

TEXAS HISTORICAL COMMISSION

ANTIQUITIES PERMIT APPLICATION FORM
ARCHEOLOGY

GENERAL INFORMATION

I. PROPERTY TYPE AND LOCATION

Project Name (and/or Site Trinomial) Ronald Reagan Boulevard project (Segment C1), from FM 3405 to CR 289

County (ies) Williamson County

USGS Quadrangle Name and Number USGS 7.5' Quadrangle Leander NE

UTM Coordinates Zone 14 E 610773 N 3399071

Location Ronald Reagan Boulevard between FM 3405 and CR 289 in Williamson County, Texas.

Federal Involvement Yes No

Name of Federal Agency _____

Agency Representative _____

II. OWNER (OR CONTROLLING AGENCY)

Owner Williamson County, Texas

Representative Presiding Officer

Address 710 S. Main St Suite 101

City/State/Zip Georgetown, TX. 78626

Telephone (include area code) 512.943.1100 Email Address ctyjudge@wilco.org

III. PROJECT SPONSOR (IF DIFFERENT FROM OWNER)

Sponsor Williamson County, Texas (see information above)

Representative _____

Address _____

City/State/Zip _____

Telephone (include area code) _____ Email Address _____

PROJECT INFORMATION

I. PRINCIPAL INVESTIGATOR (ARCHEOLOGIST)

Name Sunshine Thomas

Affiliation Environmental Research Group

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Scope Of Work for Ronald Reagan Blvd. (Segment C1) from FM 3405 to CR 289, Williamson County, Texas

At the request of Williamson County, Environmental Research Group, LLC (ERG) has prepared this scope of work for an intensive archaeological survey in advance of a proposed widening the existing Ronald Reagan Boulevard, from two-lanes to a divided four-lane road, from FM 3405 to CR 289, a length of two miles (Figure 1 and Figure 2). This proposed expansion will accommodate future increased traffic on the roadway and provide safety improvements. These improvements would include turning lanes, divided roadways, and shoulders in both directions to enhance safety for the motoring public. The project will take place entirely on county-owned property. Williamson County was the third fastest growing county in Texas between 2000-2022, and this growth trend is forecasted to continue. This project is part of the County's Long-Range Transportation Plan and is designed to help alleviate traffic congestion in this rapidly growing part of the county.

The Project Location for archaeological resources is the proposed new ROW and easements. Within the existing 57.2 acres of right-of-way (ROW) there is low potential for intact, buried cultural deposits due to existing road construction, utility easements, and associated infrastructure. Therefore, this scope of work will focus on the 11.5 acres of proposed ROW and the 1.5 acres of easements which extend outside of the existing ROW along the road alignment where past impacts may be less extensive. The depth of disturbance for most work is approximately 0.3–0.5 meters (12–18 inches) below surface, depths extend to 1.5 meters (5 feet) at culvert replacement locations and extends to maximum project depths greater than 3.0 meters (10 feet) at drilled shafts for bridge columns.

Management Summary

As Williamson County is a subdivision of the State of Texas, the project is subject to review under the Antiquities Code of Texas ([ACT] Texas Natural Resources Code, Title 9, Chapter 191) and its associated regulations (13 TAC 26). This project is part of the County's Long-Range Transportation Plan and was funded through the voter-approved 2013 Road Bond. There is no federal involvement and federal-level regulatory oversight outlined in Section 106 of the National Historic Preservation Act of 1966, as amended (Section 106) is not necessary.

Project Environmental and Cultural Setting

The proposed project traverses the Blackland Prairie and the Balcones Canyonlands ecoregions (Griffith et al. 2007).

The Northern Blackland Prairie Level IV ecoregion of the Texas Blackland Prairies Level III ecoregion is characterized by rolling to nearly level plains underlain by interbedded chalks, marls, limestones, and shales of Cretaceous age. The landscape is typically rolling or level plains of little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), yellow Indiangrass (*Sorghastrum nutans*) and tall dropseed (*Sporobolus asper*). Area streams have low to moderate

grades and support riparian forests. In the past, the region supported bison, pronghorn, wolves, and greater prairie chickens. Today the region supports expanding urban and suburban development and crops of grain sorghum, cotton, wheat, and corn, as well as pasture and hay. In the past, bottomlands hosted forests of bur oak (*Quercus macrocarpa*) Shumard oak (*Q. shumardii*), sugar hackberry (*Celtis laevigata*), elm (*Ulmus* spp.), ash (*Fraxinus* spp.), eastern cottonwood (*Populus deltoides*), and pecan (*Carya illinoensis*).

The Balcones Canyonlands Level IV ecoregion form the southeastern boundary of the Edwards Plateau Level III ecoregion, the geographic region that forms the crossroads of Central, South, and West Texas (Griffith et al. 2007). This unique escarpment ecoregion features broken topography which has discouraged intensive human development and supports diverse habitats, high species diversity and wildlife numbers, and refugia for endemics and endangered species. Moist caves support endemic species of fish (e.g., widemouth blindcat (*Satan eurystomus*)) and salamanders (e.g., Comal blind salamander (*Eurycea tridentifera*) and Blanco blind salamander (*Typhlomolge robusta*)). Millions of Mexican free-tailed bats (*Tadarida brasiliensis*) also use the caves as maternity roosts.

The abundant flowing water in this ecoregion encourages plant growth and several rare species have evolved to grow in limestone habitats including maidenhair fern (*Adiantum capillus-veneris*), tuber anemone (*Anemone edwardsiana*), and southern shield fern (*Thelypteris kunthii*) (Griffith et al. 2007). Historically the sheltered canyons support the westernmost distribution of many eastern deciduous woody species, such as slippery elm (*Ulmus rubra*), Ohio buckeye (*Aesculus glabra*), boxelder (*Acer negundo*), bigtooth maple (*Acer grandidentatum*), Carolina basswood (*Tilia caroliniana*), and escarpment black cherry (*Prunus serotina* var. *exima*). Some relicts of eastern swamp communities, such as baldcypress (*Taxodium distichum*), American sycamore (*Platanus americanus*), and black willow (*Salix nigra*), occur along major stream courses. The upland woodlands support plateau live oak (*Quercus fusiformis*), Texas oak (*Quercus buckleyi*), Ashe juniper (*Juniperus asheii*), cedar elm (*Ulmus crassifolia*), and escarpment black cherry (*Prunus serotina* var. *exima*). Where grasslands still exist, short grass species such as threeawns (*Aristida* spp.) and grammas (*Bouteloua* spp.) grow on ridge tops and heavily grazed areas while taller species cover slopes and moist depressions.

Geology and Soils

Geologically, the northeastern half of the Project Location is underlain by the Cretaceous aged Bee Cave Marl formation. The southwestern half of the Project Location is underlain by Quaternary aged Fluvial terrace deposits and Cretaceous Upper Glen Rose Limestone. (Geologic Atlas of Texas 2005, Figure 3).

According to the United States Department of Agriculture – Natural Resources Conservation Service (USDA NRCS) Web Soil Survey (2023), the Project Location is underlain by multiple intersecting soils (Figure 4; Table 1). The soils are generally clayey with shallow degraded bedrock with depths varying from 41 to 178 centimeters below surface (cmb) with shallower soils expected in many areas due to erosion and soil loss. Deep Holocene alluvium deposits are unexpected as even in areas where the Project Location crosses drainages the soils are formed in residuum parent material and any Holocene deposits are likely in reach of shovel test.

Table 1. Soils Mapped Within the Project Location

Soil	Derivation	Landform
Brckett association, 1 to 8 percent slopes	Residuum weathered from limestone bedrock of Cretaceous period.	Ridges / Summit Ridges / Shoulder Ridges / Backslope
Brckett gravelly clay loam, 3 to 12 percent slopes	Residuum weathered from limestone bedrock of Cretaceous period.	Ridges / Summit Ridges / Shoulder Ridges / Backslope
Denton silty clay, 1 to 3 percent slopes	Loamy residuum weathered from sandstone	Ridges
Denton silty clay, 3 to 5 percent slopes	A mantle of clayey materials over residuum weathered from limestone bedrock of lower Cretaceous age	Hillslopes / Toeslope
Doss silty clay, moist, 1 to 5 percent slopes	Calcareous loamy and clayey residuum derived from marls and weakly cemented limestone of mostly Lower Cretaceous age	Hillslopes / Backslope
Eckrant cobbly clay, 1 to 8 percent slopes	Residuum weathered from limestone of the Lower Cretaceous and other geologic periods and includes interbedded limestone	Ridges/Summit Ridges
Fairlie clay, 1 to 2 percent slopes	Clayey residuum weathered from calcareous mudstone of Upper Cretaceous age	Ridges / Footslope Ridges / Toeslope

Source: Web Soil Survey (USDA NRCS 2023)

Previously Recorded Archaeological Surveys, Sites, and Other Resources

Background research for this project consisted of an online search through the Texas Historical Commission's (THC's) Archeological Sites Atlas (Atlas; 2024), a review of archival maps, and aerial photographs. Research focused on the identification of archaeological sites, Registered Texas Historic Landmarks (RTHLs), sites listed on the National Register of Historic Places (NRHP), sites listed as State Antiquities Landmarks (SALs), cemeteries, and Official Texas Historical Markers (OTHM) within 1 kilometer (0.62 miles) of the Project Location. Four previously conducted archaeological surveys were found, two previously recorded archaeological sites, one cemetery, and one OTHM were identified within 1 kilometer of the Project Location (Figure 5).

Of the six surveys identified, three overlap with the Project Location and three additional surveys are within 1 kilometer (Table 2). SWCA Environmental Consultants (SWCA) completed work in 2007 for the original construction of Ronald W. Reagan Boulevard North that overlaps more than 50% of the current Project Location (Atlas ID 8500013832 and 8500013837). A more recent survey conducted by SWCA in 2022 (Atlas ID 8100023825) overlaps approximately 0.5 miles of the southernmost portion of the Project Location. These surveys did not document any resources within the current Project Location.

Table 2. Previous Archaeological Investigations Within 1 Kilometer of the Project Location

Year	THC Permit	Sponsor	Investigator	Atlas ID	Overlaps Project Location?
2002	2539	Texas Water Development Board	Henderson, Jerry	8400009992	No
2003	2752	Williamson County	Nash, Sean R.	8500018304	No
2006	4273	Texas Department of Transportation	Owens, Jeffery D.	8500013823	No
2007	4381	Williamson County	Miller, Kevin A.	8500013832	Yes
2007	4381	SWCA	Lawrence, Ken	8100013537	Yes
2022	30851	SWCA	Shelton, Christopher	8100023825*	Yes

Source: Texas Archeological Sites Atlas (THC 2024)

*Abstract ID, Survey ID unavailable

None of the previously recorded archaeological sites within the study area overlap with, or are immediately adjacent to, the Project Location (Table 3). These sites are not anticipated to be impacted by the proposed project.

Table 3. Summary of Archaeological sites Within 1 Kilometer of the Project Location

Site	Type	Eligibility Status	Overlaps Project Location?
41WM512	Lithic scatter at headwater drainage of Spring Creek	Ineligible (2/22/2007)	No
41WM248	Carved slate pendant	Undetermined	No

Source: Texas Archeological Sites Atlas (THC 2024)

There is one cemetery within 1 kilometer of the Project Location. Fore Cemetery (Atlas ID 749105505) is approximately 1 kilometer southeast of the Project Location. This cemetery does not overlap with and is not adjacent to the Project Location and should not be impacted by the proposed Project.

There is one OTHM within 1 kilometer of the Project Location (Figure 5). The marker (Atlas ID 5491009094) is affiliated with the Fore Cemetery, and the marker and any associated resources that may exist is unlikely to be impacted by the proposed Project.

There are no known NRHP or eligible NRHP properties, RTHL, or SAL resources recorded within 1 kilometer of the Project Location.

Prior Land Use

Land use within the Project Location was rural in nature into the early 1970s. An aerial photograph from 1953 (Figure 6) depicts an open landscape with no structures or buildings and minimal large vegetation. A United States Geological Survey (USGS) topographic map from 1962 (Figure 7) depicts the entire Project Location as rural. An aerial photograph from 1982 (Figure 8) shows a

reduction in farmland and more roadways created. Today there are more modern residences and commercial businesses in the Project Location. The existing Ronald Reagan Blvd. North was not constructed until after 2007.

Potential for Cultural Resources within the Project Location

A review of archival topographic maps and aerial photographs show that the Project Location is in an area which has remained primary rural throughout the twentieth century and has a moderate to low potential for intact, buried cultural materials. This assessment is further supported by the results of previous area surveys and the typically shallow nature of area soils over bedrock that are susceptible to surface area disturbance adjacent to modern area road, utility, and infrastructure construction.

Deeply buried intact cultural deposits are not expected within the Project Location as the area soils are shallow and even locations where the Project Location crosses drainages the recorded soils are formed in residuum parent material and will likely have Holocene deposits within the depth of shovel testing.

Proposed Survey Scope of Work

ERG proposes to conduct 100% intensive archaeological survey within the Survey Area — proposed ROW and easements not previously surveyed in 2007 for the original construction of Ronald W. Reagan Boulevard North (Atlas ID 8500013832 and 8500013837). Archaeologists will conduct the survey in accordance with the Council of Texas Archeologists (CTA) standards and guidelines (2020) for linear surveys and work will include surface inspection followed by subsurface shovel testing. Field conditions and site discovery will dictate the total number of shovel tests. Moreover, if archaeological sites are discovered within the Project Location, additional shovel tests will be excavated to delineate these site locations. The Project Location encompasses 11.5 acres of proposed ROW and 1.5 acres of easements; the Survey Area totals 3.7 acres of the proposed ROW and easements (Figure 9 to Figure 12).

Shovel tests will measure approximately 30 centimeters in diameter and extended to the lesser of the following: the base of Holocene sediments in depositional areas, sterile subsoil in upland areas, a depth of 80 cmbs, or physical impediment such as bedrock or the water table (CTA 2020). The shovel tests will be excavated in 20-centimeter increments and all soil will be screened through a ¼-inch hardware cloth or hand sorted if screening proves impractical. Each test will be mapped with hand-held GPS units and relevant information for all shovel tests recorded on a standardized form. Sediment descriptions will follow the USDA Soil Survey standards (Schoeneberger et al. 2012).

During site delineation, archaeologists will place a minimum of six shovel tests in a cruciform manner at intervals of no more than 15 meters. They will continue placing shovel tests in each direction until they encounter 1) two negative shovel tests, 2) the project boundary, or 3) a limiting natural or artificial impediment to survey. ERG archaeologists will use their discretion to record site boundaries at the first of two negative shovel tests, the end of the landform, or at the project boundary.

Due to the shallow soils and minimal possibility of deeply buried cultural deposits backhoe trenching will not be necessary within the Project Location.

Site Definition and Recording

For the purposes of this survey, an archaeological site contains 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 15-meter radius, or (2) a single cultural feature, such as a hearth or burned rock midden, observed on the surface or exposed during shovel testing or backhoe trenching, or (3) a positive shovel test or backhoe trench containing at least five total artifacts, or (4) two positive shovel tests located within 30 meters of each other. Archeological deposits recorded by ERG archaeologists that do not meet the above criteria will be designated isolated finds.

When sites are encountered, site definition standards will comply with THC/CTA survey standards and policy, including requirements for assessing archaeological sites and identifying cemeteries. Specific site information will be recorded on standardized forms and presented after fieldwork to the Texas Archeological Research Laboratory (TARL) for inclusion in their archives and, if necessary, production of new site trinomials.

Artifacts identified during the survey will be field catalogued and documented through notes, representative photographs, and drawings in accordance with survey-level site significance and integrity assessment that fully convey the range of variation and frequencies of observed artifacts (CTA 2011, 2020). Whenever possible, photographs will be taken with a scale. Archaeologists will strive to catalog all artifacts individually, but when this is not possible the selection of artifacts will be documented and explained. All artifacts will be returned to their original locations (i.e., shovel tests or surface locations from which they were recovered). Artifacts will be analyzed in the field, and photographs of temporally diagnostic artifacts such as stone tools, decorated ceramics, or those with distinct construction will be further analyzed by artifact experts in the ERG archaeology lab. No artifacts will be collected during the survey.

If identified, eighteenth through twentieth century archaeological sites will be documented not only through field efforts, but also through survey level archival research appropriate to the nature of the site (THC 2014). This research would include an attempt to determine relevant ownership and land use for each site through records such as deeds and maps, wherever possible. Census records for individuals associated with the site will be checked, and the names of these individuals also checked in the Texas State Historical Association's Handbook of Texas, an online source for Texas research. Should research reveal that archaeological sites might be associated with significant persons, investigators will make recommendations for further archival or archaeological work to determine NRHP/SAL eligibility.

Reporting and Curation

ERG will prepare a complete technical report describing background research, the work accomplished, and presenting the results of the archaeological survey. 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 and 36 CFR 800 (where applicable). The report will describe the Project Location conditions and cultural background, newly documented sites (including newly produced site

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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 draft report will be provided to the client for review and, following any necessary revisions by ERG, will be submitted for THC and/or State Historic Preservation Officer (SHPO) review and comment. If needed, any revisions required by the THC and/or SHPO will be addressed. The final report will be submitted to the THC for record and to client for regulatory use. All field forms, notes, and photographs will be curated at the Center for Archaeological Studies.

References Cited

Council of Texas Archeologists

- 2011 Guidelines for Professional Performance. Council of Texas Archeologists. <https://counciloftexasarcheologists.org/resources/Documents/Professional%20Performance%20Standards%20for%20Fieldwork%20and%20Analysis%20.pdf>, accessed June 29, 2024.
- 2020 Intensive Terrestrial Survey Guidelines. Standards and Guidelines Committee, Council of Texas Archeologists. <https://counciloftexasarcheologists.org/resources/Documents/CTA%20Intensive%20Survey%20Standards.pdf>, accessed April 29, 2024.

Geologic Atlas of Texas

- 2005 Texas Geological Map Data (Geologic Atlas of Texas). United States Geological Survey, File Name: txgeol.kml. <https://mrdata.usgs.gov/geology/state/state.php?state=TX>, accessed June 29, 2024.

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

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

Schoeneberger, Philip J, Douglas A Wysocki, and Ellis C Benham

- 2012 *Field Book for Describing and Sampling Soils*. Government Printing Office.

Texas Historical Commission (THC)

- 2014 Guidance for Studying Late 19th Century and Early 20th Century Sites. Texas Historical Commission, https://www.thc.texas.gov/public/upload/publications/Revised_19th_and_20th_Century_Sites.pdf, accessed June 29, 2024.
- 2024 Texas Archeological Sites Atlas. Electronic database, <http://nueces.thc.state.tx.us/>, accessed June 7, 2024.
- 2024 Texas Historical Sites Atlas. Electronic database, <http://nueces.thc.state.tx.us/>, accessed June 29, 2024.

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

- 2023 Web Soil Survey. Gridded Soil Survey Geographic (gSSURGO) Database for Texas. United States Department of Agriculture, Natural Resources Conservation Service. <https://gdg.sc.egov.usda.gov/>, accessed June 29, 2024.

Referenced Figures

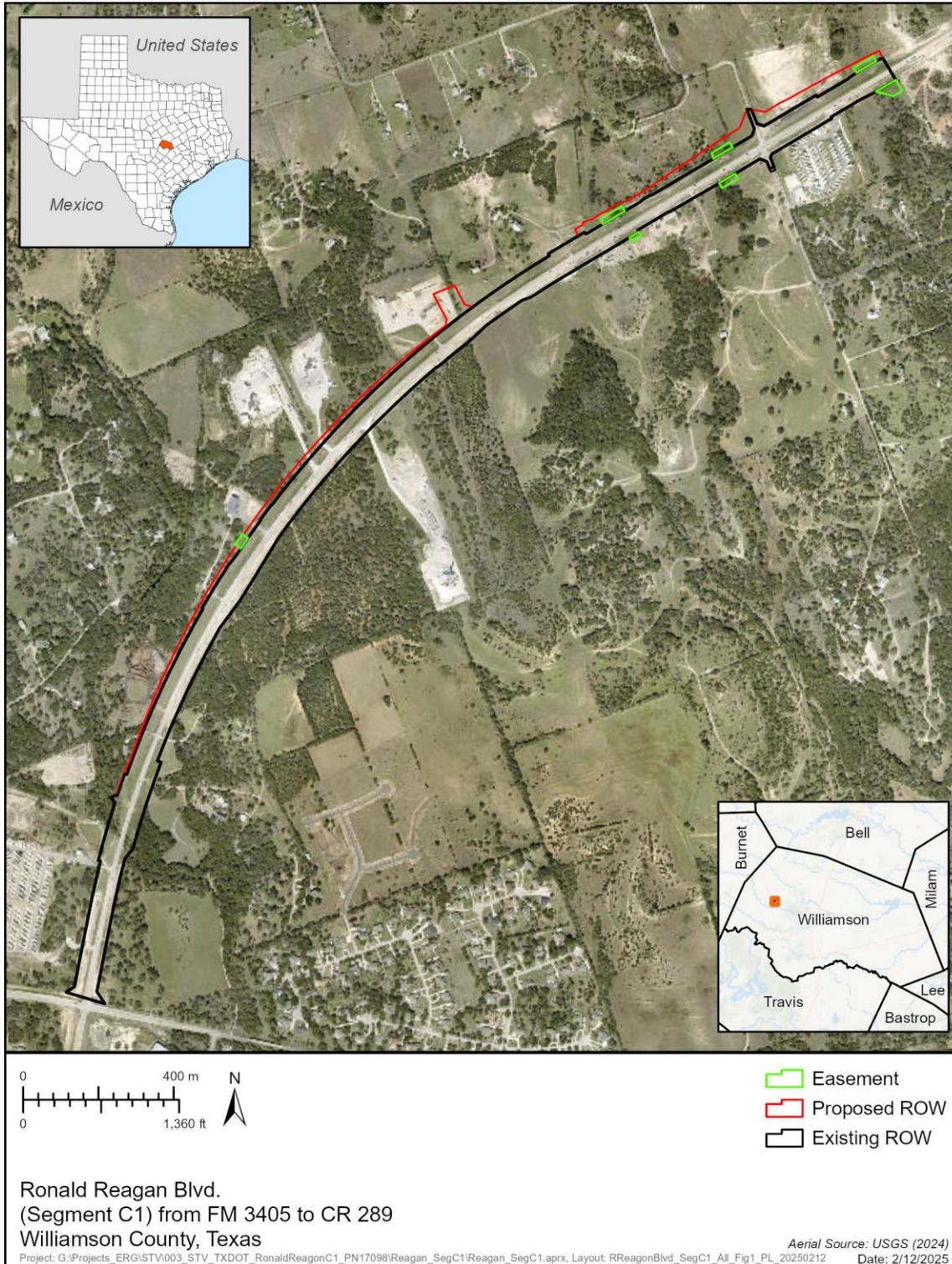


Figure 1. Project Location depicted on USGS aerial imagery map.

Williamson County

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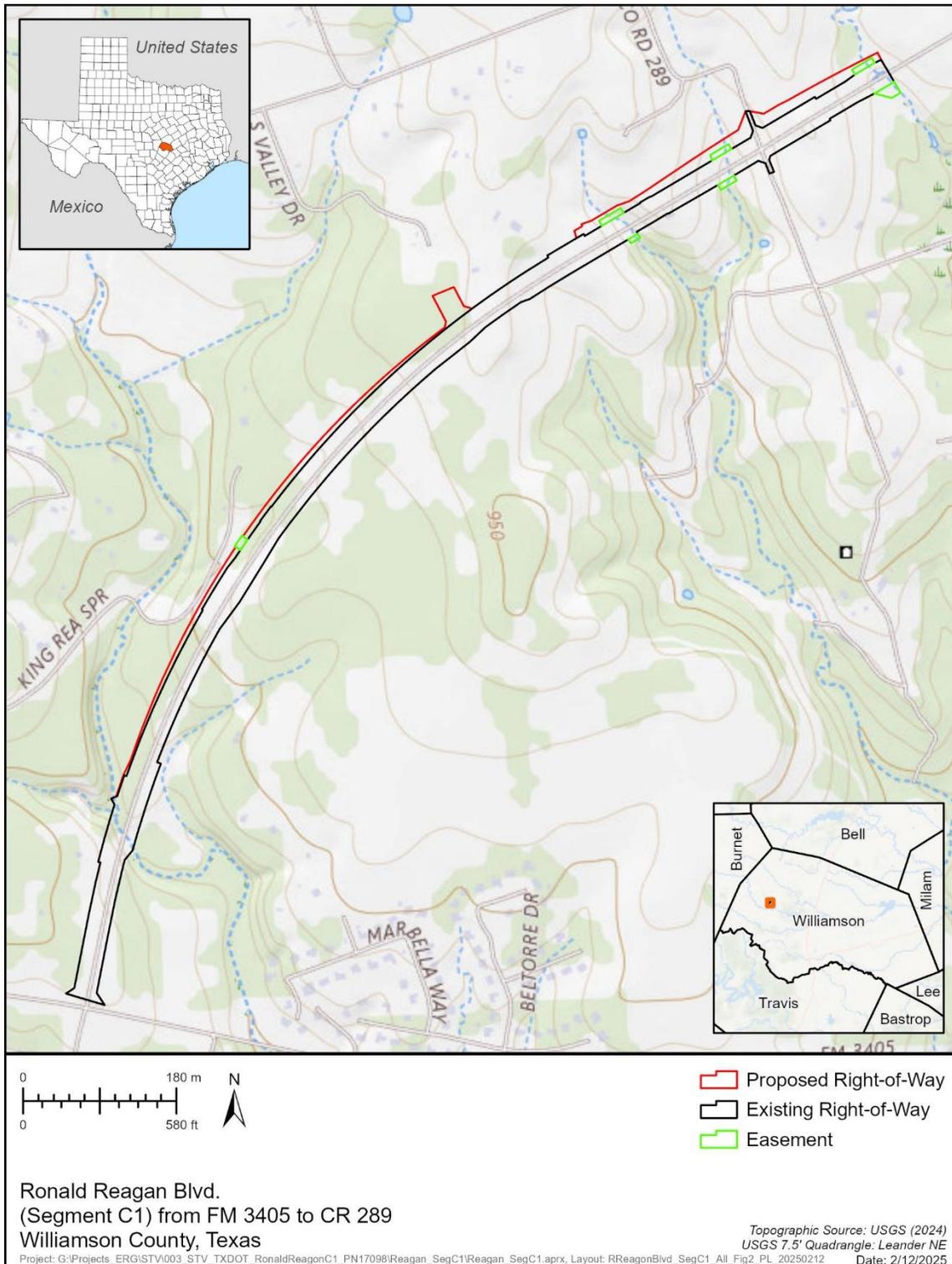


Figure 2. Project Location depicted on USGS 7.5' Quadrangle Leander NE.

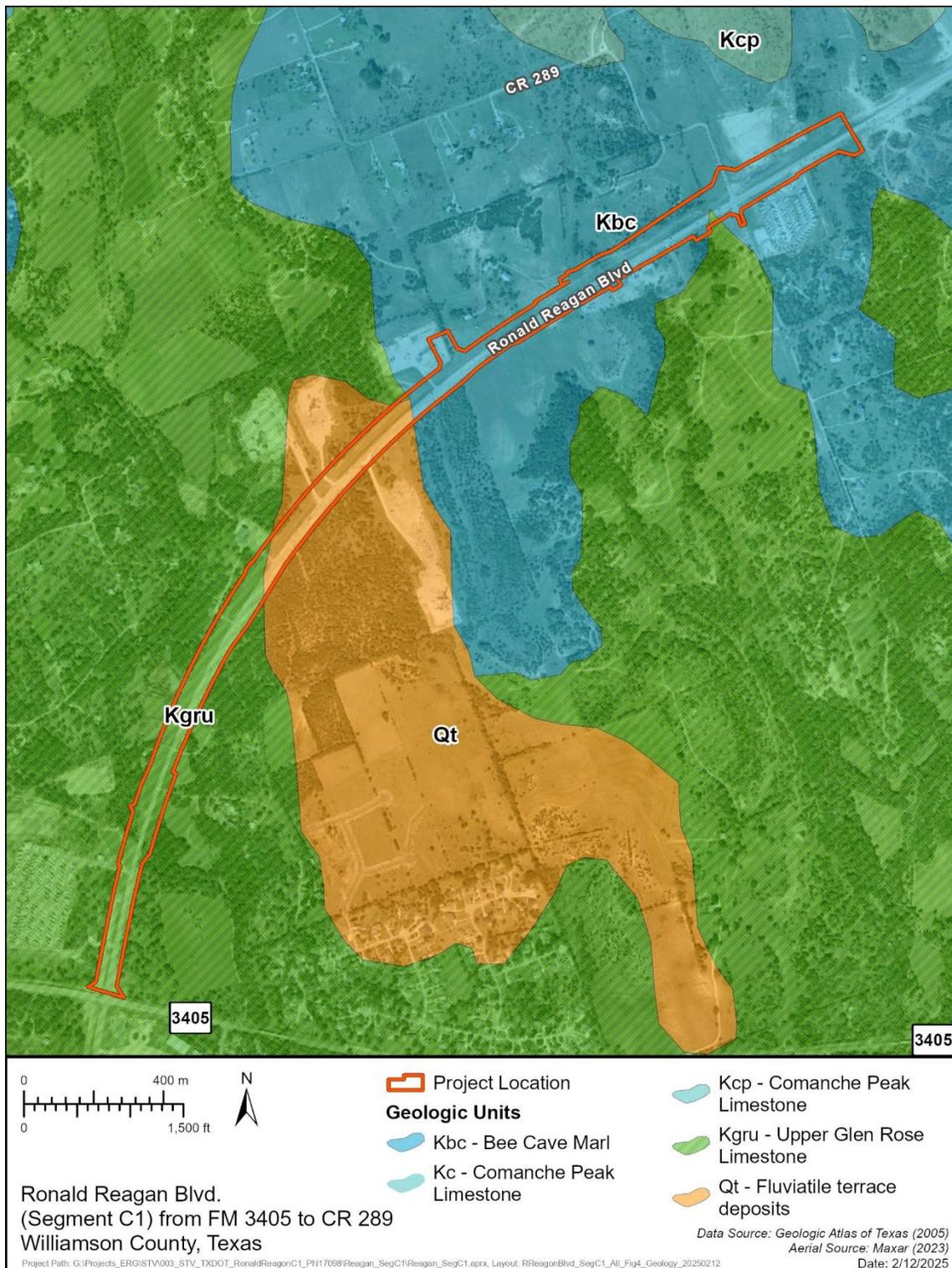


Figure 3. Geological units within the Project Location.

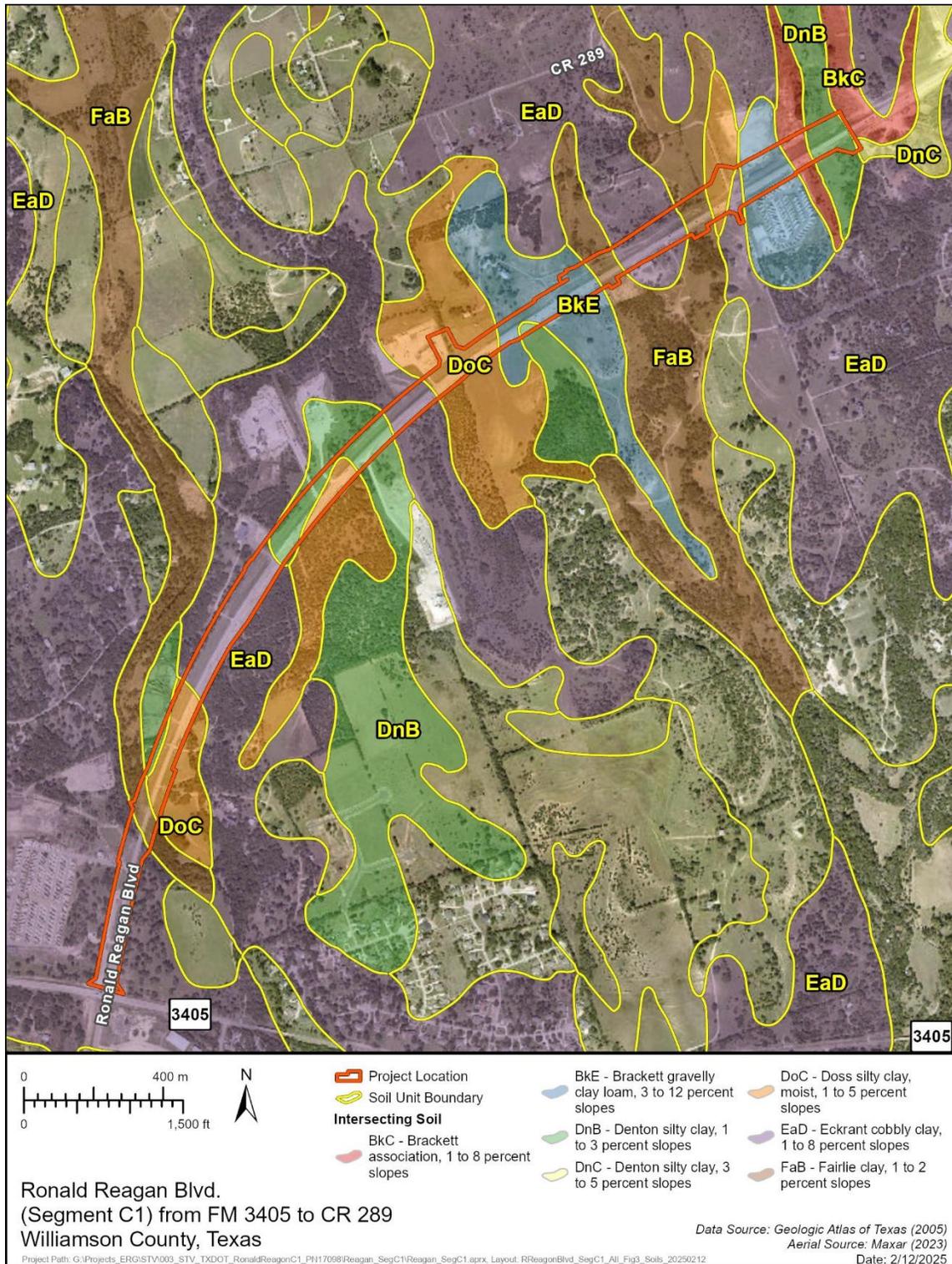


Figure 4. Mapped soil units within the Project Location.

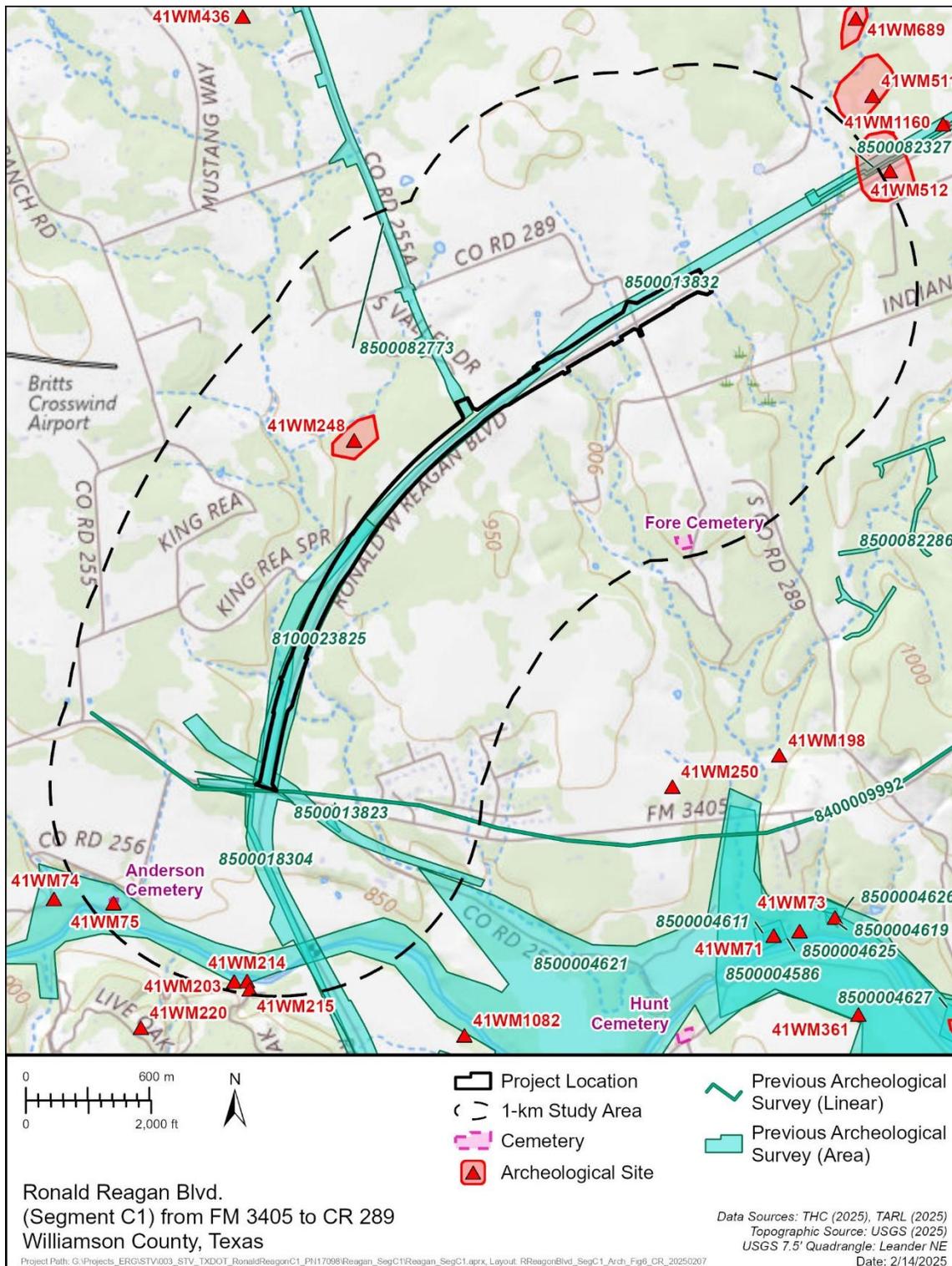


Figure 5. Previous cultural resources and archaeological surveys within 1 kilometer of the Project Location.



Figure 6. Project Location depicted on a 1953 USGS aerial photograph.

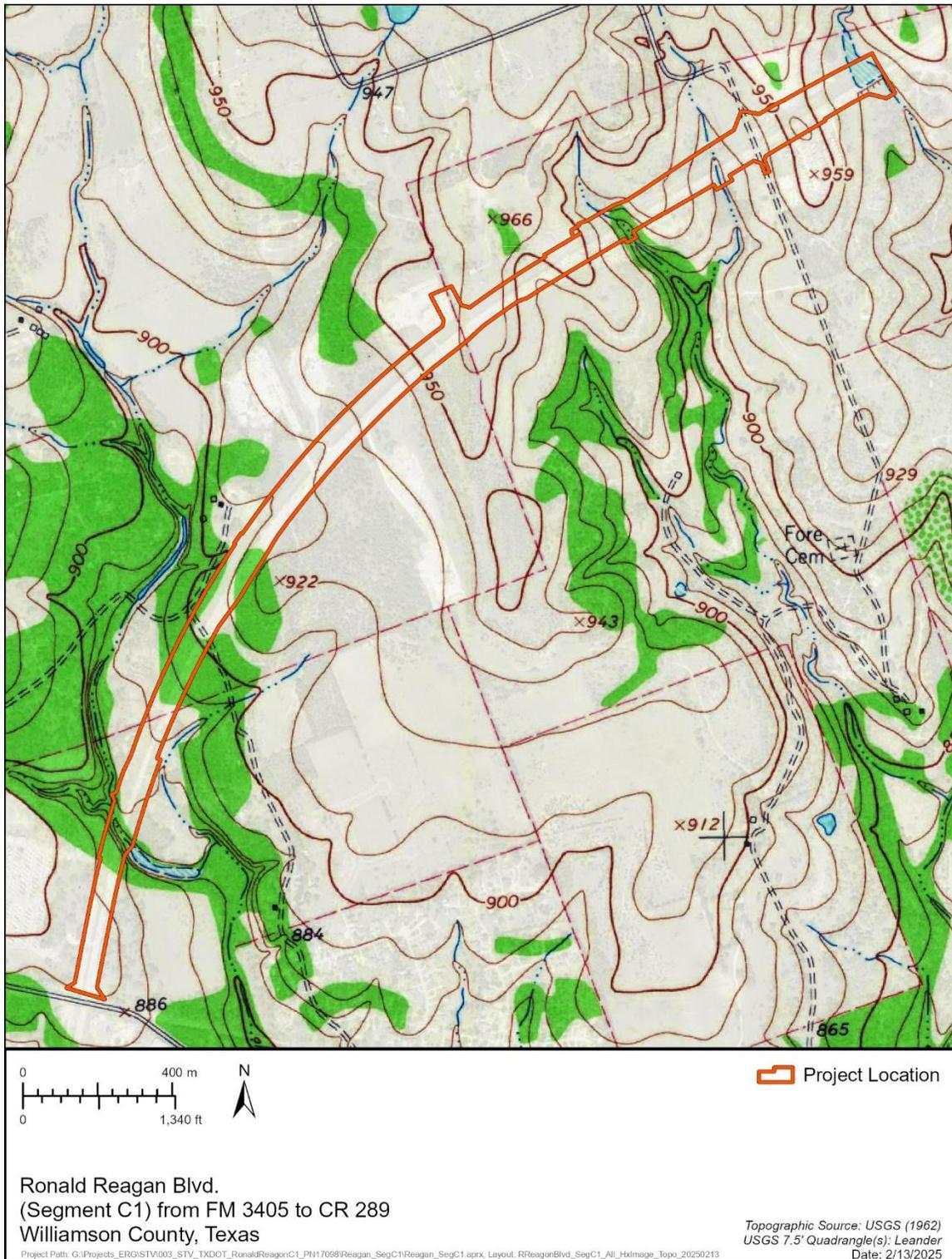


Figure 7. Project Location overlain on a 1962 USGS Leander NE 7.5' quadrangle.



Figure 8. Project Location depicted on a 1982 USGS aerial photograph.

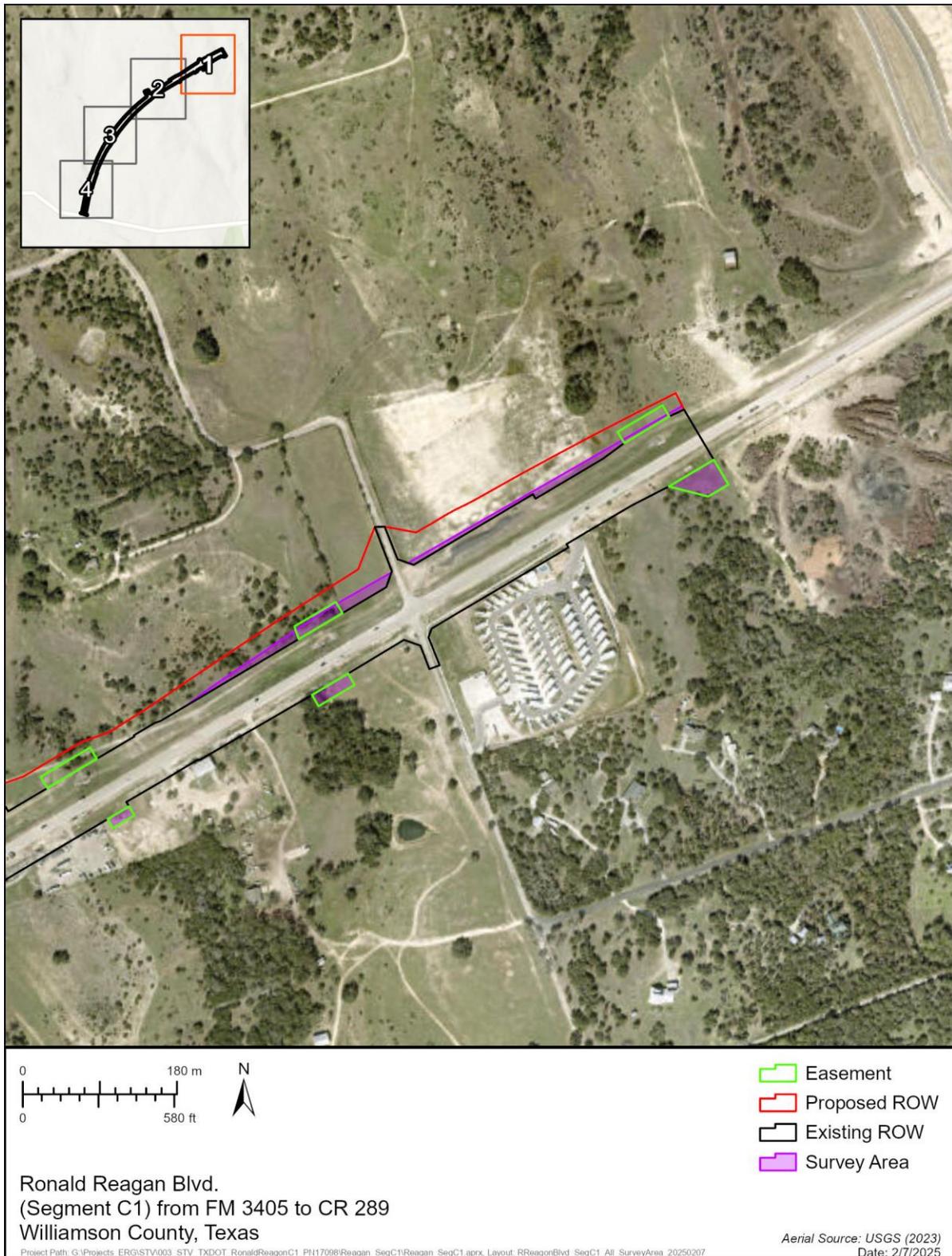


Figure 9. Survey Area to be subject to intensive archaeological survey (1 of 4).

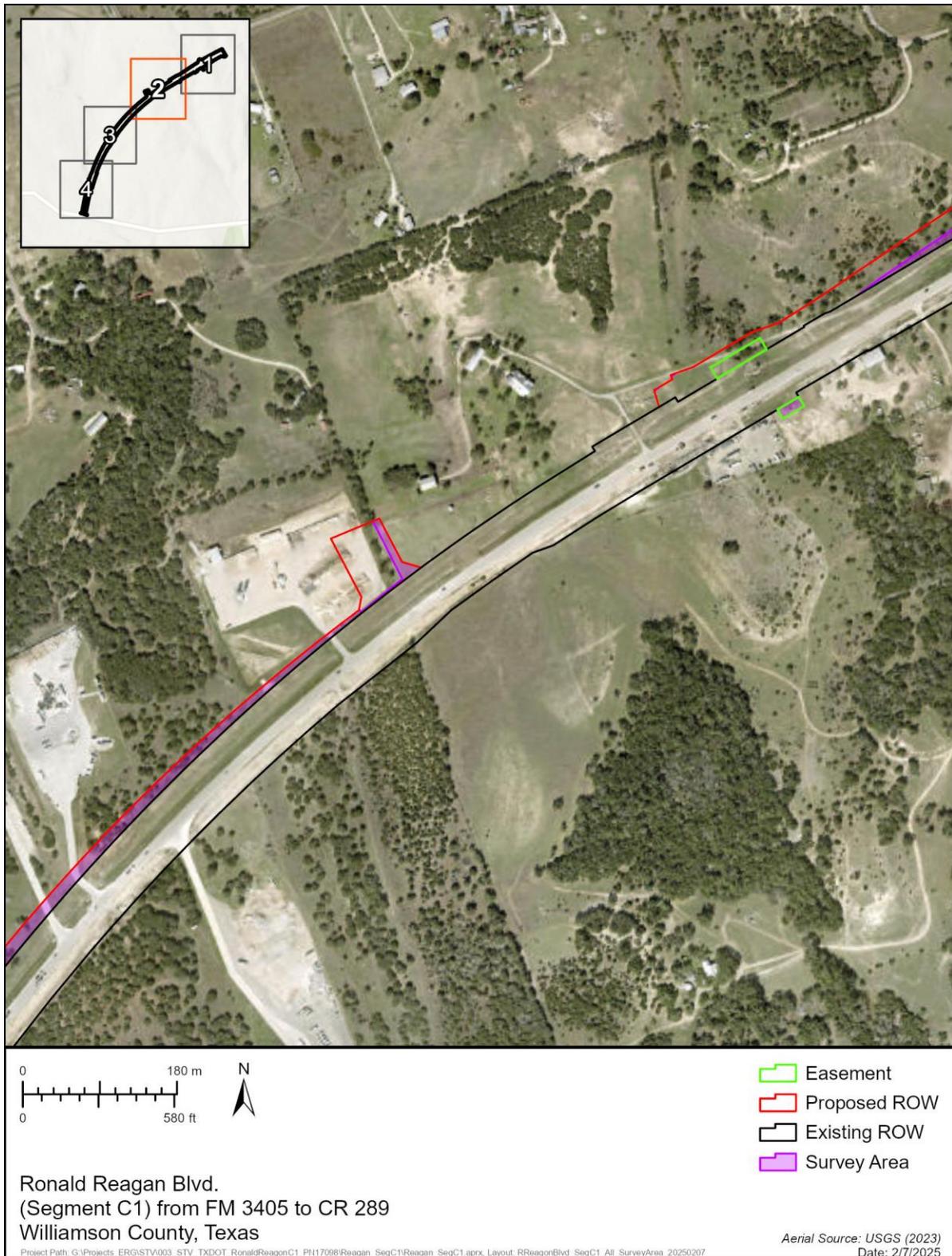


Figure 10. Survey Area to be subject to intensive archaeological survey (2 of 4).

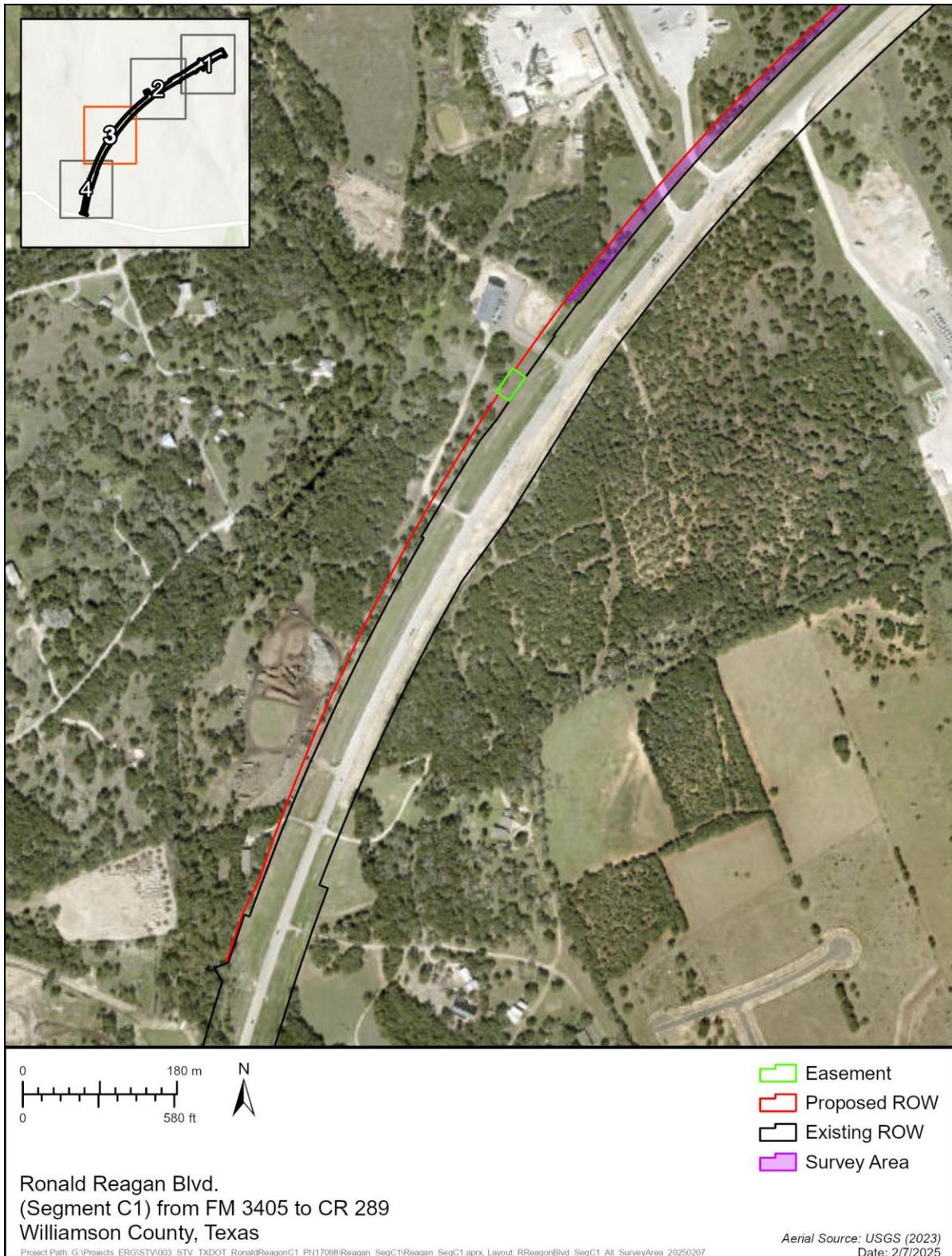


Figure 11. Survey Area to be subject to intensive archaeological survey (3 of 4).



Figure 12. Survey Area to be subject to intensive archaeological survey (4 of 4).