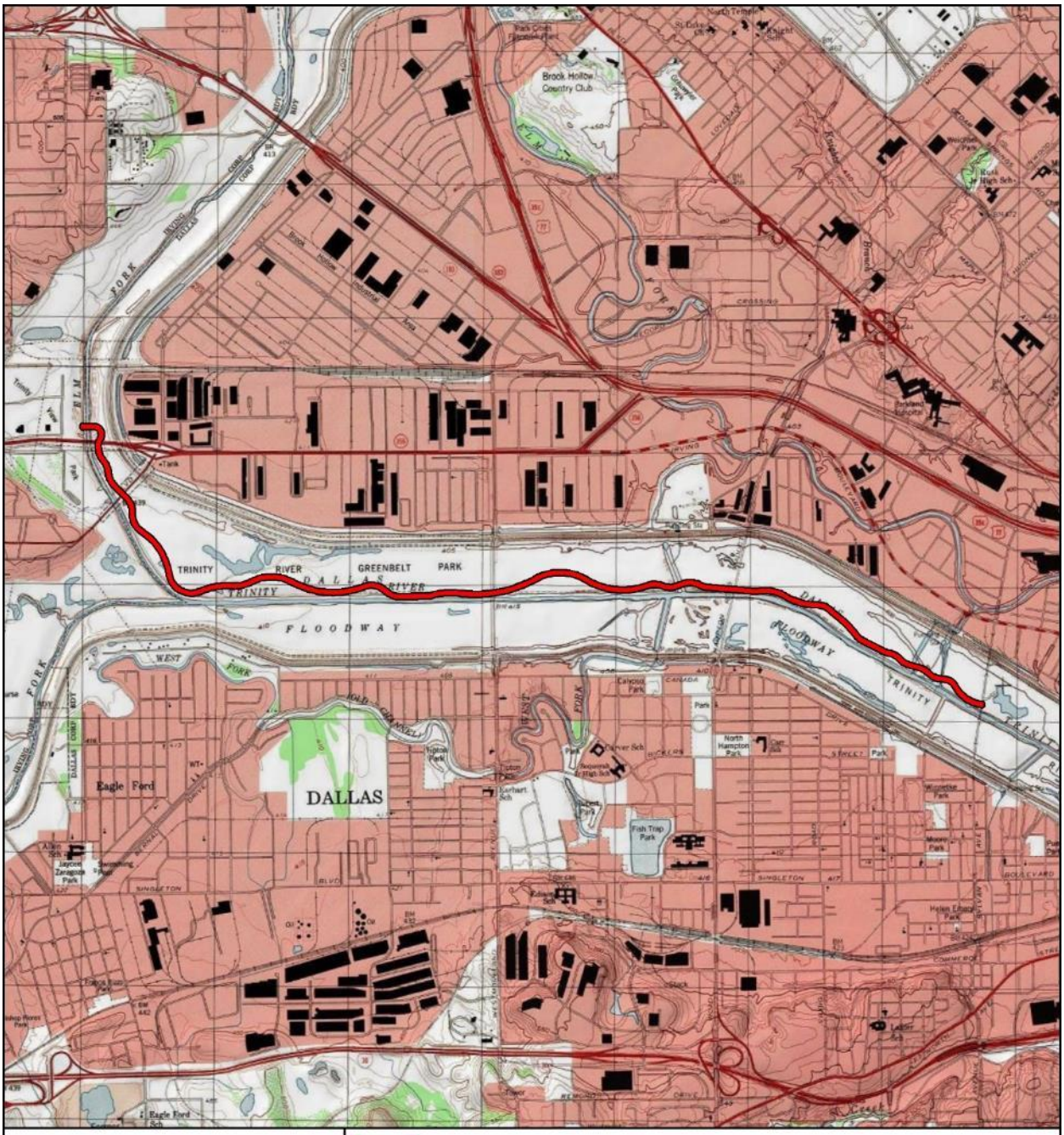

Figure 1.2
Topographic Setting

County: Dallas
State: Texas
Date map created: 5/8/2019
Source: USGS Topographic Map
7.5-min quadrangle(s):
Dallas (1982), Irving (1982)
IES Project Ref: 04.240.123

Identification, evaluation, and documentation of archeological sites shall be completed in accordance with the provisions of the Secretary of the Interior's regulatory standards, which are implemented by the THC. Archeological investigations shall be performed and documented to satisfy Texas SHPO and THC requirements for determining the presence of archeologically significant properties within the APE in accordance with 13 TAC 26, which outlines the regulations for implementing the ACT. The goal of the survey will be to locate, identify, and assess any archeological sites that could be adversely affected by the proposed project, and to evaluate such resources for their potential eligibility for listing as a SAL and eligibility for listing in the NRHP.

1.3 Area of Potential Effects

The APE extends approximately 4.9 miles (mi) within the Dallas Floodway occupying approximately 9.6 acres (ac). Engineering designs call for the construction of a 16-foot (ft)-wide concrete pathway, as well as the installation of pedestrian bridges, culverts, and signage. The right-of-way (ROW) for the proposed trail ranges in width from 16 to 87 ft to accommodate construction of the proposed trail and grading. As part of the trail, four pedestrian bridges will be constructed. A bridge measuring approximately 180 ft in length will span the Elm Fork Trinity River. The remaining three pedestrian bridges will be installed in the eastern portion of the APE and will cross the Hampton Pump Station outfall channel, the Baker 1 and 2 Pump Station outfall channel, and the Baker 3 Pump Station outfall channel. The pedestrian bridges spanning the Hampton Pump Station outfall channel and Baker 3 Pump Station outfall channel will each measure 100 ft in length and the Baker 1 and 2 Pump Station outfall channel bridge will extend approximately 150 ft. To construct this trail, 12 reinforced-concrete box culverts (RCB) will be installed across smaller drainage features within the APE. Seven of the RCB culverts will be located between Campion Trail and North Westmoreland Road and the remaining five will be installed between Inwood Road and Sylvan Avenue. The culverts will range between 28 and 65 ft in length.

Vertical impacts within the APE will primarily be restricted to the ground surface; however, deeper subsurface disturbances may occur within limited portions of the APE. These deeper subsurface impacts would occur in association with the installation of the bridges and culverts. Each bridge will require multiple 24-inch (in)-diameter shafts to be drilled to a depth of 40 ft on each bank. Ground disturbance depths associated with the culverts will reach approximately 15 ft below surface.

1.4 Administrative Information

Sponsor: City of Dallas

Review Agency: THC; USACE

Principal Investigator: Christopher Goodmaster, MA, RPA

IES Project Number: 04.240.123

Days of Field Work: 02 July 2019

Area Surveyed: 9.6 ac

Resources Recommended Eligible for NRHP Under 36 CFR 60.4: None

Resources Recommended Not Eligible for NRHP Under 36 CFR 60.4: None

Resources Recommended Eligible for SAL Under 13 TAC 26: None

Resources Recommended Not Eligible for SAL Under 13 TAC 26: None

Curation Facility: No artifacts were collected. Field notes and project records will be temporarily stored at the IES office in McKinney and permanently curated at the Center for Archeological Research (CAR) at The University of Texas at San Antonio (UTSA).

CHAPTER 2: ENVIRONMENTAL BACKGROUND

2.1 Environmental Setting

2.1.1 *Climate*

Dallas County are located in the north central portion of the State of Texas. This region has a humid subtropical climate and an average annual rainfall ranging from approximately 35 to 40 in (89 to 102 centimeters [cm]). About half of the rain usually falls between April and May, with July and August being the two driest months of the year. The subtropical region tends to have a relatively mild year-round temperature with the occasional exceedingly hot and cold snaps (Estaville and Earl 2008).

2.1.2 *Topography, Geology, and Soils*

The modern topographic setting within the APE has been greatly altered from its natural setting. The 1920 U.S. Department of Agriculture (USDA) Dallas County soils map illustrates that the APE was located within a broad valley south and west of the confluence of the Elm Fork Trinity River and the West Fork Trinity River. The former, or relic, channel of the West Fork Trinity River crossed the APE approximately 1,500 ft west of Inwood Road. Prior to the channelization and realignment of the West Fork and Elm Fork Trinity River, the floodplain was 3 to 4 mi wide surrounding the river confluence and contained a levee along the west side of the Elm Fork Trinity River and north side of the West Fork Trinity River (**Figure 2.1**). In contrast, the modern USGS Dallas and Irving 7.5-minute topographic quadrangle maps illustrate that the APE is within the narrow Dallas Floodway, an approximately 0.6-mi artificial corridor bounded by artificial levees to control flood water (see **Figure 1.2**). The APE is located north and east of the modern confluence of the West Fork and Elm Fork Trinity River and parallels the north bank of the modern Trinity River channel. The APE extends along the north side of the former West Fork Trinity River channel. At the western terminus of the APE, the proposed trail will extend across the modern Elm Fork Trinity River channel. The APE also crosses several other water features within the floodway, including the relic channel of the West Fork Trinity River, the relic channel of an unnamed tributary between North Westmoreland Road and East Irving Boulevard bridges, three outfall channels associated with Dallas Floodway pump stations, and several wetlands.

The APE is located within the Northern Blackland Prairie subregion of the Texas Blackland Prairies ecoregion. This region is distinguished from surrounding areas by the gently rolling hills and black, fine-textured soils that primarily support prairie vegetation (Griffith et al. 2007). Quaternary alluvium deposits (Qal) underlie these soils, and consists of sand, clay, and gravel in various proportions (McGowen et al. 1987; USGS 2019; **Figure 2.2**). Vertisols dominate the Blackland Prairie and consist of high clay content soils with significant shrinking and swelling potential. As shown by the *Soil Survey of Dallas County, Texas*, there are two mapped soils within the APE (Coffee 1980; Table 4). The APE contains soils typical of floodplains within the Northern Blackland Prairie ecoregion. Soils data was viewed from the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (Web Soil Survey 2019; **Figure 2.3**).

Table 2.1: Soils within the APE

Soil Map Unit Description	Percentage of the APE
73 - Trinity clay, 0 to 1 percent slopes, frequently flooded - This component is described as calcareous clayey alluvium located in floodplains. Depth to a root restrictive layer or bedrock is more than 80 in. The natural drainage class is moderately well drained.	72.2
74 - Trinity-Urban land complex - This component is described as clayey alluvium of Holocene age derived from mixed sources and located in floodplains. Depth to a root restrictive layer or bedrock is more than 80 in. The natural drainage class is moderately well drained.	26.5
W - Water	1.3

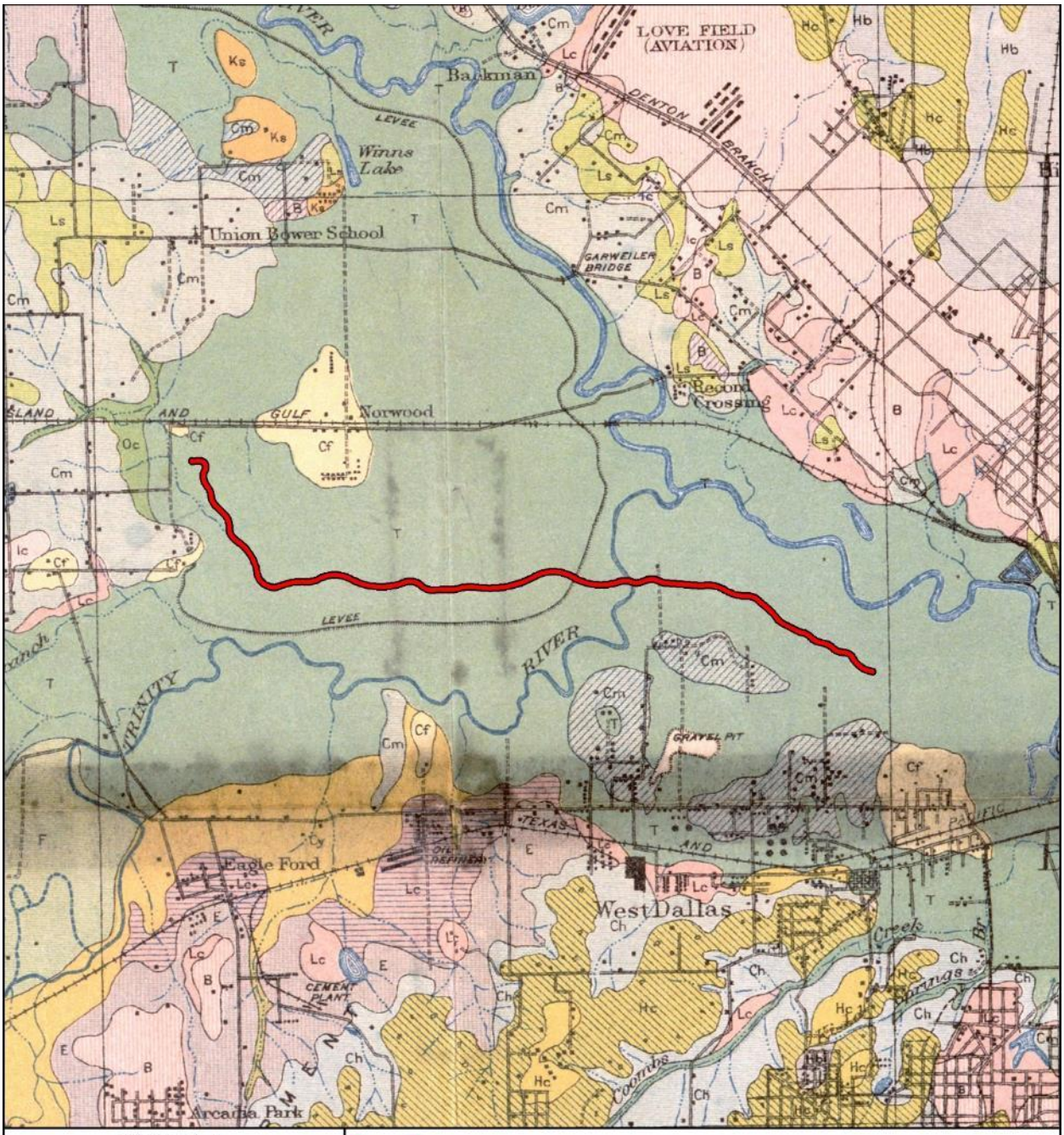

Figure 2.1
Original West Fork and Elm Fork Trinity River Channel Alignments

County: Dallas
State: Texas
Date map created: 5/8/2019
Source: USDA Dallas County Soils Map (1920)
IES Project Ref: 04.240.123

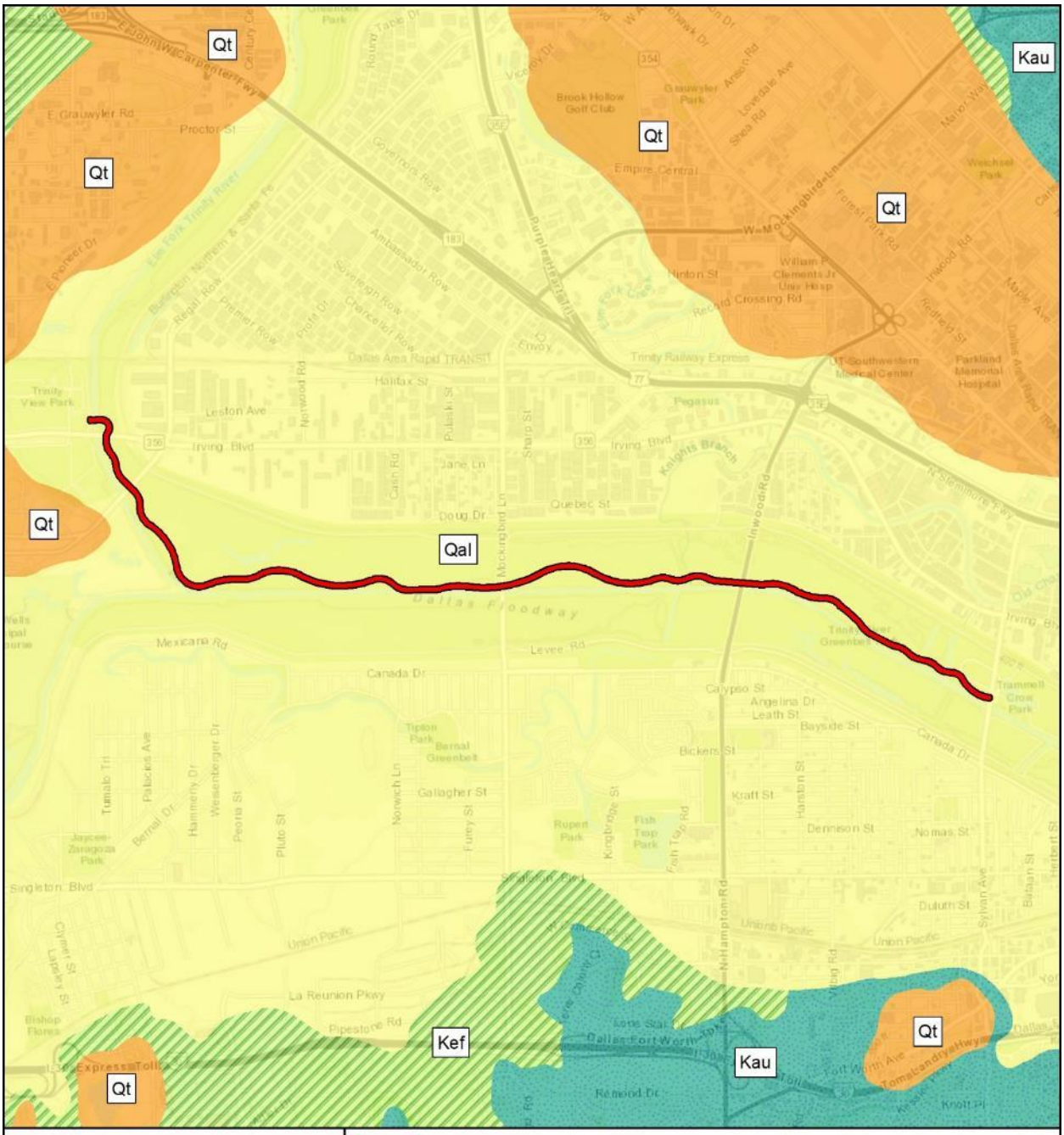

Figure 2.2
Geologic Setting

County: Dallas
State: Texas
Date map created: 5/8/2019
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5
IES Project Ref: 04.240.123

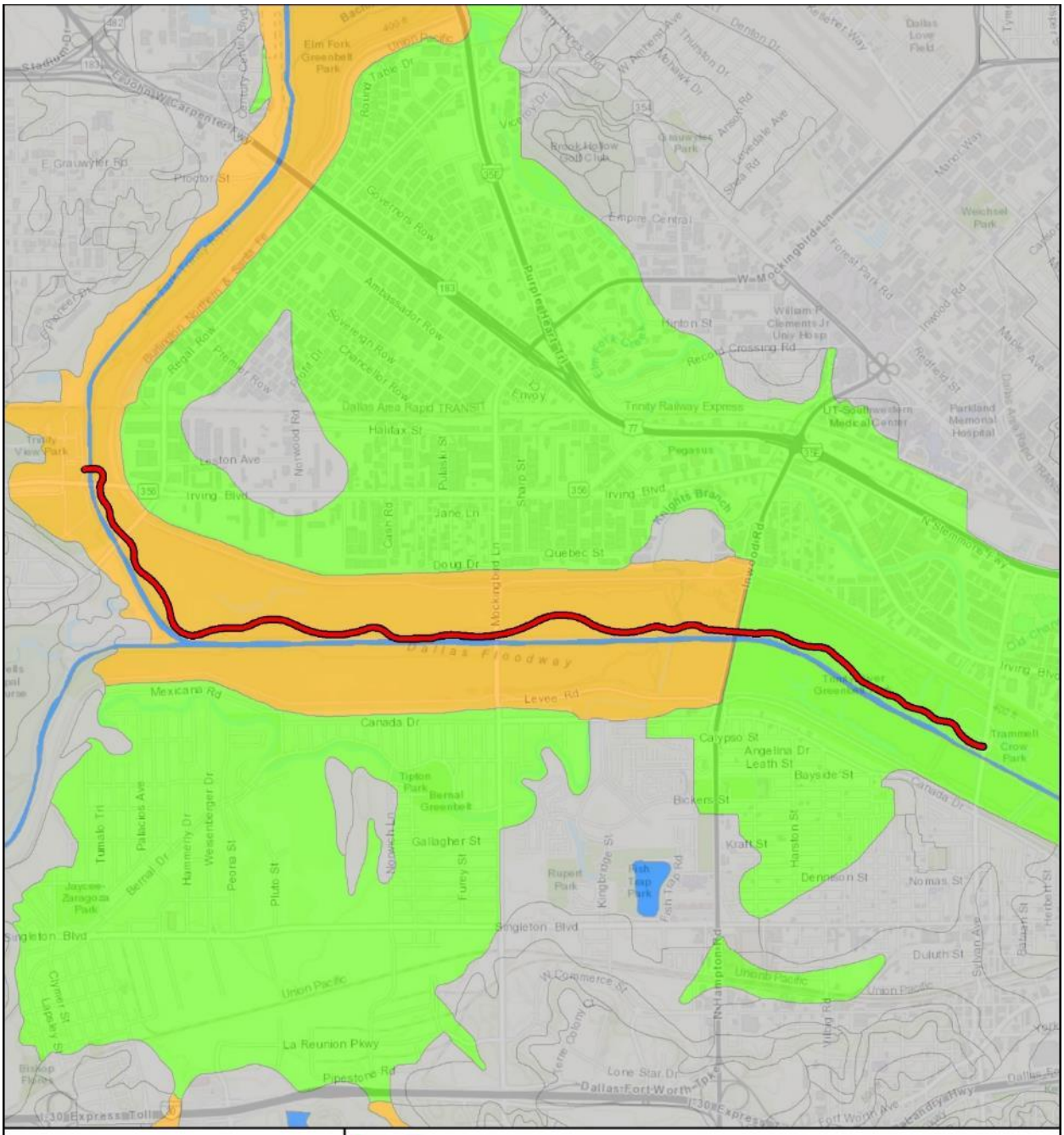

Figure 2.3
Soil Map Units Located Within and Adjacent to the APE

County: Dallas
State: Texas
Date map created: 5/8/2019
Source: 2007 USDA
NRCS Digital Soils Database
IES Project Ref: 04.240.123

CHAPTER 3: CULTURAL BACKGROUND

3.1 Previous Investigations

A file search within the Texas Archeological Sites Atlas (TASA) and Texas Historic Sites Atlas (THSA), maintained by the THC, identified no previously recorded archeological sites, historical markers, or cemeteries located within or directly adjacent to the APE (TASA 2019; THSA 2019). However, the APE is entirely within the limits of the Dallas Floodway Historic District, which has been determined eligible for listing in the NRHP by the USACE and THC. Through a November 2010 Intensive Engineering Survey Conducted by the USACE, it was determined that the Dallas Floodway Historic District, as a single engineering system for flood control and reclamation, is a historic resource with locally significant historical associations with flood control, city planning, and community development in Dallas, and is a significant statewide example of an engineering system designed for flood control and development enhancement. Although the essential physical features of the Dallas Floodway are the levees, diversion channels, and overbank; the 55 engineering components that make up the historic district can also be categorized into pumping plants, pressure sewers, intakes, outlet gate structures, sluices, sumps and culverts, and emergency control structures. The Dallas Floodway retains all its essential physical features and its ability to convey its significance to the observer.

The TASA database indicated that two archeological surveys have been previously conducted within portions of the APE (**Table 3.1**). Within 1 mi of the APE, the TASA database depicted five previously conducted archeological surveys and five previously recorded archeological sites (TASA 2019; **Tables 3.2** and **3.3**; **Figure 3.1**).

Table 3.1: Previous Archeological Surveys within the APE

Agency	ACT Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
U.S. Environmental Protection Agency (EPA)	n/a	Texas Department of Water Resources (TDWR)	1979	Linear	Western terminus of APE
Texas Department of Transportation (TxDOT)	4785	AR Consultants, Inc. (ARC)	2010	Area	Eastern terminus of APE

Table 3.2: Previous Archeological Surveys within 1 Mi of the APE

Agency	ACT Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
USACE-Fort Worth District (SWF)	n/a	Southern Methodist University (SMU)	1974	Linear	0.12 mi west of the western terminus of the APE
USACE-SWF	n/a	No data	1982	Area	0.96 mi northeast of the western terminus of the APE
USACE-SWF / Trinity River Authority (TRA)	No data	No data	1999	Linear	0.10 mi west of the western terminus of the APE
Texas Water Development Board (TWDB)	2153	GeoArch Consultants	1999	Area	225 ft west of the western terminus of the APE
TxDOT / North Texas Tollway Authority (NTTA)	4012	ARC	2006	Area	overlaps eastern portion of APE
TxDOT / NTTA	4986	ARC	2008	Site Evaluation	0.13 mi south of the APE

Table 3.3: Previously Recorded Archeological Sites within 1 Mile of the APE

Site Trinomial	Time Period	Site Type	Site Size	Depth Extent	Archeological Materials	Topographic Setting	Reference
41DL59	Prehistoric	Campsite	No data	No data	Lithic debitage	Floodplain	Kirkland 1941
41DL64	No data	No data	No data	No data	No data	Floodplain	No data
41DL389	Prehistoric	Campsite	40 x 40 m	100 cm	Bone fragments, polished bone, flake	Floodplain	Burson 1999
41DL441	Prehistoric	Hearth	80 x 20 cm	80–100 cm	Hearth feature	Floodplain	Trask 2006
41DL530	Historic (1900-1930)	Family cemetery	30 x 30 ft	5–10 ft	Coffin hardware, buttons, safety pins, cufflinks, nails, lining tacks, faunal	Floodplain	Coleman 2016; Motley 2016

Although not depicted in the TASA database, AR Consultants, Inc. (ARC) conducted an archeological survey within portions of the Dallas Floodway in 2006 under Texas Antiquities Permit No. 4012 (Frederick et al. 2006) for the proposed NTTA Trinity Parkway project. The project area was comprised of two separate survey areas. The eastern (Downtown) survey area encompassing the floodway from south of North Corinth Street to Continental Avenue, while the western (West) survey area spanned from Inwood Road to the confluence of the Elm Fork Trinity River and the West Fork Trinity River (**Figure 3.1**). Prior to field investigations, ARC determined that a portion of the floodway, located between the two project areas, had been extensively disturbed from previous gravel mining activities in the floodplain. As such, no survey was performed in that part of the floodway.

Forty-one backhoe trenches were excavated across the two survey areas during the previous survey effort (Frederick et al. 2006:24–31). In the West survey area, ARC excavated 20 trenches, most of which were conducted along the former channel of the West Fork Trinity River near the Inwood Road bridge. The remaining trenches were excavated in locations deemed to have high probability for containing archeological deposits based on geomorphology and the age of soils observed in previous trenches during the investigation. No cultural resources were encountered north of the modern Trinity River channel. However, a site featuring a hearth (41DL441) was recorded south of the modern channel. ARC performed an NRHP evaluation of site 41DL441 in 2008 under Antiquities Permit No. 4986. Through these investigations, charcoal from the hearth was recovered that produced radiocarbon dates from the 18th and 19th centuries. In addition, a shard of colorless bottle glass, encountered on the surface of the hearth feature, indicated that the feature was not of prehistoric origin. Site 41DL441 was recommended to be not eligible for inclusion in the NRHP.

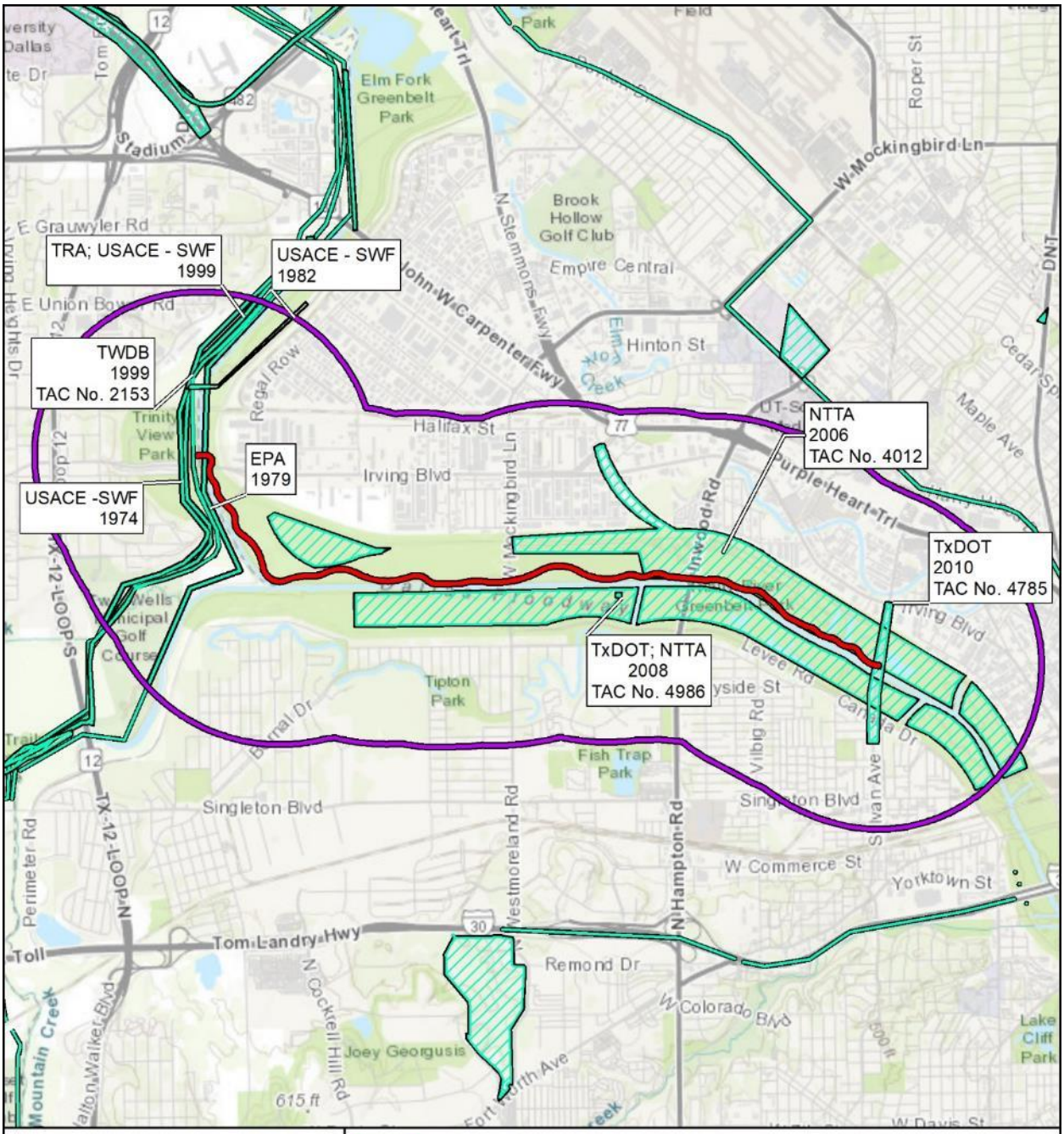

Figure 3.1
Previous Investigations Within
1 Mile of the APE

County: Dallas
State: Texas
Date map created: 5/8/2019
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5
IES Project Ref: 04.240.123

3.2 Archeological Resource Potential

In addition to the TASA review, several additional resources were referenced to determine the overall potential for encountering archeological resources within the APE. These resources included soil survey data (NRCS 2018; Coffee 1980), geologic data (McGowen et al. 1987), the TxDOT Potential Archeological Liability Map (PALM), the National Archives and Records Administration's (NARA) 1940 Census Enumeration District Maps for Dallas County, the Texas Historic Overlay (THO) georeferenced map database, historic and modern aerial photography and satellite imagery.

3.2.1 *Disturbance Analysis*

During the background review, it was determined that extensive ground-disturbing activities have transpired within the APE since the early 20th century that have pertained to development of the flood control system. The APE is situated within the Dallas Floodway, which was constructed in the 1920s and 1930s to control flooding of the Trinity River and its tributaries near the urban core of Dallas. The project entailed relocating part of the Trinity River and the confluence of the Elm Fork and West Fork Trinity River away from existing urban development to the middle of the floodplain through dredging and excavation of a new channel. As a result of the project, the West Fork and Elm Fork Trinity River confluence was relocated approximately 2.5 mi west of its original location.

In addition to moving the river confluence, the Dallas Floodway project also involved a massive upgrade to the existing levee system and construction of a pumping system. Millions of cubic yards of sediment dredged for the river relocation were used to widen and heighten the levees. For the new pumping system, pump stations connecting outfall channels or sumps were constructed near the floodway. The project converted the former West Fork Trinity River channel that crossed the floodway into an outfall channel associated with the Hampton Pump Station near Inwood Road. According to the 1920 USDA soils map (see **Figure 2.1**), part of the original levee system paralleled the former West Fork Trinity River channel; however, modern aerial photographs show that no features of the original levee system remain within the vicinity of the APE.

Historical aerial photographs from the 1950s depict that extensive gravel quarrying occurred between Sylvan Avenue and the former West Fork Trinity River channel. Borrow pits and infrastructure associated with the borrow pits were observed in aerial photographs dating from the 1950s to the 1970s. Mining scars are evident in later photographs within this area.

A 1930 aerial photograph illustrates the completed Hampton Road bridge across the Trinity River. A 1952 photograph depicts the road primarily being used for the many gravel mining operations in the floodway and construction had begun on the nearby Inwood Road bridge. By 1968, Hampton Road and its associated bridge had been removed from the floodway. The Inwood Road bridge remained until the late 2000s when it was replaced with new bridge construction. Between 1952 and 1956, the Sylvan Avenue bridge was constructed. In 2012, the old Sylvan Avenue bridge was demolished and replaced with a contemporary bridge at a higher elevation. The area near Sylvan Avenue was further disturbed by the construction of the Floodway Access Ramp beginning in 2012. At the western end of the project corridor, the early stages of construction for East Irving Boulevard are shown in a 1930 aerial photograph, which is illustrated as complete on the 1940 Texas highway map for Dallas County. North of this bridge is the State Highway (SH) 356 bridge, which was constructed between 1958 and 1968.

3.2.1.1 Prehistoric Archeological Resources Potential

The TxDOT PALM for Dallas County indicates that nearly 100 percent of the APE features a PALM score of 9, which is a high potential for containing both shallow and deeply buried deposits within areas that have retained a reasonable degree of contextual integrity (**Figure 3.2**). Although the PALM has identified a high potential for shallow prehistoric deposits, it was determined that widespread disturbances caused by the construction of the Dallas Floodway and later gravel mining would have reduced the probability of encountering shallow archeological sites. This assumption is supported by previous

archeological surveys conducted within the Dallas Floodway (e.g., Frederick et al. 2006). Therefore, the APE is not considered to have a reasonable context for the preservation of shallow archeological deposits.

Although construction of the Dallas Floodway would have significantly affected any archeological deposits located near the surface, the majority of any deeply-buried archeological deposits would have been unaffected by this construction. For these reasons, it was determined that the portion of the APE located outside the former gravel quarries between Sylvan Avenue and the relic channel of the West Fork Trinity River, west of Inwood Road, has retained a reasonable context for preserving deeply-buried deposits and contains a moderate to high probability for containing deeply-buried prehistoric sites.

3.2.1.2 Historic Period Resources Potential

The APE is located within the Dallas Floodway Historic District. Through coordination between the THC, the Federal Highway Administration through TxDOT, and the USACE, the Dallas Floodway Historic District was determined to be eligible for listing in the NRHP in 2013. The Dallas Floodway Historic District consists of levees, overbank, the main diversion channel, pump stations, and several culverts and sumps. After a flood in 1908 devastated downtown Dallas, the city implemented the Kessler Trinity Plan, which called for the construction of a levee system. After the original levee system was built in the mid-1920s, the city sought to expand flood control measures. In 1928, construction of the Dallas Floodway began and was completed in the early 1930s. After the USACE Fort Worth District was established in 1950, the USACE reconstructed the Dallas Floodway including improvements to river channels, outfall channels, pump stations, and the levee system.

In addition to the Dallas Floodway, the 1920 USDA Dallas County soils map illustrates that a building and part of a gravel road were located directly within the APE. According to a 1930 aerial photograph, the building was possibly associated with a nearby gravel mine located south of the APE and west of Inwood Road; however, it is unclear if this is the same building depicted on the map. No other historical maps depict the building and aerial photographs show that it was removed prior to 1952. As previously discussed, construction and maintenance of the Dallas Floodway and gravel mining has caused significant disturbances throughout the APE. As such, it was determined that the APE contains a negligible to low potential for containing historic-period archeological resources.

Figure 3.2
Potential Archeological
Liability Map

County: Dallas
State: Texas
Date map created: 5/8/2019
Source: TxDOT - Dallas District
IES Project Ref: 04.240.123

CHAPTER 4: METHODS

Prior to fieldwork, the IES staff conducted historical and archeological records reviews to determine the locations of previously recorded resources within the APE and within a 1-mi (1.6-kilometer [km]) radius of the APE (see **Section 3.1**). IES staff also reviewed ecological, geologic, and soils data, as well as historical and modern topographic maps and aerial photography of the APE. The archeological survey for the Trinity Skyline Trail Phase II Project was conducted on 02 July 2019. The methods utilized during this survey exceed the minimum archeological survey standards for field investigations recommended by the CTA (2002), as approved by the THC.

4.1 Intensive Survey

Intensive archeological survey within the APE was limited to backhoe trenching at the locations of proposed pedestrian bridges. Previous surveys conducted within the Dallas Floodway in the vicinity of the APE indicated little to no potential for the occurrence or preservation of surface or near-surface archeological deposits. The low potential for the occurrence of shallow archeological deposits (e.g., Frederick et al. 2006), coupled with the shallow depth associated with the proposed impacts across much of the APE, supports the rationale that shovel testing within the APE was unnecessary.

4.1.1 *Backhoe Trenching*

Due to the depth of the proposed impacts at pedestrian bridge locations within the APE, and the potential for deeply-buried archeological deposits within the Trinity River floodplain, this intensive survey consisted of backhoe trenching where proposed impacts exceeded depths of 3 ft within the portions of the APE. However, due to extensive quarrying activities between Sylvan Avenue and the former West Fork Trinity River channel during the early to mid-20th century, there was no potential for deeply buried sites to be located in these areas. Therefore, those areas were not be subjected to backhoe trenching. IES excavated two trenches at the proposed pedestrian bridge crossing the Elm Fork Trinity River and two trenches at the Hampton Pump House discharge channel, west of Inwood Road.

Backhoe trenches averaged 8 meters (m) in length, 90 cm in width, and were excavated to a maximum depth of 3.6 m. Once each trench has been excavated to a depth of approximately 1.4 m, an Occupational Safety and Health Administration (OSHA) competent field supervisor assessed the stability of the trench prior to recording soil profile data. If soil stability was low, trenches were widened through benching and/or limited to a safe depth for detailed recording of the soil profile. Soil profile recording included scraping a 1-m-wide vertical exposure within each trench profile with a trowel and/or shovel and documenting soil stratigraphic data using standardized nomenclature (Schoeneberger et al. 2012) and digital photography. After each trench soil profile was initially recorded, excavation continued to the extent of Holocene soils, water table, or the maximum operation depth of the excavation equipment. Each excavated trench was photographed, backfilled, and geospatially recorded using a Global Positioning System (GPS) unit.

Backhoe trench profiles and excavated fill was monitored for the presence of archeological materials. A representative soil sample from each natural stratigraphic layer was screened through 0.25-in hardware mesh and inspected for cultural materials. The remaining excavated soil was visually inspected as it is placed on the spoil pile. Trench excavation ceased when each trench reached the vertical extent of Holocene soils, water table, or the maximum depth the backhoe could safely excavate.

4.2 Archival Research

Prior to field investigations, a suite of archival sources including historic maps and aerial photographs was reviewed to determine former land use patterns and the locations of historic-age (e.g., greater than 50 years old) structures within the APE.

4.3 Curation

No artifacts observed on the ground surface or recovered within excavations during this project. Project-related records, field notes, photographs, forms, and other documentation will be curated at a state-certified facility as per the stipulations of the ACT. All project records will be temporarily stored at the IES office and will be permanently curated at the UTSA CAR facility upon project completion.

CHAPTER 5: RESULTS

During this survey, the APE was subjected to intensive archeological survey limited to backhoe trenching at the location of proposed pedestrian bridges within previously undisturbed portions of the APE. Ground surface visibility ranged from 0 to 20 percent across the survey area. During this survey, no cultural materials were encountered within the APE.

5.1 Backhoe Trenching

Backhoe trenching was conducted in proximity to portions of the APE that will be subjected to impacts with depths greater than 3 ft in areas that have not been subjected to extensive previous ground disturbances. The areas investigated were therefore restricted to locations surrounding a channelized outfall drainage and the Elm Fork Trinity River channel due to the potential for preservation of deeply-buried archeological deposits within the alluvial setting. Four backhoe trenches were excavated within the APE at the locations proposed for the pedestrian bridge piers (**Figure 5.1**, **Table 5.1**). Ground cover within these areas was restricted to tall grasses. Portions of the APE were saturated due to poor drainage and recent rainfall.

Trench 1 was excavated approximately 13 m east of a channelized drainage feeding into the Trinity River (**Appendix A, Photographs 1** through **6**). The soil profile exposed within Trench 1 consisted of a thin layer of very dark grayish brown (10YR 3/2) clay loam overlying a series of sediments to depths exceeding 120 cm below surface (cmbs) deposited during construction of the channel. At a depth of 120 cmbs, pale brown (10YR 6/3) loamy sand with a loose granular structure was encountered. This stratum gradually transitioned to a dark grayish brown (10YR 4/2) loamy sand with frequent gravel inclusions at depths exceeding 350 cmbs. The final stratum likely represents pre-Holocene alluvial deposits and is unlikely to contain or overlie prehistoric cultural deposits. The water table was encountered at 350 cmbs.

Trench 2 was excavated approximately 8 m west of a channelized drainage feeding into the Trinity River (**Appendix A, Photographs 7** through **10**). The soil profile exposed within Trench 2 were dissimilar to those of Trench 1 (approximately 32 m east). Trench 2 consisted of a thin layer of dark gray (10YR 4/1) loam that transitioned to a very dark gray (10YR 3/1) clay loam at a depth of 50 cmbs. Beneath that layer, the soil profile consisted of loamy sands that transitioned from dark yellowish brown (10YR 4/4) to yellowish brown (10YR 5/6). At depths exceeding 310 cmbs, gravel inclusions significantly increased. The water table was encountered at 360 cmbs.

Trench 3 was excavated approximately 20 m east of the Elm Fork Trinity River channel (**Appendix A, Photographs 11** through **14**). The soil profile exposed within Trench 3 consisted of a thick layer of dark gray (10YR 4/1) loam with a medium subangular blocky structure. The soil profile gradually transitioned to a very dark brown (10YR 2/2) subangular blocky clay loam to a depth of 225 cmbs. The clay content significantly increased below this stratum, which consisted of dark brown (10YR 3/3) clay with frequent gravel inclusions. The water table was encountered at 310 cmbs in Trench 3.

Trench 4 was excavated approximately 25 m west of the Elm Fork Trinity River, near the eastern margin of Trinity View Park. The soil profile exposed within Trench 4 was generally similar to Trench 3; however, a thick layer of modern fill from construction and grading of the park capped Trench 4 (**Appendix A, Photographs 15** through **22**). The fill layer was approximately 50 cm thick and consisted of pale brown (10YR 6/3) loam covered with manicured turf grass. The fill layer was underlain by a thick deposit of very dark grayish brown (10YR 3/2) clay loam that featured pockets of mottled black (10YR 2/1) and dark yellowish brown (10YR 4/4) clay. The water table was encountered at 330 cmbs.

5.2 Summary

In total, 31 m (101 ft) of trenches were mechanically excavated within the floodplain of the Elm Fork Trinity River and the Trinity River. Trenches 1 and 4 exhibited disturbed fill within the upper portions of the soil profiles. No archeological materials were encountered in any of the trenches excavated.

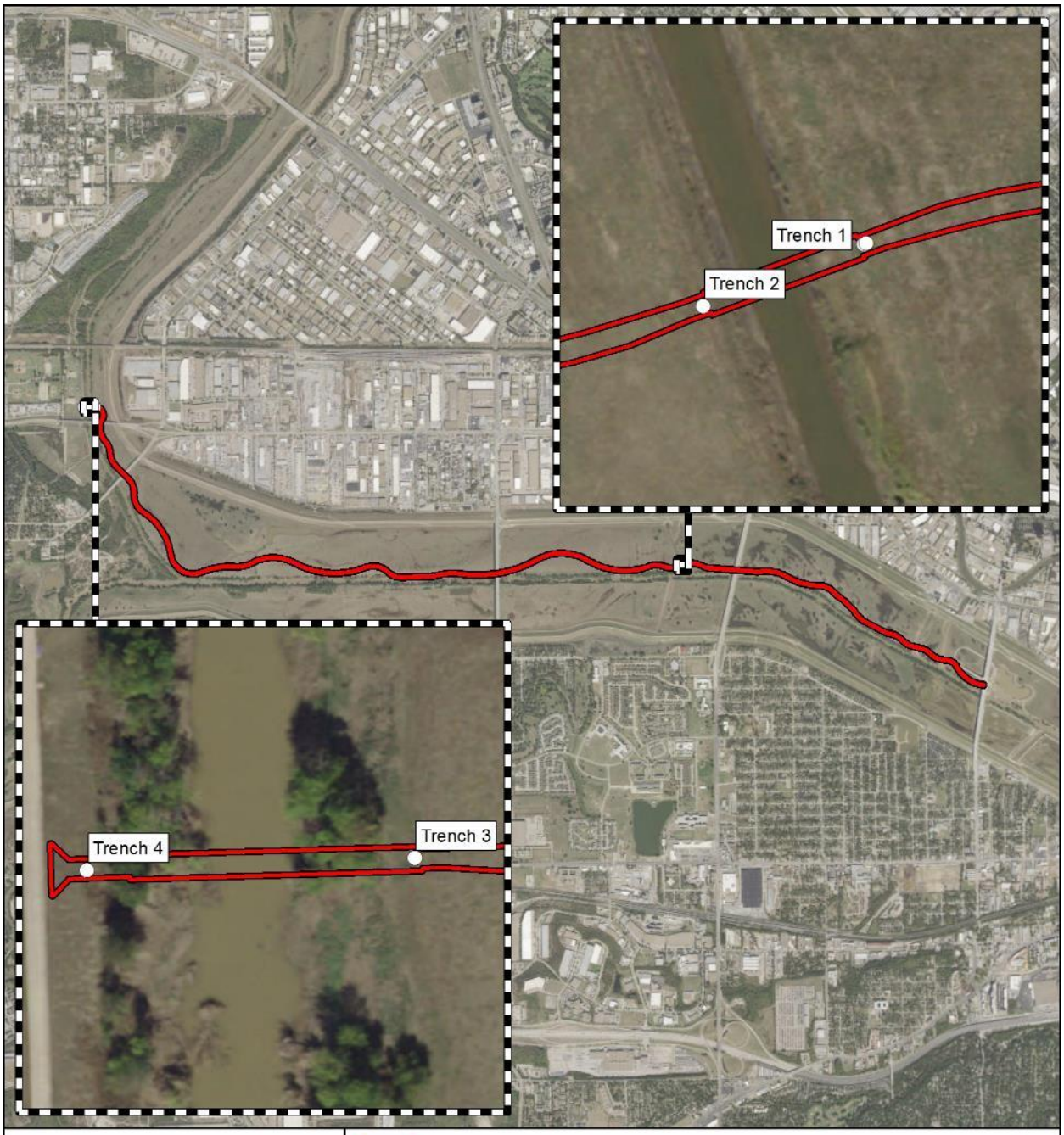

Figure 5.1
Shovel Test Location Map

County: Dallas
State: Texas
Date map created: 7/8/2019
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.5
IES Project Ref: 04.240.123

Area of Potential Effects - Direct

Backhoe Trench Location

N

0 4,000 8,000 ft

0 1,200 2,400 m

Table 5.1: Summary of Backhoe Trench Results

Trench No.	Landform	Soil Profile	Artifacts
1	Floodplain	0 - 30 cmbs: very dark grayish brown (10YR 3/2) clay loam; fine subangular blocky structure; abrupt (< 2 cm) smooth lower boundary 30 - 70 cmbs: dark yellowish brown (10YR 4/4) clay loam; medium subangular blocky structure; gradual (5-15 cm) smooth lower boundary 70 - 80 cmbs: black (10YR 2/1) clay; medium subangular blocky structure; abrupt (< 2 cm) smooth lower boundary 80 - 90 cmbs: dark yellowish brown (10YR 3/6) clay loam; medium subangular blocky structure; abrupt (< 2 cm) smooth lower boundary 90 - 120 cmbs: black (10YR 2/1) clay; medium subangular blocky structure; abrupt (< 2 cm) smooth lower boundary 120 - 300 cmbs: pale brown (10YR 6/3) loamy sand; fine granular structure; diffuse (> 15 cm) wavy lower boundary 300 - 350 cmbs: dark grayish brown (10YR 4/2) loamy sand; medium granular structure; frequent gravel inclusions; water table present	None
2	Floodplain	0 - 30 cmbs: dark gray (10YR 4/1) loam; medium subangular blocky structure; frequent rootlets; gradual (5-15 cm) smooth lower boundary 30 - 50 cmbs: very dark gray (10YR 3/1) clay loam; medium subangular blocky structure; diffuse (> 15 cm) smooth lower boundary 50 - 80 cmbs: dark yellowish brown (10YR 4/4) loamy sand; fine granular structure; diffuse (> 15 cm) smooth lower boundary 80 - 310 cmbs: yellowish brown (10YR 5/6) loamy sand; fine granular structure; diffuse (> 15 cm) smooth lower boundary 310 - 360 cmbs: yellowish brown (10YR 5/6) loamy sand; fine granular structure; frequent gravel inclusions; water table present	None
3	Floodplain	0 - 75 cmbs: dark gray (10YR 4/1) loam; medium subangular blocky structure; frequent rootlets; diffuse (> 15 cm) smooth lower boundary 75 - 225 cmbs: very dark brown (10YR 2/2) clay loam; medium subangular blocky structure; diffuse (> 15 cm) smooth lower boundary 225 - 320 cmbs: dark brown (10YR 3/3) clay; massive structure; frequent gravel inclusions; water table present	None
4	Floodplain	0 - 50 cmbs: pale brown (10YR 6/3) loam; fine subangular blocky structure; frequent rootlets; diffuse (> 15 cm) smooth lower boundary 50 - 330 cmbs: very dark grayish brown (10YR 3/2) clay loam; medium subangular blocky structure; Mottled with 5 percent black (10YR 2/1) and 5 percent dark brown (10YR 4/4); water table present	None

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CHAPTER 6: SUMMARY AND RECOMMENDATIONS

During this archeological survey for the Trinity Skyline Trail Phase II project, an intensive archeological survey was conducted. The surveyed areas were limited to previously undisturbed portions of the APE that will be subjected to impacts with depths greater than 3 ft. In total, four backhoe trenches were excavated within the APE. No cultural materials were encountered during this survey. Therefore, it is the recommendation of IES that the Trinity Skyline Trail Phase II project be permitted to continue without the need for further archeological investigations or coordination. However, if any archeological deposits are encountered during construction, the operators should immediately stop construction activities in the area of the inadvertent discovery. The project cultural resources consultant should then be contacted to initiate further consultation with the USACE and THC prior to resuming construction activities in the vicinity of the inadvertent discovery. In addition, if project designs change, and areas outside the APE detailed within this report are to be impacted, additional field investigations may be required.

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APPENDIX A
General APE Photograph Location Map and Photographs

Photograph 1 – Trench 1, view to the south.

Photograph 2 - Trench 1, view to the south.

Photograph 3 - Trench 1, view to the south.

Photograph 4 - Trench 1, view to the east.

Photograph 5 - Trench 1, view to the southeast.

Photograph 6 - Trench 1, view to the south.

Photograph 7 - Trench 2, view to the north.

Photograph 8 - Trench 2, view to the northwest.

Photograph 9 - Trench 2, view to the north.

Photograph 10 - Trench 2, view to the west.

Photograph 11 - Trench 3, view to the southeast.

Photograph 12 - Trench 3, view to the southeast.

Photograph 13 - Trench 3, view to the southeast.

Photograph 14 - Trench 3, view to the east.

Photograph 15 - Trench 4, view to the southeast.

Photograph 16 - Trench 4, view to the northeast.

Photograph 17 - Trench 4, view to the northeast.

Photograph 18 - Trench 4, view to the northeast.

Photograph 19 - Trench 4, view to the northwest.

Photograph 20 - Trench 4, view to the northwest.

Photograph 21 - Trench 4, view to the northwest.

Photograph 22 – Trench 4, view to the southeast.

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