

TEXAS HISTORICAL COMMISSION

# ANTIQUITIES PERMIT APPLICATION FORM ARCHEOLOGY

## GENERAL INFORMATION

### I. PROPERTY TYPE AND LOCATION

Project Name (and/or Site Trinomial) Archeological Survey for RM 2243 - Added Capacity Leander to Georgetown \_\_\_\_\_  
County (ies) Williamson \_\_\_\_\_  
USGS Quadrangle Name and Number Leander, Round Rock, Leander NE, and Georgetown, Texas 7.5-minute \_\_\_\_\_  
UTM Coordinates Zone \_\_\_\_\_ E \_\_\_\_\_ N \_\_\_\_\_  
Location From SR Hwy 183A to the RM 2243 intersection with Southwest Bypass \_\_\_\_\_  
Federal Involvement ☒ Yes ☐ No  
Name of Federal Agency Federal Highway Administration (FHWA) \_\_\_\_\_  
Agency Representative Scott Pletka, TxDOT, on behalf of FHWA per the NEPA assignment MOU \_\_\_\_\_

### II. OWNER (OR CONTROLLING AGENCY)

Owner TxDOT \_\_\_\_\_  
Representative Scott Pletka \_\_\_\_\_  
Address 125 E. 11<sup>th</sup> St. \_\_\_\_\_  
City/State/Zip Austin, TX 78701 \_\_\_\_\_  
Telephone (include area code) 512-416-2631 Email scott.pletka@txdot.gov \_\_\_\_\_

### III. PROJECT SPONSOR (IF DIFFERENT FROM OWNER)

Sponsor Williamson County \_\_\_\_\_  
Representative Bill Gravell, Jr., County Judge \_\_\_\_\_  
Address 710 S. Main Street, Ste. 101 \_\_\_\_\_  
City/State/Zip Georgetown, TX 78664 \_\_\_\_\_  
Telephone (include area code) 512-943-1550 Email Address ctyjudge@wilco.org \_\_\_\_\_

## PROJECT INFORMATION

### I. PRINCIPAL INVESTIGATOR (ARCHEOLOGIST)

Name Sunshine Thomas \_\_\_\_\_  
Affiliation AmaTerra Environmental, Inc. \_\_\_\_\_  
Address 11842 Rim Rock Trail \_\_\_\_\_  
City/State/Zip Austin, TX 78737 \_\_\_\_\_  
Telephone (include area code) 512.329.0031 Email Address sthomas@amaterra.com \_\_\_\_\_

(OVER)  
**ANTIQUITIES PERMIT APPLICATION FORM (CONTINUED)**

**II. PROJECT DESCRIPTION**

Proposed Starting Date of Fieldwork 08/23/2021  
Requested Permit Duration 3 Years 0 Months (1 year minimum)  
Scope of Work (Provided an Outline of Proposed Work) Intensive archeological survey with shovel testing – see attached description

**III. CURATION & REPORT**

Temporary Curatorial or Laboratory Facility AmaTerra Environmental  
Permanent Curatorial Facility CAS in San Marcos

**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, Bill Gravell, Jr., as legal representative of the Sponsor, Williamson County, 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, Sunshine Thomas, as Principal Investigator employed by AmaTerra Environmental, Inc. (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 Sunshine Thomas Date 11 June 2021

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

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**Project Name:** RM 2243 – Added Capacity Leander to Georgetown (From 183A to Southwest Bypass)

**Highway:** RM 2243

**District(s):** Austin

**County(s):** Williamson

**CSJ Number(s):** 2103-01-038

**Prepared By:** AmaTerra Environmental

**Date:** June 22, 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 12-09-2019, and executed by FHWA and TxDOT.

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## Introduction

Williamson County and the Texas Department of Transportation (TxDOT) propose to realign and widen the existing undivided Hero Way and Ranch to Market (RM) 2243 roadways in Williamson County, Texas. The project will extend for 12.64 kilometers (7.87 miles) from United States (US) 183A to Southwest Bypass and will be entirely within the existing and proposed right-of-way (ROW) (Figure 1-Figure 2). The current ROW is typically 24.2 meters (80 feet) wide. The proposed project will extend the current ROW to a typical width of 117.1 meters (385 feet) and a maximum width of 295.1 meters (970 feet). The current roadway is two lanes with two-foot shoulders and open ditches. Project plans include reconstruction of the existing roadway into a controlled access roadway with three 3.7-meter (12-foot) primary travel lanes in each direction, three 3.7-meter (12-foot) frontage road lanes in each direction. Associated grading, erosion control, and landscaping activities are also planned.

The Area of Potential Effects (APE) for 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 APE for the project consists of 510.7 total acres, 102.7 acres of existing ROW, and 408.0 acres of proposed ROW. The maximum depth of impacts is estimated to be 22.9 meters (75 feet), with the typical dept of impact being 1.5 meters (5 feet) for road construction.

The project will take place on ROW to be acquired by Williamson County, a political subdivision of the State. Federal funding support is anticipated for construction of the project, and there is potential for the project to impact one or more jurisdictional Waters(s) of the U.S. requiring United States Army Corps of Engineers (USACE) Nationwide Permit authorization. Therefore, Section 106 of the National Historic Preservation Act (Section 106) and the Antiquities Code of Texas (ACT) apply.

## Project Setting

The project is in a generally undeveloped area in Williamson County, Texas. The western end of the APE is approximately 384 meters north of Brushy Creek and the eastern end of the APE is approximately 714 meters south of the South Fork of the San Gabriel River. Approximately four unnamed streams or drainages cross the APE.

The APE is located within the Balcones Canyonlands level IV ecoregion established by the Environmental Protection Agency (Griffith et al. 2007). This area forms the southern border of the Edwards Plateau, rising over 1,000 feet in elevation above the coastal plain to the southeast. Underlain by limestone formations, the karstic region is dissected by waterways, and the resulting canyons, sinkholes, and caverns are common. Area vegetation is variable and includes forests that host drought tolerant species, protected areas home to plants rare for the region, and oak savannas between drainages. Managed pastureland is common and managed for both native and domestic species.

The area owes much of its character to the underlying limestone and marl formations (Geologic Atlas of Texas 2018, Figure 3-Figure 7). Most of the bedrock geology of the APE is within Keys Valley Marl or Edwards Limestone. Beyond area waterways, surface sediments are typically Holocene to Pleistocene aged clay and loam colluvium. Soils within the project area are clays formed in residuum derived from limestone and marl (United States Department of Agriculture-Natural Resources Conservation Service [USDA-NRCS] 2020; Figure 8-Figure 12). They are typically well drained, and bedrock is often encountered above one meter in depth.

## Archeological Background and Previous Studies

Background research was completed for a study area that includes the APE and a one-kilometer (0.6-mile) radius beyond the APE boundary. An online records search of the Texas Historical Commission's (THC) Archeological Sites Atlas (THC 2021) and a review of historical maps and aerial photographs was completed. Research focused on the identification of archeological sites, sites listed as State Antiquities Landmarks (SALs), Recorded Texas Historical Landmarks (RTHLs), sites listed in the National Register of Historic Places (NRHP), Official Texas Historical Markers, cemeteries, and previously conducted archeological surveys within the study area (Figure 13-Figure 16). This records search identified 47 previously recorded archeological sites (Table 1), no SAL, no RTHL, no NRHP properties, one Official Texas Historical Marker, one cemetery, and 37 previously recorded archeological surveys within the study area (Table 2).

**Table 1. Previously recorded archeological sites within the APE and within one kilometer (0.62 miles) of the APE.**

Trinomial	Time Period of Occupation	Eligibility Determination	Within APE
41WM46	Archaic	Undetermined	
41WM143	Precontact	Undetermined	
41WM144	Precontact	Undetermined	
41WM226	Late Archaic and Postcontact	Undetermined	
41WM541	Precontact	Ineligible within ROW	
41WM542	Archaic to Later Archaic	Ineligible within ROW	
41WM549	Precontact; twentieth century	Ineligible within ROW	Yes
41WM550	Precontact	Undetermined	
41WM551	Precontact; Postcontact	Ineligible within ROW	
41WM552	Precontact	Undetermined	
41WM553	Archaic	Ineligible within ROW	
41WM556	Archaic	Undetermined	Yes
41WM557	Precontact	Undetermined	

Trinomial	Time Period of Occupation	Eligibility Determination	Within APE
41WM558	Early to Middle Archaic	Ineligible within ROW	
41WM581	Precontact	Undetermined	Yes
41WM583	Precontact	Undetermined	
41WM584	Precontact	Undetermined	
41WM593	Precontact	Undetermined	Yes
41WM691	Precontact	Undetermined	
41WM692	Precontact	Undetermined	
41WM693	Precontact	Undetermined	
41WM696	1900-1970s	Undetermined	
41WM697	Precontact	Undetermined	
41WM698	Precontact	Ineligible	
41WM1005	1950s-1960s	Ineligible	Yes
41WM1006	1839-1994	Eligible	
41WM1007	Precontact	Ineligible	
41WM1040	Early to Middle Archaic; Late Precontact	Ineligible	
41WM1043	1920-1960s	Ineligible	
41WM1100	Precontact	Undetermined	Yes
41WM1115	Late nineteenth to mid-twentieth century	Ineligible	
41WM1168	Precontact	Ineligible	
41WM1198	Precontact	Ineligible	Yes
41WM1246	Precontact	Ineligible	
41WM1279	Precontact	Undetermined	
41WM1317	Precontact	Ineligible	Yes
41WM1318	Precontact	Undetermined	
41WM1333	Precontact	Undetermined	Yes
41WM1342	Early to mid-twentieth century	Ineligible	Yes
41WM1343	Mid- to late twentieth century	Ineligible	
41WM1359	Precontact	Ineligible	
41WM1369	Precontact	Undetermined	



Trinomial	Time Period of Occupation	Eligibility Determination	Within APE
41WM1370	Precontact	Undetermined	
41WM1375	Precontact	Undetermined	
41WM1390	Precontact	Ineligible within ROW	
41WM1392	Early twentieth century	Ineligible within ROW	
41WM1429	Precontact	Ineligible within ROW	

**Table 2. Previously recorded archeological surveys within the APE and within one kilometer (0.62 miles) of the APE.**

Atlas Number	Permit Number	Author(s)	Sponsor Agency	THC Review Date
8400004295				
8400010011	2437			
8400010012	2437			
8400010473	2736	Nash, Sean R., G. Staples, and M. Freeman	Williamson County	4/30/2002
8400010579	2768	Oksanen, Eric R, Craig Weaver, and Eric Shroeder	COE-FWD/Brushy Creek MUD	5/27/2003
8400010643	2619	Nash, Sean	Williamson County	9/1/2001
8400010714	2736	Nash, Sean R., G. Staples, and M. Freeman	Williamson County	4/30/2002
8400010802	2768	Oksanen, Eric R, Craig Weaver, and Eric Shroeder	COE-FWD/Brushy Creek MUD	5/27/2003
8400010865	2619	Nash, Sean	Williamson County	9/1/2001
8500004588			Environmental Protection Agency	
8500004589			Environmental Protection Agency, Texas Department of Water Resources	
8500004606			Corps of Engineers-Fort Worth District	
8500011248	3611	Sundermeyer, Scott and Sherry DeFreece	Federal Transit Administration	3/8/2005
8500011602	3245	Dockall, John E.	Texas Department of Transportation	2/16/2006



Atlas Number	Permit Number	Author(s)	Sponsor Agency	THC Review Date
8500013643	3848	Cambell, John and Robert Lassen	Texas Department of Transportation	8/24/2006
8500014054		Owens, Jeffrey D.	Corps of Engineers-Fort Worth District	5/7/2007
8500015070	4846	Bradle, Michael R., and G. T. Bernhardt	City of Georgetown	6/5/2008
8500015216	3482	Bradle, Michael, R. D'Aigle	City of Georgetown	9/9/2008
8500016332	5431	Nash, Sean R.	City of Leander	12/3/2009
8500016349	5387	Dayton, Chris	Texas Department of Transportation, City of Leander	12/11/2009
8500017289	5499	Kibler, Karl W.	Texas Department of Transportation, City of Leander	3/5/2010
8500018289	5644	Nash, Michael A., Casey J. Hanson	U. S. Department of Education	8/24/2010
8500060011	6918	Young, Alamea et al.	K Friese & Associates, Inc.	
8500060994	6952	Perrine, Rachel D. and David Treichel	Brown & Gay Engineers, Inc.	9/22/2014
8500061451	2753	Nash, Sean R. and Gregory D. Staples	Athabasca Consulting Inc.	
8500062593		Owens, Jeffrey D.	Mason Joseph Company, Inc.	1/12/2015
8500063416		Owens, Jeffrey D.	Mason Joseph Company, Inc.	1/30/2015
8500063836	6952	Perrine, Rachel D. and David Treichel	City of Leander	9/22/2014
8500063837				
8500066423	7283	Hanson, Casey	City of Leander	7/15/2015
8500070880		Owens, Jeffrey	Meritage Homes of Texas	8/10/2015
8500076619	7537	Fullerton, Ben	Williamson County	3/10/2016
8500080259	7416	King, Allison	CRMWD	12/16/2016
8500080336	7531	Evans, Steven, et al.	LCRA	5/12/2017
8500080426	7992	Rodriguez, Mary F. and Ashley Eyeington	City of Georgetown	7/17/2017
8500080611	7028	Stotts, Matthew C. and Brandon Young	City of Georgetown	9/1/2017

Atlas Number	Permit Number	Author(s)	Sponsor Agency	THC Review Date
8500080716	7718	Padilla, Antonio	Williamson County	6/20/2018

Archeological sites recorded within the study area can be typically characterized as precontact lithic scatters or lithic procurement sites without refined temporal assessment. Six sites within this same area have postcontact components that date to the late nineteenth or early twentieth century, typically rural residential sites. Ten of the previously recorded archeological sites are within the APE. Of these, four have been determined Ineligible for listing in the NRHP by the State Historic Preservation Officer (SHPO) (41WM1342, 41WM1317, 41WM1198, and 41WM1005). Site 4WM549 was determined Ineligible within the ROW by the SHPO in 2017 as part of a survey for a proposed bypass road (Atlas No. 8500080426). A portion of this previous survey overlaps the current proposed APE at the south end of the project. However, the APE of the proposed project also includes portions of this site that have not been reviewed for eligibility. The remaining five archeological sites (41WM1333, 41WM1100, 41WM593, 41WM581, and 41WM556) are Undetermined for listing in the NRHP.

An Official Texas Historical Marker (Marker No. 9369) within the study area records the location of the 'Webster Massacre' that occurred in 1839 when approximately 30 migrants were killed by Native Americans. This marker is located across Brushy Creek from the Davis Cemetery, also within the study area, where the Webster Massacre dead are buried along with additional interments. The marker and cemetery are not located immediately adjacent to the project and the project is unlikely to affect these resources.

Twelve of the 37 previously recorded archeological surveys identified within the study area occur within the APE including Atlas Numbers 8500004588, 8500011602, 8500015070, 8500015216, 8500016332, 8500061451, 8500063837, 8500076619, 8500080336, 8500080426, 8500080611, and 8500080716.

One previous archaeological survey that occurs within the APE was conducted with methods that meet the current standards for Texas as outlined by the Council of Texas Archeologists (CTA) and adopted by the THC. Atlas Number 8500080426 was an intensive cultural resources survey completed for a proposed Southwest Bypass with fieldwork completed in 2017. This survey overlaps the current APE at the eastern boundary (Figure 17). Methods included pedestrian survey with shovel testing systematically excavated within the project area.

## Historic Land Use

The Native American groups living in the Williamson County area at the time of contact with European explorers include the Tonkawa, and small groups of the Kowa, Yojuane, Tawakoni, and Mayeye (Odintz 2021). The Lipan Apache and the Comanches were also present in the region into the nineteenth century. Spanish explorers traversed the area and missions were established on the San Gabriel River in the eighteenth century. Although land grants were given to Mexican

families, no homesteaders are known to have moved to the area at this time. European-American homesteading first began in the county in 1838 when settlers built on Brushy Creek. These migrants arrived in greater numbers by the middle of the nineteenth century, sometimes accompanied by enslaved people.

The Civil War had little direct material impact on Williamson County, but the county's economic fortunes somewhat mirrored the broader southeast after the war (Odintz 2021). A post-war increase in cotton production was observed into 1900 with an accompanying increase in the number of tenant farms. Stock raising, cattle and sheep, was common before the Civil War and this became an increasing source of agricultural income in the county into the 1960s. In the late twentieth century the area saw a significant increase in inhabitants associated with outgrowth of the broader Austin urban area.

The project area remained largely undeveloped into the mid-twentieth century with most development related to agriculture. The historical 1893 topographic map does not depict any settlements concentrations near the APE (Figure 18), and the 1954 topographic map shows no additional development (Figure 19). The historic aerials from 1953 confirm that the western quarter of the APE is tilled farmland, the remainder of the APE is generally open or lightly wooded grazing land (Figure 20-Figure 23).

## **Archeological Site Potential**

Much of the APE has not been surveyed for archeological resources. The Texas Department of Transportation Hybrid Potential Archaeological Liability Map (HPALM) depicts most of the APE as having low potential for archeological sites (Abbott and Pletka 2015; Figure 24-Figure 28). A few small areas of moderate shallow potential/low deep potential are present in the eastern portion of the APE; these are locations of previously recorded archeological sites within the APE. One small area of moderate potential occurs on the western end of the APE, just north of Brushy Creek; this location has not been previously surveyed. Surface lithic scatters and lithic procurement sites are commonly recorded in the project vicinity. These sites are typically located on terraces associated with area drainages and unrecorded sites of this type may be present. Late nineteenth and early twentieth century sites may also be present in the area, particularly within the APE along the existing route of RM 2243.

## **Proposed Survey Methods**

The survey for the proposed RM 2243 will take place within existing and new ROW to be acquired by Williamson County (Figure 29-Figure 32). The recommended survey area will be visually inspected and assessed where Right of Entry (ROE) has been granted. AmaTerra staff will conduct an archeological survey in accordance with the THC's minimum standards for 100 percent intensive linear surveys. Previously recorded sites within the recommended survey area will be revisited, surveyed, and assessed.



The recommended survey area includes all portions of the APE not previously subject to an intensive terrestrial survey that meets the current standards for Texas as outlined by the CTA and adopted by the THC. This includes 504.7 acres of the total 510.7-acre APE. An approximate six-acre portion of the APE previously surveyed as Atlas Number 8500080426 has been excluded from the recommended survey area because the intensive survey meets the current standards for Texas (Figure 33). This includes the part of site 41WM549 determined by SHPO as Ineligible within ROW for listing in the NRHP.

Deep, Holocene-aged sediment deposits are not present within the recommended survey area; auguring and backhoe trenching are not recommended. The current assessment and the previously conducted background study (Background Study for CSJ 2103-01-038) note that most project soils are shallow, rocky, and clayey residuum material. The exception, Holocene aged Denton soils are shallowly mapped (less than three feet deep) above bedrock.

Archeologists will conduct an intensive terrestrial survey incorporating shovel testing within the recommended survey area. Shovel testing will adhere to the minimum standards for Texas as outlined by the CTA and adopted by the THC. Survey methods will utilize the standards for linear surveys, completing shovel tests at a rate of 16 tests per mile per 100 feet of survey corridor. Additional shovel tests will be conducted if archeological sites are discovered within the recommended survey area, to delineate these site locations. However, portions of the project area 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. The number and placement of shovel tests will be dictated by the principal investigator, based upon observed field conditions. Shovel tests will be excavated to a depth of 80 centimeters below surface, sterile subsoil, or bedrock, whichever is encountered first. Shovel tests will be excavated in 20-centimeter increments, and all sediment will be screened through ¼-inch hardware mesh. Relevant information for all shovel tests will be recorded on a standardized form.

Any new and previously recorded sites within the recommended survey area will be documented with methods that comply with THC/CTA survey standards and guidelines, including requirements for assessing historical archeological sites and identifying historical cemeteries. Sites will be investigated by means of now fewer than six subsurface shovel tests 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 shovel tests will be field catalogued then returned to the original discovery location. No artifacts will be collected during the survey.

Any recorded historical archeological sites will be documented with additional survey-level archival research. This will include an attempt to determine the history of ownership and land use for each site through oral interviews, deed research, and map research, when possible. When relevant to the ownership and land use history, census records for individuals associated with the site will be checked, and the names of these individuals will be cross-referenced with the Online Handbook of Texas History. Investigators will make recommendations for further archival or archeological

work to determine NRHP/SAL eligibility if survey-level research reveals the site may be associated with significant persons or events.

For the purposes of this survey, an archeological site will be defined as containing a certain number of cultural materials or features older than 50 years within a given area. The definition of a site is: (1) five or more surface artifacts within a 30-m radius, or (2) a single cultural feature observed on the surface or exposed during shovel testing, or (3) a positive shovel test containing at least three total artifacts, or (4) two positive tests located within 30 m of one another.

## **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 Texas Administrative Code (TAC) 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 and proposed new ROW. Electronic copies of the draft report will be submitted to the TxDOT Austin District, to be forwarded to the TxDOT Environmental Affairs Division 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 the Center for Archaeological Studies at Texas State University San Marcos, according to their standards.

## References Cited

Abbott, James T., and Scott Pletka

2015 The Austin District HPALM Model. Texas Department of Transportation

[https://ftp.dot.state.tx.us/pub/txdot-info/env/arch\\_sites/austin-hpalm.zip](https://ftp.dot.state.tx.us/pub/txdot-info/env/arch_sites/austin-hpalm.zip), accessed June 21, 2021.

Geologic Atlas of Texas

2018 Texas Geological Map Data. United States Geological Survey

<https://mrdata.usgs.gov/geology/state/state.php?state=TX>, accessed May 27, 2021.

Griffith, Glenn, Sandy Bryce, James Omernik, and Anne Rogers

2007 *Ecoregions of Texas. Project Report to Texas Commission on Environmental Quality.*

Submitted to Texas Commission on Environmental Quality, Austin, Texas

Odintz, Mark

2021 Williamson County. In *Handbook of Texas*. Texas State Historical Association

<https://www.tshaonline.org/handbook/entries/williamson-county>, accessed June 21, 2021.

Texas Historical Commission (THC)

2021 Texas Archeological Sites Atlas (Restricted). Texas Historical Commission

<https://atlas.thc.state.tx.us/>, accessed May 3, 2021.

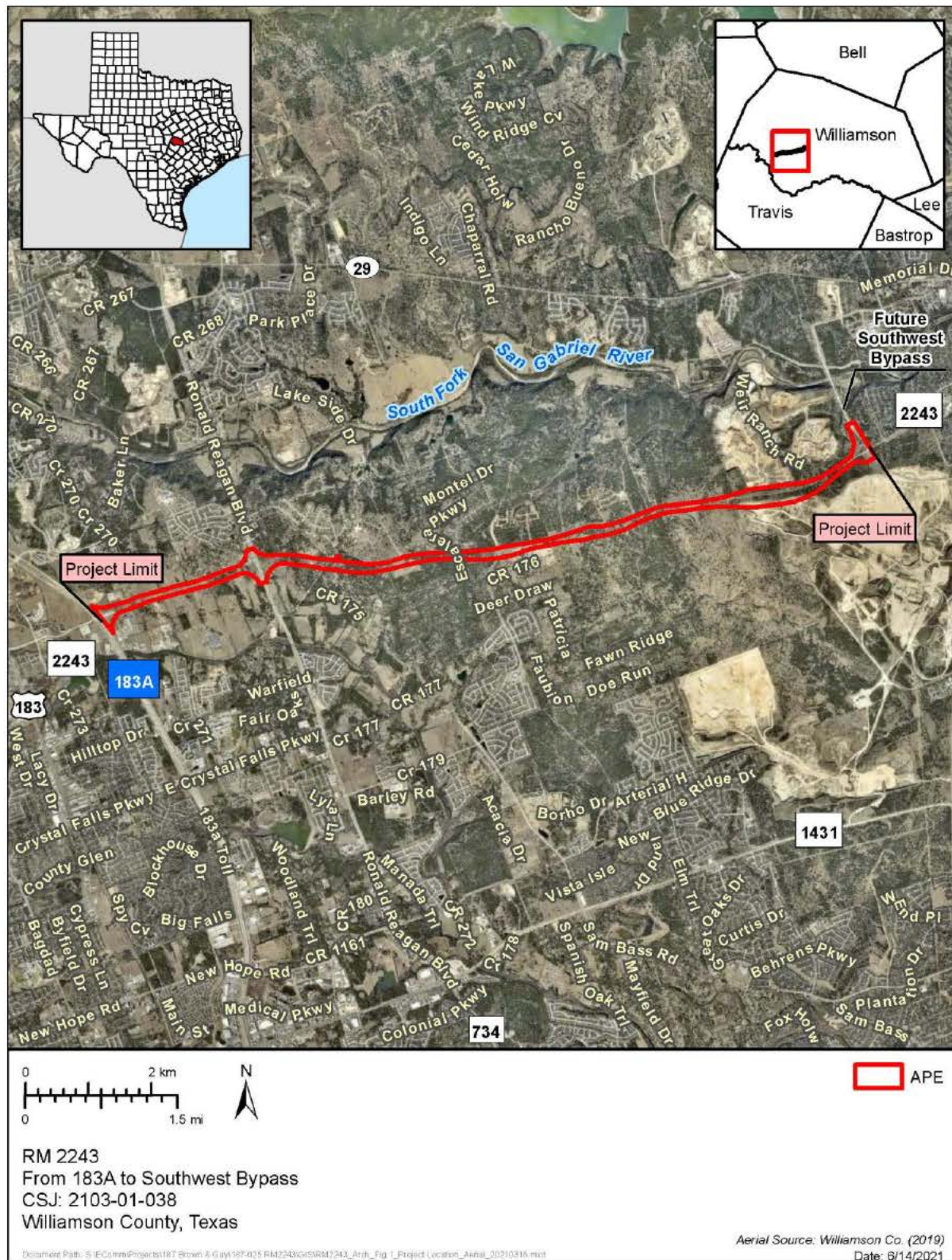
United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS)

2020 Web Soil Survey. United States Department of Agriculture

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcseprd1464818>, accessed June 21, 2021.

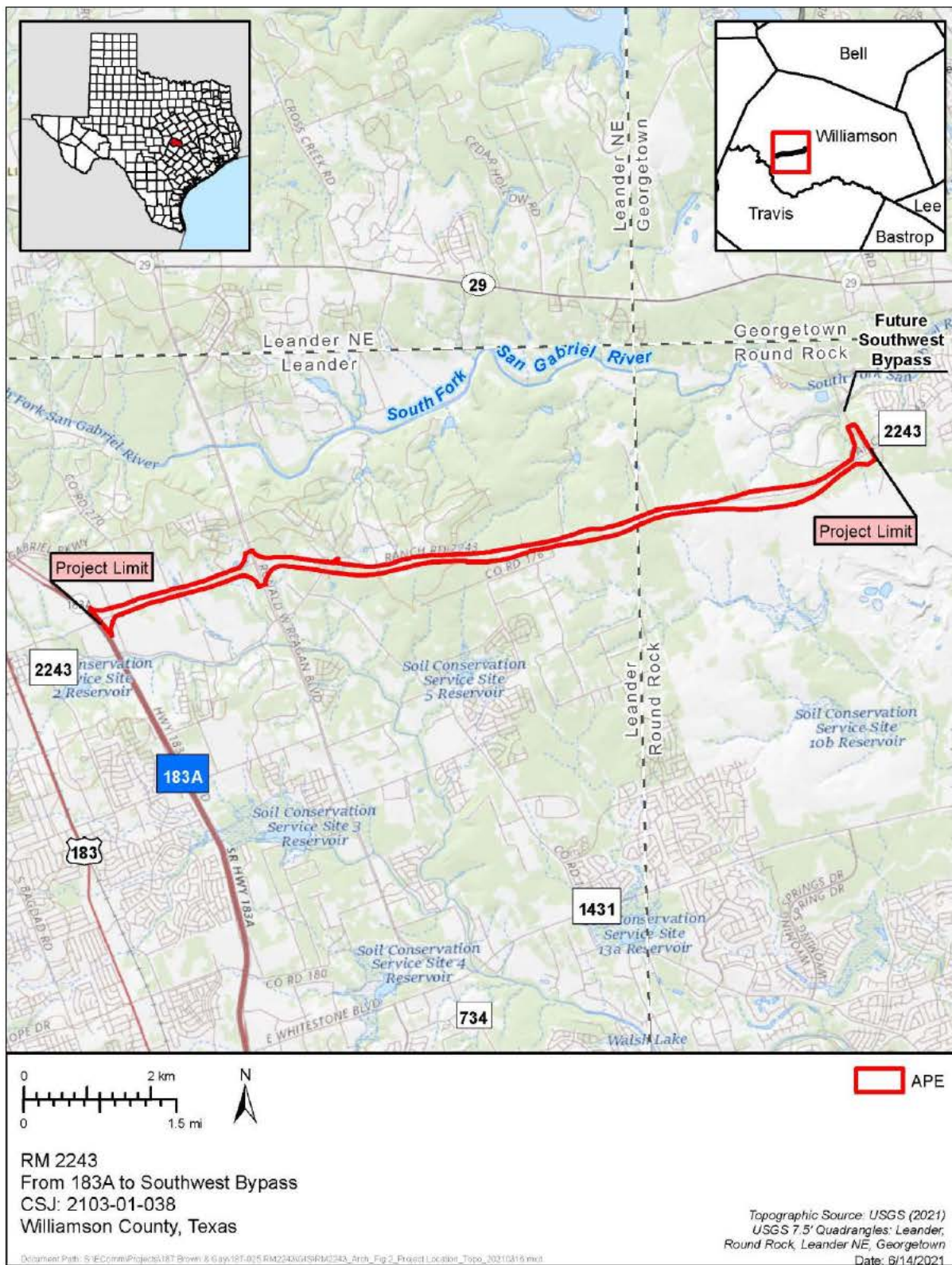


## Figures



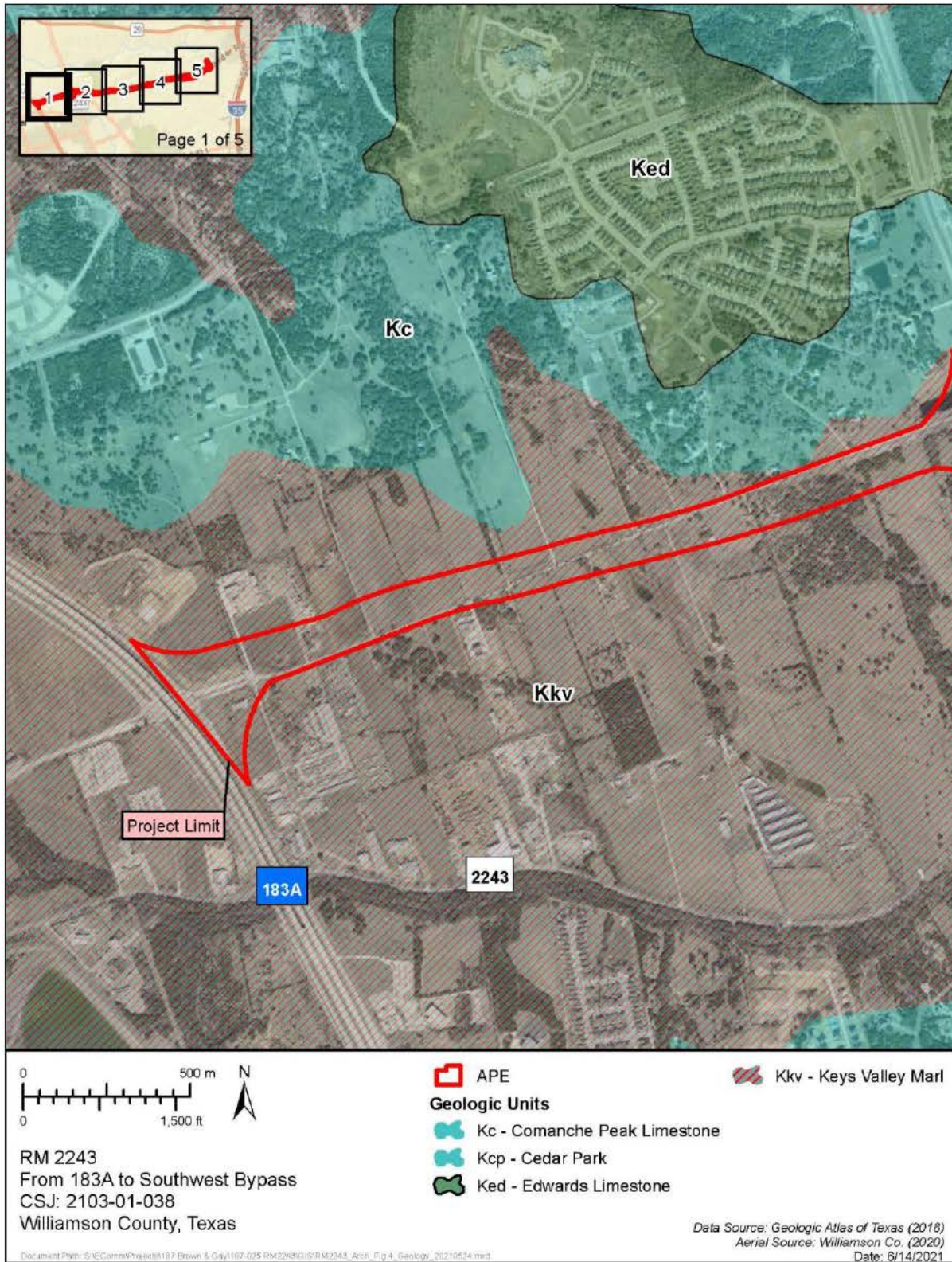
**Figure 1. Map Showing horizontal extent of APE on modern aerial photograph.**





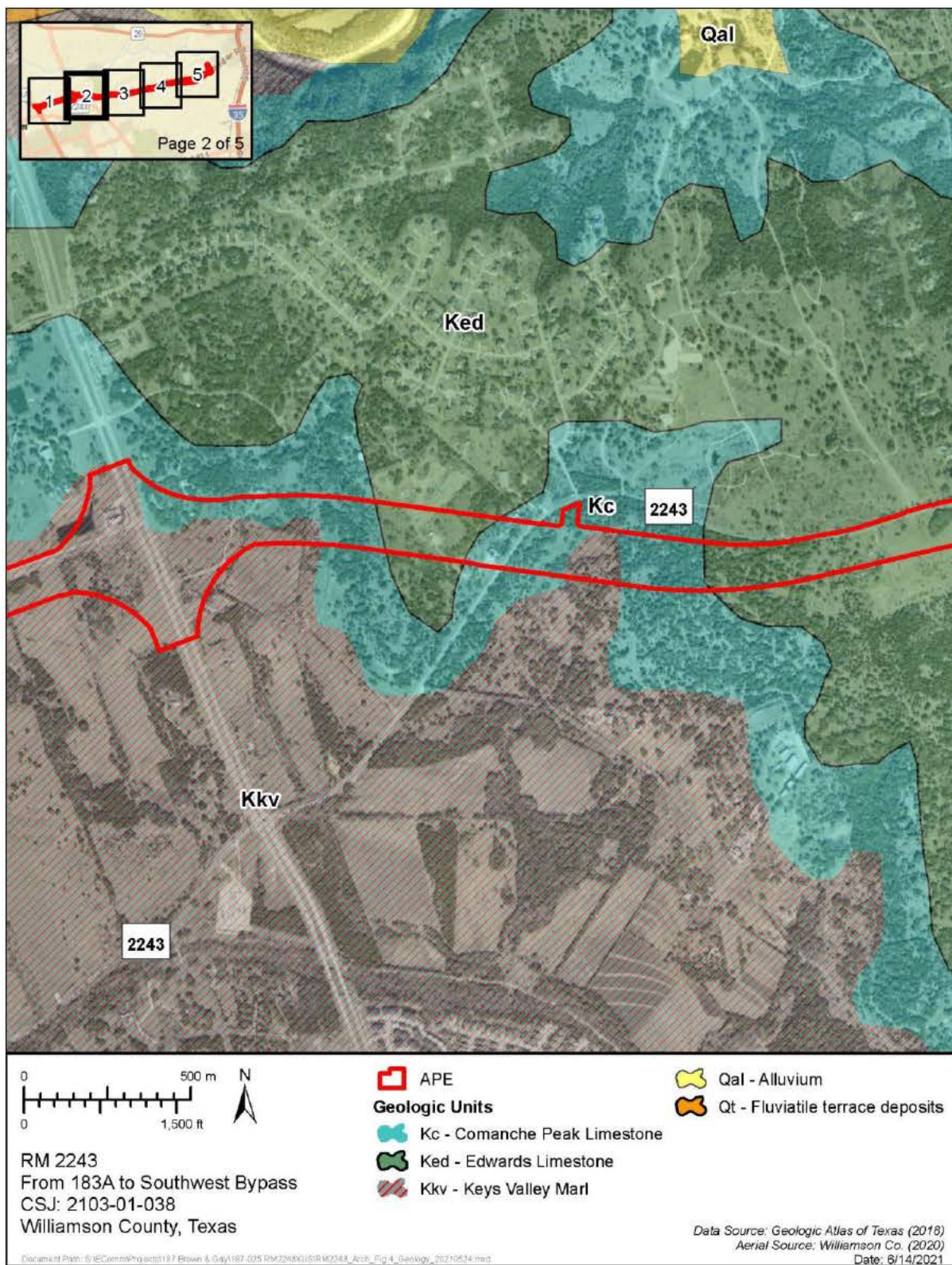
**Figure 2. Showing horizontal extent of APE on modern topographic map.**





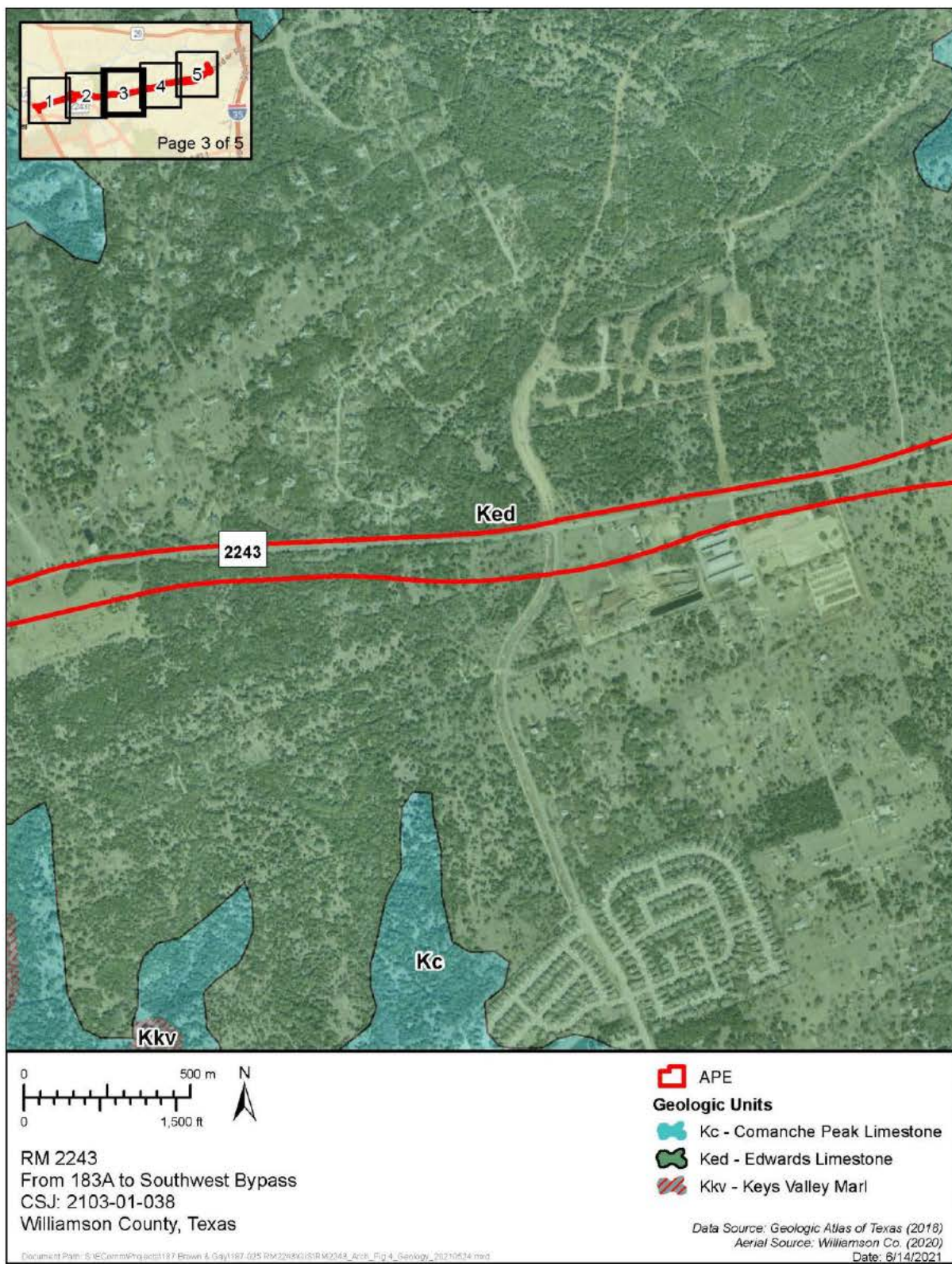
**Figure 3. Geologic Units within the APE (1 of 5).**





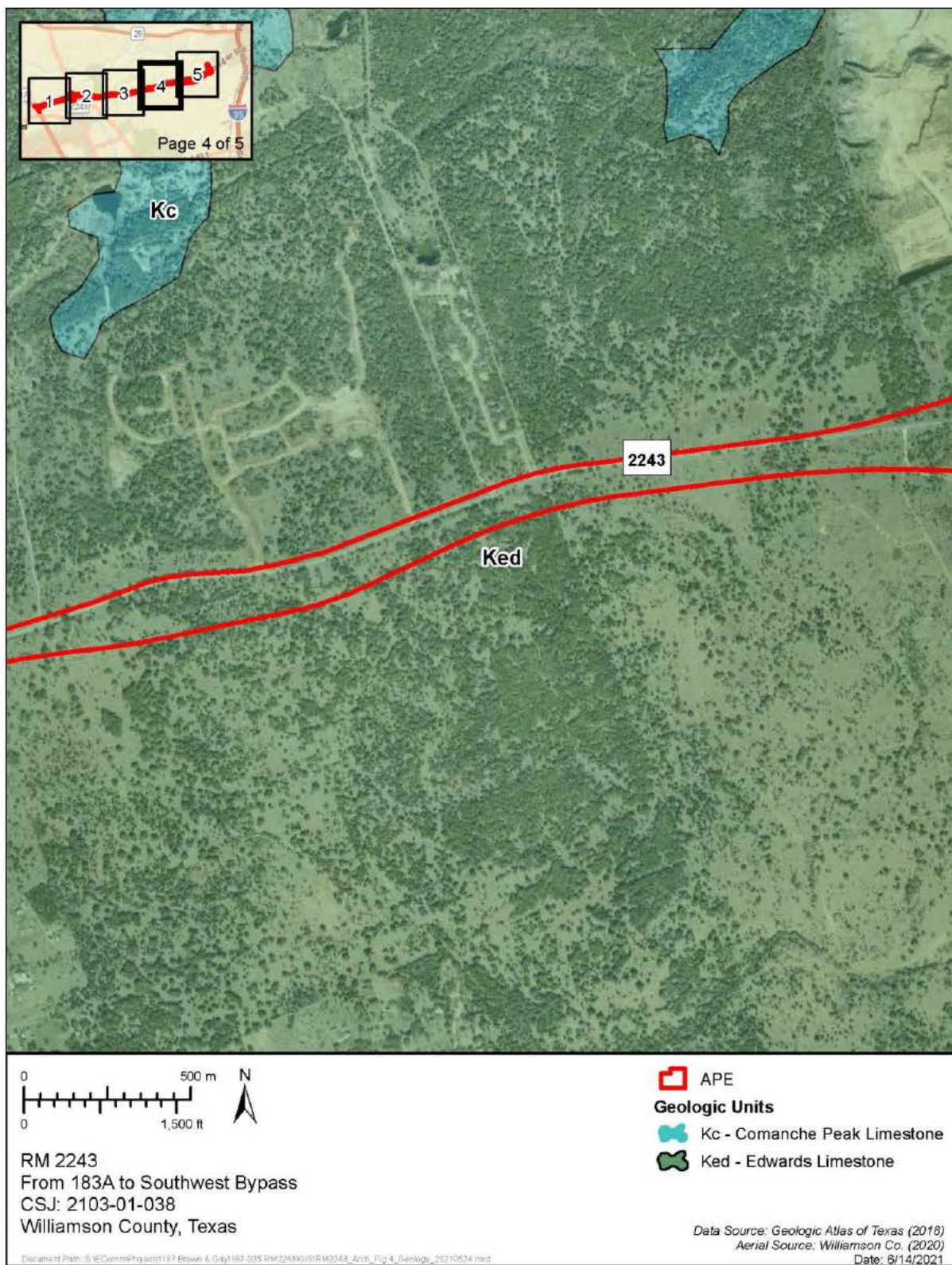
**Figure 4. Geologic Units within the APE (2 of 5).**





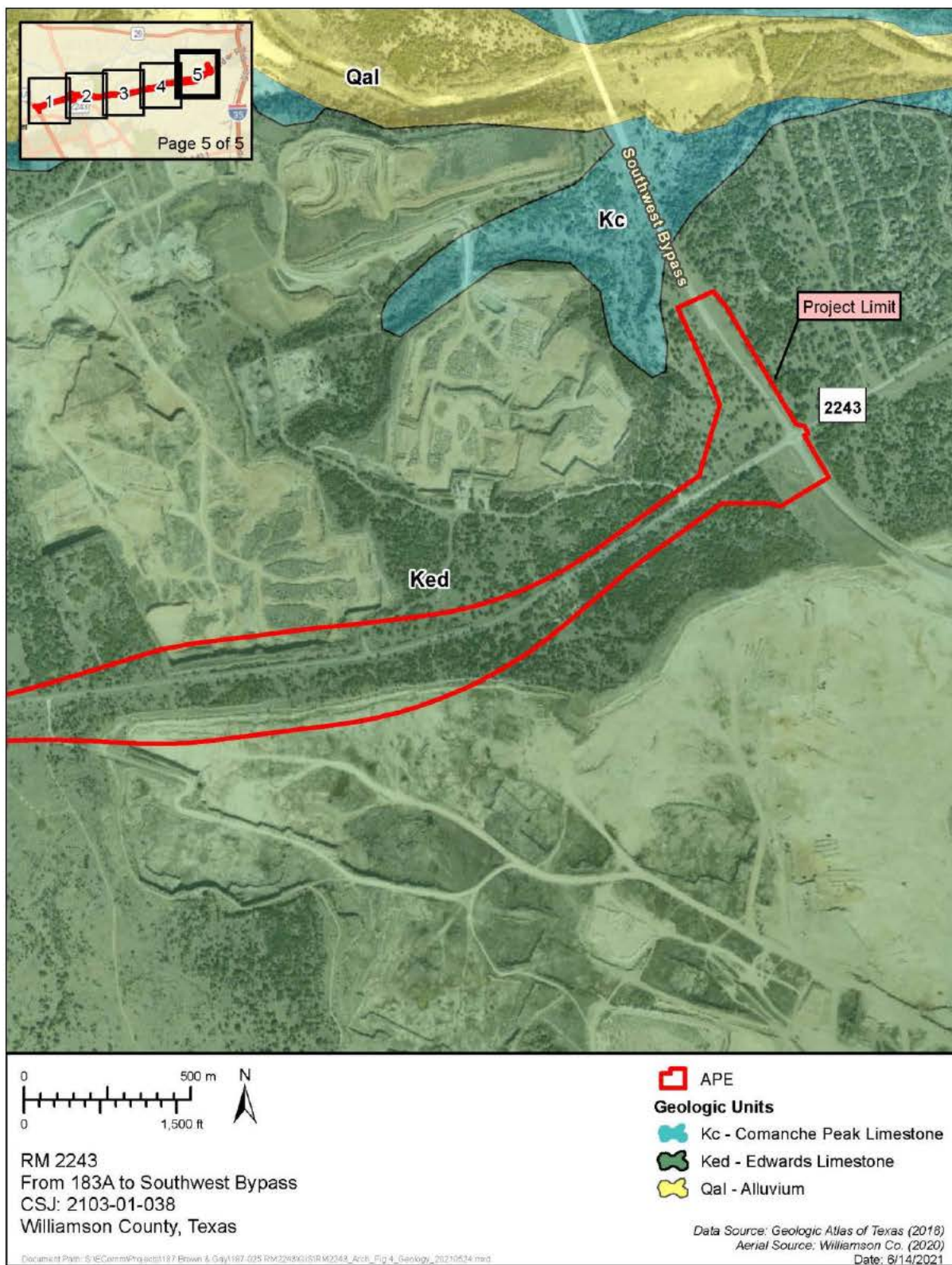
**Figure 5. Geologic Units within the APE (3 of 5).**





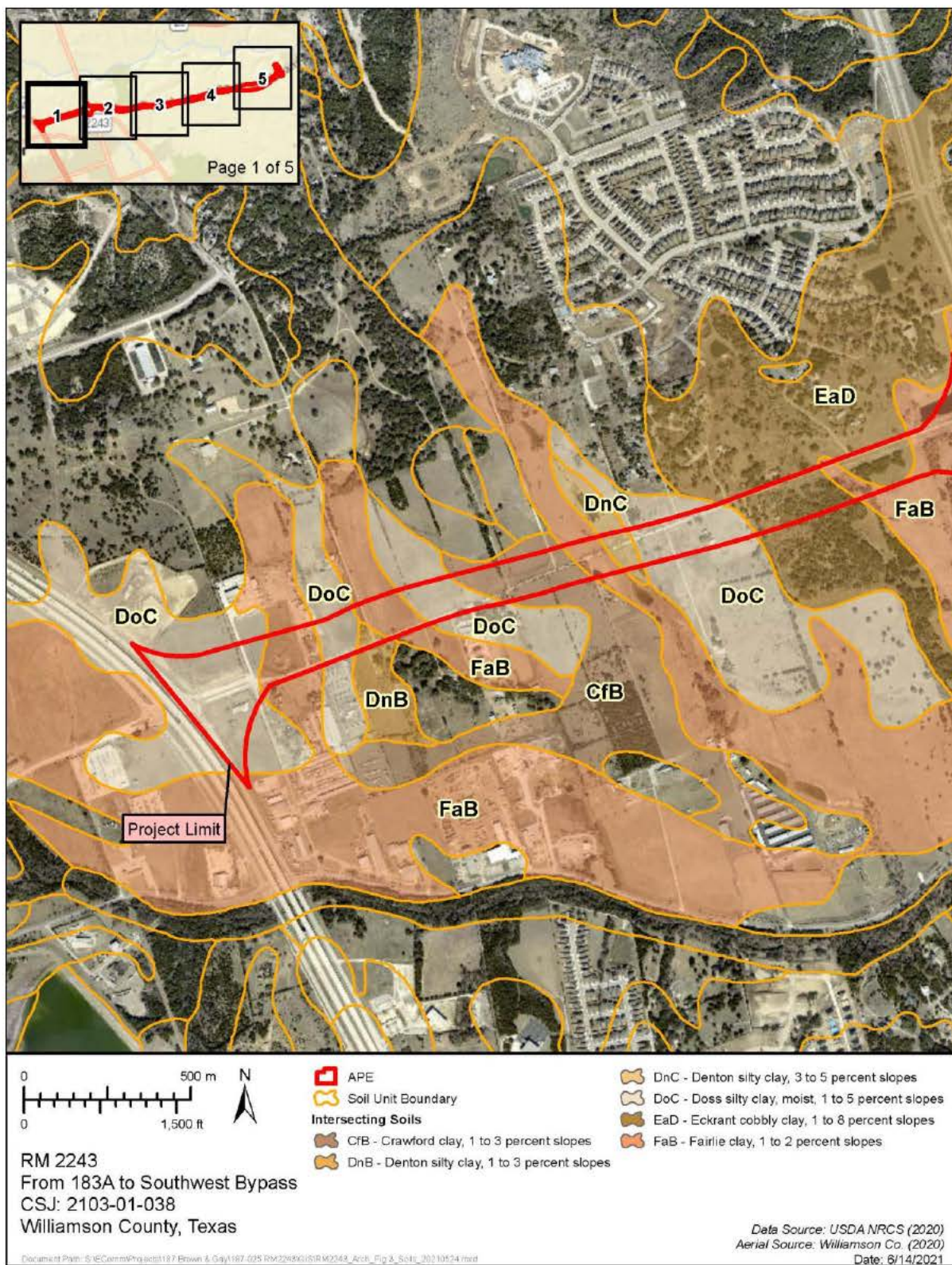
**Figure 6. Geologic Units within the APE (4 of 5).**





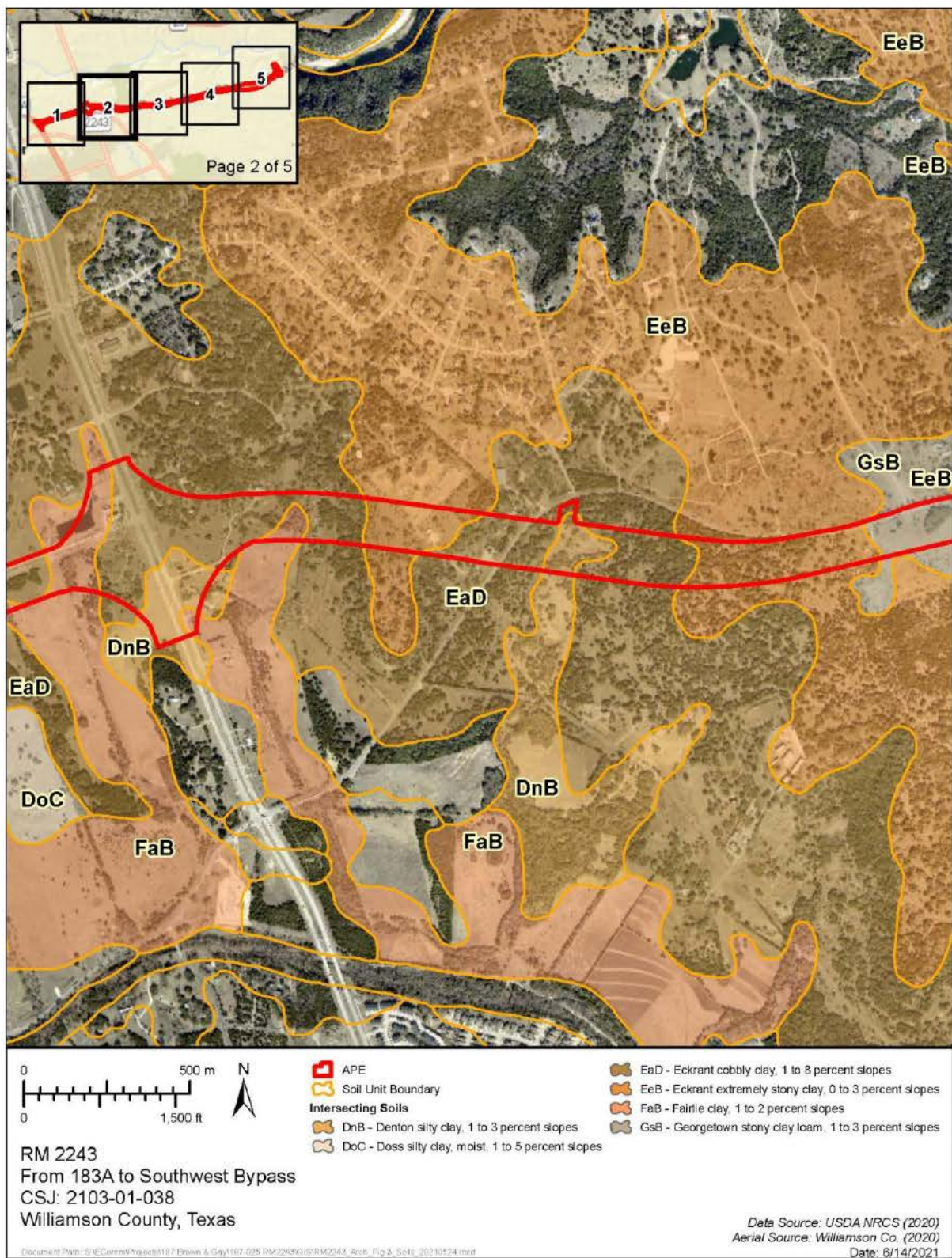
**Figure 7. Geologic Units within the APE (5 of 5).**





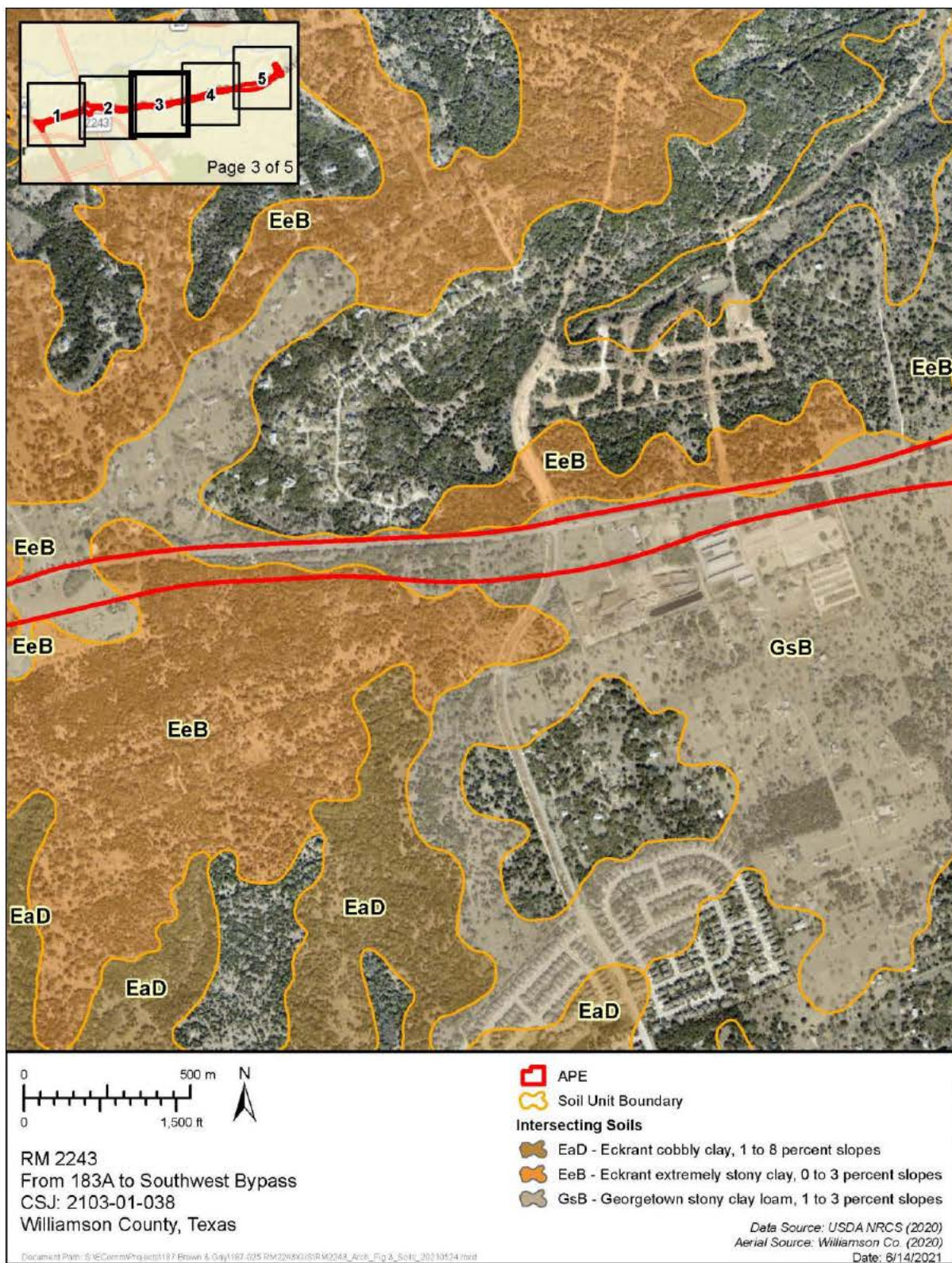
**Figure 8. Soils within the APE (1 of 5).**





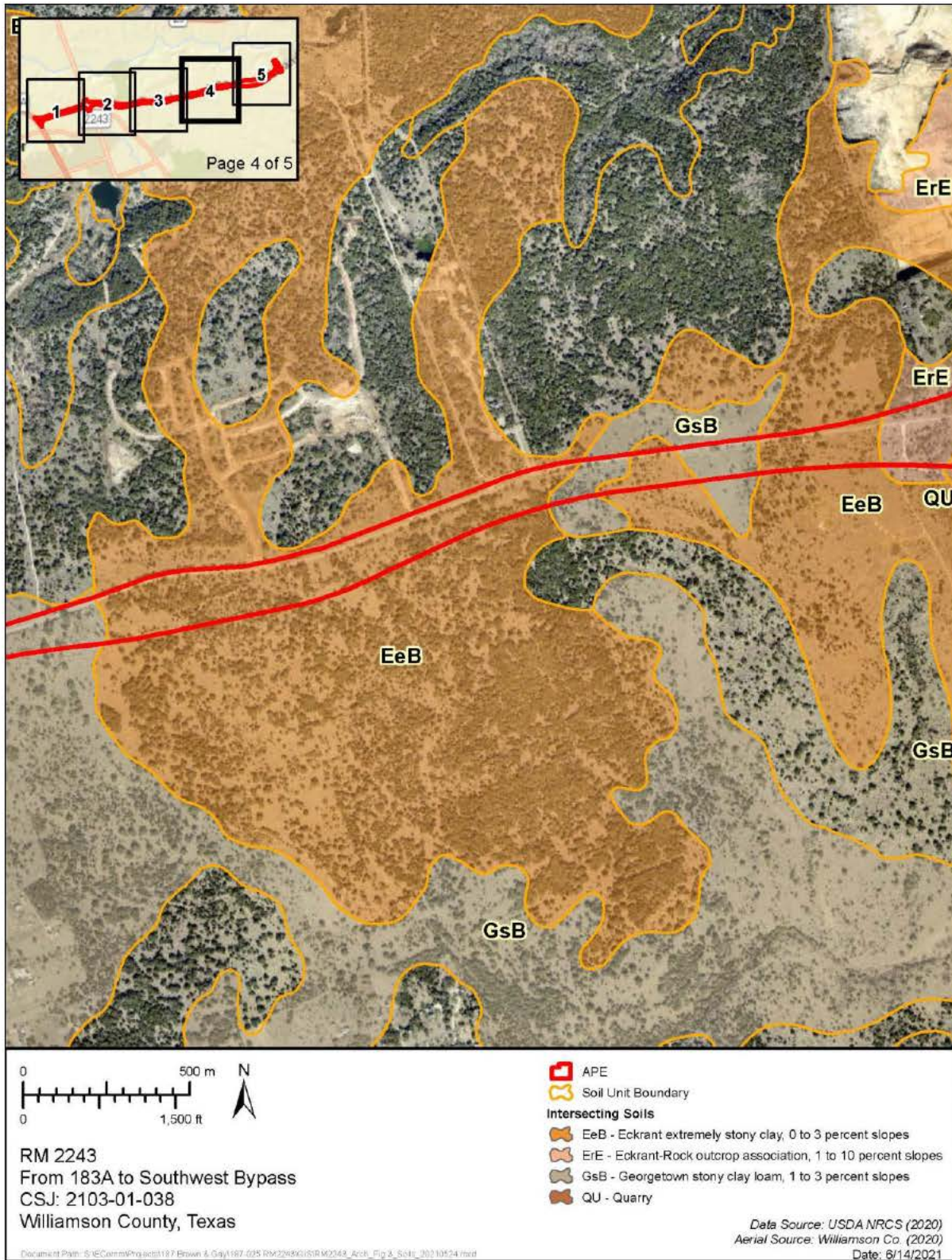
**Figure 9. Soils within the APE (2 of 5).**





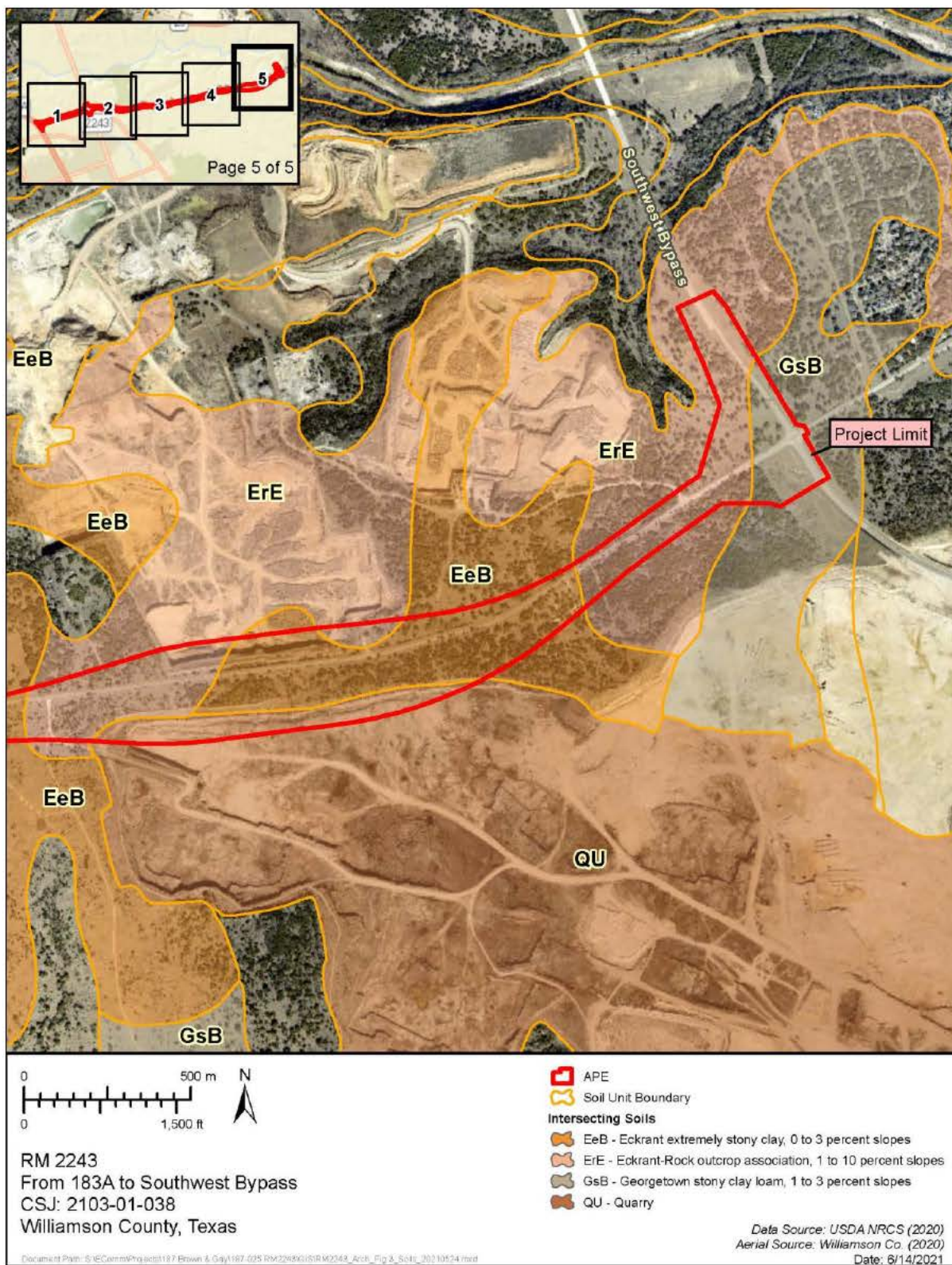
**Figure 10. Soils within the APE (3 of 5).**





**Figure 11. Soils within the APE (4 of 5).**





**Figure 12. Soils within the APE (5 of 5).**



Figure redacted

**Figure 13. Records search results within 1 kilometer (0.62 miles) of the APE (1 of 4).**

Figure redacted

**Figure 14. Records search results within 1 kilometer (0.62 miles) of the APE (2 of 4).**

Figure redacted

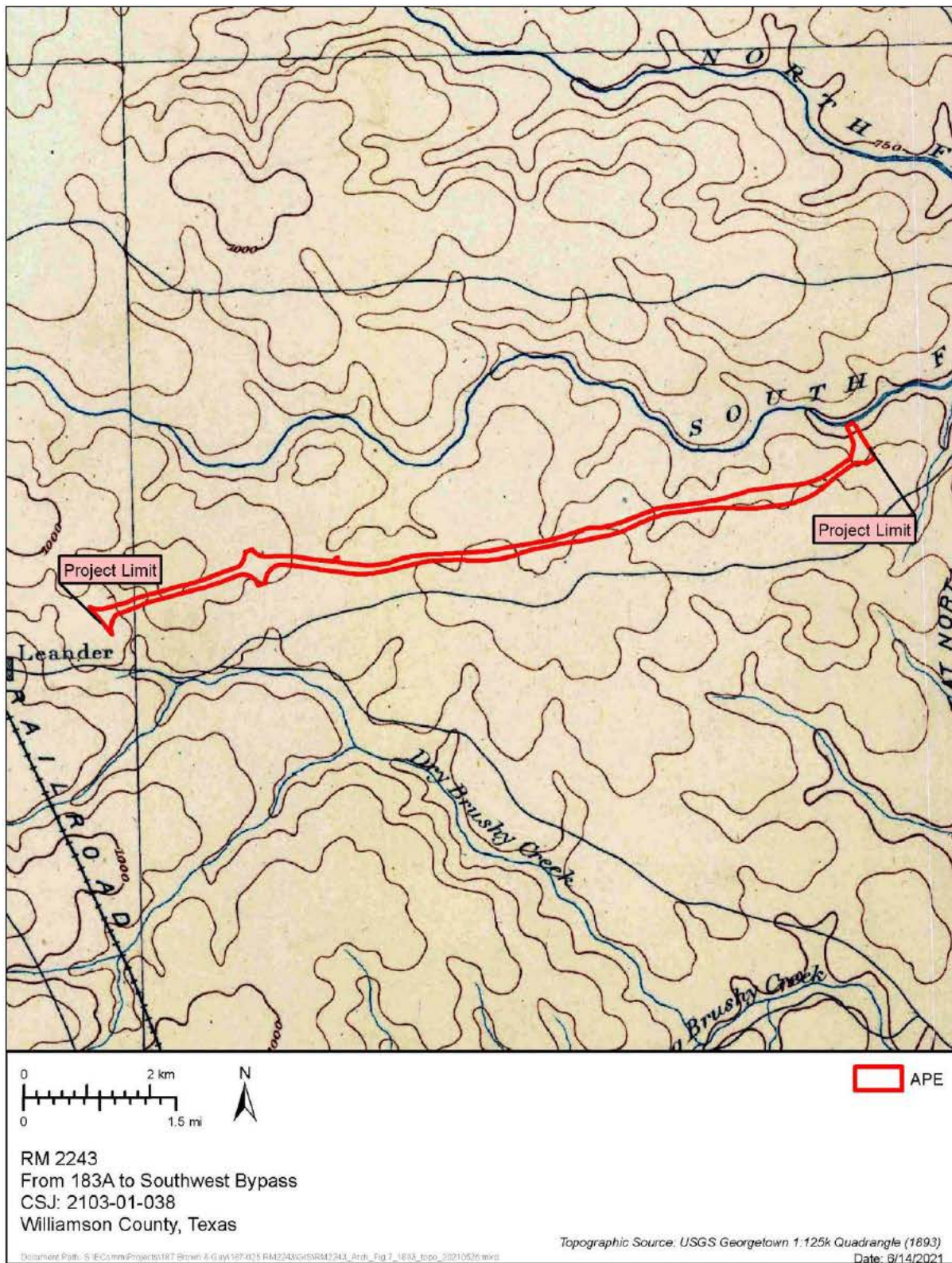
**Figure 15. Records search results within 1 kilometer (0.62 miles) of the APE (3 of 4).**

Figure redacted

**Figure 16. Records search results within 1 kilometer (0.62 miles) of the APE (4 of 4).**

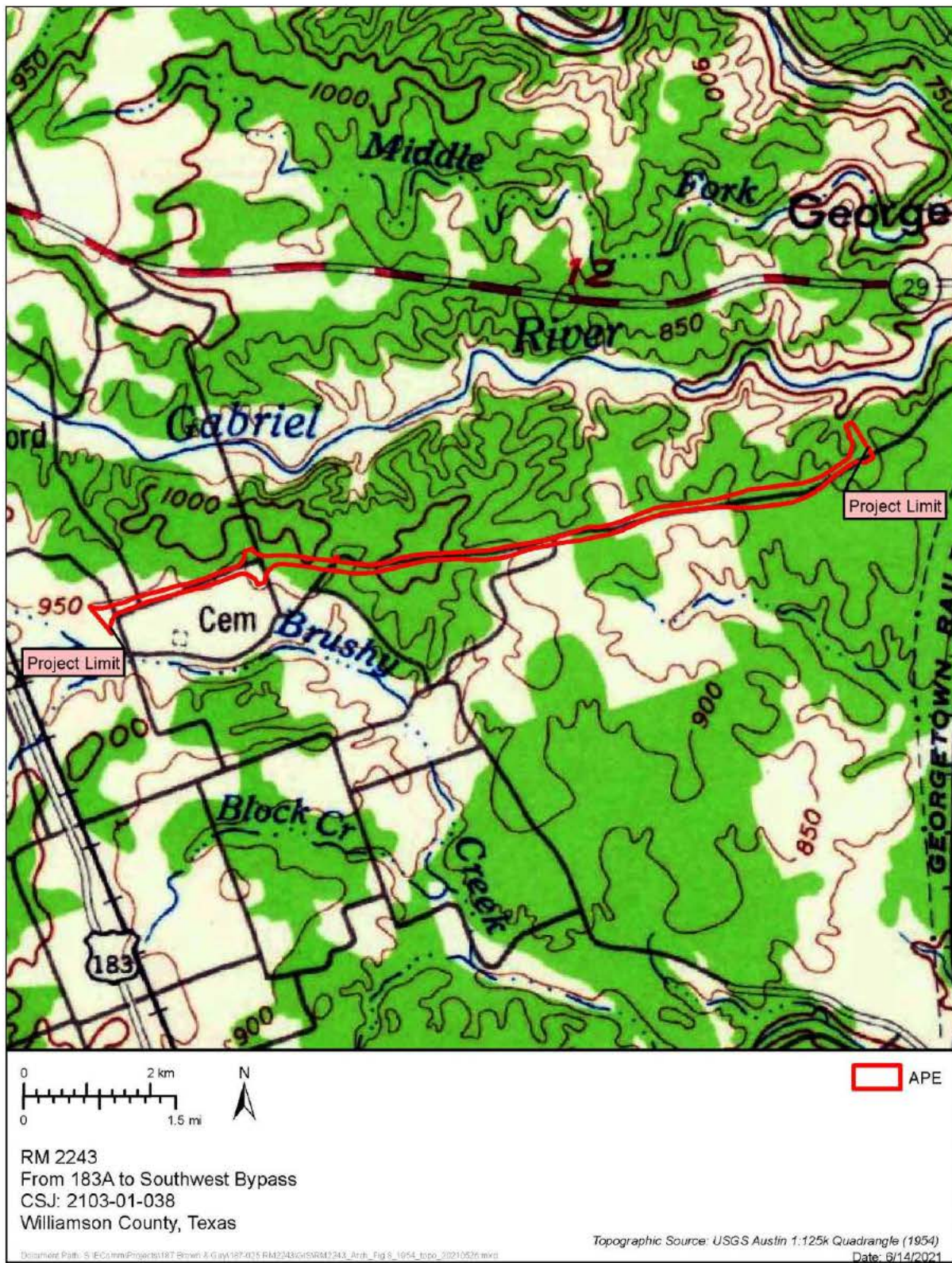
Figure redacted

**Figure 17. Records search results within 1 kilometer (0.62 miles) of the eastern limit of the APE.**



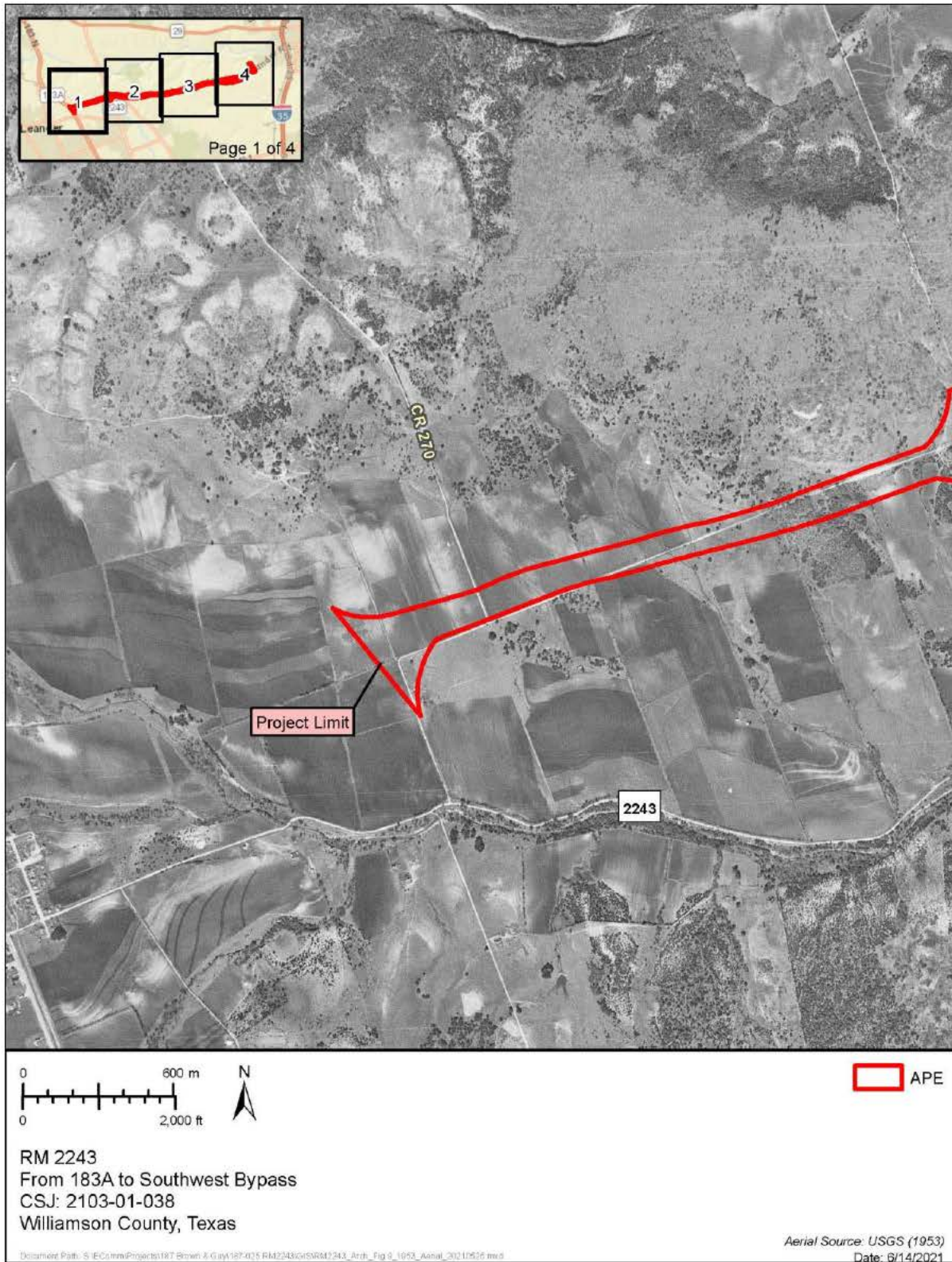
**Figure 18. Historical topographic map (1893) with APE.**





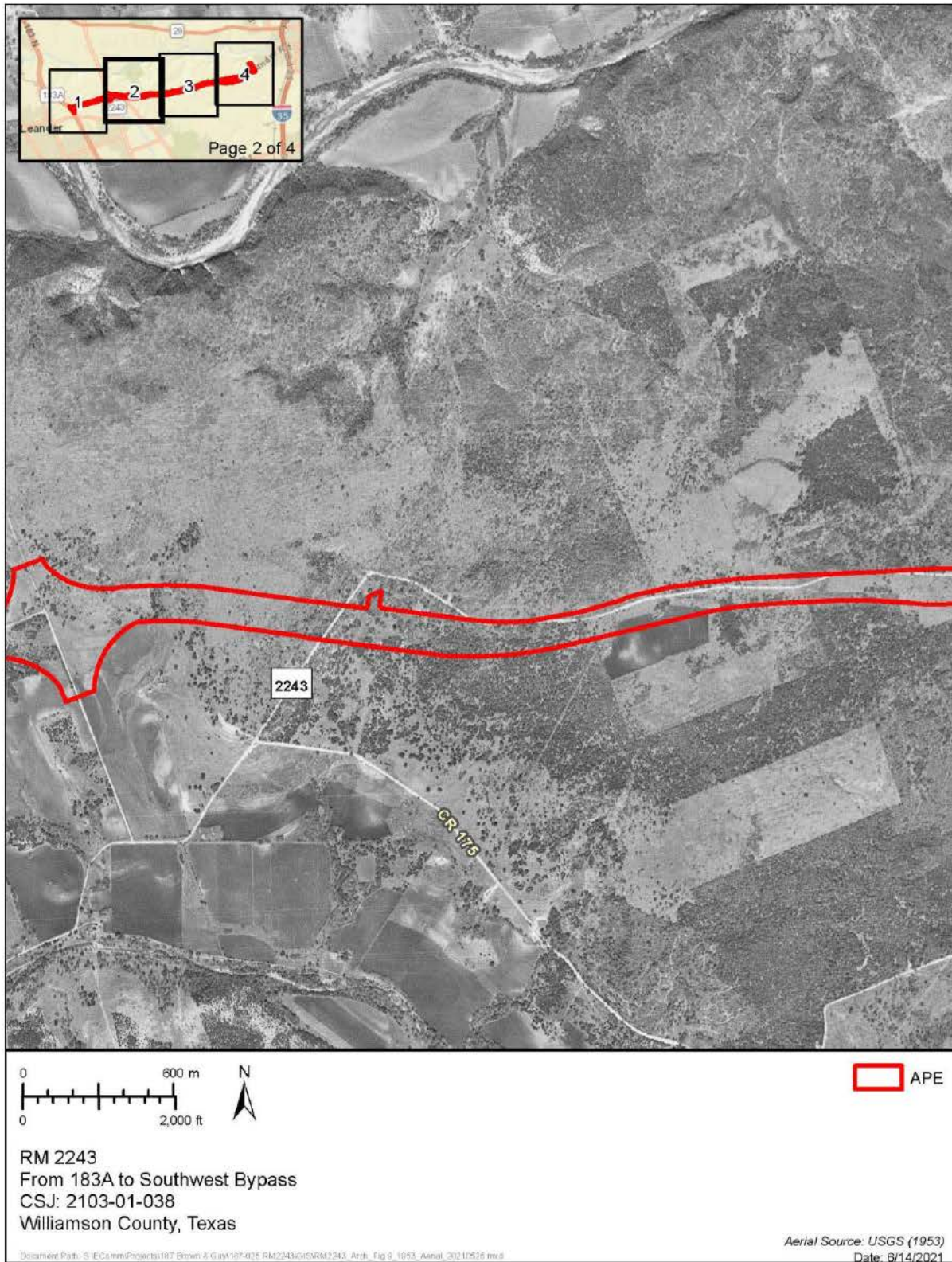
**Figure 19. Historical topographic map (1954) with APE.**





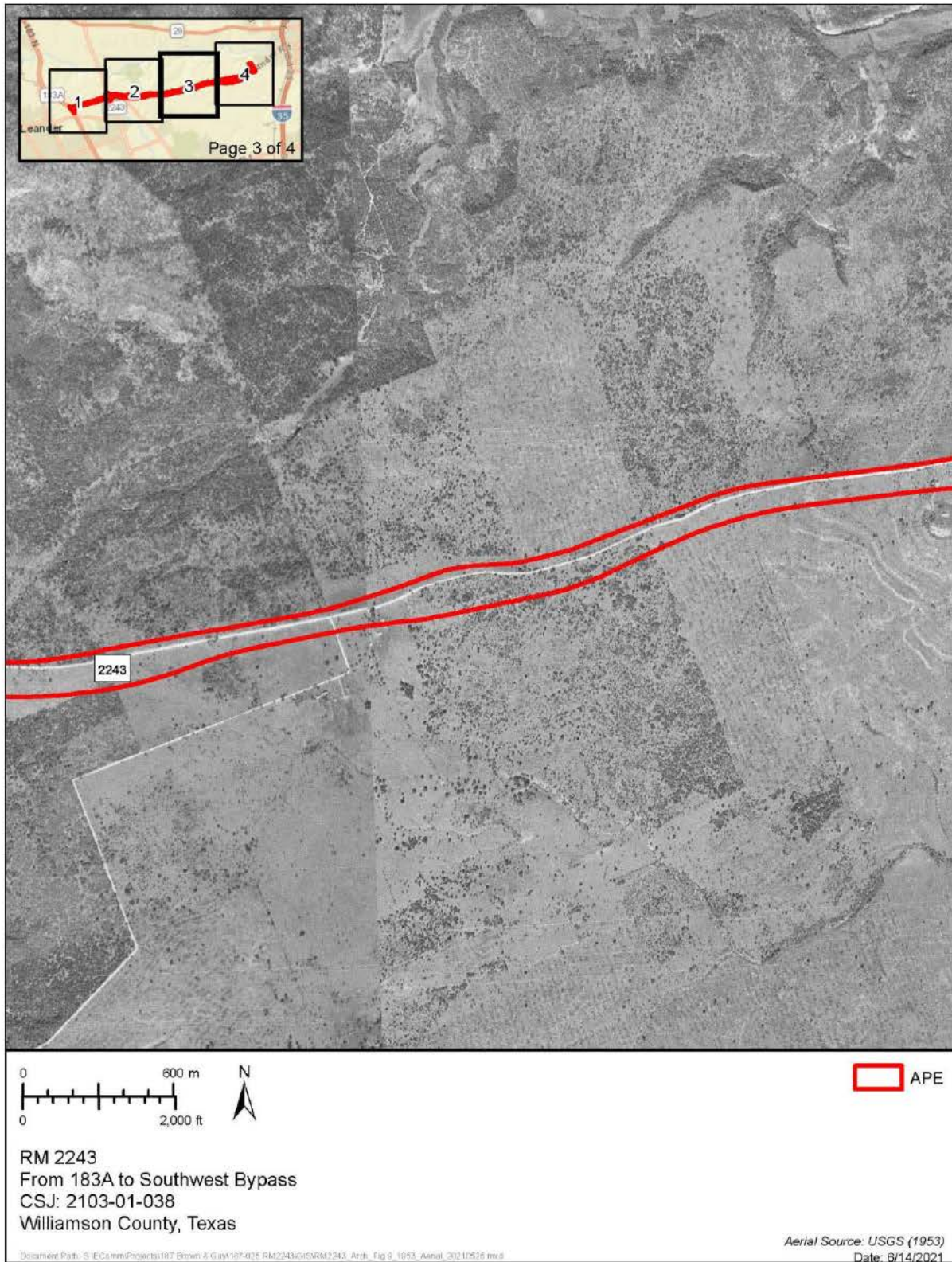
**Figure 20. Historical aerial photograph (1953) with APE (1 of 4).**





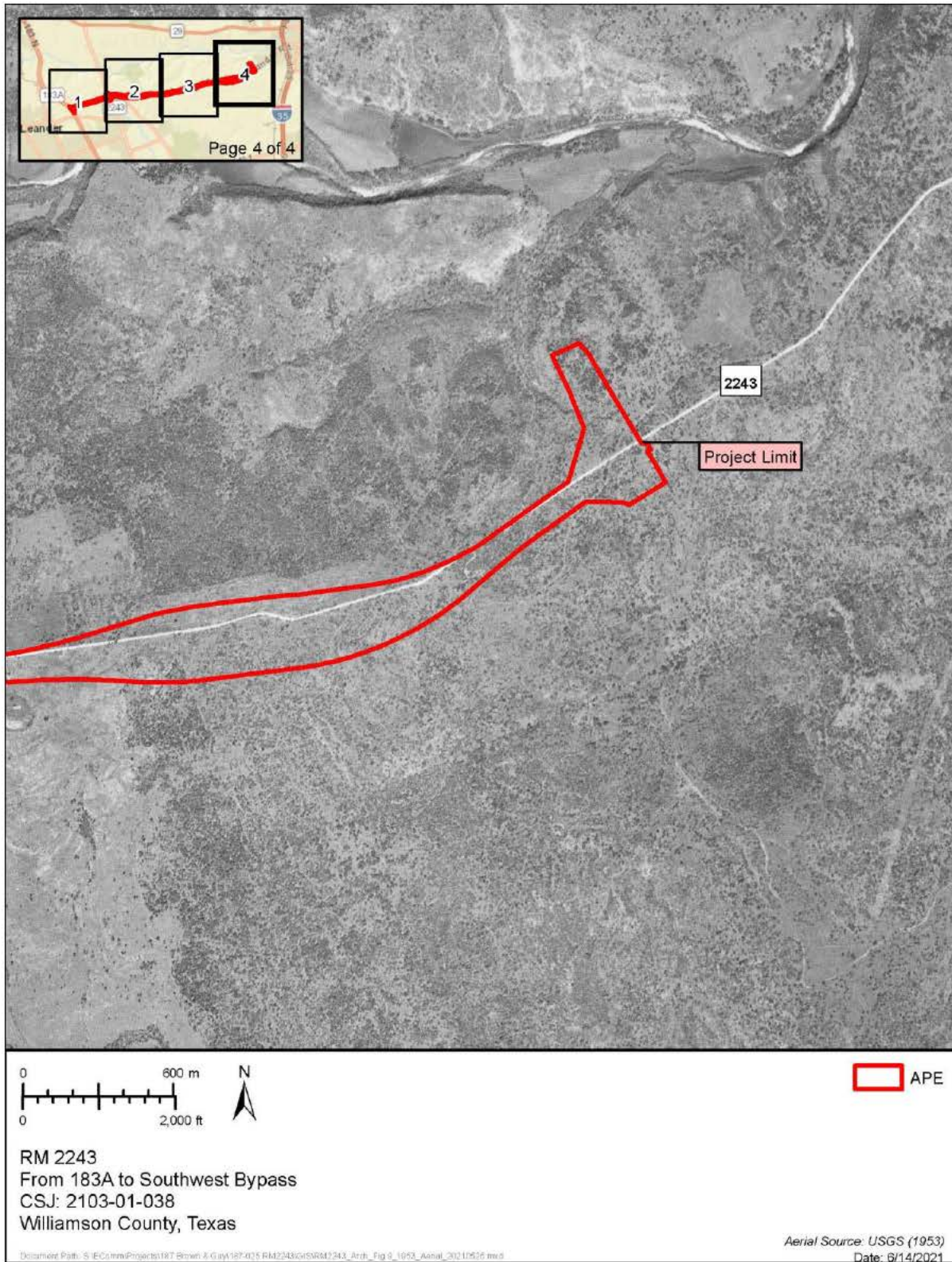
**Figure 21. Historical aerial photograph (1953) with APE (2 of 4).**





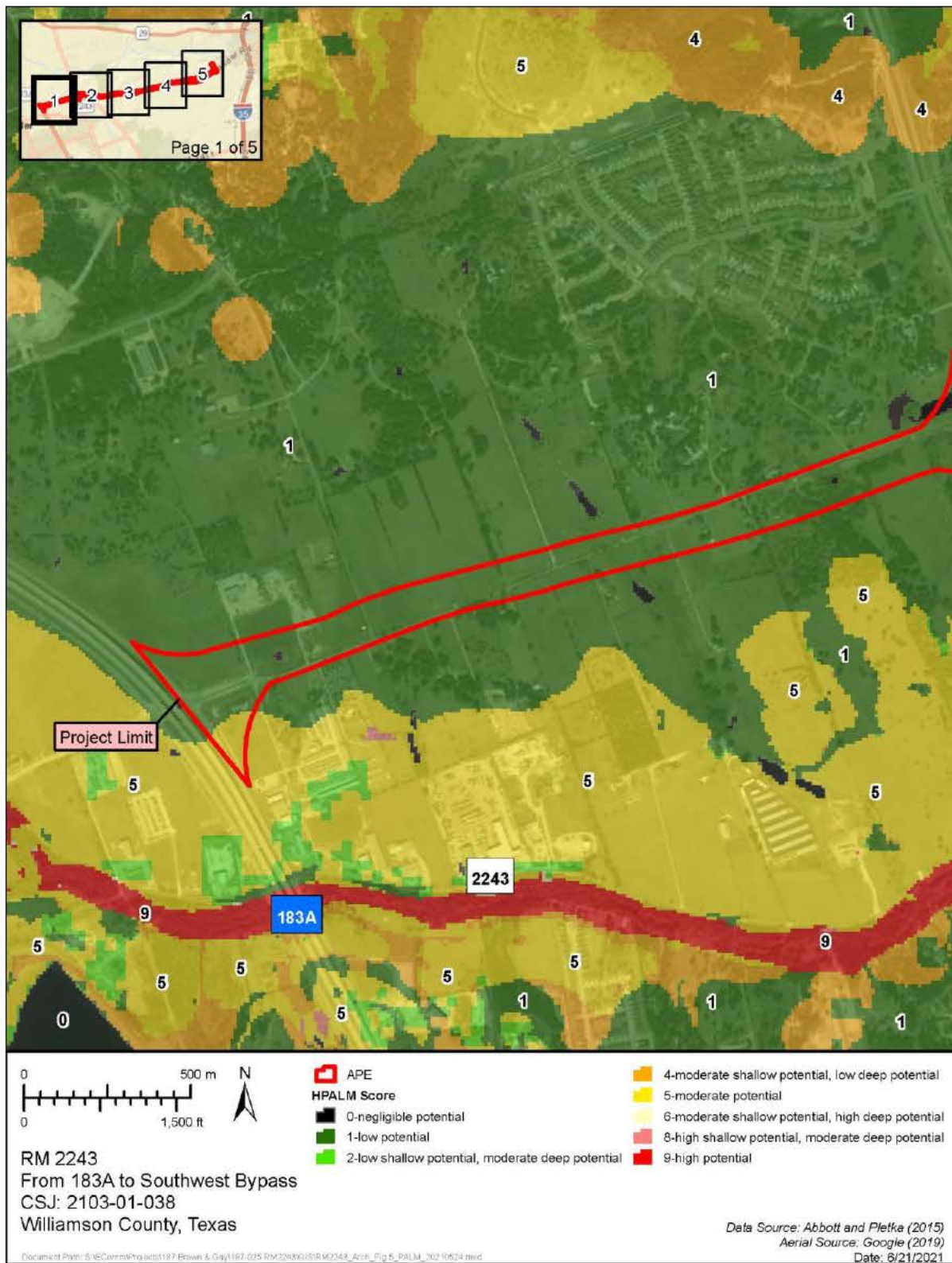
**Figure 22. Historical aerial photograph (1953) with APE (3 of 4).**



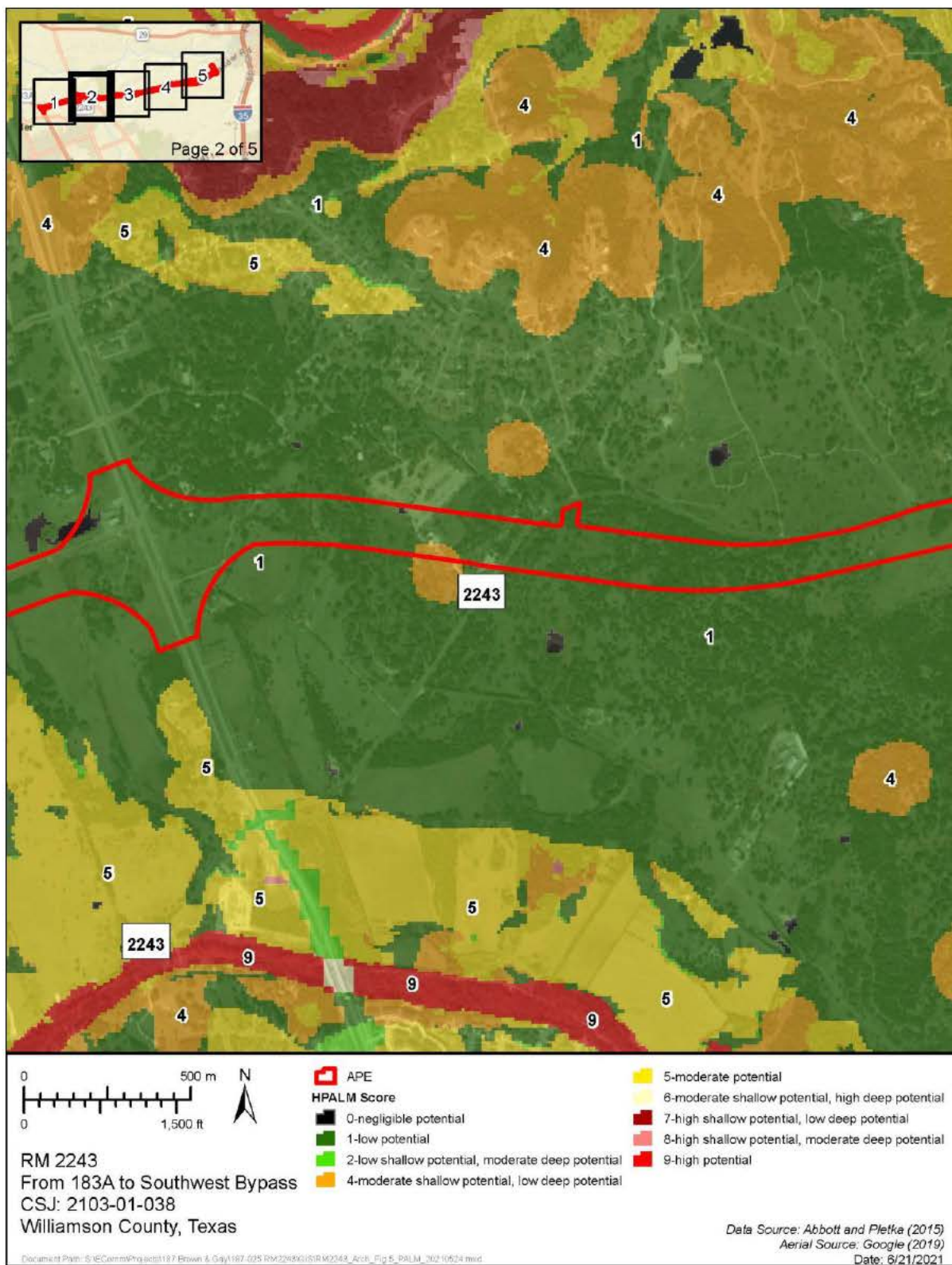


**Figure 23. Historical aerial photograph (1953) with APE (4 of 4).**



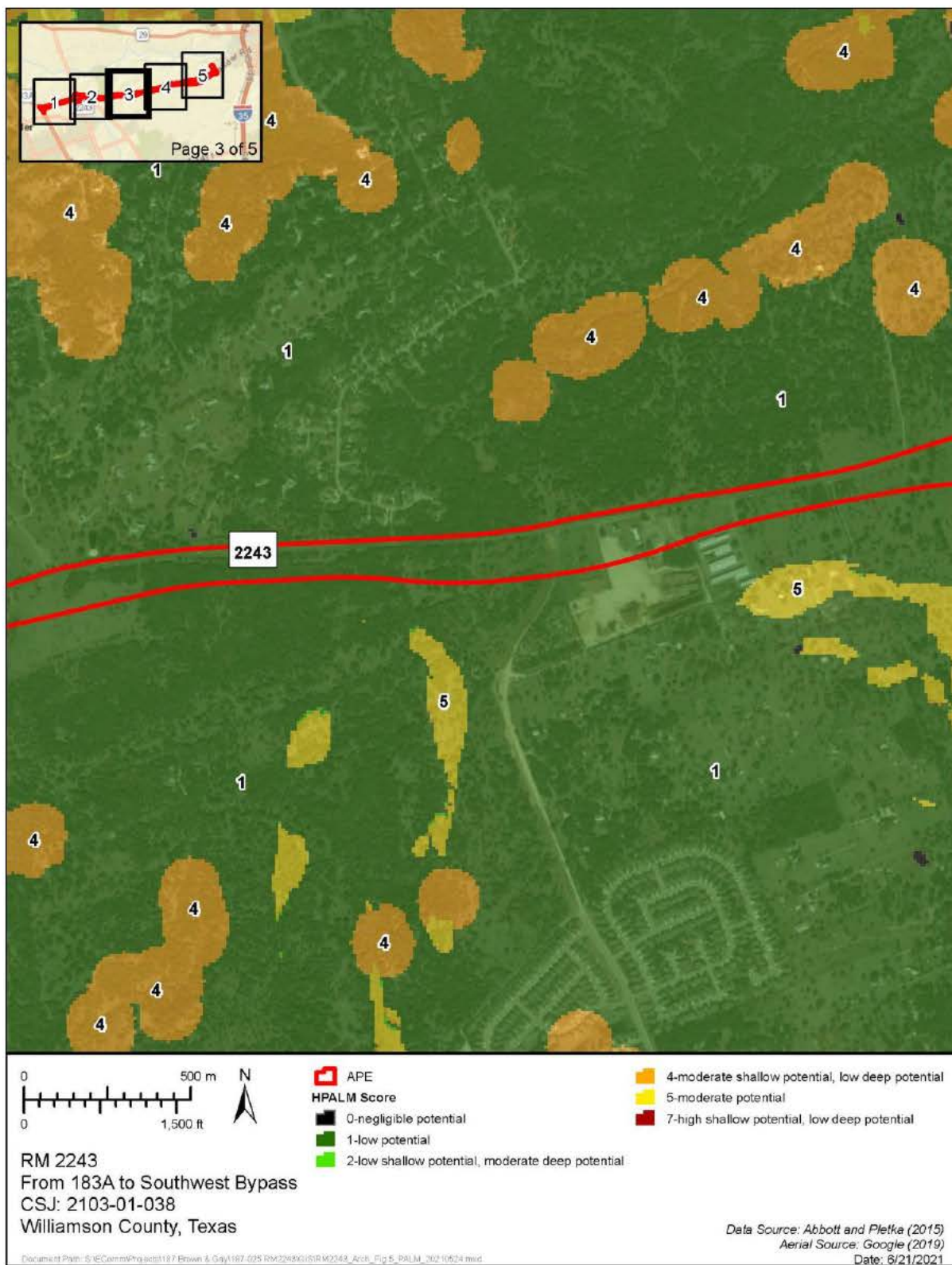


**Figure 24. PALM map of the APE (1 of 5).**

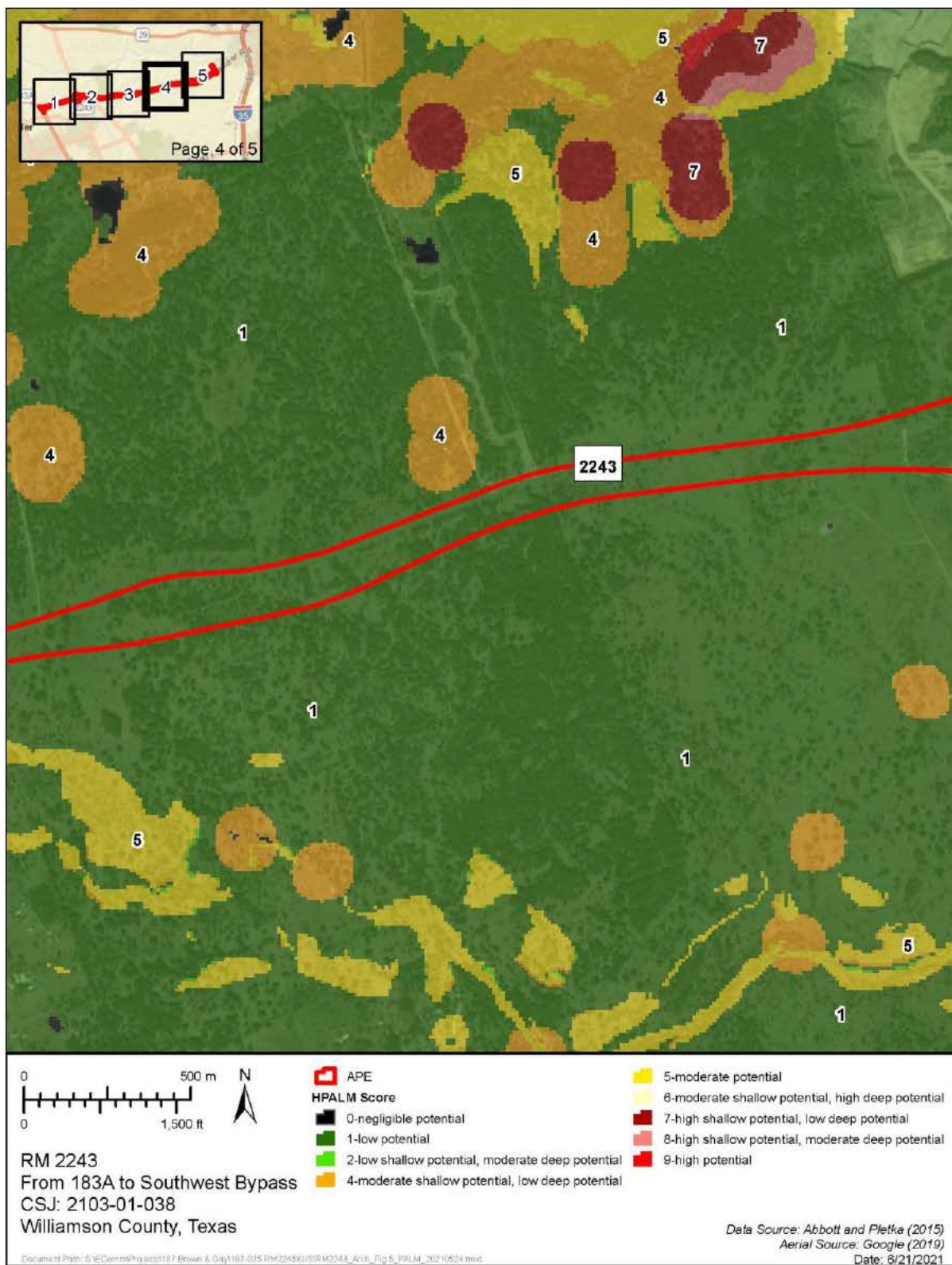


**Figure 25. PALM map of the APE (2 of 5).**



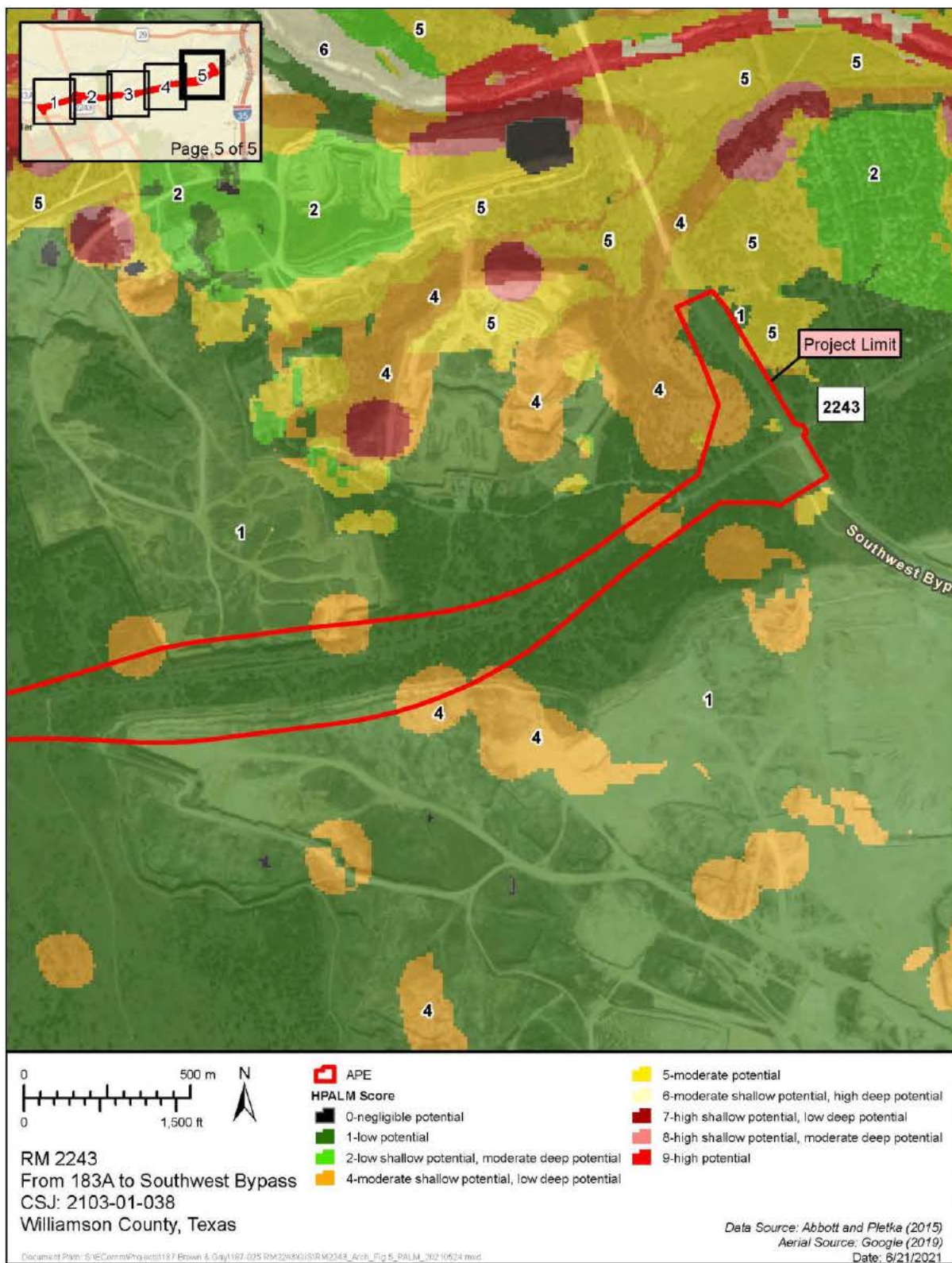


**Figure 26. PALM map of the APE (3 of 5).**



**Figure 27. PALM map of the APE (4 of 5).**





**Figure 28. PALM map of the APE (5 of 5).**



Figure redacted

**Figure 29. Recommended survey area within the APE (1 of 4).**

Figure redacted

**Figure 30. Recommended survey area within the APE (2 of 4).**



Figure redacted

**Figure 31. Recommended survey area within the APE (3 of 4).**

Figure redacted

**Figure 32. Recommended survey area within the APE (4 of 4).**



Figure redacted

**Figure 33. Recommended survey area - eastern limit of APE.**