

ANTIQUITIES PERMIT APPLICATION FORM

ARCHEOLOGY

GENERAL INFORMATION

I. PROPERTY TYPE AND LOCATION

Project Name (and/or Site Trinomial) _____
County (ies) _____
USGS Quadrangle Name and Number _____
UTM Coordinates Zone _____ E _____ N _____
Location _____
Federal Involvement ☐ Yes ☐ No
Name of Federal Agency _____
Agency Representative _____

II. OWNER (OR CONTROLLING AGENCY)

Owner _____
Representative _____
Address _____
City/State/Zip _____
Telephone (include _____ Email Address _____
area code)

III. PROJECT SPONSOR (IF DIFFERENT FROM OWNER)

Sponsor _____
Representative _____
Address _____
City/State/Zip _____
Telephone (include area code) _____ Email Address _____

PROJECT INFORMATION

I. PRINCIPAL INVESTIGATOR (ARCHEOLOGIST)

Name _____
Affiliation _____
Address _____
City/State/Zip _____
Telephone (include area code) _____ Email Address _____

(OVER)

ANTIQUITIES PERMIT APPLICATION FORM (CONTINUED)

II. PROJECT DESCRIPTION

Proposed Starting Date of Fieldwork _____
Requested Permit Duration _____ Years _____ Months (1 year minimum)
Scope of Work (Provided an Outline of Proposed Work) _____

III. CURATION & REPORT

Temporary Curatorial or Laboratory Facility _____
Permanent Curatorial Facility _____

IV. LAND OWNER'S CERTIFICATION

I, _____, as legal representative of the Land Owner, _____, do certify that I have reviewed the plans and research design, and that no investigations will be performed prior to the issuance of a permit by the Texas Historical Commission. Furthermore, I understand that the Owner, Sponsor, and Principal Investigator are responsible for completing the terms of the permit.
Signature _____ Date _____

V. SPONSOR'S CERTIFICATION

I, _____, as legal representative of the Sponsor, _____, do certify that I have review the plans and research design, and that no investigations will be performed prior to the issuance of a permit by the Texas Historical Commission. Furthermore, I understand that the Sponsor, Owner, and Principal Investigator are responsible for completing the terms of this permit.
Signature _____ Date _____

VI. INVESTIGATOR'S CERTIFICATION

I, _____, as Principal Investigator employed by _____ (Investigative Firm), do certify that I will execute this project according to the submitted plans and research design, and will not conduct any work prior to the issuance of a permit by the Texas Historical Commission. Furthermore, I understand that the Principal Investigator (and the Investigative Firm), as well as the Owner and Sponsor, are responsible for completing the terms of this permit.
Signature _____ Date _____

Principal Investigator must attach a research design, a copy of the USGS quadrangle showing project boundaries, and any additional pertinent information. Curriculum vita must be on file with the Archeology Division.

FOR OFFICIAL USE ONLY

Reviewer _____ Date Permit Issues _____
Permit Number _____ Permit Expiration Date _____
Type of Permit _____ Date Received for Data Entry _____





Archeological Survey Permit Application

FM 3349 at US 79 from CR 404 to CR
395, Williamson County, Texas

CSJs: 0204-02-034, 0914-05-211 & 3486-01-008

Prepared by: AmaTerra Environmental, Inc.

Date: April 2021

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 14, 2019, and executed by FHWA and TxDOT.

Williamson County proposes improvements to FM 3349 and CR 101 at the interchange of FM 3349/CR 101 and US 79, between CR 404 and CR 395 in Williamson County, Texas. The project extends south to north for 2.75 miles from just north of the intersection with CR 404 to CR 395 (**Figures 1 and 2**). The existing FM 3349 roadway, from approximately 0.12 mile north of CR 404 to US 79, is a two-lane undivided roadway with one 11-foot southbound travel lane, one 11-foot northbound travel lane, and one-foot outside shoulders. The existing CR 101 roadway, from US 79 to approximately 0.25 mile north of US 79, is a two-lane undivided roadway with one 12-foot northbound lane, one 12-foot southbound lane, and outside shoulders varying from one foot to 10 feet. Approximately 500 feet north of US 79, the southbound 10-foot shoulder on CR 101 tapers southward and the pavement widens to accommodate a 12-foot southbound right turn lane, which begins approximately 220 feet north of US 79. The existing CR 101 roadway, from approximately 0.25 mile north of US 79 to CR 395, is a two-lane undivided roadway with one 10-foot northbound travel lane, one 10-foot southbound travel lane, and no shoulders. The existing US 79 facility, from approximately 0.71 west of FM 3349/CR 101 to approximately 150 feet east of FM 3349/CR 101, is a four-lane divided roadway with two 12-foot eastbound travel lanes, two 12-foot westbound travel lanes, 10-foot outside shoulders, and 4-foot inside shoulders. Directions of travel are separated by a grassy median (approximately 50 feet wide). The Union Pacific Railroad (UPRR) runs parallel to and south (approximately 60 feet) of US 79 within existing ROW.

The existing right-of-way width varies:

- FM 3349: from 80 feet to 100 feet
- CR 101: 120 feet
- US 79 and UPRR: from 330 feet to 380 feet

The proposed improvements within the project limits include the elevation and widening of the existing ROW and the construction of bridges along FM 3349/CR 101, turnaround lanes, drainages, and a jug handle connecting CR 101 to US 79. The proposed total ROW width includes 350-490 feet along FM3349, 400 feet along CR101, and 540-650 feet along US 79. Removals include the existing FM 3349/CR 101 pavement, from approximately 0.24 mile north of CR 404 to CR 395, and the existing FM 3349 the bridge-class culvert in the unnamed tributary of Boggy Creek, approximately 1.25 miles south of US 79. Drainage improvements associated with the project include a permanent drainage easement along the west side of FM 3349, and the installation of cross-drainage culverts, minor culverts and pipes, two bridges, open ditches, and four detention ponds.

The Area of Potential Effects (APE) for the archeological resources is defined as the footprint of the proposed project to the maximum depth of impact, including all easements, and project specific locations. The total Right-of-Way (ROW) for the project is approximately 213.5 acres, consisting of around 72.35 acres of existing ROW and 120.8 acres of new ROW. The proposed project area would include 20.3 acres (from approximately 1,540 feet north of CR 132 to approximately 0.27 mile south of US 79) for a potential permanent drainage easement along the west side of FM 3349. The maximum depth of impacts is estimated to be 75 feet for installation of the bridge foundations, with the typical depth of impact being three to five feet for at-grade road construction.

The project will take place on ROW owned or to be acquired by the State of Texas or Williamson County, a political subdivision of the State, and will impact jurisdictional waterways. Therefore, Section 106 of the National Historic Preservation Act (Section 106) and the Antiquities Code of Texas (ACT) apply.

Project Setting

The project area is in a rural area in Williamson County, Texas between the cities of Hutto and Taylor (**Figures 1 and 2**). The proposed project area is in the Northern Blackland Prairies ecoregion. This ecoregion is characterized by its broad floodplains forested with oaks, hackberry, elm, ash, eastern cottonwood, and pecan. Three streams and/or drainages cross the project area, with a total of four separate crossings. A few scattered residences and commercial properties are interspersed along larger tracts of agricultural land. Land use is almost entirely agriculture (a mix of row crops and pasture/hay fields). Native prairie grasses have been replaced by converted pastures and row crops with few trees. Trees are primarily limited to hardwoods surrounding scattered homesteads and hardwood shrubs along fencerows.

Geologically, this portion of the Blackland Prairie ecoregion is characterized by Quaternary-age clay, silt, and sand surrounded by the Cretaceous shale, sandstone, and limestone (USGS 2020). The project area is underlain by Late Cretaceous, Gulfian Series geology associated with the Navarro and Taylor Groups (USGS 2020, **Figure 3**). Soils consist primarily of calcareous clayey soils derived from Quaternary alluvium including Houston Black, Heiden and Tinn Series clays (**Figure 4**, USDA-NRCS 2021). Houston Black soils are a clayey residuum formed from upper cretaceous age, calcareous mudstone (0-5% slopes). Heiden Clays are a clayey residuum formed from weathered mudstone (3-5% slopes, eroded). Tinn clays are a calcareous clayey alluvium (0-1% slopes occasionally to frequently flooded).

Archeological Background and Previous Archeological Studies

Background research for this project consisted of an online records search through the Texas Historical Commission's (THC) Archeological Sites Atlas (Atlas 2021) and a review of historical maps and aerial photographs. Research focused on the identification of archeological sites, sites listed as State Antiquities Landmarks (SALs), Recorded Texas Historic Landmarks (RTHLs), sites listed on the National Register of Historic Places (NRHP), cemeteries, and previously conducted archeological surveys with 0.62 miles (one kilometer) of the APE (**Figure 5**). The search identified four previously conducted surveys and two archeological sites within one kilometer of the APE (Figure 5).

Three of the four previous archeological surveys within a kilometer of the APE (see Table 1) overlap with the APE. Most of the existing ROW within the APE has been previously surveyed, however, sections of proposed new ROW have not been previously surveyed.

The two archeological sites identified during the records search are 41WM1422 and 41WM767 (Figure 5). Site 41WM1422 is a late 19th to early 20th century farmstead with a disturbed artifact scatter and remains of a brick well and well house. Details of Site 41WM767 are unknown.

Table 1. Survey within a kilometer of the APE.

Year	TAC Permit	Investigator	Sponsor	Overlap APE
1976			TDHP	Yes
2010	5528	LCRA	LCRA	No
2011	5788	Horizon ESI	TxDOT	Yes
2016	7694	HDR	Williamson County	Yes

Historic Land Use

The earliest known historical occupants of the county, the Tonkawas, were a flint-working, hunting people who followed the buffalo on foot and periodically set fire to the prairie to aid them in their hunts. While Álar Núñez Cabeza de Vaca may have traveled through the area in the sixteenth century, the area was probably first explored by Europeans in the late seventeenth century, when Capt. Alonso De León sought a route between San Antonio and the Spanish missions in East Texas that would serve as a drier alternative to the more southerly Camino Real. The San Xavier missions, which were founded in the mid-eighteenth century and occupied a series of sites along the San Gabriel River. Anglo settlement began during the Texas Revolution and the early days of the Republic of Texas, when the area was part of Milam County. In 1835, a military post was built near the headwaters of Brushy Creek in what would become southwestern Williamson County, but was abandoned in 1836 when its garrison was withdrawn to deal with the Mexican invasion. In 1838 the first civilian settlement was established at Kenney's Fort on Brushy Creek near the site of the present-day crossing of the Missouri-Kansas-Texas Railroad. Several other sites on Brushy Creek were settled soon after, but Indian raids kept white settlement in check. In 1842 many of the early farms were abandoned when Governor Sam Houston advised settlers to pull back from the frontier. The Indian threat eased after 1846, and part of the influx of settlers who came to Texas after its annexation traveled to the frontier along Brushy Creek and the San Gabriel River (Odintz 2021).

By 1848 there were at least 250 settlers in what was then western Milam County when the Texas legislature established Williamson County. According to the census of 1850 Williamson County had a population of 1,379 whites and 155 slaves, living in agricultural communities on Brushy Creek and the San Gabriel. As was common in other frontier counties, most of the improved acreage was used to grow corn. Three families owned fifteen or more slaves in 1850, but family farms and subsistence agriculture remained the norm prior to the Civil War. On the eve of the Civil War Williamson County had become a populous, agriculturally diverse county. Agricultural pursuits were quite varied and reflected the county's geographical diversity. Farmers were using the rich blackland soils in the eastern half of the county to grow wheat and corn. Cotton was introduced in the 1850s, but it was not an important cash crop for most farmers. The early settlers had found large herds of wild cattle in the 1840s, and cattle ranching, both for home consumption and for market, was widespread

throughout the county by 1860. Similarly, the number of sheep grew from 2,937 producing 3,499 pounds of wool in 1850 to 16,952 sheep and 32,994 pounds of wool in 1860 (Odintz 2021).

Though the Civil War had caused little material damage in the area, the county was a much poorer place in 1870 than it had been in 1860. The economic recovery in the 1870s was aided by the growth of the cattle and sheep industries and a dramatic expansion of cotton farming. Various feeder routes to the Chisholm Trail passed through Williamson County, and many cattle drives passed through or originated in the county from the 1860s through the early 1880s. With the coming of the railroads to the county in the 1870s, Taylor, in the eastern part of the county, became an important rail center for the cattle trade. Cattle raising, after declining somewhat in importance in the early twentieth century, was again a major part of the agricultural economy by 1950. Sheep and goat raising declined in the late nineteenth and early twentieth centuries, but the industry revived in the 1930s. Mohair became a significant agricultural product by 1930. Cotton, the second boom industry in Williamson County, which had been insignificant before the war, developed alongside the cattle industry. Farm tenancy rates began to decline during the Great Depression with the shift away from cotton and other staple crops. The depression encouraged diversification among farmers and a shift away from staple crops to livestock. Between 1930 and 1940, the number of acres used for cotton growing fell by almost half. Cropland acreage used for corn production increased over the same period by about one half, and wool and mohair production more than doubled. Farmers increasingly turned to other crops, like sorghum and wheat, and to livestock raising in the later twentieth century. Along with traditional livestock like sheep and cattle, poultry farming played a significant role in the economy by 1950 (Odintz 2021).

Urbanization and “suburbanization” continued to transform Williamson County during the 1990s and into the early twenty-first century. In the early twenty-first century high-tech businesses, various manufacturing concerns, and agriculture were important elements of the county’s economy, and many residents commuted to Austin to work. In 2002 the county had 2,510 farms and ranches covering 583,099 acres, 52 percent of which were devoted to crops and 42 percent to pasture. Corn, cattle, grain, sorghum, cotton, and wheat were the chief agricultural products (Odintz 2021).

Archeological Site Potential

Previous survey has been conducted along more than half of the existing ROW (Figure 2). However, sections of proposed new ROW have not been previously surveyed. Historic aerial imagery and topographic maps depict several historic residential structures present within the project APE, which appear to be intact (**Figures 6 and 7**). The PALM (**Figure 8**) indicates that there are three areas with moderate to high potential for buried cultural deposits, correlating with creek crossings, and two previously recorded archeological sites exist within the APE. Due to the potential presence of archeological deposits and features, pedestrian survey augmented with shovel testing is recommended for all undisturbed sections of the APE and trenching is recommended on the terraces adjacent to creeks and drainages where deeply buried site components may be located.

Proposed Survey Methods

The survey for the proposed FM 3349 at US 79 project will take place within TxDOT and Williamson County ROW and land to be acquired by Williamson County. It will consist of an intensive surface survey incorporating shovel testing and backhoe trenching within the APE. AmaTerra staff will conduct an archeological survey in accordance with the THC's minimum standards for 100 percent intensive linear surveys. Archeologists will visually inspect and assess the entirety of the existing ROW for the project and all survey areas where new ROW has been proposed where Right of Entry (ROE) has been granted. Shovel testing will adhere to the minimum standards for surveys in Texas as outlined by the Council of Texas Archeologists (CTA) and adopted by the THC and will be conducted throughout the entire APE. Since this is a linear project the minimum shovel testing rate of 16 tests per mile per 100 feet of corridor width will be used. Additional shovel tests will be excavated if archeological sites are discovered within the APE to delineate these site locations. However, portions of the ROW where significant disturbance (e.g. erosion, buried utilities and borrow pits) is apparent will be minimally tested to verify and delineate disturbance and photo documented. Ultimately, observed field conditions and discretion of the principal investigator will dictate the number and placement of shovel tests. Shovel tests will be excavated to a depth of 80 centimeters or to sterile subsoil, whichever is encountered first. Soil from all shovel tests will be screened through ¼-inch hardware cloth.

Due to the moderate to high potential for intact deeply buried deposits at creek crossings (see Figure 8: tributary of Mustang Creek at the interchange, Boggy Creek, a tributary of Boggy Creek north of Boggy Creek), backhoe trenches will be excavated to a depth sufficient to examine potential subsurface deposits. Trench depths will extend to the depth of the APE, pre-cultural deposits, or to the water table, whichever is encountered first. Samples will be screened through ¼-inch hardware cloth, and notes and photographs will be made for each trench. Should archeological deposits be observed during trenching, a 50 by 50-centimeter column will be excavated for the entire depth of deposits or a maximum depth of four feet, whichever is encountered first. All fill from the column sample will be screened to document and evaluate subsurface deposits.

If sites are encountered, recording methods will comply with THC/CTA survey standards and guidelines, including requirements for assessing historic archeological sites and identifying historic cemeteries. Any archeological sites identified within the APE during the survey will be investigated by means of no fewer than six subsurface shovel tests and/or backhoe trenches to define site boundaries relative to the APE. Specific site information will be recorded on standardized forms and presented to the Texas Archeological Research Laboratory (TARL) for inclusion in their archives. Any artifacts found either on the surface or in trenches or shovel tests will be field catalogued then returned to their original discovery locations. No artifacts will be collected during the survey.

If encountered, structural historic-age archeological sites will be documented not only through field efforts, but also through survey-level archival research. This research will include an attempt to determine history of ownership and land use for each site through oral interviews, deed research, and map research, wherever possible. Census records for individuals associated with the site will be

checked, and the names of these individuals will also be checked in the Online Handbook of Texas History. Should research reveal that historical archeological sites might be associated with significant persons, investigators will make recommendations for further archival or archeological work, to determine NRHP/SAL eligibility.

Reporting and Curation

All work will be conducted under the terms and conditions of the First Amended Programmatic Agreement (2005) among the Federal Highway Administration (FHWA), TxDOT, the THC, and the Advisory Council on Historic Preservation and the Memorandum of Understanding (MOU) between TxDOT and the THC.

The results of the investigation will be compiled into a professional report as required under Chapter 26 of the THC's Rules of Practice and Procedure and in conformance with Section 106. The report will describe the project area conditions and cultural background, existing and newly documented sites (including newly assigned site trinomials), and NRHP/SAL eligibility of these sites based on the requirements of 13 TAC 26.5(35), 13 TAC 26.20(1) and 13 TAC 26.20(2). The results section of the report will include relevant maps and discussion regarding shovel testing and finds in existing versus proposed new ROW. Electronic copies of the draft report will be submitted to the TxDOT Austin District, to be forwarded to TxDOT-ENV and the THC for review and comment, then resubmitted following the address of any comments. Copies of the final report will be provided to TxDOT and the THC. Artifacts will not be collected during the survey. However, all photographs and records of sites will be curated at CAS, according to their standards.

References

Odintz, M

2021 "Williamson County," *Handbook of Texas Online*, accessed March 03, 2021, <https://www.tshaonline.org/handbook/entries/williamson-county>. Published by the Texas State Historical Association.

Griffith, G., S. Bruce, J. Omernik, and A. Rogers

2007 Ecoregions of Texas. Project report to the Texas Commission on Environmental Quality.

Texas Historical Commission

2021 Texas Archeological Sites Atlas Online. Electronic document, <https://atlas.thc.texas.gov/>, accessed March 2021.

United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS)

2021 Williamson County, Texas – Web Soil Survey. Electronic document, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.asp>, accessed March 2021.

United States Geological Survey (USGS)

2021 Geologic Database of Texas. Digital Dataset.

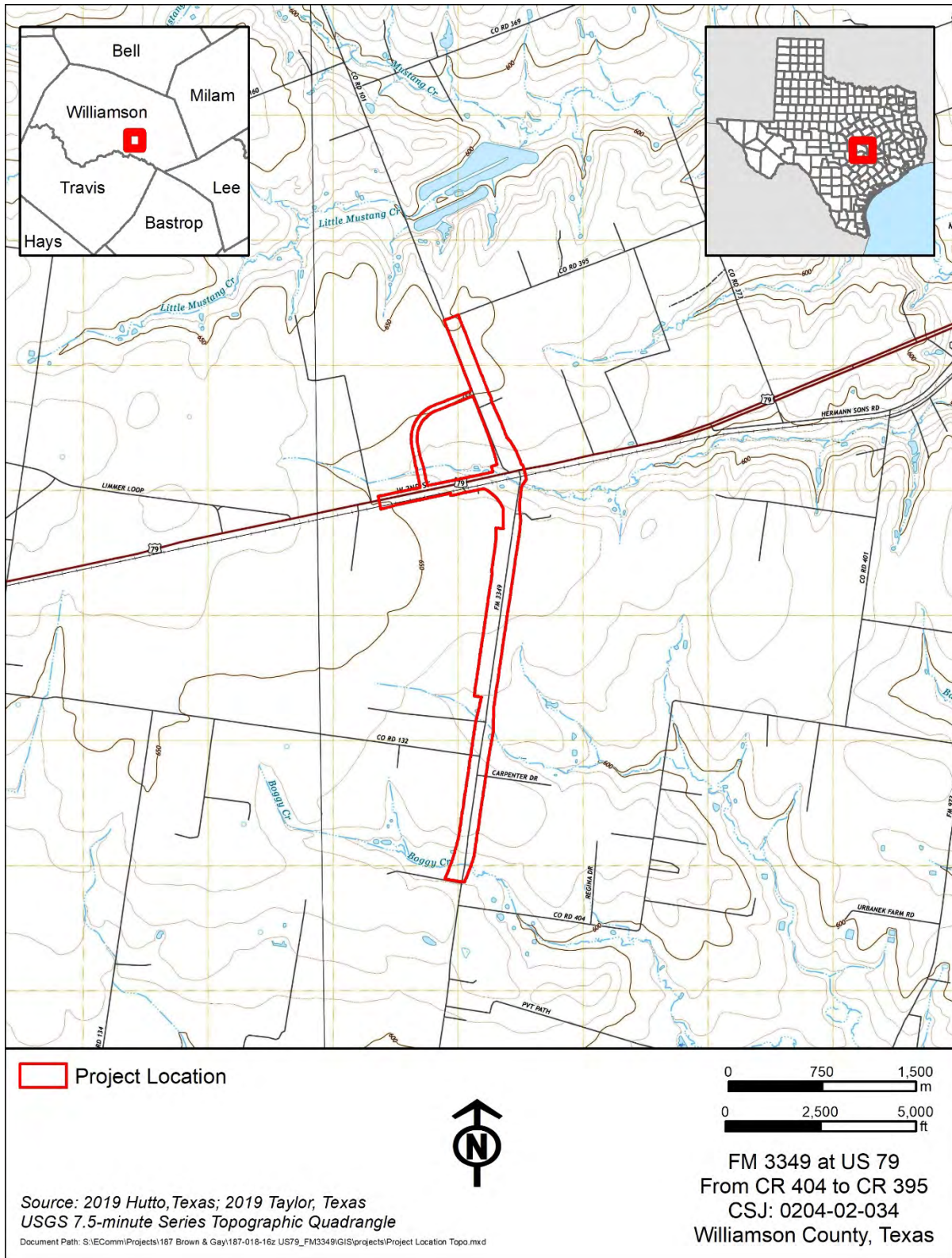


Figure 1: Project Location overlaid a recent topographic map.

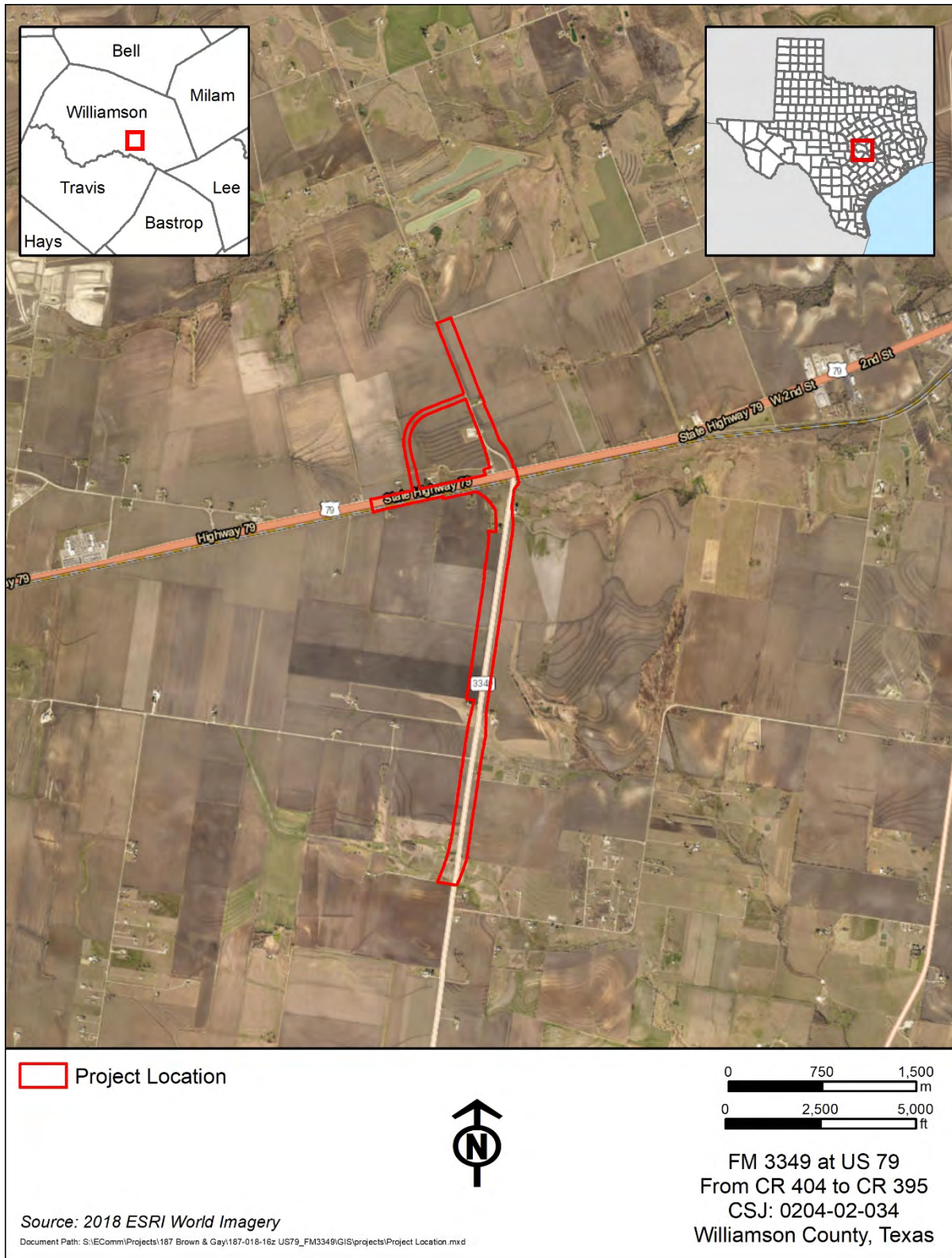


Figure 2: Project Location overlaid recent aerial imagery.

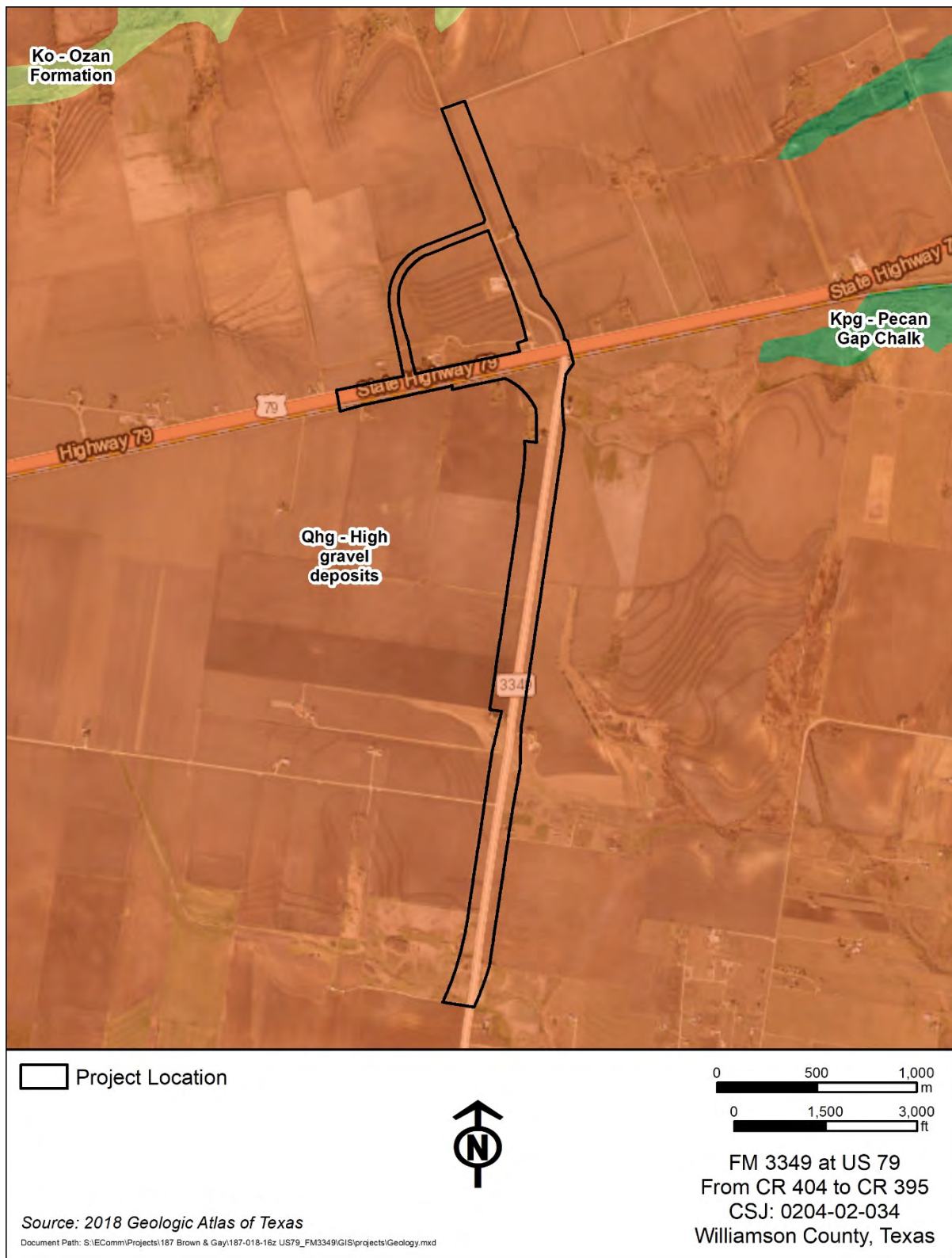


Figure 3: Geologic map of the project APE.

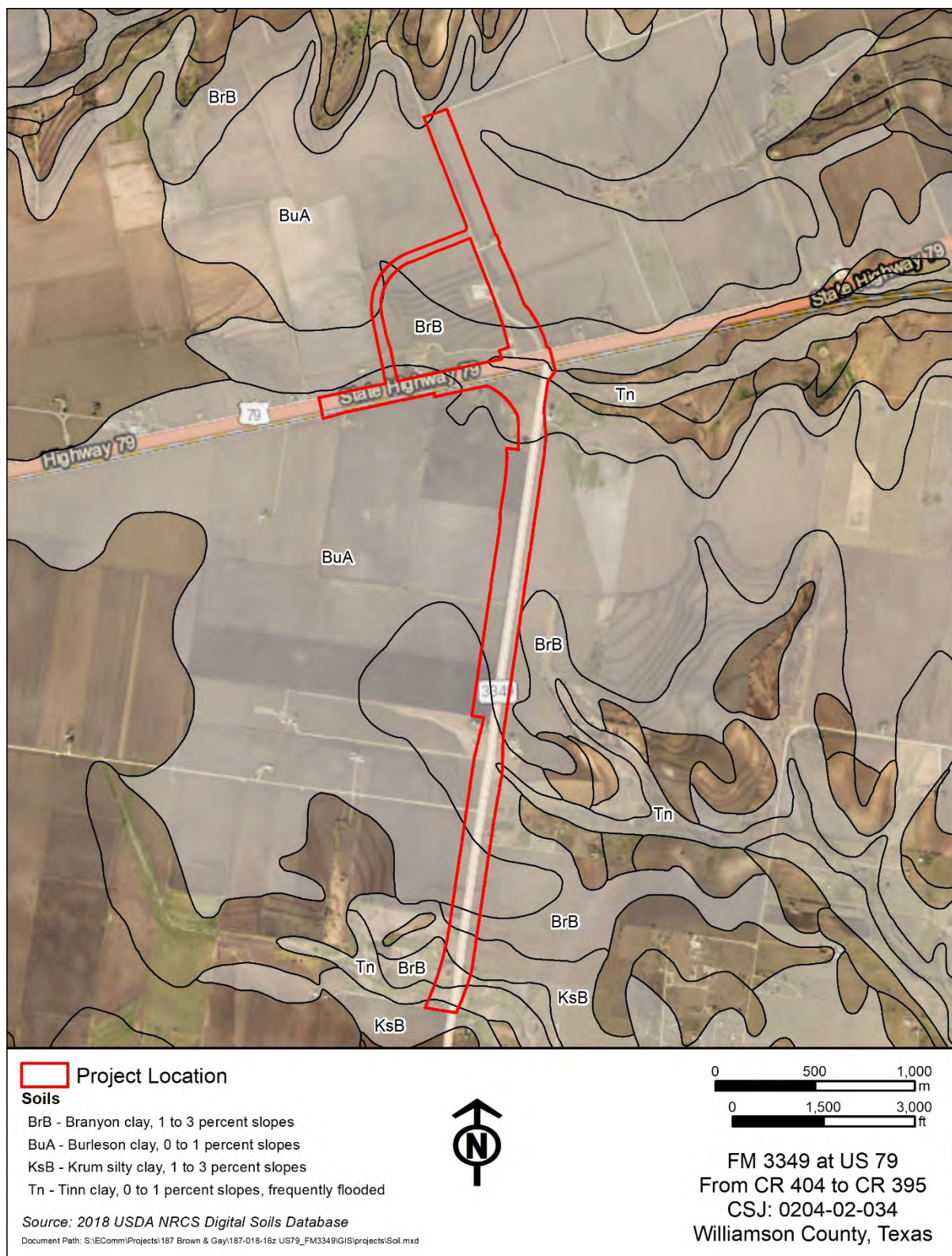


Figure 4: Soils within the project APE, western portion.

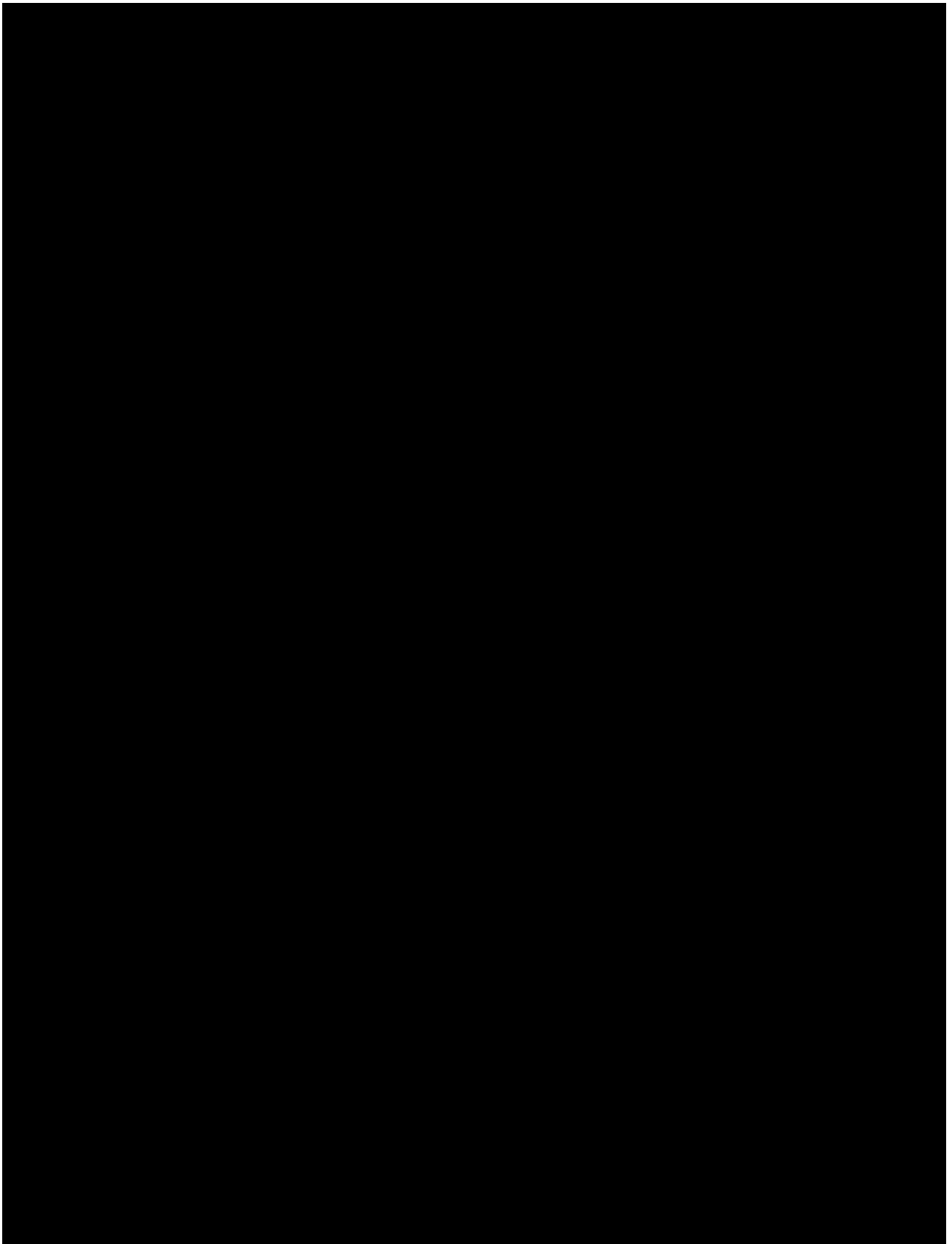


Figure 5: Previous archeological surveys and cultural resources within one kilometer of the APE.

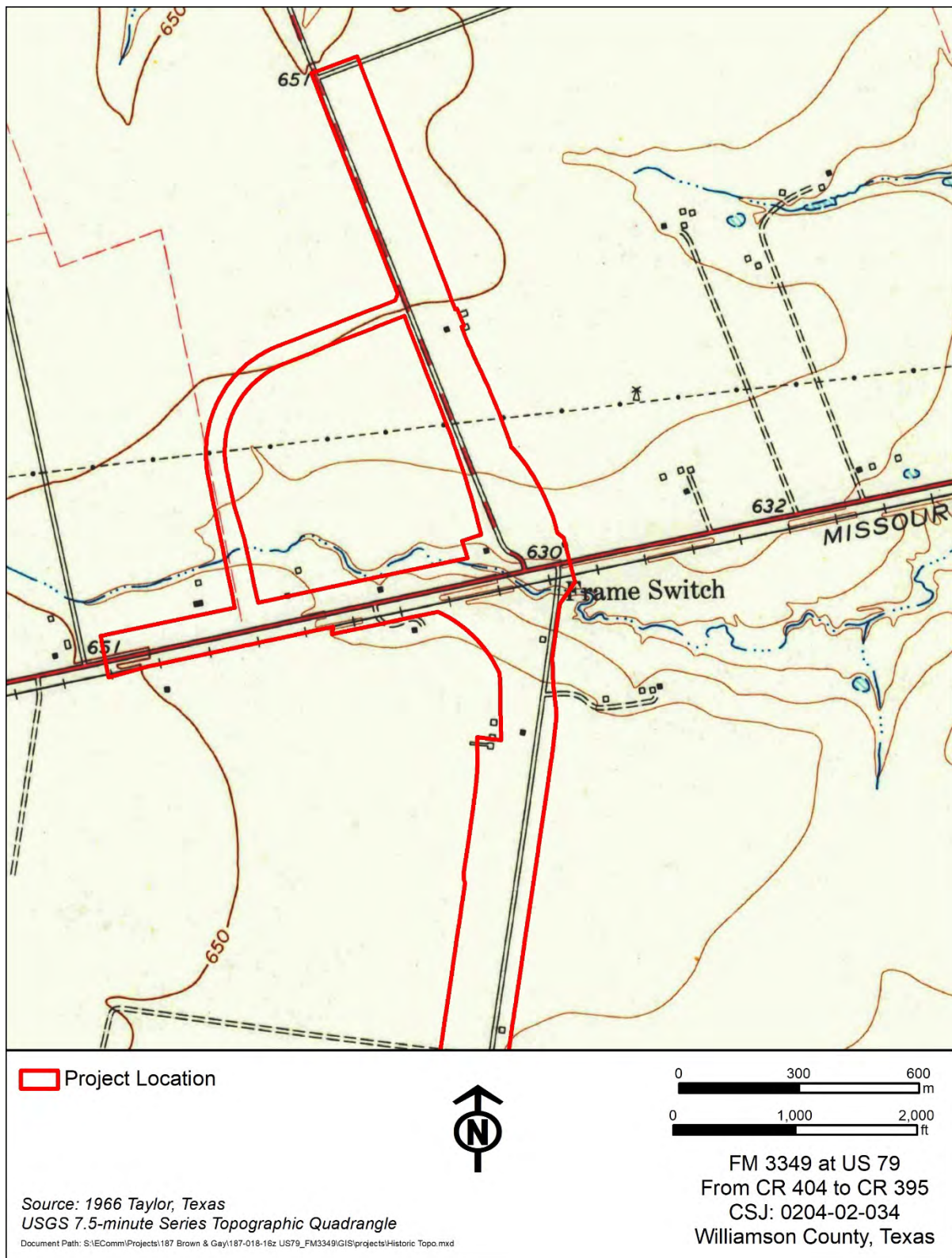


Figure 6a: Northern portion of project APE overlaid 1966 topographic map.

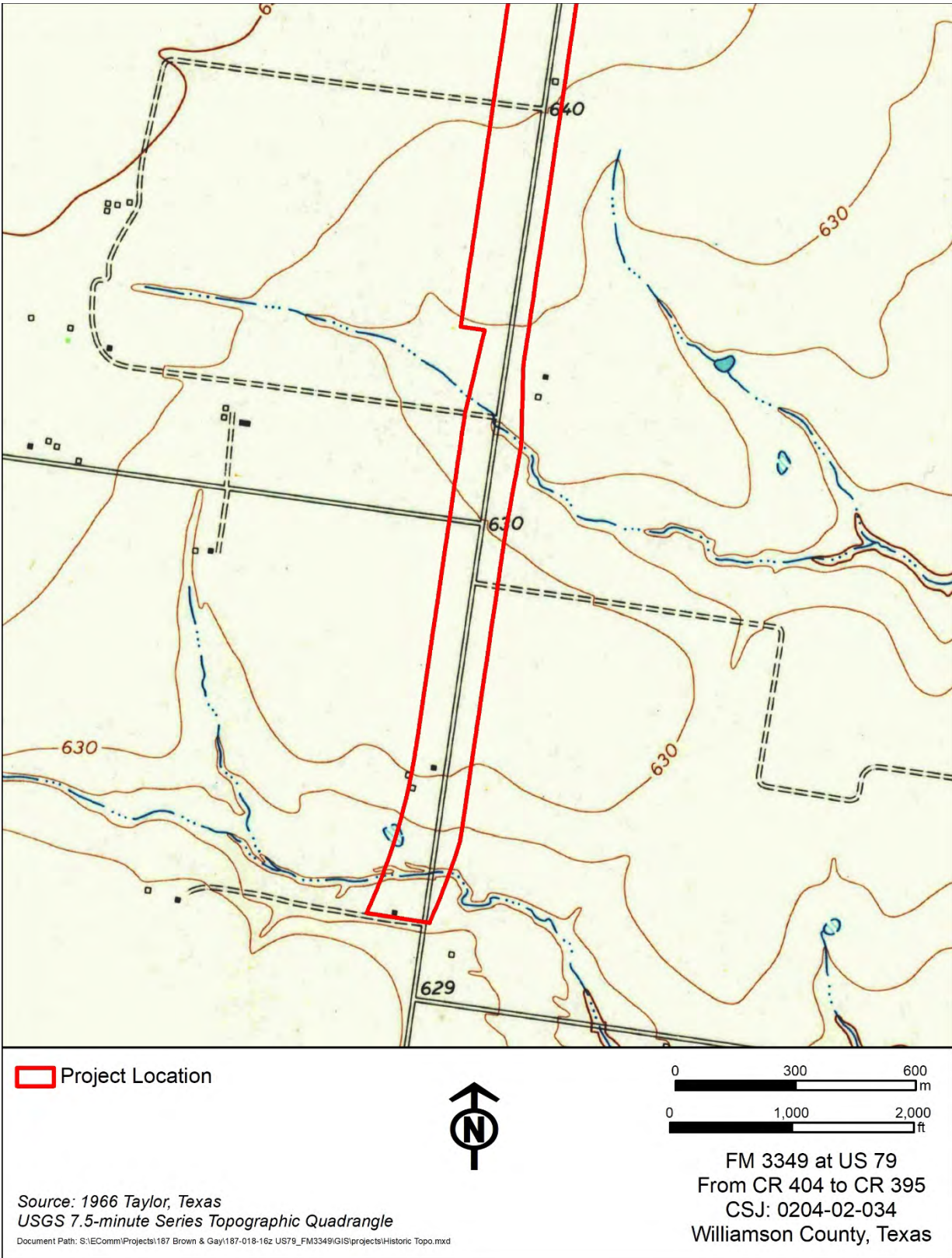


Figure 6b: Southern portion of project APE overlaid 1966 topographic map.

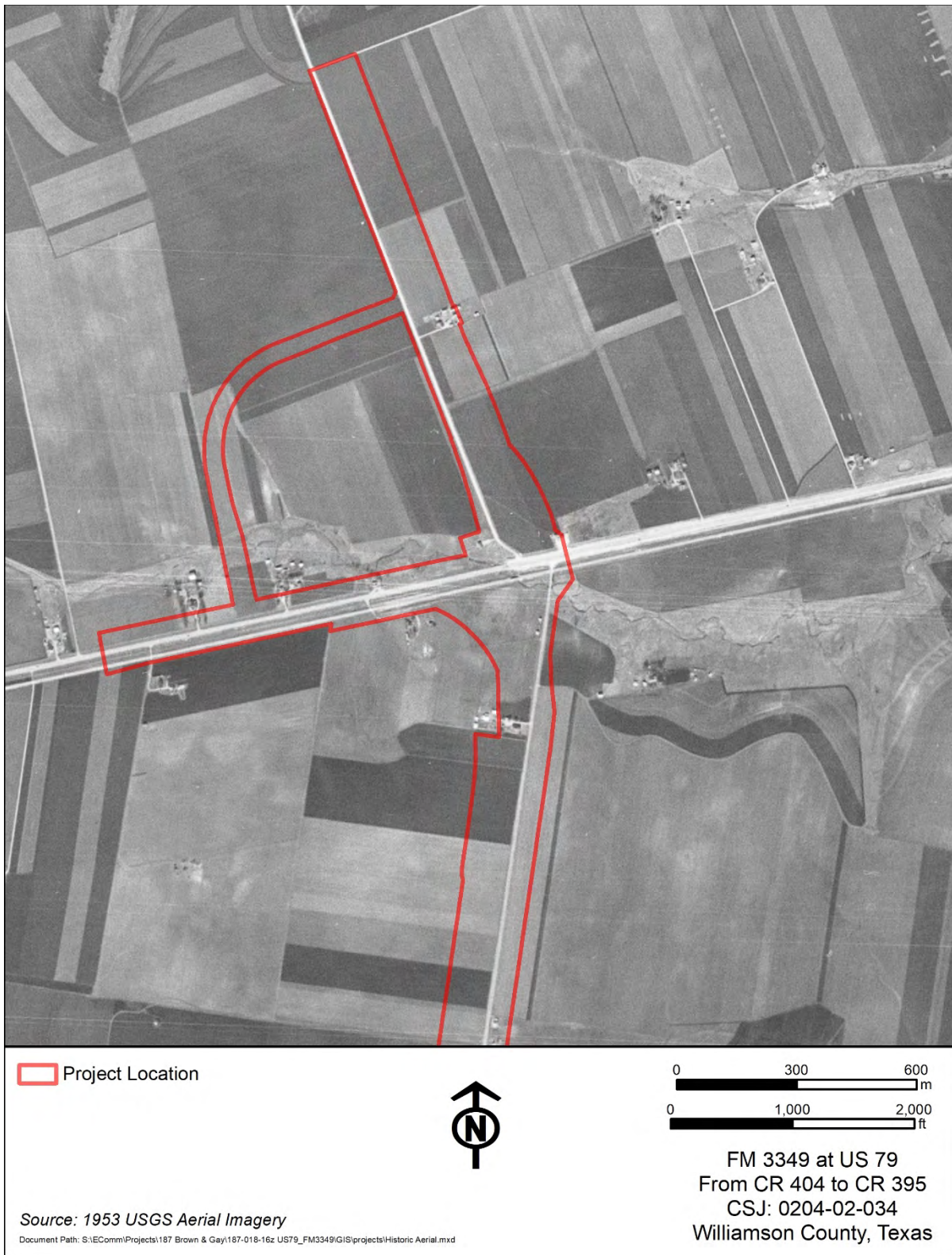


Figure 7a: Northern portion of project APE overlaid 1953 aerial map.

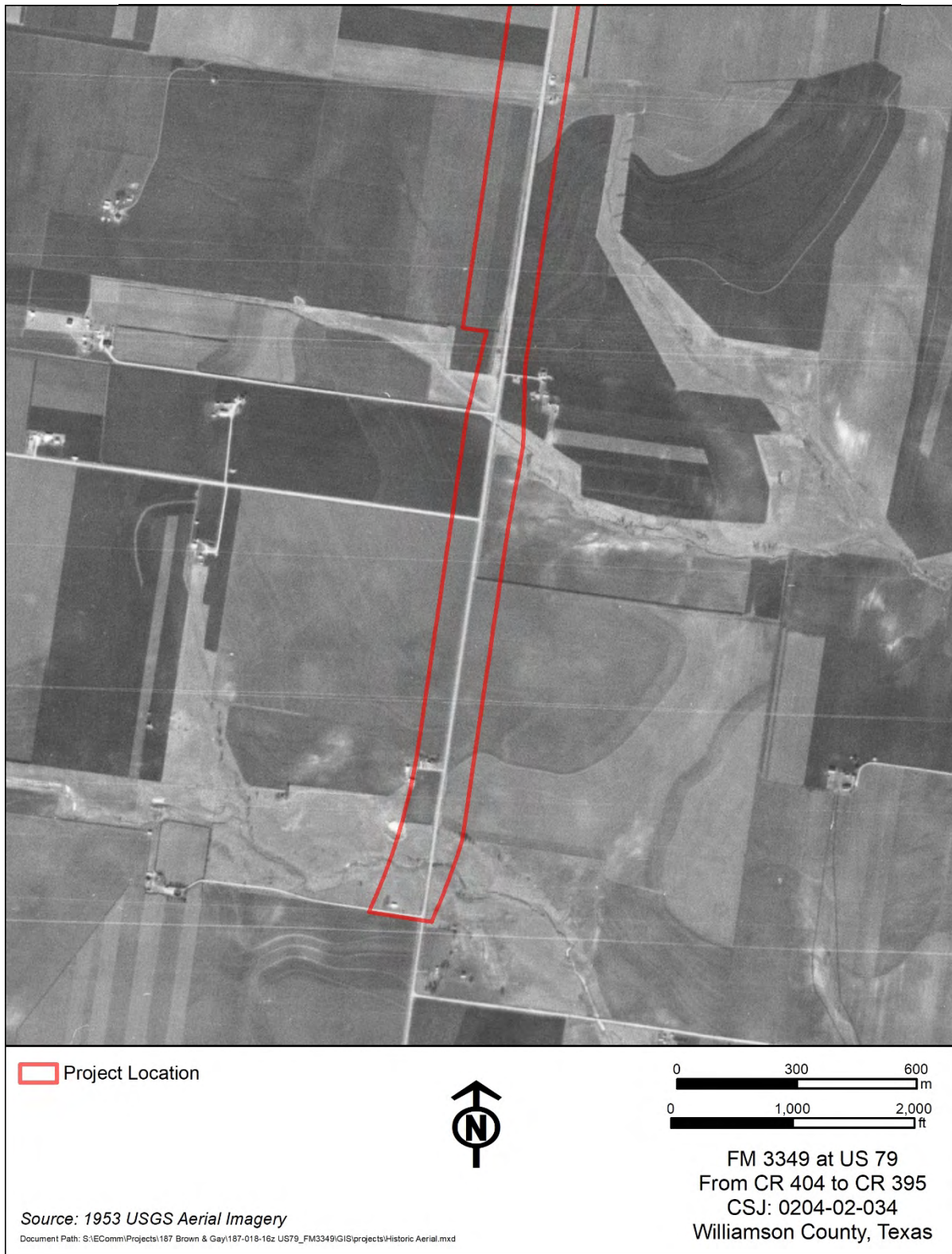


Figure 7b: Southern portion of project APE overlaid 1953 aerial map.



Figure 8: PALM Map of the project APE.