Attachment 1

ENVIRONMENTAL ASSESSMENT

for the proposed

Ranchtown — Talley Road 138 kV Transmission Line Project in Medina and Bexar Counties, Texas

Prepared for

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OCTOBER 2024

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Acronyms and Abbreviations

AD	*anno Domini* (after Christ)
AM Radio	Amplitude Modulation Radio
BEG	Bureau of Economic Geology
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
BP	Before present
C	Candidate species
ca.	*circa* (approximately)
CAS	Center for Archeological Studies
CCN	Certificate of Convenience and Necessity
CFR	Code of Federal Regulations
CHU	Critical Habitat Unit
CLF	Civilian Labor Force
CMP	Coastal Management Program
CMZ	Coastal Management Zone
CPS Energy	City Public Service Board
CR	County Road (e.g., CR 171)
CSJ	Control Section Job
DoD	Department of Defense
EA	Environmental Assessment
EAA	Edwards Aquifer Authority
EAPP	Edwards Aquifer Protection Program
e.g.	*exempli gratia* (for example)
EMST	Ecological Mapping Systems of Texas
EOID	Element Occurrence Identification number
EPA	United States Environmental Protection Agency
ERCOT	Electric Reliability Council of Texas
ESA	Endangered Species Act
et al.	*et alia* (and others)
FAA	Federal Aviation Administration
FCC	Federal Communication Commission
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Policy Act
FM	Farm-to-Market Road (e.g., FM 471)
FM Radio	Frequency Modulation Radio
FPPA	Farmland Protection Policy Act
GIS	Geographic Information System
GLO	Texas General Land Office
Halff	Halff Associates, Inc.
HPA	High Probability Area
HTC	Historic Texas Cemetery
i.e.	*id est* (that is)
IH	Interstate Highway (e.g., IH 20)
IPaC	Information for Planning and Conservation (USFWS)
ISD	Independent School District

kcmil	thousand circular mils
kV	kilovolt (1,000 Volts)
LRR	Land Resource Region
LWCF	Land and Water Conservation Fund Act
MBTA	Migratory Bird Treaty Act
MLRA	Major Land Resource Area
MVA	Megavolt-amperes
NDD	Natural Diversity Database
NCED	National Conservation Easement Database
NEPA	National Environmental Policy Act
NESC	National Electric Safety Code
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPS	National Parks Service
NRCS	Natural Resources Conservation Service (an agency of the USDA)
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit
NWSRS	National Wild and Scenic Rivers System
OHP	Office of Historic Preservation
OTHM	Official Texas Historical Markers
PE	Proposed Endangered
PELA	Pre-existing Landing Areas
Project	Howard Road – Leon Creek 138 kV Phase 2 Transmission Line Project
PUC	Public Utility Commission of Texas
PURA	Public Utility Regulatory Act
ROW	Right-of-Way
RRC	Railroad Commission of Texas
RTHL	Recorded Texas Historic Landmark
SAL	State Antiquities Landmark
SARA	San Antonio River Authority
SAWS	San Antonio Water System
SCS	Soil Conservation Service (agency was renamed NRCS, see above)
Section 404	Section 404 of the Clean Water Act
SGCN	Species of Greatest Conservation Need
SH	State Highway
SHPO	State Historic Preservation Office
spp.	Species (plural)
SWPPP	Stormwater Pollution Prevention Plan
T	State Listed Threatened Species
TAC	Texas Administrative Code
TARL	Texas Archeological Research Laboratory
TASA	Texas Archeological Sites Atlas
TCEQ	Texas Commission on Environmental Quality
TDC	Texas Demographic Center

TEA	Texas Education Agency
THC	Texas Historical Commission
THSA	Texas Historical Sites Atlas
TLC	Texas Land Conservancy
TLTC	Texas Land Trust Council
TNC	The Nature Conservancy
TNRIS	Texas Natural Resources Information System
TPWC	Texas Parks and Wildlife Code
TPWD	Texas Parks and Wildlife Department
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
US	United States
U.S.	United States
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
var.	Variation
WHAB	Wildlife Habitat Assessment

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Scope of Project

The City of San Antonio (San Antonio or City), acting by and through City Public Service Board (CPS Energy) proposes to construct a new single-circuit 138 kilovolt (kV) transmission line. The Ranchtown – Talley Road 138 kV Transmission Line Project (Project) begins at the existing CPS Energy-owned Ranchtown Substation, which is located south of State Highway (SH) 16 (Bandera Road), 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continues 12.11 miles to the existing CPS Energy-owned Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for 10.80 miles, the Project will add a new 138 kV transmission line circuit primarily utilizing existing structures within an existing transmission line corridor that has a vacant position to accommodate the new circuit (Vacant Position Segment). For the remaining 1.31 miles of the new 138 kV transmission line, an existing single-circuit transmission line corridor will be expanded with additional right-of-way (ROW) to accommodate new structures capable of supporting the existing and new circuit (Rebuild Segment). Each of these project endpoints are shown relative to the local road network and county boundaries on **Figure 1-1**. The existing and proposed ROW necessary to safely operate the Project on private property will be approximately 100 to 150 feet in width depending on the location. Subject to appropriate regulatory approvals for the Project, the Project is anticipated to be in service by the summer of 2027.

Because the Project will be constructed, owned, and operated by CPS Energy outside the municipal boundaries of San Antonio, CPS Energy will present the Public Utility Commission of Texas (PUC) with an application to amend its Certificate of Convenience and Necessity (CCN) that includes route evaluation and cost information for the Project. CPS Energy retained Halff Associates, Inc. (Halff) to prepare this Environmental Assessment (EA) to support CPS Energy's CCN application to be submitted to the PUC. This report has been prepared to provide information relating to and to address the requirements of Section 37.056(c)(4)(A)-(D) of the Texas Utilities Code, PUC Procedural Rules Section 22.52(a)(4), PUC Substantive Rules Section 25.101, and the PUC CCN application form for a proposed transmission line. This report may also be used in support of local, state, or federal permitting activities that may be required for the Project.

To assist Halff in the evaluation of the Project, CPS Energy provided Halff with information regarding the need, construction practices, and ROW requirements for the Project. CPS Energy also provided information regarding the engineering and design requirements for the EA.

Following this section describing the Project, this document includes an explanation of the EA methodology (**Section 2.0**), a description of the existing environmental and social conditions in the study area (**Section 3.0**), and an evaluation of expected environmental impacts of the route proposed in the CCN application (proposed Project route) (**Section 4.0**). A discussion of effort to solicit information from local, state, and federal officials and agencies (**Section 5.0**), description of the public involvement program (**Section 6.0**), a list of report preparers (**Section 7.0**) and bibliographical references used in preparing this report (**Section 8.0**) are also provided. The appendices include copies of agency correspondence (**Appendix A**), public participation meeting information (**Appendix B**), as well as an environmental and land use constraints map (**Appendix C**).

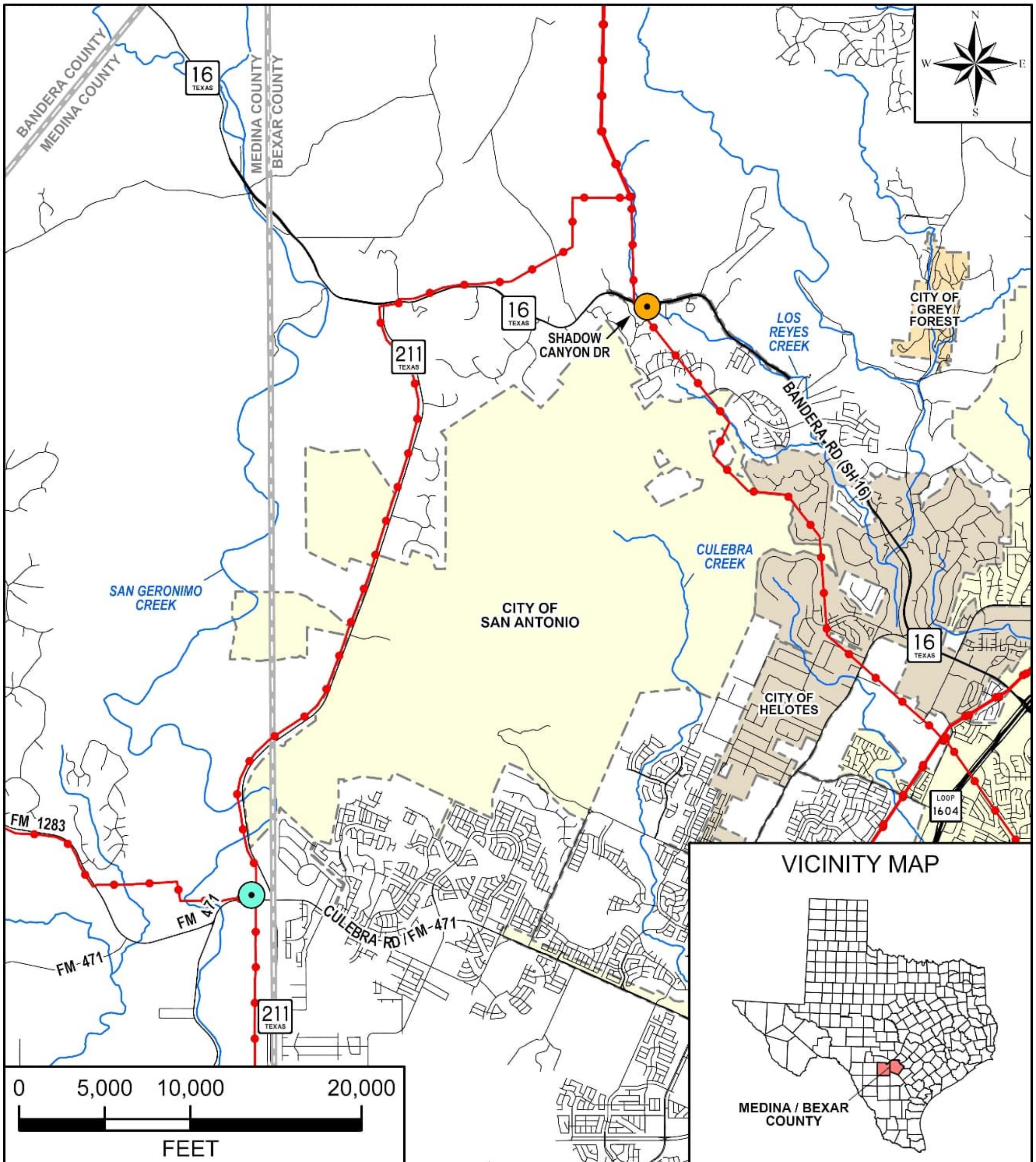

FIGURE 1-1. PROJECT LOCATION MAP

RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

RANCHTOWN SUBSTATION
COUNTY BOUNDARY
EXISTING TRANSMISSION LINE
ROAD
TALLEY ROAD SUBSTATION
CITY LIMITS
STREAM / CREEK

SOURCE: TNRIS, 2024

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1.2 Purpose and Need

The proposed project is needed to increase the load-serving capability of the far western portion of the CPS Energy transmission system to accommodate increasing customer load growth in the area, including new large customer loads. The Project is one in a suite of projects that constitute the Rio Medina Project that was presented to the Electric Reliability Council of Texas (ERCOT) in October 2023. ERCOT endorsed the Project as part of the Rio Medina Project on February 16, 2024.

1.3 Description of Proposed Design

A general description of the transmission line design is provided below. Some details of the proposed installation will be determined following approval of the route.

1.3.1 Transmission Line Design

Beginning from the Talley Road Substation, for 10.80 miles (the Vacant Position Segment), the transmission line will be installed on the vacant position of existing CPS Energy 345 kV structures. CPS Energy has existing ROW of 150 feet in width in association with the existing structures and associated 345 kV circuit that is sufficient to accommodate constraints and to meet engineering clearance specifications for the safe operation of this portion of the Project.

For the remaining 1.31 miles (the Rebuild Segment) of the Project, an existing single-circuit 138 kV transmission line corridor will be expanded with additional ROW to accommodate new single-pole structures capable of supporting both the existing and new 138 kV transmission line circuits. ROW widths in this area will need to be 100 feet to accommodate constraints and to meet engineering clearance specifications for the operation of both circuits. As the existing CPS Energy ROW is currently 50 feet in width, the ROW will be expanded to provide for the necessary 100 feet of ROW width for the safe operation of both circuits.

The Project will be operated as a 138 kV transmission line utilizing 1,272 thousand circular mils (kcmil) aluminum conductor, steel-supported Pheasant with one conductor per phase and one static wire per circuit and will be rated for operation at 1,964 amperes, yielding a nominal 469-megavolt ampere (MVA) capacity. For the entire Project, the configuration of the conductor and shield wire will provide adequate clearance for operation at 138 kV, considering icing and wind conditions. The Project will be designed and constructed to meet or exceed the specifications set forth in the current edition of the National Electric Safety Code (NESC) and will comply with all applicable state and federal statutes and regulations.

1.3.2 Typical Transmission Line Structures and Easements

As stated above, for 10.80 miles (Vacant Position Segment), starting at the Talley Road Substation, CPS Energy proposes to utilize a vacant position on the existing 345 kV monopole structures for the new 138 kV circuit. The example illustrative geometries of the existing monopole tangents, angles, and dead-end structures are shown in **Figures 1-2** through **1-4**. This portion of the Project will be constructed on existing ROW, within easements typically 150 feet in width, and spans that typically range from approximately 254 to 1,569 feet. Temporary construction easements may be needed in some areas.

The remaining 1.31 miles (Rebuild Segment) of the Project will use new 138 kV double-circuit monopole structures for typical tangent and dead-end structures. The illustrative geometries of the proposed typical tangent and dead-end structures are shown in **Figures 1-5** and **1-6**. Actual proposed structure types may differ slightly based on newer or different designs available at the time of construction. This portion of the Project will be constructed on existing and new ROW, within easements anticipated to be 100 feet in width, and spans that will range from approximately 100 to 810 feet. In some areas, easement width and span length could be more or less depending on terrain and other engineering considerations. Access easements and/or temporary construction easements may be needed in some areas.

1.3.3 Construction Schedule

Subject to appropriate regulatory approvals for the Project, CPS Energy plans to construct the Project primarily between August 2026 and May 2027. The specific construction schedule will be refined following PUC approval of the Project, as new ROW is acquired and surveyed, engineering designs are finalized, and any necessary endangered or threatened species accommodations are considered. The transmission line is proposed to be constructed by a CPS Energy contractor.

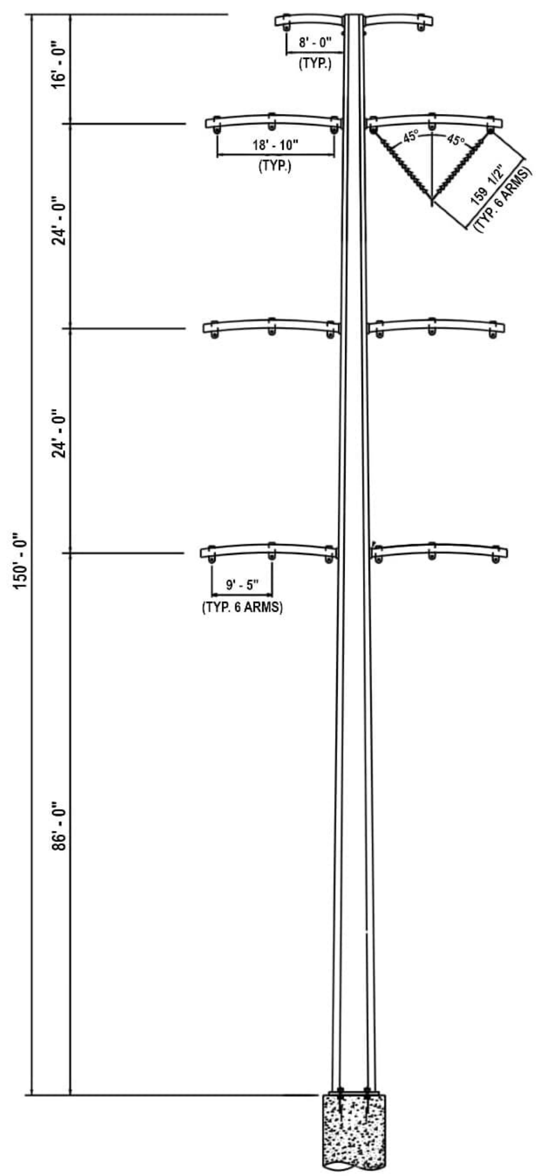

FIGURE 1-2.
TYPICAL 345 kV DOUBLE CIRCUIT TANGENT STRUCTURE
RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

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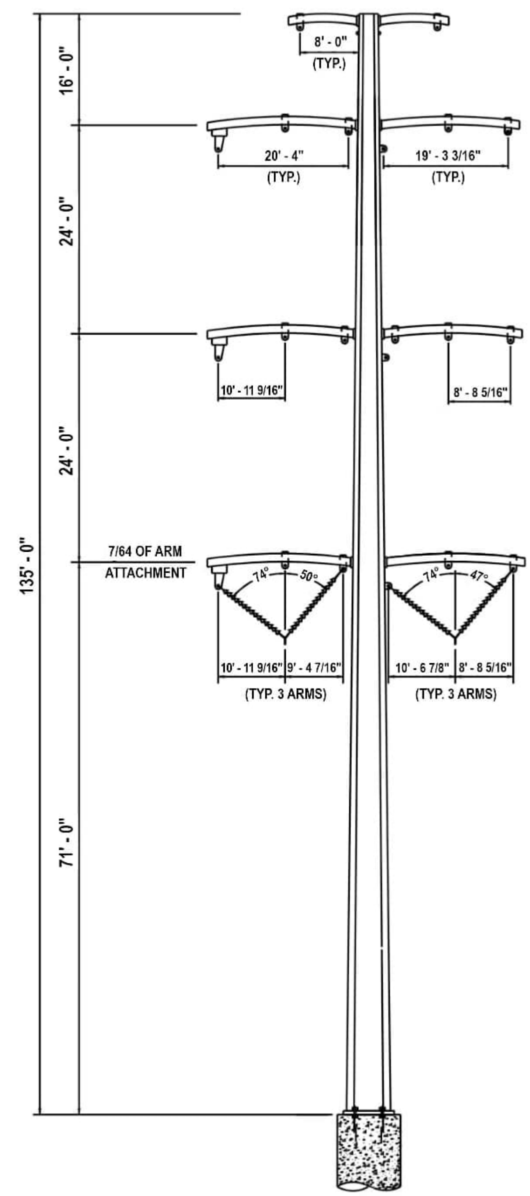

FIGURE 1-3.
TYPICAL 345 kV DOUBLE CIRCUIT RUNNING ANGLE STRUCTURE
RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

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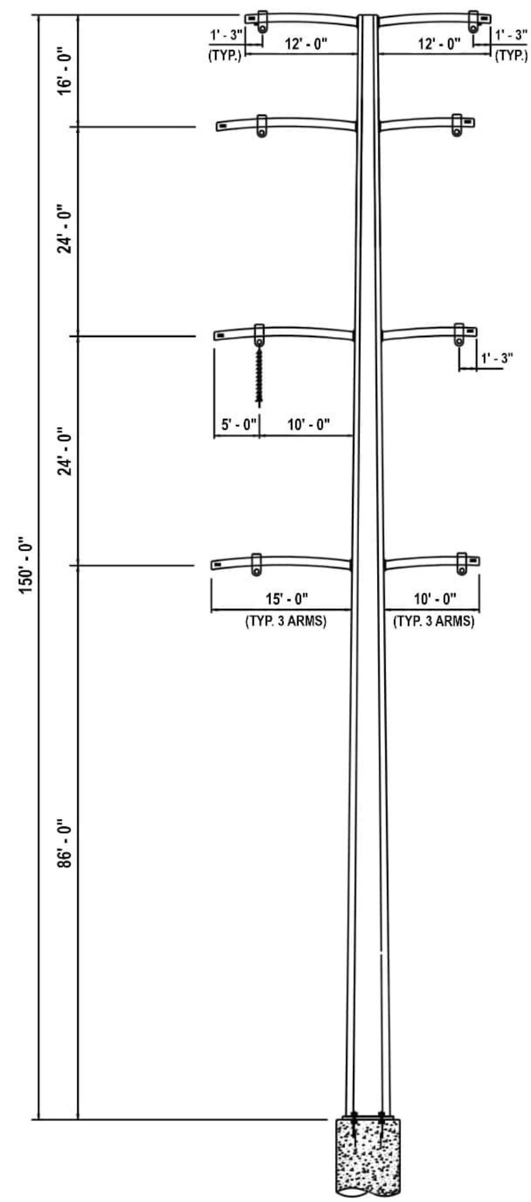

FIGURE 1-4.
TYPICAL 345 kV DOUBLE CIRCUIT DEAD-END STRUCTURE
RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

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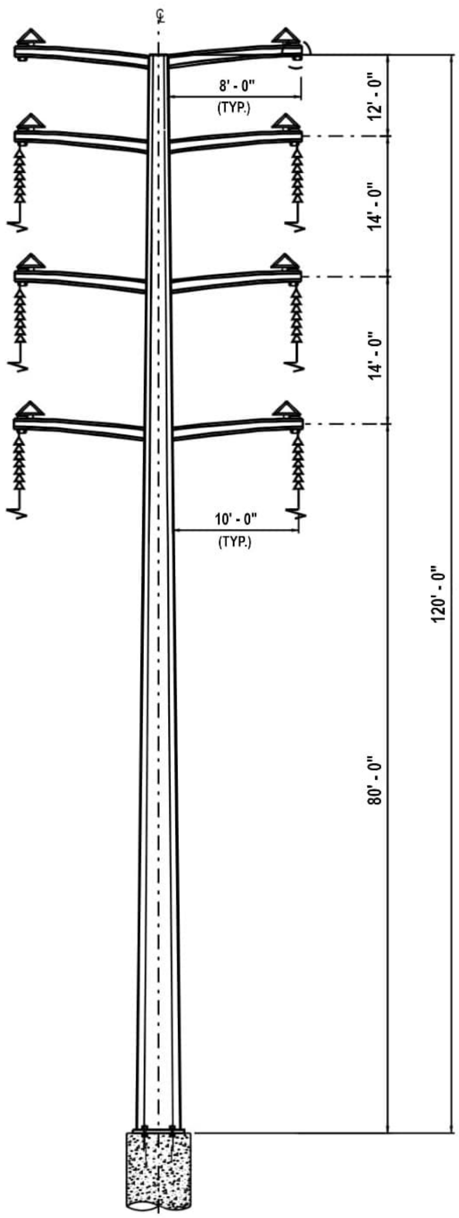

FIGURE 1-5.
TYPICAL 138 kV DOUBLE CIRCUIT TANGENT STRUCTURE
RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

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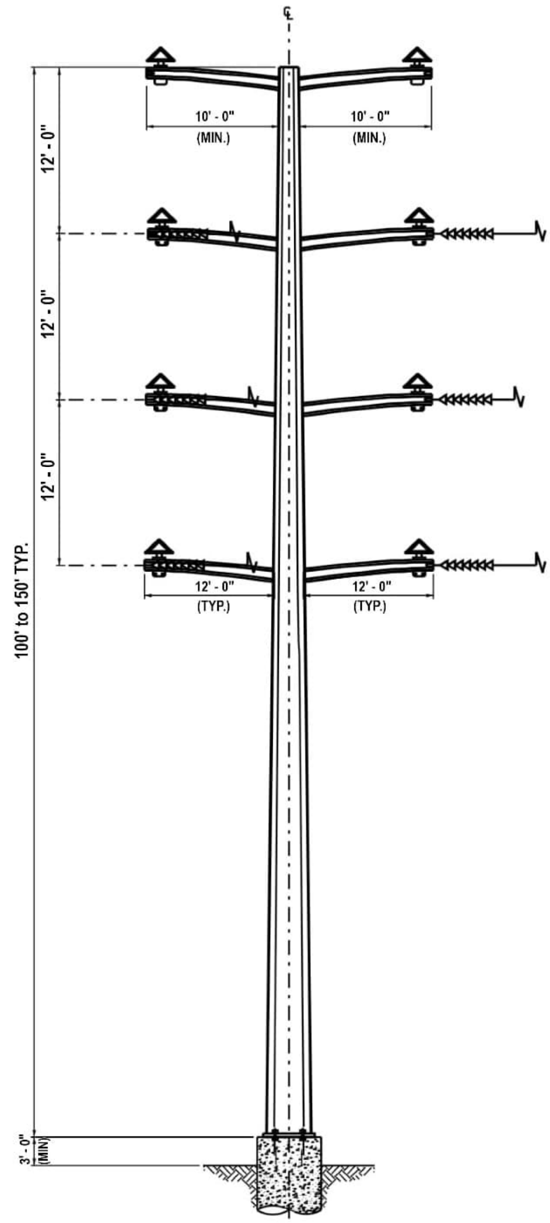

FIGURE 1-6.
TYPICAL 138 kV DOUBLE CIRCUIT DEAD-END STRUCTURE
RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

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1.4 Construction Considerations

Projects of this type require clearing, structure assembly and erection, conductor and shield wire installation, and cleanup when the Project is completed. The following criteria will be taken into consideration (these criteria are subject to potential adjustment in befitting the regulations and determinations of public agencies whose lands or managing resources may be impacted by the Project):

1.) Clearing and grading of construction areas (e.g., storage areas, setup sites, etc.) will be minimized to the extent practicable. These areas will be graded in a manner that will minimize erosion and conform to the natural topography.

2.) Soil that has been excavated during construction and not used will be evenly backfilled onto a cleared area or removed from the site. The backfilled soil will be sloped gradually to conform to the terrain and the adjacent land. All disturbed areas, as a result of construction activity, will be restored and re-vegetated with native grasses.

3.) Soil disturbance during construction will be minimized and erosion control devices will be utilized, where necessary. The Project will comply with Texas Commission on Environmental Quality (TCEQ), Bexar and Medina counties, and the City of San Antonio requirements for stormwater discharges.

4.) Clearing and construction activities in the vicinity of streambeds will be performed in a manner to minimize damage to the natural condition of the area. If new service and access roads are required, construction will take place concurrently. Roads will not be constructed on unstable slopes. Side drainage ditches and culverts will be utilized to prevent soil or road erosion as required. Construction of any roads and drainage structures required for the Project will adhere to all applicable local, state, or federal permit requirements.

5.) Tension stringing of conductors may be employed to reduce the amount of vegetation clearing before final conductor locations are established.

6.) When possible, in area of high wildlife use or in areas of known endangered or threatened species habitat, construction will be performed during seasons of low wildlife occurrence, such as between periods of peak waterfowl migrations (generally spring and fall) and during nonbreeding seasons (species dependent).

7.) If any archeological materials are uncovered during construction, work will stop in the immediate area of the discovery for evaluation.

1.4.1 Clearing and ROW Preparation

Clearing plans, methods, and practices are extremely important to minimize the potential adverse effects of transmission lines on the environment. The ROW will not be clear cut, unless necessary in very limited circumstances. Only trees and vegetation that may interfere with the construction, operation, and maintenance of the transmission line will be removed in accordance with the San Antonio tree ordinance requirements. Trees and brush that are removed will be mulched and spread in the ROW to help stabilize the ground and prevent erosion. CPS Energy does not intend to use herbicides in ROW clearing and preparation.

1.4.2 Structure Assembly and Erection

Survey crews will stake or otherwise mark structure locations. Construction crews will install structures by excavating holes and placing a reinforced concrete drilled pier foundation. After the foundations have cured sufficiently, crews will set the structures and install the conductor and shield wire suspension assemblies. Since a large amount of vehicular traffic will occur during this operation, construction crews will take care to minimize impacts to the ROW by minimizing the number of pathways traveled.

1.4.3 Conductor and Shield Wire Installation

The conductors and shield wires are typically installed via a tensioning system. Conductors and shield wires are pulled by ropes and held taut by a tensioner to prevent contact with the ground and other potentially damaging objects. Temporary guard structures will be installed at points where the transmission line crosses overhead electric power lines, overhead telephone lines, roadways, or other areas requiring sag. After the wire is pulled, it is placed in suspension and dead-end clamped for permanent attachment. In some areas, use of helicopters may be utilized for conductor and shield wire installation.

1.4.4 Cleanup

The cleanup operation typically involves returning disturbed areas to as close to the original contour as possible, the removal of debris, and the restoration of any items damaged by construction of the project. Upon the completion of the construction work, all scrap, trash, excavated materials, waste materials, and debris resulting from construction of the transmission line will be promptly removed. All construction equipment and materials will be removed from the site, and waste disposal will be conducted in a legal manner. All disturbed areas will be re-vegetated with native grass seed mixture.

1.5 Maintenance Considerations

Following construction, CPS Energy will periodically inspect the transmission line ROW, structures, and line to ensure the safe and reliable operation of the facilities. The completed project will require routine maintenance, including, but not limited to, the removal or pruning of trees that could pose a risk to the conductors or structures. Preservation of natural resources requires a thoughtful, comprehensive maintenance program. The following factors are key components of CPS Energy's maintenance program that will be utilized for the Project.

- Native vegetation that is important for fish and wildlife and does not pose a risk to the safe operation and maintenance of the transmission line will be permitted to grow in the ROW. Likewise, if ecologically appropriate, native grass cover and low-growing shrubs will be left in the area immediately adjacent to transmission structures. Where grading is necessary, access roads will be graded to the proper slope to prevent soil erosion.
- A cover of vegetation will be maintained within the ROW in a manner that minimizes erosion and does not interfere with the safe and reliable operation of the transmission facilities.
- If used, United States Environmental Protection Agency (EPA)-approved herbicides will be carefully selected to have a minimal effect on desirable indigenous plant life, and selective application will be used whenever appropriate.
- CPS Energy performs routine maintenance inspections at appropriate intervals. Routine maintenance will be performed, when possible, when access roads are firm or dry.

- Aerial and ground maintenance inspection activities of the transmission line facility will include observation of soil erosion problems, fallen timber, and conditions of the vegetation that require attention. Where necessary, based on erosion control, native shrubs or grasses may be planted.
- CPS Energy intends for the ROW to be used for compatible purposes, provided that activity does not impact public safety or hinder the safe operation and maintenance of the electrical system. The results of natural resources and cultural resources assessments will be followed as necessary and appropriate during maintenance of the ROW.

1.6 Agency Actions

A portion of the Project is located within or across the ROW of a county or state-maintained road or highway. Therefore, CPS Energy will obtain the appropriate permit(s) from the controlling government entity, if necessary. Since more than one acre will be cleared or disturbed during construction, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared, a Notice of Intent (NOI) will be submitted to the TCEQ, and a construction notice will be submitted by CPS Energy to San Antonio Water Systems (SAWS). The controls specified in each SWPPP will be monitored in the field. Permits or regulatory approvals may also be required from the TCEQ, Texas Historical Commission (THC), United States Army Corps of Engineers (USACE), and the United States Fish and Wildlife Service (USFWS). Following the identification of environmental and ROW concerns, appropriate measures will be taken during engineering design to incorporate special provisions in construction documents, specifications, or other instructions. Following completion of the design, a preconstruction conference will be held, which will include a review of these provisions. Physical inspections of the Project will be performed to assure all appropriate measures have been taken during construction.

Numerous federal, state, and local regulatory agencies and organizations have developed rules and regulations regarding the routing and potential impacts associated with the construction of the Project. This section describes the major regulatory agencies and additional issues that are involved in project planning and permitting of transmission lines in Texas. Halff solicited comments from various regulatory entities during the development of this document, and records of correspondence and additional discussions with these agencies and organizations are provided in **Section 5.0** and **Appendix A**.

1.6.1 Public Utility Commission of Texas

The PUC regulates CPS Energy's construction, installation, or extension of transmission lines in Texas outside of the San Antonio municipal boundaries under Sections 37.051(g) and 37.056(c)(4)(A)-(D) of the Public Utilities Regulatory Act (PURA). In addition to the specific legislative requirements in PURA, the PUC regulatory guidelines for routing transmission lines in Texas include:

- 16 Texas Administrative Code (TAC) 25.101(b)(3)(B) (including the PUC's policy of prudent avoidance)
- 16 TAC 22.52(a)(4)
- The PUC's CCN application requirements
- PUC precedent related to transmission line applications

This EA has been prepared by Halff in support of CPS Energy's CCN application for this Project to be filed at the PUC for its consideration.

1.6.2 United States Army Corps of Engineers

The USACE is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 United States Code [U.S.C.] § 403) and Section 404 of the Clean Water Act (33 U.S.C. § 1344) to implement these statutes. Under Section 10, the USACE regulates all work or structures in or affecting the course, condition, or capacity of navigable waters of the United States. The intent of this law is to protect the navigable capacity of waters important to interstate commerce. Under Section 404 of the Clean Water Act (Section 404), the USACE regulates the discharge of dredged and fill material into all waters of the United States, including associated wetlands. The intent of this law is to protect the waters of the United States and aquatic ecosystems from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical, and biological integrity. The Project is located within the jurisdiction of the USACE – Fort Worth District.

Review of the National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) maps indicate surface waters of the United States, and associated areas of potential wetlands may occur within the study area. Upon PUC approval of the Project, additional coordination, jurisdictional wetland verifications and permitting with the

USACE – Fort Worth District for a Section 404 Permit might be required. Based on the Project footprint and construction techniques proposed, the construction of the Project will likely meet the criteria for the Nationwide Permit (NWP) No. 57 - Electricity Utility Line and Telecommunications Activities, which applies to activities associated with any cable, line, or wire for the transmission of electrical energy. A Section 10 permit is not anticipated for this Project.

1.6.3 United States Fish and Wildlife Service

The USFWS is charged with the responsibility for enforcement of federal wildlife laws and providing comments on proposed construction projects with a federal nexus under the National Environmental Policy Act (NEPA) and within the framework of several federal laws including the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA). Halff reviewed the USFWS' Information for Planning and Conservation (IPaC) (Project Code: 2024-0139036) website for federally protected species and designated critical habitats within the study area.

Because the project area is located within Karst Zones 1-3b or within a 500-foot buffer of these Karst Zones, a karst survey must be performed in accordance with the USFWS, Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys for Endangered Karst Invertebrates in Central Texas. Should a karst feature be observed during the initial survey, a Section 10(a)(1)(A) permit would be required to facilitate excavation of the feature beyond reconnaissance excavation to determine the presence of suitable endangered karst invertebrate habitat. If suitable habitat exists, a presence/absence survey for karst invertebrates and subsequent report would be required by the Section 10(a)(1)(A) permit.

Upon PUC approval of the Project and prior to construction, surveys will be completed as determined necessary and appropriate to identify any potentially suitable habitat for federally listed species. If suitable habitat is identified, then informal consultation with the USFWS – Austin Ecological Services Field Office might need to occur to determine the need for any required species-specific surveys and/or permitting under Section 10 of the ESA.

1.6.4 Federal Aviation Administration

According to Federal Aviation Administration (FAA) regulations, Title 14 Code of Federal Regulations (CFR) 77.9 the construction of a transmission line requires FAA notification if a transmission tower structure height will exceed 200 feet or the height of an imaginary surface extending outward and upward at one of the following slopes:

- A 100:1 slope for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport described in paragraph (d) of 14 CFR 77.9 having at least one runway longer than 3,200 feet, excluding heliports;
- A 50:1 slope for a horizontal distance of 10,000 feet from the nearest runway of a public or military airport described in paragraph (d) of 14 CFR 77.9 where its longest runway is no longer than 3,200 feet in length, excluding heliports; or
- A 25:1 slope for a horizontal distance of 5,000 feet for a heliport described in paragraph (d) of 14 CFR 77.9.

Paragraph (d) of 14 CFR 77.9 includes public-use airports listed in the Airport/Facility Directory (currently the Chart Supplement), public-use or military airports under construction, airports operated by a federal agency or the Department of Defense (DoD), or an airport or heliport with at least one FAA-approved instrument approach procedure.

Notification is not required for structures that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height and will be located in a congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation.

It is not currently anticipated that the Project will require FAA notification. Following PUC approval of the Project, CPS Energy will make a final determination of the need for FAA notification, based on specific structure locations and design. If any of the FAA notification criteria are met for the approved route, a Notice of Proposed Construction or Alteration, FAA Form 7460-1, will be completed and submitted to the FAA Southwest Regional Office in Fort Worth, Texas, at least 30 days prior to construction. The result of this notification, and any subsequent coordination with the FAA, could include changes in line design and/or potential requirements to mark and/or light the structures.

The PUC CCN application also requires listing private airstrips within 10,000 feet of a route centerline.

1.6.5 Military Aviation and Installation Assurance Siting Clearinghouse

The DoD Military Aviation and Installation Assurance Siting Clearinghouse works with industry to overcome risks to national security while promoting compatible domestic energy development. Energy production facilities and transmission projects involving tall structures, such as electrical transmission towers, may degrade military testing and training operations. The electromagnetic interference from electricity transmission lines can impact critical DoD testing activities. Title 16 TAC §22.52 states that upon filing of the application, the DoD shall be notified and an affidavit attesting to the notification shall also be provided with the applicant’s proof of notice. The DoD shall also be provided written notice of the public meeting and if a public meeting is not held, the DoD shall be noticed of the planned filing of the application prior to the completion of the EA. On June 21, 2024, the DoD was contacted about the proposed Project to provide notification and to solicit any input from the DoD about the proposed Project. On July 29, 2024, the DoD was sent an invitation to the public meeting that was held for the Project. A notice of the filing of the application will be sent to the DoD Military Aviation and Installation Assurance Siting Clearinghouse when the CCN application is filed with the PUC.

1.6.6 Texas Parks and Wildlife Department

The Texas Parks and Wildlife Department (TPWD) is the state agency with the primary responsibility for protecting the state’s fish and wildlife resources in accordance with the Texas Parks and Wildlife Code (TPWC) Sections 12.0011(b), 64.003, 68.015 and 1.011. Halff solicited comment from TPWD during the scoping phase of the Project, and a copy of this EA will be submitted to TPWD when the CCN amendment application is filed with the PUC. Halff also reviewed the Texas Natural Diversity Database (NDD) records of state-listed species occurrences and sensitive vegetation communities. Upon PUC approval of the Project, additional coordination with TPWD may be necessary to determine the need for any additional surveys, and to avoid or minimize any potential adverse impacts to sensitive habitats, threatened or endangered species, and other state regulated fish and wildlife resources.

1.6.7 Floodplain Management

Floodplain maps published by the Federal Emergency Management Agency (FEMA) were reviewed to identify the mapped 100-year floodplains within the study area. The mapped 100-year floodplains are typically associated with the larger creeks and streams or within the boundaries of a river. The 100-year floodplain represents a flood event that has a one percent chance of being equaled or exceeded for any given year. The construction of the proposed transmission line is not anticipated to create any significant permanent changes in the existing topographical grades and will not significantly increase the stormwater runoff within the study area due to increased areas of impermeable surfaces. Additional coordination with the study area county floodplain administrators may be required after PUC route approval to determine if any permits or mitigation is necessary.

1.6.8 Texas Commission on Environmental Quality

The TCEQ is the state agency with the primary responsibility for protecting the state's water quality. Construction of the Project will require a Texas Pollutant Discharge Elimination System General Construction Permit (TXR150000) as implemented by the TCEQ under the provisions of Section 402 of the Clean Water Act and Chapter 26 of the Texas Water Code. Construction activities will be compliant with the TXR150000 permit conditions.

1.6.9 Texas Historical Commission

Cultural resources are protected by federal and state laws if they have some level of significance under the criteria of the National Register of Historic Places (NRHP) (36 CFR 60) or under state guidance (13 TAC § 2.26 (7-8)). Chapter 26 of the TAC requires state agencies and political subdivisions of the state to notify the THC of ground disturbing activity on public land. Halff contacted THC to identify known cultural resource sites within the study area boundary. Halff also reviewed Texas Archeological Research Laboratory (TARL) records for known locations of cultural resource sites and the THC's online, restricted-access Texas Archeological Sites Atlas (TASA) and Texas Historical Sites Atlas (THSA) for the locations of recorded cemeteries, NRHP properties, State Antiquities Landmarks (SALs) and Official Texas Historical Markers (OTHMs). Once the route is approved by the PUC, depending on a state or federal nexus, additional coordination with the THC might be required to determine the need for archeological surveys or additional permitting requirements. CPS Energy proposes to implement an unanticipated discovery procedure during construction activities. If artifacts are discovered during construction, activities will cease near the discovery, and will notify the State Historic Preservation Office (SHPO) for additional consultation.

1.6.10 Texas Department of Transportation

Halff notified the Texas Department of Transportation (TxDOT) of the Project during the development of the EA. A portion of the Project is located within or across TxDOT ROW. Therefore, once the Project is approved by the PUC, all construction activities for the Project will comply with TxDOT's rules, regulations, and policies, as applicable. Best Management Practices (BMPs) will be used as required to minimize erosion and sedimentation resulting from construction. Revegetation will occur as required under the "Revegetation Special Provisions" as contained in TxDOT Form 1023 (Rev. 9-93). Traffic control measures will comply with applicable portions of the Texas Manual of Uniform Traffic Control Devices.

1.6.11 Texas General Land Office

The Texas General Land Office (GLO) requires a miscellaneous easement for ROWs within any state-owned riverbeds or navigable streams or tidally influenced waters. Coordination with the GLO will be completed after PUC approval of the Project.

The Texas Land Commissioner administers the Texas Coastal Management Program (CMP) under the GLO, which has the responsibility for implementing the Texas CMP. This program intends to help ensure the environmental and economic well-being of the Texas coast through proper management of coastal natural resource areas. The Texas CMP has federal and state project and permit action review processes to evaluate consistency with the program. As specified in the Coastal Coordination Act of 1991, the CMP of the Texas GLO must develop and implement a comprehensive plan for managing natural resources within the CMP boundary along the Texas coastline. The CMP boundary, as defined by 31 TAC § 503.1, delineates the coastal zone of Texas. The Project is not located within the Coastal Management Zone, and no permitting action will be required under this program.

1.6.12 City of San Antonio

The Project is within the city limits and extra territorial jurisdiction of San Antonio; therefore, San Antonio has jurisdiction on tree mitigation according to San Antonio

Unified Development Code Section 35-523. Throughout the process of designing the Project and clearing the ROW for the safe and reliable operation of the transmission line, CPS Energy will make every effort to save tree canopy and heritage trees where possible. The construction of the Project will require a tree permit from San Antonio upon approval of the Project by the PUC.

1.6.13 Bexar County

Bexar County will require a Storm Water Quality Permit, Post Construction Permit, and Floodplain Permit for the construction of the Project, as applicable. These permits will be completed after PUC approval of the Project.

1.6.14 Medina County

Medina County will require a Storm Water Quality Permit, Post Construction Permit, and Floodplain Permit for the construction of the Project, as applicable. These permits will be completed after PUC approval of the Project.

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2.0 ENVIRONMENTAL ASSESSMENT METHODOLOGY

2.1 Objective of Study

The objective of this EA is to evaluate the proposed Project route for compliance with Section 37.056(c)(4)(A)-(D) of PURA, the PUC's Substantive Rules located at 16 TAC § 25.101(b)(3)(B), including the PUC's policy of prudent avoidance, the PUC's CCN application requirements, and the precedent established by the PUC for transmission line certification projects and CPS Energy's transmission line routing manual. The study methodology utilized by Halff for this EA included study area delineation based on the Project endpoints; identification and characterization of existing land use and environmental constraints; and evaluation of the proposed Project route and potential impacts in relation to the environmental constraints. Halff identified potentially affected resources and considered each during the assessment process. Input from regulatory agencies and local officials was also considered during the route evaluation process.

The proposed Project route was analyzed using evaluation criteria to determine potential impacts to existing land use and environmental resources. CPS Energy also will consider all of the certification criteria in PURA and the PUC Substantive Rules, engineering and construction constraints, grid reliability and security issues, and estimated costs to evaluate the route as it relates to the requirements of PURA and PUC Substantive Rules.

2.2 Study Area Delineation

The first step in the identification of the Project was defining a study area. This area needed to encompass the existing endpoints (i.e., the Ranchtown and Talley Road substations) and be large enough to adequately evaluate the proposed Project route in support of the CCN Application. The purpose of delineating the study area for the Project was to establish boundaries and limits for the information gathering process (i.e., identifying environmental and land use constraints). The delineation of the study area also allowed Halff to focus its evaluation within a specific area.

Halff reviewed United States Geological Survey (USGS) 1:24,000 scale topographic maps and aerial photography (NearMap, 2024) to develop and refine the study area boundary for the proposed project. Halff located and depicted the proposed Project route and project endpoints on various maps to identify major features in or near the study area, such as FM 471, SH 211, SH 16 and the Medina County/Bexar County boundary. **Figure 2-1** shows the study area boundary Halff delineated overlaid on aerial photography (NearMap, 2024). **Figure 2-2** displays the study area boundary overlaid on a USGS topographic map (USGS, 2022a). The study area is a parallelogram in shape with the longer axes (i.e., north and south boundaries) being 9.23 miles, whereas the shorter axes (i.e., east and west boundaries) traverse 4.21 miles. The study area encompasses approximately 37 square miles.

2.3 Data Collection and Constraints Mapping

After delineation of the study area, a constraints map was prepared and used to initially display resource data and constraints for the Project area. The constraints map provides a broad overview of various resource locations indicating land use or landscape features that may affect or be affected by the Project.

Several methodologies were utilized to collect and review environmental and land use data, including incorporation of readily available Geographic Information System (GIS) geospatial data with associated metadata; review of maps and published literature; and review of files and records from numerous federal, state, and local agencies. Data collected for each resource area was mapped within the study area utilizing GIS layers. The conditions of the existing environment are discussed throughout **Section 3.0** of this document. **Section 5.0** and **Appendix A** provide information regarding correspondence with agencies and officials.

Maps and/or data layers reviewed include (but are not limited to) USGS 7.5 minute topographic maps, NWI maps, TxDOT county highway maps, and recent aerial photography. Recent (July 2024) aerial photography was used as the background for the environmental and land use constraint map.

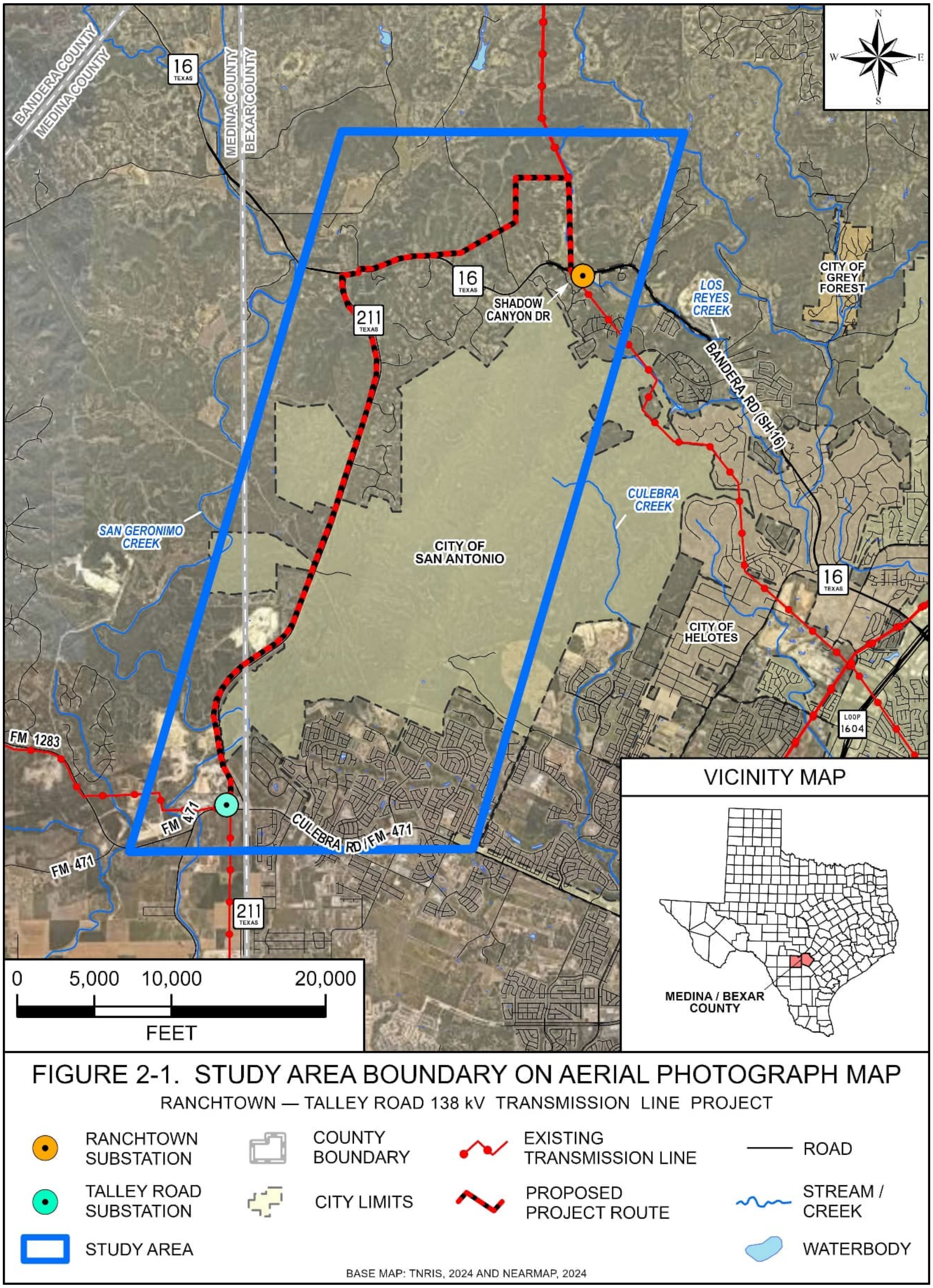

FIGURE 2-1. STUDY AREA BOUNDARY ON AERIAL PHOTOGRAPH MAP
RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

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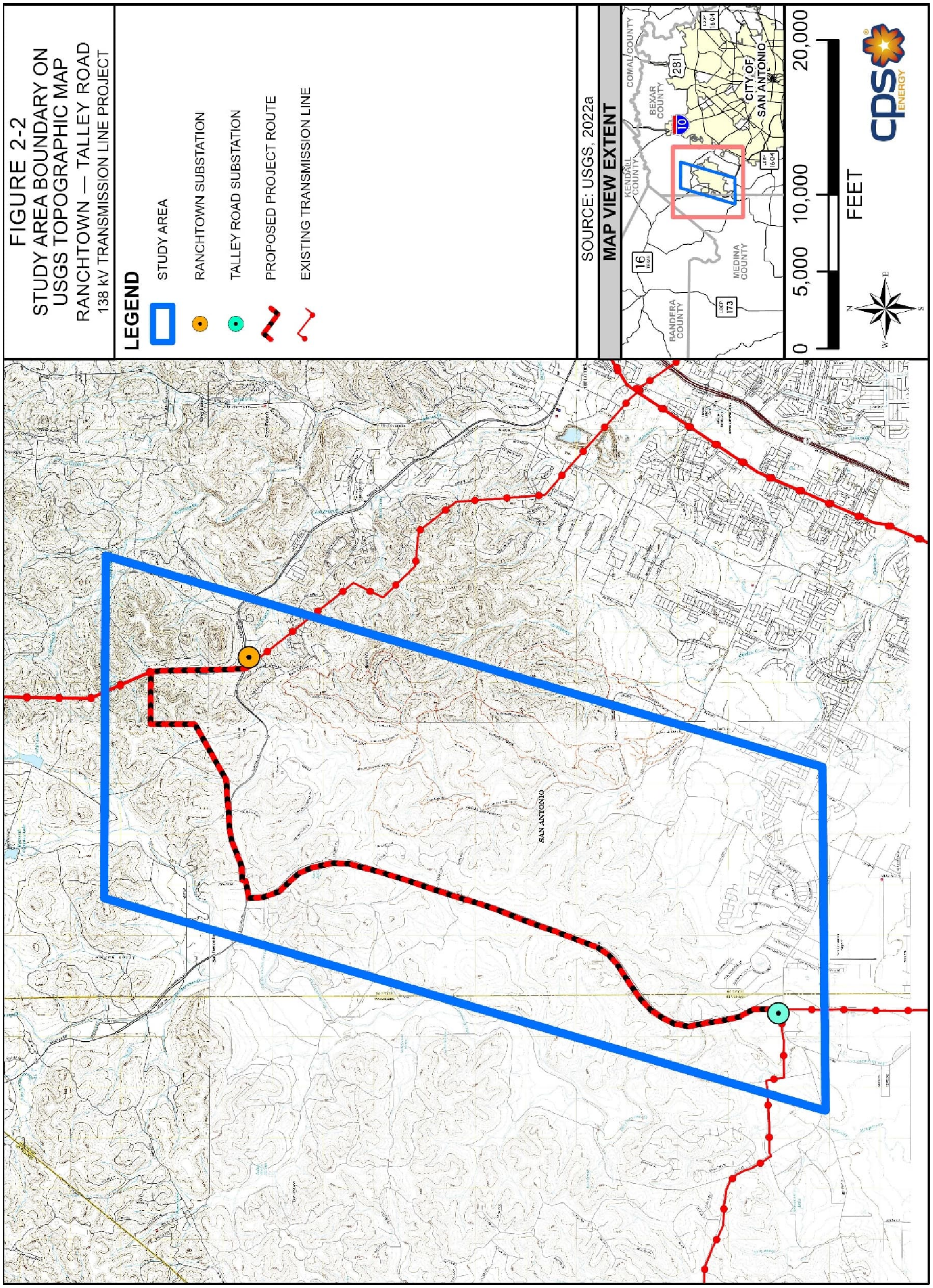
FIGURE 2-2
STUDY AREA BOUNDARY ON
USGS TOPOGRAPHIC MAP
RANCHTOWN — TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
PROPOSED PROJECT ROUTE
EXISTING TRANSMISSION LINE
SOURCE: USGS, 2022a
MAP VIEW EXTENT
COMAL COUNTY
BEXAR COUNTY
KENDALL COUNTY
MEDINA COUNTY
BANDERA COUNTY
CITY OF SAN ANTONIO
0
5,000
10,000
20,000
FEET
SAN ANTONIO

Data typically displayed on a constraints map could include, but is not limited to:

- Major roads including local, county, and Farm-to-Market Roads (FM), and United States (US), State (SH), and Interstate Highways (IH)
- Existing transmission line and pipeline corridors.
- Airports, private airstrips, and heliports.
- Cultural resources (including historical markers, NRHP sites, and cemeteries).
- Communication towers.
- Parks and recreational areas.
- Major political subdivision boundaries.
- Lakes, reservoirs, rivers, streams, canals, and ponds.
- Mobile irrigation systems.
- Wells (including identifiable water, oil, and gas).

2.4 Agency Consultation

In consultation with CPS Energy, Halff developed a list of federal, state, and local regulatory agencies, elected officials, and organizations to receive a consultation letter regarding the Project. The purpose of the letter was to inform the various agencies and officials of the Project and provide them with an opportunity to provide information regarding resources and potential issues within the study area. A list of agencies contacted, and a summary of responses are included in **Section 5.0**. Copies of all correspondence with the various state/federal regulatory agencies and local/county officials and departments are included in **Appendix A**.

2.5 Field Reconnaissance

A reconnaissance survey of the study area (from public viewpoints) was conducted by Halff personnel to confirm the findings of the research and data collection activities, identify changes in land use occurring after the date of the aerial photography, and to identify potential unknown constraints that may not have been previously noted in the data. Reconnaissance surveys of the study area were conducted by Halff on July 18, 2024, and August 12, 2024.

2.6 Public Meeting

CPS Energy and Halff presented the Project to the public at an open house meeting held on August 12, 2024. Following the open house, CPS Energy continued to receive feedback from mailed questionnaire responses, emails, and phone calls.

Based on input, comments, and information received by CPS Energy and Halff during and after the public open house meeting, Halff conducted an analysis of the public input received. The purpose of the public input analysis was to identify and evaluate the comments and additional information received at and following the public open house meeting. A summary of the formal questionnaire responses obtained at and following the open house meeting is presented in **Section 6.0**. Copies of the public open house notice letter with map, brochure, frequently asked questions, and questionnaire provided in association with the public open house meeting are provided in **Appendix B**.

2.7 Route Evaluation

The proposed Project route was reviewed by CPS Energy to determine engineering requirements, constructability, and long-term maintenance considerations. Halff reviewed the proposed Project route using the environmental and land use constraints map while considering resource sensitivity. The proposed Project route was also reviewed and evaluated consistent with Section 37.056(c)(4)(A)-(D) of PURA, the PUC CCN application, 16 TAC § 25.101, including the PUC's policy of prudent avoidance, and consistency with CPS Energy's transmission line routing manual. The proposed Project route was reviewed considering such factors as community values, parks and recreational areas, historical and aesthetic values, environmental integrity, route length utilizing and parallel to existing compatible corridors or parallel to apparent property boundaries, and prudent avoidance.

In evaluating the proposed Project route, land use and environmental evaluation criteria were developed to reflect accepted practices for routing electric transmission lines in the state of Texas (see **Table 2-1**). Evaluation criteria were further refined based on data collection and reconnaissance surveys.

The Project is shown in relation to environmental and other land use constraints on an aerial photographic base in **Figure 3-1** located in **Appendix C** (map pocket). The analysis of the Project involved inventorying and tabulating the number or quantity of each environmental criterion located along the route (e.g., number of habitable structures within 300 feet). The number or amount of each factor was measured by Halff using GIS layers, maps, recent aerial photography, and field verification from publicly accessible areas where practical. Potential environmental impacts are addressed in **Section 4.0** of this document.

Table 2-1. Land Use and Environmental Evaluation Criteria

EVALUATION CRITERIA	
Land Use	
1	Length of primary alternative route (miles)
2	Number of habitable structures[1] within 300 feet of right-of-way (ROW) centerline
3	Length of ROW using existing transmission line ROW
4	Length of ROW parallel and adjacent to existing transmission line ROW
5	Length of ROW parallel and adjacent to other existing ROW (roadways, railways etc.)
6	Length of ROW parallel and adjacent to apparent property lines (or other natural or cultural features, etc.)
7	Sum[2] of evaluation criteria 4, 5, 6
8	Percent[2] of evaluation criteria 4, 5, 6
9	Length of ROW across parks/recreational areas[3]
10	Number of additional parks/recreational areas[3] within 1,000 feet of ROW centerline
11	Length of ROW across cropland
12	Length of ROW across pasture/rangeland
13	Length of ROW across land irrigated by traveling systems (rolling or pivot type)
14	Length of route across conservation easements and/or mitigation banks (Special Management Area)
15	Length of route across gravel pits, mines, or quarries
16	Length of ROW parallel to existing pipeline ROW[4]
17	Number of pipeline crossings[4]
18	Number of transmission line crossings
19	Number of IH, US and state highway crossings
20	Number of FM or RM road crossings
21	Number of FAA registered airports[5] with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline
22	Number of FAA registered airports[5] having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline
23	Number of private airstrips within 10,000 feet of the ROW centerline
24	Number of heliports within 5,000 feet of the ROW centerline
25	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline
26	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline
27	Number of identifiable existing water wells within 200 feet of the ROW centerline
28	Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)
Aesthetics	
29	Estimated length of ROW within foreground visual zone[6] of US and state highways
30	Estimated length of ROW within foreground visual zone[6] of FM roads
31	Estimated length of ROW within foreground visual zone[6 & 7] of parks/recreational areas[3]
Ecology	
32	Length of ROW across upland woodlands/brushlands
33	Length of ROW across bottomland/riparian woodlands
34	Length of ROW across NWI mapped wetlands
35	Length of ROW across critical habitat of federally listed threatened or endangered species
36	Length of ROW across open water (lakes, ponds)
37	Number of stream and river crossings
38	Length of ROW parallel (within 100 feet) to streams or rivers
39	Length of ROW across Trinity Aquifer Recharge and Contributing Zones
40	Length of ROW across 100-year floodplains

EVALUATION CRITERIA	
Cultural Resources	
41	Number of cemeteries within 1,000 feet of the ROW centerline
42	Number of recorded cultural resource sites crossed by ROW
43	Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline
44	Number of NRHP-listed properties crossed by ROW
45	Number of additional NRHP-listed properties within 1,000 feet of ROW centerline
46	Length of ROW across areas of high archeological site potential

NOTES: All length measurements are shown in miles unless noted otherwise

1. Single-family and multi-family dwellings, and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less.
2. Length of apparent property boundaries adjacent to and paralleling existing roads or highways are not “double-counted” in the sum length of ROW paralleled of criteria 4,5, and 6.
3. Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the proposed Project route.
4. Only steel pipelines six inches and greater in diameter carrying hydrocarbons were quantified in the pipeline crossing and paralleling calculations.
5. As listed in the Chart Supplement South Central US (FAA, 2024b formerly known as the Airport/Facility Directory South Central US) and FAA, 2024a.
6. One-half mile, unobstructed. Lengths of ROW within the foreground visual zone of Interstates, US and state highway criteria are not “double-counted” in the length of ROW within the foreground visual zone of FM roads criteria.
7. One-half mile, unobstructed. Lengths of ROW within the foreground visual zone of parks/recreational areas may overlap with the total length of ROW within the foreground visual zone of interstates, US and state highway criteria and/or with the total length of ROW within the foreground visual zone of FM roads criteria.

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3.0 EXISTING ENVIRONMENT

3.1 Natural Resources/Environmental Integrity

Resource inventory data were collected for physiography, geology, soils, surface waters, wetlands, and ecological resource areas. These data were obtained from readily available sources and mapped within the study area utilizing GIS layers. Additional data collection activities consisted of file and record reviews conducted utilizing the various state and federal regulatory agencies, a review of published literature, and review of various maps and aerial photographs. Maps and data layers reviewed include USGS 7.5-minute topographic maps, aerial photography, Bureau of Economic Geology (BEG) Geologic Atlas, NWI maps, TxDOT county highway maps, and county appraisal district land parcel boundary maps.

A land use constraints map was developed that identifies the locations of environmentally sensitive areas and other land use constraints, all of which are mapped on an aerial photograph base that is shown on **Figure 3-1** located in **Appendix C** (map pocket). This assessment considered various natural resources, including local physiography, geology, and soils; all surface waters, groundwater, floodplains, wetlands, and vegetation; common wildlife, and rare, state, and federally listed threatened and endangered species. Detailed descriptions of the information obtained and reviewed during the route evaluation are provided in the following sections.

3.1.1 Physiography and Geology

The study area lies within the Balcones Canyonlands subregion of the Edwards Plateau and the Northern Blackland Prairie subregion of the Texas Blackland Prairies (Griffith et al., 2007), which are part of the Great Plains physiographic ecoregion (or “province”). The Balcones Canyonlands is a karst landscape largely defined by the fractured escarpment with intervening canyons and surrounding stairstep topography. Springs, streams, and rivers, both at the surface and subsurface, create canyons, sinkholes, and caverns (karst). The Blackland Prairie is characterized by rolling to nearly level plains. The Northern Blackland Prairie is typified by dark, rich, fine-textured, calcareous soils underlain by interbedded chalks, marls, limestones, and shales from the Cretaceous period.

Geologic units found within the study area include Cretaceous epoch units such as Edwards Limestone (Ked), Upper Glen Rose Formation (Kgru); Austin Chalk (Kau), and

Pecan Gap Chalk (Kpg); Pleistocene epoch units such as Fluviatile terrace deposits (Qt), Alluvium (Qal), and the Leona formation (Qle); and the Tertiary epoch unit of Uvalde Gravel (T-Qu) (**Figure 3-2**; USGS, 2022b). The Edwards Limestone and Upper Glen Rose Formations are both karstic limestones with numerous fossils. These geologic units constitute much of the study area. The Pleistocene and Tertiary units are almost exclusively along the southern boundary of the study area.

The study area contains two normal faults that run approximately east-northeast to west-southwest, dipping to the south. These faults make up the north and south boundaries of most of the Edwards Limestone unit. An additional four unspecified faults are within the southern portion of the study area.

Karst Zones define areas of varying likelihood for the occurrence of federally listed karst invertebrate species (USFWS, 2024a). Karst Zones are further divided into Karst Fauna Regions (KFRs), which are geographic areas delineated based on local area geology that may reduce or limit interactions between troglobite populations (USFWS, 2024a). The study area contains Karst Zones 1, 2, 3a, 3b, and 4b, and Government Canyon and Helotes KFRs (**Figure 3-3**; USFWS, 2024a). Karst Zone 1 in the Government Canyon KFR constitutes most of the study area. Additional information about karst habitat is discussed further in **Section 3.1.10**.

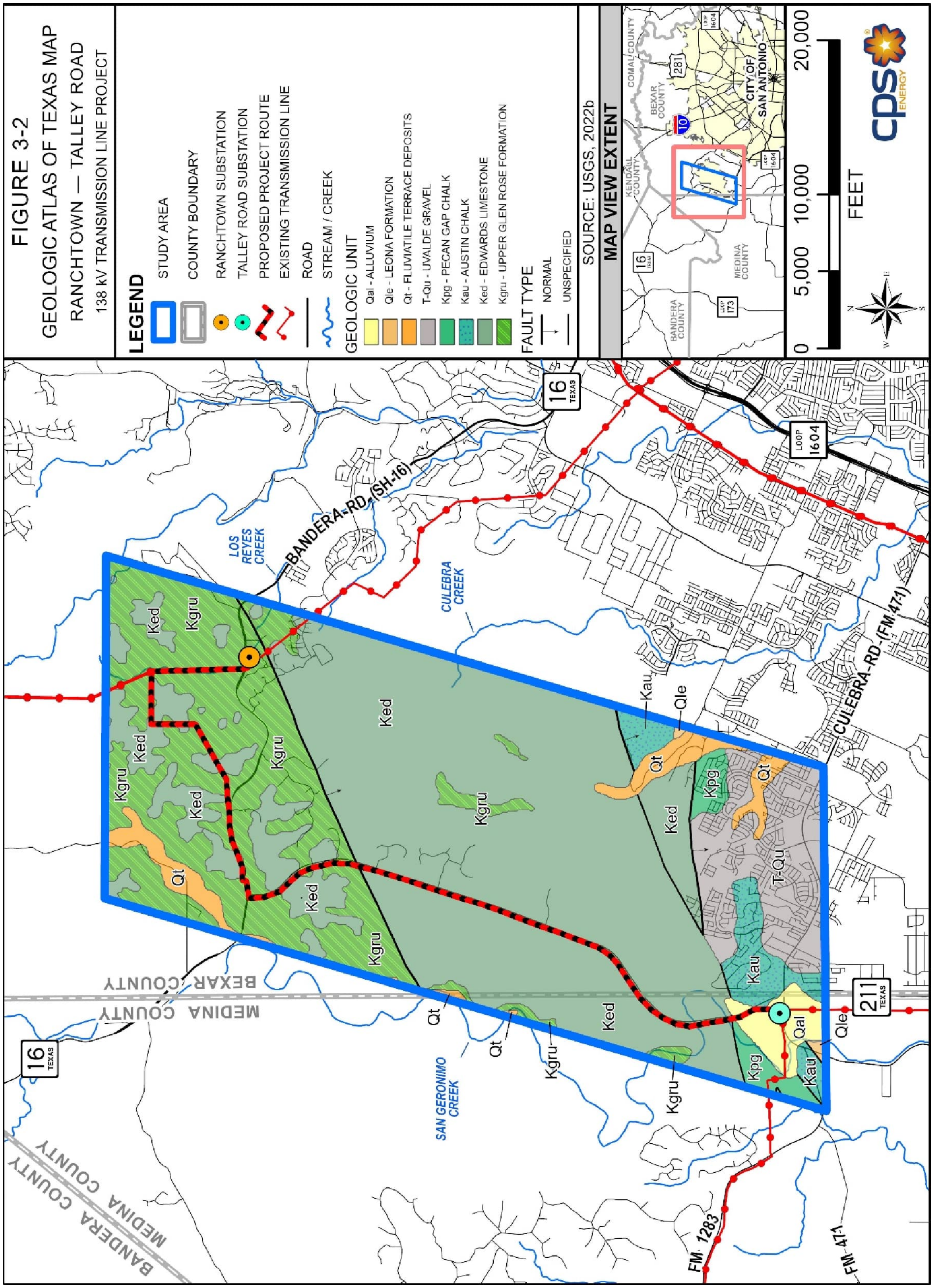
FIGURE 3-2
GEOLOGIC ATLAS OF TEXAS MAP
RANCHTOWN — TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
COUNTY BOUNDARY
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
PROPOSED PROJECT ROUTE
EXISTING TRANSMISSION LINE
ROAD
STREAM / CREEK
GEOLOGIC UNIT
Qal - ALLUVIUM
Qle - LEONA FORMATION
Qt - FLUVIATILE TERRACE DEPOSITS
T-Qu - UVALDE GRAVEL
Kpg - PECAN GAP CHALK
Kau - AUSTIN CHALK
Ked - EDWARDS LIMESTONE
Kgru - UPPER GLEN ROSE FORMATION
FAULT TYPE
NORMAL
UNSPECIFIED
SOURCE: USGS, 2022b
MAP VIEW EXTENT
CITY OF SAN ANTONIO
BEXAR COUNTY
MEDINA COUNTY
BANDERA COUNTY
KENDALL COUNTY
COMAL COUNTY
0 5,000 10,000 20,000
FEET
CPS ENERGY
BANDERA-RD (SH-16)
LOS REYES CREEK
CULEBRA CREEK
CULEBRA-RD (FM 471)
SAN GERONIMO CREEK
BEXAR COUNTY
MEDINA COUNTY
BANDERA COUNTY
FM 1283
FM 471
16
211
1604

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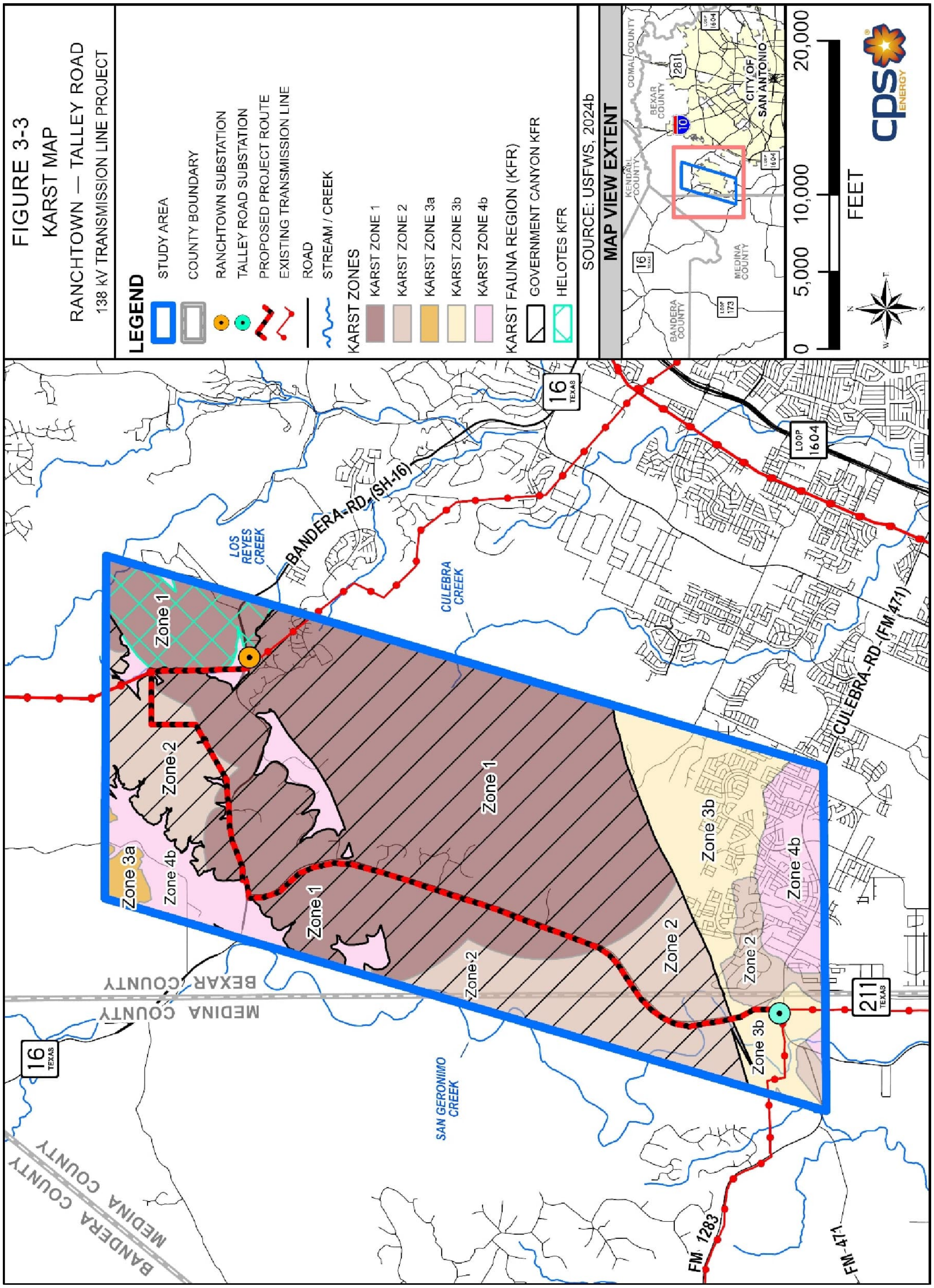
FIGURE 3-3
KARST MAP
RANCHTOWN — TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
COUNTY BOUNDARY
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
PROPOSED PROJECT ROUTE
EXISTING TRANSMISSION LINE
ROAD
STREAM / CREEK
KARST ZONES
KARST ZONE 1
KARST ZONE 2
KARST ZONE 3a
KARST ZONE 3b
KARST ZONE 4b
KARST FAUNA REGION (KFR)
GOVERNMENT CANYON KFR
HELOTES KFR
SOURCE: USFWS, 2024b
MAP VIEW EXTENT
CITY OF SAN ANTONIO
BANDERA COUNTY
MEDINA COUNTY
BEXAR COUNTY
KENDALL COUNTY
COMAL COUNTY
0
5,000
10,000
20,000
FEET
BANDERA RD (SH-16)
LOS REYES CREEK
CULEBRA CREEK
CULEBRA RD (FM 471)
SAN GERONIMO CREEK
BEXAR COUNTY
MEDINA COUNTY
BANDERA COUNTY
FM 1283
FM 471
Zone 1
Zone 2
Zone 3a
Zone 3b
Zone 4b

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3.1.2 Soils

Soil Associations

A desktop analysis using publicly available data from the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS, 2024) was conducted to determine mapped soil units occurring within the study area and their characteristics. In 2006, the NRCS completed its Digital General Soil Map of the United States, which consists of a broad inventory and mapping of general soil association units. Soil associations are main patterns of soils defined and delineated based on criteria, such as soil texture, parent material, slope, characteristics of horizons in the soil profile, and degree of erosion (NRCS, 2017). The NRCS project merged soil association data from myriad county soil surveys into a seamless national data set. This soil mapping approach resolved a basic challenge in using individual county soil surveys, which often reflect different soil names for similar soils from one county to the next.

A brief description of each soil association's general characteristics is provided in **Table 3-1**, and **Figure 3-4** shows the NRCS-mapped soil associations within the study area. The soil associations in the seamless NRCS map were compared graphically with the soil associations defined and mapped in the county-level soil surveys for Bexar and Medina counties (NRCS, 2024; Soil Conservation Service [SCS], 1973). The column on the right side of **Table 3-1** shows the names of the corresponding soil association(s) from the county soil surveys, where applicable.

Table 3-1. Soil Descriptions for Mapped Units within the Study Area

Soil Association Map Unit # - Name [1]	Study Area Percent	Description of Soil Association [2]	County Soil Survey: Soil Association Name [3]
s7300 - Rock outcrop-Eckrant	83	Shallow, well-drained soils over limestone bedrock, found on rocky uplands and ridges, with minimal soil depth.	Eckrant-Rock outcrop
s7221 - Lewisville-Branyon	17	Upland level to gently sloping soils, very deep and well drained, ancient loamy and clayey sediments and alluvium.	Lewisville clay and Branyon clay

SOURCES: NRCS, 2017; SCS, 1973.
NOTES:
[1] Map unit # and name correspond with the number and name assigned to each association in the 2006 NRCS Digital General Soil Map of the U.S., as shown for the study area in **Figure 3-4**.
[2] The description used for the soil association is a composite of descriptions for the soil associations from individual county soil surveys that correspond geographically with the 2006 NRCS Digital General Soil Map.
[3] This column shows the soil association names from the county soil surveys that correspond to the 2006 NRCS Digital General Soil Map.

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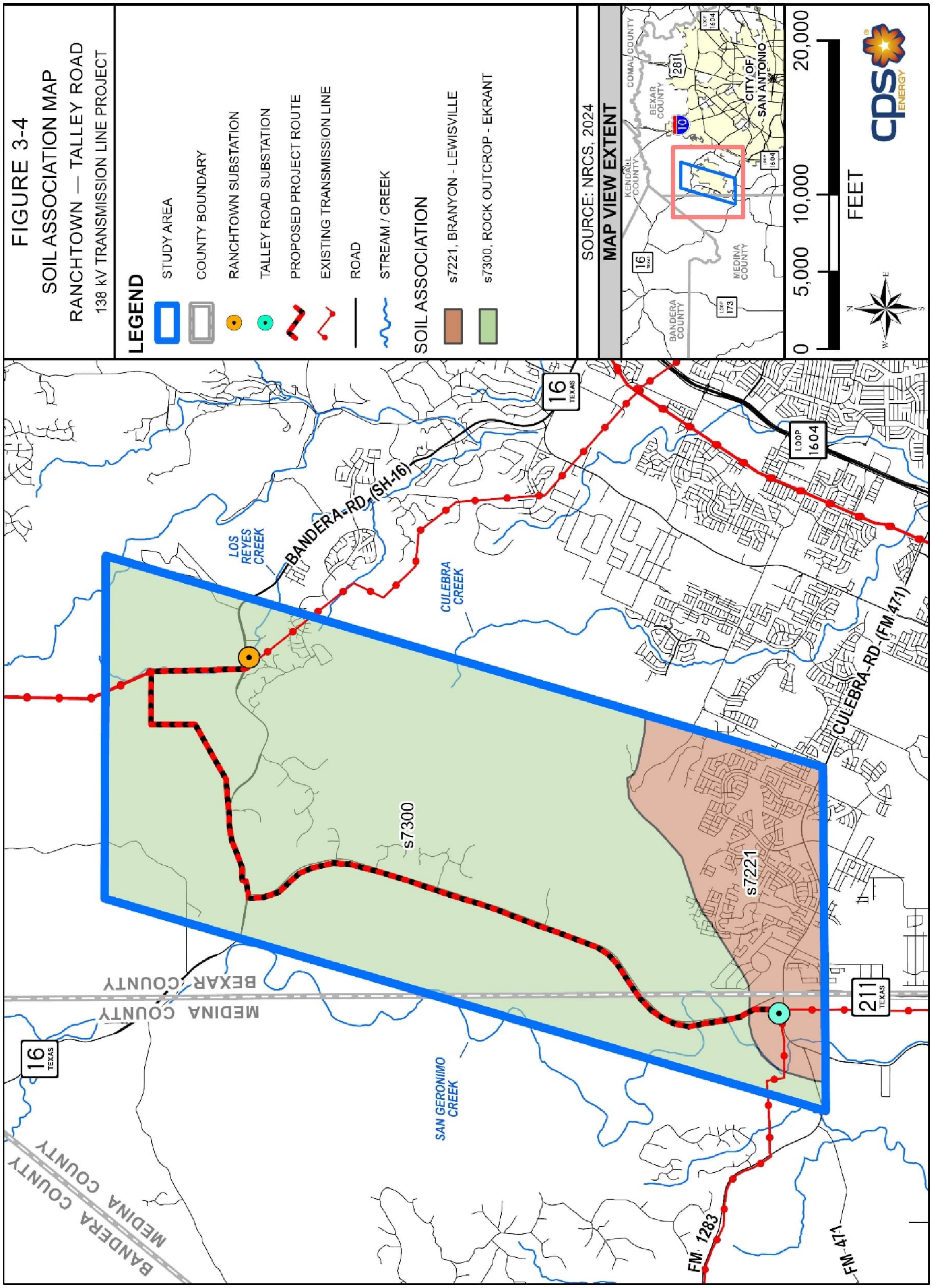
FIGURE 3-4
SOIL ASSOCIATION MAP
RANCHTOWN — TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
COUNTY BOUNDARY
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
PROPOSED PROJECT ROUTE
EXISTING TRANSMISSION LINE
ROAD
STREAM / CREEK
SOIL ASSOCIATION
s7221, BRANYON - LEWISVILLE
s7300, ROCK OUTCROP - EKRANT
SOURCE: NRCS, 2024
MAP VIEW EXTENT
BANDERA COUNTY
MEDINA COUNTY
KENDALL COUNTY
BEXAR COUNTY
COMAL COUNTY
CITY OF SAN ANTONIO
0
5,000
10,000
20,000
FEET
BANDERA-RD (SH-16)
LOS REYES CREEK
CULEBRA CREEK
CULEBRA-RD (FM 471)
s7300
s7221
BEXAR COUNTY
MEDINA COUNTY
SAN GERONIMO CREEK
BANDERA COUNTY
MEDINA COUNTY
FM 1283
FM 471
16
211
1604

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Two distinct soil associations were identified within the study area, each associated with upland environments. Soil textures across these series range from silty clay loams and loams to clay (NRCS, 2017; SCS, 1973). The surface geology described earlier underpins the soils observed, with soil maps generally mirroring the area's geological characteristics.

Prime Farmland

In the Farmland Protection Policy Act (FPPA), federal law defines prime farmland as “land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor...” (7 U.S. Code Section 4201(c)(1)(A)). These lands are distinguished by their soil quality, growing season, and moisture supply, which together enable the economic production of sustained high yields when managed properly, including the use of appropriate water management practices. Additionally, certain lands that do not currently meet the criteria for prime farmland due to insufficient water management or natural moisture may be classified as prime farmland if irrigated.

The study area includes many soil units protected by the FPPA. Soil units classified as Prime Farmland occupy 9.8 percent of the total study area. Soil units designated as Prime Farmland if irrigated occupy 3.4 percent of the study area. Soil units designated as Farmland of Statewide Importance occupy 0.9 percent of the total study area. Soils classified as Farmland of Statewide Importance, if irrigated occupy 1.0 percent of the total study area. The soil units identified in each of these prime farmland categories are shown in **Table 3-2**.

Table 3-2. Mapped Units of Prime Farmland Soils within the Study Area

Map Unit	Prime Farmland Category	Location in Study Area
Branyon clay, 0 to 1 percent slopes (HtA)	Prime Farmland	Southern portion of study area
Branyon clay, 1 to 3 percent slopes (HtB)	Prime Farmland	Southern portion of study area
Lewisville silty clay, 0 to 1 percent slopes (LvA)	Prime Farmland	Southern portion of study area
Lewisville silty clay, 1 to 3 percent slopes (LvB)	Prime Farmland	Southern portion of study area
Divot clay loam, occasionally flooded (Do)	Prime Farmland	Southern portion of study area
Knippa clay, 0 to 1 percent slopes (KnA)	Prime Farmland	Southern portion of study area
Knippa clay, 1 to 3 percent slopes (KnB)	Prime Farmland	Southern portion of study area
Anhalt clay, 0 to 2 percent slopes (Ca)	Prime Farmland if irrigated	Patches in the northwestern and western portions of the study area
Krum clay, 1 to 5 percent slopes (Kr)	Prime Farmland if irrigated	Patches in the northwestern and western portions of the study area

Map Unit	Prime Farmland Category	Location in Study Area
Pratley clay, 0 to 3 percent slopes (PrB)	Prime Farmland if irrigated	Patches in the northwestern and western portions of the study area
Castroville clay loam, 0 to 1 percent slopes (CsA)	Farmland of Statewide Importance	Southwestern corner of the study area
Atco loam, 1 to 3 percent slopes (KaB)	Farmland of Statewide Importance if Irrigated	Southwestern corner of the study area
Atco loam, 0 to 1 percent slopes (AtA)	Farmland of Statewide Importance if Irrigated	Southwestern corner of the study area
Atco loam, 1 to 3 percent slopes (AtB)	Farmland of Statewide Importance if Irrigated	Southwestern corner of the study area
Sabenyo clay loam, 1 to 5 percent slopes (SaC)	Farmland of Statewide Importance if Irrigated	Southwestern corner of the study area

While these soils are designated for agricultural importance, it is essential to note that land use is influenced by factors beyond soil quality, such as existing development. A review of aerial imagery indicates that some areas of prime farmland and farmland of statewide importance have been developed for commercial and residential purposes, limiting their availability for agricultural use.

3.1.3 Surface Water

The study area lies within the Medina Subbasin of the San Antonio Basin (USGS, 2006, 2024b). The San Antonio Basin is relatively modest in terms of size and average annual watershed yield, with its yields further diminished by its reliance on groundwater (TWDB, 2024).

A review of aerial imagery, Texas Water Development Board (TWDB) GIS data (TWDB, 2024), the National Hydrography Dataset (USGS, 2006, 2024a), and USFWS (2024b) sources identified numerous aquatic features, as depicted in the figures in **Section 3.0**. The study area is intersected by 50 streambeds, identified as being seasonally flooded or intermittently exposed, with 25 of these containing permanently flooded segments (USFWS, 2024b; USGS 2024a). These streambeds could be functioning as ephemeral streams or upland swales depending on their hydrological characteristics, which have not yet been determined by a formal survey (i.e., waters of the U.S. delineation). Additionally, there is a single perennial stream, a tributary to San Geronimo Creek, which intersects the northwestern portion of the study area (USFWS, 2024b; USGS, 2024a). This unnamed tributary flows southwest, ultimately discharging into the Medina River approximately 32 miles downstream (TCEQ, 2024a, 2024b).

State legislation in 1997 (see Texas Water Code Section 16.051) modified the state-wide water resources planning process by authorizing regional planning groups to recommend ecologically unique river and stream segments to the Texas State Legislature in regional and state water plans (TWDB, 2022b). A primary purpose for this approach is to ensure that future water impoundments do not destroy stream segments that are considered unique under specified designation criteria (see 31 TAC Section 357.8), which include biologic functions and habitat for threatened and endangered species. State designation as ecologically unique would also prevent state agencies or municipalities from acquiring property or easements that would destroy the ecological values forming the basis for the designation. Part of the process for designating ecologically unique stream segments requires regional water planning groups to coordinate with TPWD about candidate stream segments (Freese and Nichols, Inc. and LBG - Guyton Associates, Inc., 2021; TWDB, 2022a). No stream within or immediately adjacent to the study area is designated as ecologically significant under the relevant designation criteria (TPWD, 2005).

Section 303(d) of the Clean Water Act authorizes EPA to assist states, territories and authorized tribes in listing impaired waters and developing Total Maximum Daily Loads (TMDLs) for these waterbodies. A TMDL establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality (EPA, 2023a). No streams within the study area are listed by the TCEQ under Section 303(d) of the Clean Water Act as being monitored for impairment or having other water quality concerns (TCEQ, 2022, 2024a).

3.1.4 Groundwater

A review of TWDB databases and TCEQ was conducted to identify potential groundwater including the presence of two major aquifers within the study area. The Edwards Aquifer and the Trinity Aquifer, both of which are designated by the EPA as sole source aquifers (EPA, 2023b). The Edwards Aquifer, located in the Balcones Fault Zone in south-central Texas, ranges in depth from 200 to 600 feet and is characterized by highly permeable dissolved limestone. This permeability makes the aquifer’s water levels and spring flows particularly sensitive to changes caused by rainfall, drought, and pumping (TWDB, 2024). The Trinity aquifer, which serves as the catchment area for the Edwards Aquifer, intercepts some surface flow above the Edwards Aquifer Recharge Zone. No minor aquifers are present within the study area (TWDB, 2024).

Furthermore, the study area lies within the regulated recharge and contributing zones of the Edwards Aquifer (Edwards Aquifer Authority [EAA], 2024a), and District 4 of the EAA (2024b) jurisdictional area which includes critical area where water from precipitation and surface streams enters the aquifer through fractures, faults, and sinkholes (TCEQ, 2024c). The EAA has regulatory jurisdiction in Bexar County and authorizes groundwater withdrawals for municipal, industrial, and irrigation purposes. The study area is located within the Subchapter E and F Regulated Area as defined by the EAA Rules. Subchapter E of the rules states that in addition to notification requirements of the TCEQ, a responsible party shall notify the EAA of any unauthorized discharges or spills into surface waters. Subchapter F states that the responsible party of a facility storing more than 1,000 gallons of regulated substances in containers of less than 500 gallons, that are located on the Recharge Zone must register the facility with the EAA (2023). Due to the study area's location within the regulated Edwards Aquifer Zones, the proposed project must be reviewed and approved by the TCEQ (2024c) Edwards Aquifer Protection Program prior to start of construction.

The presence of the Trinity Glen Rose Conservation District, the EAA, and the Medina County Conservation District in the study area underscores the importance of groundwater management in this region, as these groundwater conservation districts are responsible for protecting the water resources of the Trinity and Edward's Aquifers, particularly the Glen Rose Formation, which transmits water through surface streams to the Edwards Aquifer Recharge Zone (TAGD, 2024; Trinity Glen Rose Conservation District, 2024). These conservation districts play a vital role in managing water use to ensure sustainable groundwater levels, safeguarding both aquifers' capacity to meet the region's water needs. Being located within these zones means that land use, water management practices, and any development activities must be carefully regulated to prevent contamination and overuse of these vital water sources.

3.1.5 Floodplains

A review of the FEMA's Flood Insurance Rate Maps and National Flood Hazard Layers were reviewed for the study area. The 100-year floodplains are primarily associated with San Geronimo Creek, Los Reyes Creek, Chimenea Creek and their associated tributaries, as shown on **Figure 3-1** located in **Appendix C** (map pocket). The 100-year flood (1.0 percent of flood or base flood) represents a flood event that has a 1.0 percent chance of being equaled or exceeded for any given year (FEMA, 2024).

3.1.6 Wetlands

Wetlands are areas defined by the USACE that, due to a combination of hydrologic and soil conditions, are capable of supporting hydrophytic vegetation. Wetlands are identified based on three technical parameters: hydrophytic vegetation, hydric soils, and hydrology. Data from the USFWS National Wetland Inventory (USFWS, 2024b) identified three freshwater emergent wetlands, one freshwater forested/shrub wetland, and numerous freshwater ponds and riverine resources, the latter of which were described in **Section 3.1.3**.

3.1.7 Coastal Management Program

The PUC must comply with CMP policies when approving CCNs for electric transmission lines that are located within the Coastal Management Zone (CMZ) under the Coastal Zone Management Act of 1972. The study area is not located within the CMZ boundary as defined in 31 TAC § 503.1 and this excludes the Project from CMP conditions.

3.1.8 Vegetation

The NRCS has studied the characteristics of ecological regions for decades to better understand the biology and management of natural resources. The NRCS published a handbook in 2022 that maps general Land Resource Regions (LRRs) that share similar geology and land physiography, moisture and climate, and soils characteristics (NRCS, 2022, 2024). The study area is located within the Southwestern Prairies Cotton and Forage Region. The Southwestern Prairies Cotton and Forage Region extends across central Texas up through central Oklahoma and into southeast Kansas. Average annual precipitation ranges from 32 to 46 inches throughout most of the region (NRCS, 2022; 2024).

As shown in **Figure 3-5**, NRCS soil scientists have further subdivided the LRR into more detailed Major Land Resource Areas (MLRAs). As the criteria used to define both MLRAs and the larger LRRs focus fundamentally on soils and soil-forming factors, the delineation of MLRAs is closely linked to the various soil associations that have been mapped over the past half century. This approach to the study of vegetation focuses on the land's potential for supporting natural vegetation or agricultural practices, rather than simply reporting a snapshot of vegetation as it may exist at a single point in time. The study area is located entirely within the boundary of the Edwards Plateau, Eastern Part (MLRA 81C).

The physiography of Edwards Plateau, Eastern Part is distinguished by rolling to steep topography with shallow soils over limestone bedrock and a plant community of trees, shrubs, and mid or tall grasses. In much of the MLRA, soil parent material consists of bedrock; softer limestone beds with thin harder beds of limestone create a stair-step topography. The Balcones Fault Zone is in this area and impacted the topography and ground water systems. The geology of this MLRA is underlain primarily by limestones of the Glen Rose, Fort Terrett, and Edwards Formations of Cretaceous age with Quaternary alluvium in river valleys. The dominant soil orders in this MLRA are Inceptisols and Mollisols. The soils are well drained and generally shallow and have a skeletal particle-size class (NRCS, 2022; 2024).

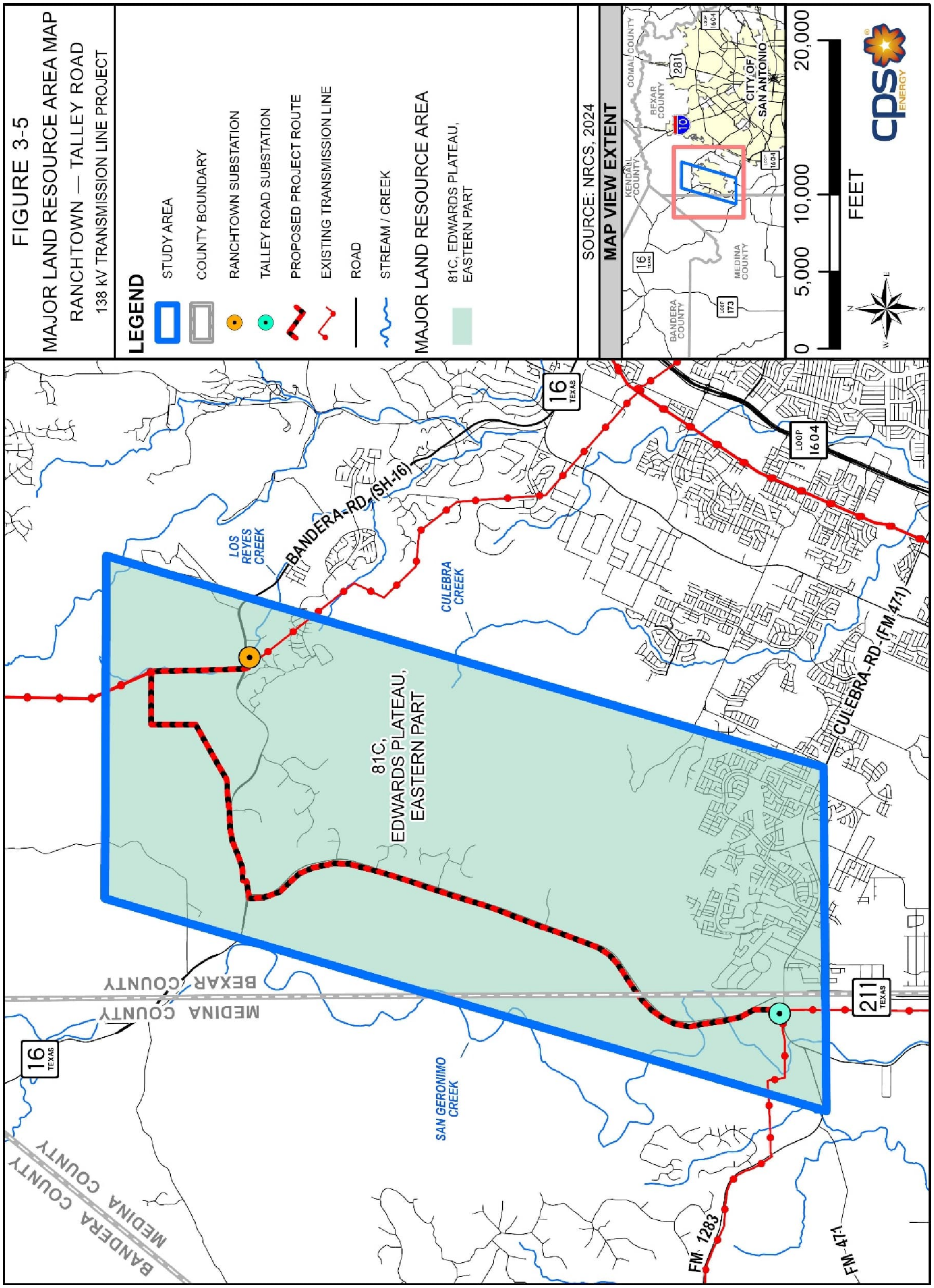
FIGURE 3-5
MAJOR LAND RESOURCE AREA MAP
RANCHTOWN — TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
COUNTY BOUNDARY
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
PROPOSED PROJECT ROUTE
EXISTING TRANSMISSION LINE
ROAD
STREAM / CREEK
MAJOR LAND RESOURCE AREA
81C, EDWARDS PLATEAU, EASTERN PART
SOURCE: NRCS, 2024
MAP VIEW EXTENT
BANDERA COUNTY
MEDINA COUNTY
BEXAR COUNTY
KENDALL COUNTY
COMAL COUNTY
CITY OF SAN ANTONIO
0 5,000 10,000 20,000
FEET
81C, EDWARDS PLATEAU, EASTERN PART
BANDERA-RD-(SH-16)
LOS REYES CREEK
CULEBRA CREEK
CULEBRA-RD-(FM 471)
SAN GERONIMO CREEK
BEXAR COUNTY
MEDINA COUNTY
BANDERA COUNTY
FM 1283
FM 471

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This MLRA supports a plant community of trees, shrubs, and mid or tall grasses. Vegetation includes: Ashe juniper (*Juniperus ashei*), plateau live oak (*Quercus fusiformis*), Texas red oak (*Q. buckleyi*), shin oak (*Q. sinuata* var. *breviloba*), cedar elm (*Ulmus crassifolia*), evergreen sumac (*Rhus virens*), escarpment cherry (*Prunus serotina*), saw greenbrier (*Smilax bona-nox*), mescal bean (*Sophora secundiflora*), poison ivy (*Toxicodendron radicans*), twistleaf yucca (*Yucca rupicola*), elbowbush (*Forestiera pubescens*), cedar sedge (*Salvia roemeriana*), little bluestem (*Schizachyrium scoparium*), Neally grama (*Bouteloua uniflora*), Texas grama (*Bouteloua rigidiseta*), meadow dropseed (*Sporobolus compositus*), Texas wintergrass (*Nassella leucotricha*), curlymesquite (*Hilaria belangeri*), pellitory (*Parietaria* sp.), noseburn (*Tragi* sp.), spreading sida (*Sida abutifolia*), woodsorrel (*Oxalis* sp.), and mat euphorbia (*Euphorbia* sp.) (NRCS, 2022).

The Ecoregions of Texas Level III and Level IV maps were prepared by a collaborative effort between the EPA, TCEQ, and the NRCS (Griffith et al., 2007). Under the Ecoregions of Texas, the study area is located within the Balcones Canyonlands ecoregion to the North and the Northern Blackland Prairie ecoregion to the south.

The Balcones Canyonlands ecoregion is dominated by post oak (*Quercus stellata*) and blackjack oak (*Q. marilandica*) with cedar elm, black hickory (*Carya texana*), and plateau live oak in some areas, mixed with mesquite (*Prosopis glandulosa*) grassland. Minimally disturbed grasslands are dominated by little bluestem and sideoats grama (*Bouteloua curtipendula*). Grasses in grazed areas include Texas wintergrass, purple threeawn (*Aristida purpurea*), silver bluestem (*Bothriochloa laguroides*), sand lovegrass (*Eragrostis trichodes*), and short grasses typical of drier ecoregions. Many endemic and rare plant species are found within this ecoregion.

The Northern Blackland Prairie ecoregion has historically been dominated by vast expanses of tallgrass prairie vegetation of little bluestem, big bluestem (*Andropogon gerardii*), yellow Indiangrass (*Sorghastrum nutans*), and tall dropseed (*Sporobolus compositus*). In more mesic areas, eastern gamagrass (*Tripsacum dactyloides*), and switchgrass (*Panicum virgatum*) dominate. Forbs of asters (*Aster* spp.), prairie bluet (*Stenaria nigricans*), prairie clovers (*Dalea* spp.), and black-eyed Susan (*Rudbeckia hirta*). Riparian forests primarily consist of bur oak (*Quercus macrocarpa*), Shumard oak (*Q. shumardii*), sugar hackberry (*Celtis laevigata*), elm (*Ulmus* sp.), ash (*Fraxinus* sp.), eastern cottonwood (*Populus deltoides*), and pecan (*Carya* sp.). This ecoregion is heavily used for agriculture and urban/suburban development.

The TPWD Ecological Mapping Systems of Texas (EMST) GIS data were used to estimate areas of major types of existing vegetation cover within the study area (TPWD, 2014). Data were developed from satellite imagery with 10-meter by 10-meter mapping resolution collected from 2005 to 2007 and refined with *in situ* data. Using this refined imagery, TPWD created a statewide land cover data set that includes enough land cover types to provide insights for planning and management at a variety of scales (Elliott, 2014; TPWD, 2014, 2024a). For this study area, EMST types were grouped into seven general land cover classes. **Figure 3-6** displays TPWD land cover data by different land/vegetation cover types, as it was grouped into cover classes for the purposes of this study. **Table 3-3** shows the species likely to occur within cover classes as depicted on **Figure 3-6** that included more than one EMST type with the exception of Urban/Barren. The description of study area terrestrial vegetation in **Table 3-3** and in the text that follows is based on a review of reports and maps produced by TCEQ (Griffith et al., 2007). Cover types are provided in the general order as shown in **Figure 3-6**.

Table 3-3. Plant Species within EMST Cover Classes

Common Name	Scientific Name	EMST Cover Class		
		Upland Forest/Woodland/ Shrubland	Upland Grassland	Riparian Forest/ Shrubland
Major Associated Grasses				
Big bluestem	*Andropogon gerardii*	x		
Bushy bluestem	*Andropogon glomeratus*			x
Purple threeawn	*Aristida purpurea*	x	x	
Threeawn species	*Aristida* spp.	x	x	
Cane bluestem	*Bothriochloa barbinodis*	x	x	
King Ranch bluestem	*Bothriochloa ischaemum* var. *songarica*	x	x	x
Silver bluestem	*Bothriochloa laguroides* ssp. *Torreyana*	x	x	
Sideoats grama	*Bouteloua curtipendula*	x	x	
Buffalograss	*Bouteloua dactyloides*	x	x	
Hairy grama	*Bouteloua hirsuta*	x	x	
Tall grama	*Bouteloua hirsuta* var. *pectinata*		x	
Tall grama	*Bouteloua pectinata*		x	
Texas grama	*Bouteloua rigidiseta*	x	x	
Red grama	*Bouteloua trifida*	x	x	
Gramas	*Bouteloua* spp.	x		
Creekoats	*Chasmanthium latifolium*			x
Saw-grass	*Cladium mariscus* ssp. *Jamaicense*			x
Bermudagrass	*Cynodon dactylon*	x	x	x
Virginia wildrye	*Elymus virginicus*			x
Fluffgrass	*Erioneuron pilosum*	x	x	
Curly mesquite	*Hilaria belangeri*	x	x	
Lindheimer's muhly	*Muhlenbergia lindheimeri*			x
Seep muhly	*Muhlenbergia reverchonii*	x	x	
Texas wintergrass	*Nassella leucotricha*	x	x	x

Common Name	Scientific Name	EMST Cover Class		
		Upland Forest/Woodland/ Shrubland	Upland Grassland	Riparian Forest/ Shrubland
Kleingrass	*Panicum coloratum*		x	
Switchgrass	*Panicum virgatum*			x
Bahiagrass	*Paspalum notatum*	x		
Buffelgrass	*Pennisetum ciliare*	x		
Little bluestem	*Schizachyrium scoparium*	x	x	
Plains bristlegrass	*Setaria leucopila*	x		
Southwestern bristlegrass	*Setaria scheelei*			x
Indiangrass	*Sorghastrum nutans*	x	x	
Johnsongrass	*Sorghum halepense*		x	x
Eastern gamagrass	*Tripsacum dactyloides*			x
Major Associate Herbaceous and Forbs				
Peonia	*Acourtia runcinata*	x		
Western ragweed	*Ambrosia psilostachya*		x	
Common broomweed	*Amphiachyris dracunculoides*		x	
Rio Grande stickpea	*Calliandra conferta*	x		
Hartweg evening primrose	*Calylophus hartwegii*	x		
Cedar sedge	*Carex planostachys*	x		
Carices	*Carex* spp.			x
Gregg's senna	*Chamaecrista greggii*	x		
Silver-puff	*Chaptalia texana*	x		
Cluster cordial	*Cordia podocephala*	x		
Golden dalea	*Dalea aurea*	x		
Velvet bundleflower	*Desmanthus velutinus*	x		
Spikerushes	*Eleocharis* spp.			x
Narrowleaf thryallis	*Galphimia angustifolia*	x		
Torrey heliotrope	*Heliotropium torreyi*	x		
Mexican mallow	*Hermannia texana*	x		
Water penny	*Hydrocotyle* spp.			x
Old plainsman	*Hymenopappus scabiosaeus*	x		
Texas lespedeza	*Lespedeza texana*	x		
Plateau rocktrumpet	*Macrosiphonia lanuginosa var. macrosiphon*	x		
Blackfoot daisy	*Melampodium cinereum*	x		
Violet sida	*Meximalva filipes*	x		
Baby blue-eyes	*Nemophila phacelioides*	x		
Texas sacahuista	*Nolina texana*	x		
White milkwort	*Polygala alba*	x		
Cedar sage	*Salvia roemeriana*	x		
Awnless bush sunflower	*Simsia calva*	x		
Prairie bluets	*Stenaria nigricans*	x		
Texas desert-rue	*Thamnosma texana*	x		
Fire-hair dogweed	*Thymophylla pentachaeta*	x		
Widowstears	*Tinantia anomala*	x		
Oreja de perro	*Tiquilia canescens*	x		
Frostweed	*Verbesina virginica*	x		
Skeletonleaf goldeneye	*Viguiera stenoloba*	x		
Hairy zexmania	*Wedelia hispida*	x		
Major Associate Woody Plants				
Guajillo	*Acacia berlandieri*	x		
Huisache	*Acacia farnesiana*	x	x	x
Blackbrush	*Acacia rigidula*	x		
Roemer's acacia	*Acacia roemeriana*	x		
Huisachillo	*Acacia schaffneri*	x		
Boxelder	*Acer negundo*			x
Red buckeye	*Aesculus pavia var. flavescens*	x		
Whitebrush	*Aloysia gratissima*			x
Vara dulce	*Aloysia macrostachya*	x		
Roosevelt-weed	*Baccharis neglecta*			x
False-willows	*Baccharis* spp.			x

Common Name	Scientific Name	EMST Cover Class		
		Upland Forest/Woodland/ Shrubland	Upland Grassland	Riparian Forest/ Shrubland
Oreja de raton	*Bernardia myricifolia*	x		
Bricklebush	*Brickellia* spp.			x
American beautyberry	*Callicarpa americana*	x		
Pecan	*Carya illinoinensis*			x
Granjeno	*Celtis ehrenbergiana*	x		
Sugar hackberry	*Celtis laevigata*	x		x
Netleaf hackberry	*Celtis laevigata var. reticulata*	x		x
Hackberries	*Celtis* spp.	x		x
Jersey tea	*Ceanothus herbaceus*	x		
Common buttonbush	*Cephalanthus occidentalis*			x
Texas redbud	*Cercis canadensis* var. *texensis*	x		
Desert willow	*Chilopsis linearis*			x
Texas hogplum	*Colubrina texensis*	x		
Brasil	*Condalia hookeri*	x		
Knifeleaf condalia	*Condalia spathulata*	x		
Anacahuita	*Cordia boissieri*	x		
Roughleaf dogwood	*Cornus drummondii*			x
Torrey croton	*Croton incanus*	x		
Tasajillo	*Cylindropuntia leptocaulis*			
Texas persimmon	*Diospyros texana*	x	x	x
Common persimmon	*Diospyros virginiana*	x		
Texas ebony	*Ebenopsis ebano*	x		
Joint-fir	*Ephedra antisyphilitica*	x		
Texas kidneywood	*Eysenhardtia texana*	x		
Netleaf forestiera	*Forestiera reticulata*	x		
Elbow bush	*Forestiera angustifolia*	x		
Carolina buckthorn	*Frangula caroliniana*	x		
Ashes	*Fraxinus* spp.	x		
Texas ash	*Fraxinus texensis*	x		x
Green ash	*Fraxinus pennsylvanica*			x
Silktassel	*Garrya ovata*	x		
Guayacan	*Guaiacum angustifolium*	x		
Baretta	*Helietta parvifolia*	x		
Yaupon	*Ilex vomitoria*	x		
Possumhaw	*Illex decidua*			x
Leatherstem	*Jatropha dioica*	x		
Arizona walnut	*Juglans major*	x		x
Little walnut	*Juglans microcarpa*			x
Ashe juniper	*Juniperus ashei*	x	x	x
Redberry juniper	*Juniperus pinchotii*	x		
Eastern redcedar	*Juniperus virginiana*	x		
American water-willow	*Justicia americana*			x
Coyotillo	*Karwinskia humboldtiana*	x		
Allthorn	*Koeberlinia spinosa*	x		
Calderona	*Krameria ramosissima*	x		
Cenizo	*Leucophyllum frutescens*	x		
Sweetgum	*Liquidambar styraciflua*	x		
Agarito	*Mahonia trifoliolata*	x	x	x
Turk's cap	*Malvaviscus arboreus* var. *drummondii*			x
Chinaberry	*Melia azedarach*			x
Fragrant mimosa	*Mimosa borealis*	x		
Red mulberry	*Morus rubra*			x
Virginia creeper	*Parthenocissus quinquefolia*			x
Paper-shell pinyon	*Pinus remota*	x		
Loblolly pine	*Pinus taeda*	x		
American sycamore	*Platanus occidentalis*			x
Honey mesquite	*Prosopis glandulosa*	x	x	x
Escarpment black cherry	*Prunus serotina ssp. eximia*	x		
Water-ash	*Ptelea trifolata*			x

Common Name	Scientific Name	EMST Cover Class		
		Upland Forest/Woodland/ Shrubland	Upland Grassland	Riparian Forest/ Shrubland
Texas oak	*Quercus buckleyi*	x		x
Plateau live oak	*Quercus fusiformis*	x	x	x
Lacey oak	*Quercus laceyi*	x		
Bur oak	*Quercus macrocarpa*			x
Mohr's shin oak	*Quercus mohriana*	x		
Water oak	*Quercus nigra*	x		
White shin oak	*Quercus sinuata var. breviloba*	x	x	
Post oak	*Quercus stellata*	x		x
Vasey shin oak	*Quercus vaseyana*	x		
Coastal live oak	*Quercus virginiana*	x		
Prairie sumac	*Rhus lanceolata*	x		
Sumacs	*Rhus* spp.	x		
Skunkbush sumac	*Rhus trilobata*	x		
Evergreen sumac	*Rhus virens*	x		
Black willow	*Salix nigra*			x
Mejorana	*Salvia ballotiflora*	x		
Western soapberry	*Sapindus saponaria* var. *drummondii*			x
La coma	*Sideroxylon celastrinum*	x		
Gum bumelia	*Sideroxylon lanuginosum*	x		x
Saw greenbrier	*Smilax bona-nox*	x		x
Texas mountain-laurel	*Sophora secundiflora*	x	x	x
Baldcypress	*Taxodium distichum*			x
Poison ivy	*Toxicodendron radicans*	x		
Chinese tallow	*Triadica sebifera*			
Winged elm	*Ulmus alata*	x		x
Cedar elm	*Ulmus crassifolia*	x		x
Mexican buckeye	*Ungnadia speciosa*	x		x
Rusty blackhaw	*Viburnum rufidulum*	x		
Mustang grape	*Vitis mustangensis*	x		
Grapes	*Vitis* spp.	x		x
Spanish dagger	*Yucca treculeana*	x		
Hercules' club	*Zanthoxylum clava-herculis*	x		
Colima	*Zanthoxylum fagara*	x		
Lotebush	*Ziziphus obtusifolia*	x	x	
Major Associated Succulent or Cactus				
Tasajillo	*Cylindropuntia leptocaulis*	x		
Texas pricklypear	*Opuntia engelmannii*	x		
Lindheimer pricklypear	*Opuntia engelmannii* var. *lindheimeri*	x		

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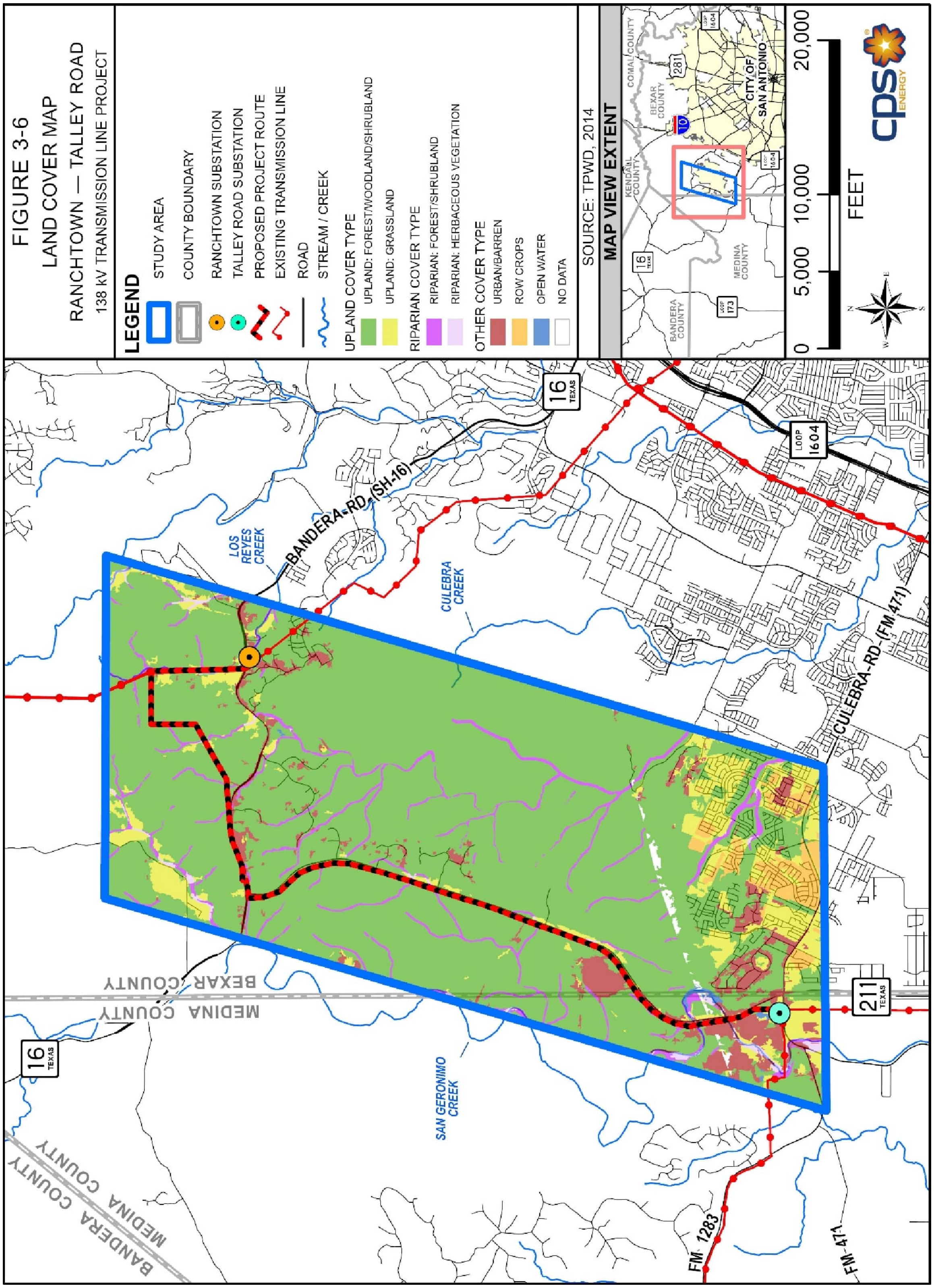
FIGURE 3-6
LAND COVER MAP
RANCHTOWN — TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
COUNTY BOUNDARY
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
PROPOSED PROJECT ROUTE
EXISTING TRANSMISSION LINE
ROAD
STREAM / CREEK
UPLAND COVER TYPE
UPLAND: FOREST/WOODLAND/SHRUBLAND
UPLAND: GRASSLAND
RIPARIAN COVER TYPE
RIPARIAN: FOREST/SHRUBLAND
RIPARIAN: HERBACEOUS VEGETATION
OTHER COVER TYPE
URBAN/BARREN
ROW CROPS
OPEN WATER
NO DATA
SOURCE: TPWD, 2014
MAP VIEW EXTENT
KENDALL COUNTY
COMAL COUNTY
BEXAR COUNTY
BANDERA COUNTY
MEDINA COUNTY
CITY OF SAN ANTONIO
0 5,000 10,000 20,000
FEET
CPS ENERGY
BANDERA-RD (SH-16)
LOS REYES CREEK
CULEBRA CREEK
CULEBRA-RD (FM 471)
SAN GERONIMO CREEK
BEXAR COUNTY
MEDINA COUNTY
BANDERA COUNTY
FM 1283
FM 471
16
1604
211

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Upland forest/woodland/shrubland is the predominant land cover class within the study area as shown in **Figure 3-6**. This cover class is composed of 19 EMST cover types.

1. Edwards Plateau: Ashe Juniper Slope Forest
2. Edwards Plateau: Ashe Juniper Motte and Woodland
3. Edwards Plateau: Deciduous Oak - Evergreen Motte and Woodland
4. Edwards Plateau: Ashe Juniper-Live Oak Shrubland
5. Edwards Plateau: Live Oak Motte and Woodland
6. Edwards Plateau: Oak - Ashe Juniper Slope Forest
7. Native Invasive: Mesquite Shrubland
8. Edwards Plateau: Oak - Hardwood Motte and Woodland
9. Edwards Plateau: Ashe Juniper-Live Oak Slope Shrubland
10. Edwards Plateau: Shin Oak Shrubland
11. Native Invasive: Deciduous Woodland
12. South Texas: Shallow Shrubland
13. Edwards Plateau: Live Oak Slope Forest
14. Native Invasive: Juniper Shrubland
15. Edwards Plateau: Oak - Hardwood Slope Forest
16. Native Invasive: Juniper Woodland
17. Edwards Plateau: Shin Oak Slope Shrubland
18. Post Oak Savanna: Live Oak Motte and Woodland
19. South Texas: Clayey Blackbrush Mixed Shrubland

Upland grassland is the second most dominant land cover class within the study area as shown in **Figure 3-6**. This cover class is composed of two EMST cover types (in order of prevalence):

1. Edwards Plateau: Savanna Grassland
2. Blackland Prairie: Disturbance or Tame Grassland

Riparian forest/shrubland is a land cover class within the study area as shown in **Figure 3-6**. This cover class is composed of six EMST cover types (in order of prevalence):

1. Edwards Plateau: Riparian Ashe Juniper Forest
2. Edwards Plateau: Riparian Hardwood - Ashe Juniper Forest
3. Edwards Plateau: Riparian Live Oak Forest

4. Edwards Plateau: Riparian Ashe Juniper Shrubland
5. Edwards Plateau: Riparian Hardwood Forest
6. Edwards Plateau: Riparian Deciduous Shrubland

The EMST data included six additional cover types distinguishing floodplain forest and shrubland types, that for mapping purposes, were integrated into the riparian forest/shrubland cover type on **Figure 3-6**. These EMST cover types included the following:

1. Edwards Plateau: Floodplain Hardwood Forest
2. Edwards Plateau: Floodplain Ashe Juniper Shrubland
3. Edwards Plateau: Floodplain Live Oak Forest
4. Edwards Plateau: Floodplain Deciduous Shrubland
5. Edwards Plateau: Floodplain Hardwood - Ashe Juniper Forest
6. Edwards Plateau: Floodplain Ashe Juniper Forest

Similarly, for mapping purposes, the two riparian and floodplain herbaceous cover classes were combined into one Riparian Herbaceous Vegetation cover type for mapping purposes on **Figure 3-6**.

Open water is a land cover class identified within the study area as shown in **Figure 3-6**. This cover class is composed of one EMST cover type, Open Water. In addition to large lakes, rivers, and marine water, ephemeral ponds may be mapped as open water. Some mapped areas may support vegetation with pioneering species such as black willow (*Salix nigra*), eastern cottonwood, Chinese tallow (*Triadica sebifera*), seepweeds (*Suaeda* spp.), sea ox-eye daisy (*Borrichia frutescens*), saltwort (*Batis maritima*), rushes (*Juncus* spp.), sedges (*Carex* spp.), cattails (*Typha* spp.), and spikerushes (*Eleocharis* spp.).

Urban/barren is the third most dominant within the study area as shown in **Figure 3-6**. This cover class is composed of three EMST cover types (in order of prevalence):

1. Urban Low Intensity
2. Barren
3. Urban High Intensity

Row Crops is a land cover class identified within the study area as shown in **Figure 3-6**. This cover class is composed of one EMST cover type, Row Crops. This type includes all cropland where fields are fallow for some portion of the year. Some fields may rotate into and out of cultivation frequently, and year-round cover crops are generally mapped as grassland.

3.1.9 Wildlife and Fisheries

The term “wildlife” includes all animal species except those identified as protected by law, rare, and/or Species of Greatest Conservation Need (SGCN). This discussion is divided into the following vertebrate wildlife categories: amphibians and reptiles, fish, mammals, and birds. Additionally, mussels are also included within this discussion. **Table 3-4** through **Table 3-8** present the most common species with the potential to inhabit the study area based on ranges that intersect the study area, potential occurrence in relation to EMST vegetation types, and other species-specific habitat requirements. These tables are not all-inclusive for wildlife species that could occur in the study area.

Amphibians and Reptiles

Table 3-4 lists some of the most common amphibian and reptile species, organized by family. Most of these species are likely to occur in vegetation types associated with natural areas, including woodlands along drainages, greenspaces, and landscaped vegetation within the study area. Specifically, water snakes (*Nerodia* spp.), garter snakes (*Thamnophis* spp.), and the cottonmouth (*Agkistrodon piscivorus*), as well as salamanders, frogs, and toads, and turtle species, tend to occur in habitats near water and are more commonly found in the Central Texas EMST types, as well as any other vegetation type that occurs near a water source.

Table 3-4. Common Amphibian and Reptile Species with Potential to Occur in the Study Area

Common Name	Scientific Name
Frogs and Toads	
Couch's spadefoot	*Scaphiopus couchi*
Cliff chirping frog	*Eleutherodactylus marnockii*
Blanchard's cricket frog	*Acris blanchardi*
Green treefrog	*Hyla cinerea*
Gray treefrog	*Hyla cinerea*
Spotted chorus frog	*Pseudacris clarkii*
Green toad	*Anaxyrus debilis*
Gulf Coast toad	*Incilius nebulifer*
Rio Grande leopard frog	*Lithobates berlandieri*
Bullfrog	*Lithobates catesbeiana*
Western narrow-mouthed toad	*Gastrophryne olivacea*
Turtles	
Texas river cooter	*Pseudemys texana*
Pond slider	*Trachemys scripta*
Spiny softshell	*Apalone spinifera*
Lizards	
Mediterranean gecko [a]	*Hemidactylus turcicus*
Prairie lizard	*Sceloporus consobrinus*
Texas spiny lizard	*Sceloporus olivaceus*
Green anole [a]	*Anolis carolinensis*
Little brown skink	*Scincella lateralis*
Common spotted whiptail	*Aspidoscelis gularis*
Six-lined racerunner	*Aspidoscelis sexlineatus*
Snakes	
Texas threadsnake	*Rena dulcis*
Great Plains ratsnake	*Pantherophis emoryi*
Texas ratsnake	*Pantherophis obsoleta*
Eastern hog-nosed snake	*Heterodon platirhinos*
Common kingsnake	*Lampropeltis getula*
Western coachwhip	*Masticophis flagellum testaceus*
Blotched watersnake	*Nerodia erythrogaster*
Diamond-backed watersnake	*Nerodia rhombifer*
Rough greensnake	*Opheodrys aestivus*
Gophersnake	*Pituophis catenifer*
Black-necked gartersnake	*Thamnophis cryptopsis*
Checkered gartersnake	*Thamnophis marcianus*
Western ribbonsnake	*Thamnophis proximus*
Rough earthsnake	*Virginia striatula*
Texas coralsnake	*Micrurus tener*
Copperhead	*Agkistrodon contortrix*
Cottonmouth	*Agkistrodon piscivorus*
Western diamond-backed rattlesnake	*Crotalus atrox*

SOURCE: Dixon 2013
NOTES:
[a] Introduced

Fish

The study area lies within the San Antonio Basin. Aquatic habitats within the study area are influenced by an unnamed tributary to San Geronimo Creek which intersects the northwestern portion of the study area. Common species with potential to inhabit waters in and around the study area are listed in below in **Table 3-5**.

Table 3-5. Common Fish Species with Potential to Occur in the Study Area

Common Name	Scientific Name
Longnose gar	*Lepisosteus osseus*
Gizzard shad	*Dorosoma cepedianum*
Grass carp [a]	*Ctenopharyngodon idella*
Red shiner	*Cyprinella lutrensis*
Blacktail shiner	*Cyprinella venusta*
Common carp [a]	*Cyprinus carpio*
Golden shiner [a]	*Notemigonus crysoleucas*
Fathead minnow	*Pimephales promelas*
Bullhead minnow	*Pimephales vigilax*
River carpsucker	*Carpiodes carpio*
Smallmouth buffalo	*Ictiobus bubalus*
Black bullhead	*Ameiurus melas*
Yellow bullhead	*Ameiurus natalis*
Blue catfish	*Ictalurus furcatus*
Channel catfish	*Ictalurus punctatus*
Flathead catfish	*Pylodictis olivaris*
Western mosquitofish	*Gambusia affinis*
White bass	*Morone chrysops*
Striped bass [a]	*Morone saxatilis*
Redbreast sunfish [a]	*Lepomis auritus*
Green sunfish	*Lepomis cyanellus*
Warmouth	*Lepomis gulosus*
Orangespotted sunfish	*Lepomis humilis*
Bluegill	*Lepomis macrochirus*
Redspotted sunfish	*Lepomis miniatus*
Longear sunfish	*Lepomis megalotis*
Largemouth bass	*Micropterus salmoides*
White crappie	*Pomoxis annularis*
Black crappie	*Pomoxis nigromaculatus*
Freshwater drum	*Aplodinotus grunniens*
SOURCE: Thomas et al 2007 NOTES: [a]Introduced	

Mammals

Common mammalian species with the potential to inhabit the study area are listed in **Table 3-6**. The study area is located primarily within a forested environment with little urbanization on the northern and southern ends of the study area. Several mammalian species can be found in the vegetated or human-modified habitats. The Virginia opossum (*Didelphis virginiana*) and nine-banded armadillo (*Dasypus novemcinctus*) can be found in a variety of habitats, including all EMST vegetation types within the study area.

Bats that could occur within the study area are cave-adapted species that utilize man-made structures for roosting, such as Brazilian [Mexican] free-tailed bats (*Tadarida brasiliensis*), or are forest dwellers, such as evening bats (*Nycticeius humeralis*), that utilize trees and snags for roosting. Bats may be found in any of the EMST types, including row crops, Urban High Intensity and Urban Low Intensity. The riparian areas along San Geronimo Creek and tributaries within the study area and undeveloped properties supporting mature trees can provide suitable habitat for tree dwelling bats.

Mexican free-tailed bats, one of the most abundant bat species in the U.S. and Mexico, including on the Edwards Plateau of Central Texas, provide important ecological and economic benefits including pest control. A primary food source of Mexican free-tailed bats is adult flying lepidopteran species, such as moths, the larvae of which are documented agricultural pests. Mexican free-tailed bats are considered a migratory species that spend summers in caves and bridges throughout Texas and beyond, and they overwinter in Mexico. Central Texas, however, is known to have large overwintering populations of Mexican free-tailed bats (Davis et al., 1962; Spenrath and LaVal, 1974; Glass, 1982; Scales and Wilkins, 2007). Recent observations suggest that overwintering populations of Mexican free-tail bats are increasing in size (Weaver, 2012).

Carnivores and even-toed ungulates mostly consist of habitat generalists that can also be found in all the EMST vegetation types. Rodents also occur in varying habitat types. According to Schmidly and Bradley (2016), squirrels are tree dwelling species that can be found in any of the woodland or forest vegetation types. Nutria (*Myocastor coypus*) are found in aquatic habitats and would mostly be associated with water in the central Texas EMST types, as well as any aquatic habitats within the study area. The white-footed deermouse (*Peromyscus leucopus*) is typically found in bottomland forests and woodlands associated with drainages and would potentially be found in all the central Texas EMST types. The North American deermouse (*Peromyscus maniculatus*) and hispid cotton rat (*Sigmodon hispidus*) are habitat generalists and may be found in vegetated areas within any of the EMST types. The eastern cottontail (*Sylvilagus floridanus*) is also a habitat generalist, but typically inhabits areas with abundant brush cover. They would be expected to occur in any of the shrubland EMST types or in brushy areas found within other EMST types.

Table 3-6. Common Mammalian Species with Potential to Occur in the Study Area

Common Name	Scientific Name
Marsupials	
Virginia opossum	*Didelphis virginiana*
Armadillos	
Nine-banded armadillo	*Dasypus novemcinctus*
Bats	
Silver-haired bat	*Lasionycterus noctivagans*
Mexican free-tailed bat	*Tadarida brasiliensis*
Evening bat	*Nycticeius humeralis*
Carnivores	
Coyote	*Canis latrans*
Common gray fox	*Urocyon cinereoargenteus*
Bobcat	*Lynx rufus*
Striped skunk	*Mephitis*
Northern raccoon	*Procyon lotor*
Even-toed Ungulates	
Feral hog [a]	*Sus scrofa*
White-tailed deer	*Odocoileus virginianus*
Rodents	
White-footed deermouse	*Peromyscus leucopus*
North American deermouse	*Peromyscus maniculatus*
Hispid cotton rat	*Sigmodon hispidus*
Rock squirrel	*Otospermophilus variegatus*
Eastern fox squirrel	*Sciurus niger*
Nutria [a]	*Myocastor coypus*
House mouse [a]	*Mus musculus*
Black rat [a]	*Rattus rattus*
Rabbits	
Eastern cottontail	*Sylvilagus floridanus*
SOURCE: Schmidly and Bradley, 2016 NOTES: [a]Introduced	

Birds

There are numerous year-round, summer, and winter resident, as well as migrant, avian species with potential to occur in the study area. The study area is located within the Central Flyway, a major bird migration corridor that leads to the Texas coast and Central/South America. **Table 3-7** lists some of the most common avian species, organized by family, with the potential to occur in the study area.

Additionally, **Table 3-7** identifies the species as year-round residents or migrants and provides what season migrants may be present. Note that all species except those denoted by an asterisk are native and protected from take under provisions of the MBTA. Avian families most commonly found in the central Texas EMST types, as well as any other vegetation type that occurs near ponds, wetlands, or other water sources, include swans, geese and ducks; grebes; cormorants; bitterns and herons; rails, gallinules and coots; plovers; sandpipers, phalaropes and allies; and gulls, terns and allies. Many of these species will form colonial wading bird colonies, which are considered sensitive wildlife features and tracked by TPWD. No NDD Element of Occurrence Records (EORs) for colonial wading bird colonies were identified within the study area. See **Section 3.1.10** for additional details regarding NDD EORs. Typical grassland- and savanna-associated families potentially found in the associated EMST types include New World sparrows and meadowlarks, as well as northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), and scissor-tailed flycatcher (*Tyrannus forficatus*). Species usually associated with woodlands and forests that could potentially occur in the associated EMST types, as well as any other woodland or forest EMST types, include eagles, owls, woodpeckers, and wood warblers. Other avian families and species listed below typically occur in a variety of habitats and can be found in any of the EMST types within the study area.

Table 3-7. Common Avian Species with Potential to Occur in the Study Area

Common Name	Scientific Name	Season
Swans, Geese and Ducks		
Black-bellied whistling-duck	*Dendrocygna autumnalis*	Year-round
Snow goose	*Chen caerulescens*	Migration
Canada goose	*Branta canadensis*	Winter
Mute swan [a]	*Cygnus olor*	Year-round
Wood duck	*Aix sponsa*	Year-round
Gadwall	*Anas strepera*	Winter
American wigeon	*Anas americana*	Winter
Mallard	*Anas platyrhynchos*	Winter
Blue-winged teal	*Anas discors*	Winter
Northern shoveler	*Anas clypeata*	Winter
Northern pintail	*Anas acuta*	Winter
Green-winged teal	*Anas crecca*	Winter
Canvasback	*Aythya valisineria*	Winter
Redhead	*Aythya americana*	Winter
Ring-necked duck	*Aythya collaris*	Winter
Lesser scaup	*Aythya affinis*	Winter
Bufflehead	*Bucephala albeola*	Winter
Ruddy duck	*Oxyura jamaicensis*	Winter
Grebes		
Pied-billed grebe	*Podilymbus podiceps*	Year-round
Eared grebe	*Podiceps nigricollis*	Winter
Cormorants		
Double-crested cormorant	*Phalacrocorax auritus*	Winter
Neotropic cormorant	*Phalacrocorax brasilianus*	Summer
Bitterns and Herons		
Great blue heron	*Ardea herodias*	Year-round
Great egret	*Ardea alba*	Year-round
New World Vultures		
Black vulture	*Coragyps atratus*	Year-round
Turkey vulture	*Cathartes aura*	Year-round

Common Name	Scientific Name	Season
Osprey, Eagles, Kites and Hawks		
Osprey	*Pandion haliaetus*	Winter
Bald eagle	*Haliaeetus leucocephalus*	Winter
Northern harrier	*Circus cyaneus*	Winter
Sharp-shinned hawk	*Accipiter striatus*	Winter
Cooper's hawk	*Accipiter cooperii*	Year-round
Red-shouldered hawk	*Buteo lineatus*	Year-round
Red-tailed hawk	*Buteo jamaicensis*	Year-round
Falcons		
Crested caracara	*Caracara cheriway*	Year-round
Peregrine falcon	*Falco peregrinus*	Year-round
American kestrel	*Falco sparverius*	Winter
Rails, Gallinules, and Coots		
American coot	*Fulica americana*	Year-round
Plovers		
Killdeer	*Charadrius vociferus*	Year-round
Sandpipers, Phalaropes and Allies		
Wilson's snipe	*Gallinago delicata*	Winter
Spotted sandpiper	*Actitis macularius*	Winter
Gulls, Terns and Allies		
Ring-billed gull	*Larus delawarensis*	Winter
Pigeons and Doves		
Rock pigeon [a]	*Columba livia*	Year-round
Eurasian collared-dove [a]	*Streptopelia decaocto*	Year-round
White-winged dove	*Zenaida asiatica*	Year-round
Mourning dove	*Zenaida macroura*	Year-round
Cuckoos and Allies		
Greater Roadrunner	*Geococcyx californianus*	Year-round
Owls		
Eastern screech owl	*Megascops asio*	Year-round
Great horned owl	*Bubo virginianus*	Year-round
Barred Owl	*Strix varia*	Year-round
Nighthawks and Nightjars		
Common nighthawk	*Chordeiles minor*	Summer
Swifts		
Chimney swift	*Chaetura pelagica*	Summer
Hummingbirds		
Ruby-throated hummingbird	*Archilochus colubris*	Summer
Woodpeckers		
Red-bellied woodpecker	*Melanerpes carolinus*	Year-round
Ladder-backed woodpecker	*Dryobates scalaris*	Year-round
Downy woodpecker	*Dryobates pubescens*	Year-round
Tyrant Flycatchers		
Eastern phoebe	*Saynoris phoebe*	Year-round
Great-crested flycatcher	*Myiarchus crinitus*	Summer
Western kingbird	*Tyrannus verticalis*	Summer
Scissor-tailed flycatcher	*Tyrannus forficatus*	Summer
Vireos		
White-eyed vireo	*Vireo griseus*	Summer
Red-eyed vireo	*Vireo olivaceus*	Summer
Jays and Crows		
Blue jay	*Cyanocitta cristata*	Year-round
American crow	*Corvus brachyrhynchos*	Year-round
Martins and Swallows		
Purple martin	*Progne subis*	Summer
Cliff swallow	*Petrochelidon pyrrhonta*	Summer
Barn swallow	*Hirundo rustica*	Summer
Chickadees and Titmice		
Carolina chickadee	*Poecile carolinensis*	Year-round
Black-crested titmouse	*Baeolophus atricristatus*	Year-round

Common Name	Scientific Name	Season
Wrens		
House wren	*Troglodytes aedon*	Winter
Carolina wren	*Thryomanes ludovicianus*	Year-round
Bewick's wren	*Thryomanes bewickii*	Year-round
Kinglets		
Ruby-crowned kinglet	*Regulus calendula*	Winter
Thrushes		
Eastern bluebird	*Sialia sialis*	Summer
American robin	*Turdus migratorius*	Year-round
Mockingbirds and Thrashers		
Northern mockingbird	*Mimus polyglottos*	Year-round
Starlings		
European starling [a]	*Sturnus vulgaris*	Year-round
Wagtails and Pipits		
American pipit	*Anthus rubescens*	Winter
Cedar waxwing	*Bombycilla cedrorum*	Winter
Wood Warblers		
Black and white warbler	*Mniotilta varia*	Summer
Black-throated green warbler	*Setophaga virens*	Migration
Orange-crowned warbler	*Vermivora celata*	Winter
Nashville warbler	*Vermivora ruficapilla*	Migration
Yellow warbler	*Setophaga petechia*	Migration
Yellow-rumped warbler	*Setophaga coronata*	Winter
New World Sparrows		
Chipping sparrow	*Spizella passerina*	Winter
Vesper sparrow	*Pooecetes gramineus*	Winter
Field sparrow	*Spizella pusilla*	Winter
Lark sparrow	*Chondestes grammaus*	Year-round
Savannah sparrow	*Passerculus sandwichensis*	Winter
White-crowned sparrow	*Zonotrichia leucophrys*	Winter
White-throated sparrow	*Zonotrichia albicollis*	Winter
Song sparrow	*Melospiza melodia*	Winter
Lincoln's sparrow	*Melospiza lincolnii*	Winter
Cardinals and Allies		
Summer tanager	*Piranga rubra*	Summer
Northern cardinal	*Cardinalis cardinalis*	Year-round
Painted bunting	*Passerina ciris*	Summer
Blackbirds, Meadowlarks and Orioles		
Red-winged blackbird	*Agelaius phoeniceus*	Year-round
Eastern meadowlark	*Sturnella magna*	Year-round
Orchard oriole	*Icterus spurius*	Summer
Common grackle	*Quiscalus quiscula*	Winter
Great-tailed grackle	*Quiscalus mexicanus*	Year-round
Brown-headed cowbird	*Molothrus ater*	Year-round
Finches and Allies		
House finch	*Carpodacus mexicanus*	Year-round
Lesser goldfinch	*Spinus psaltria*	Year-round
American goldfinch	*Spinus tristis*	Winter
Old World Sparrows		
House sparrow [a]	*Passer domesticus*	Year-round

SOURCE: Lockwood and Freeman, 2014
NOTES:
[a] Introduced

Freshwater Mollusks

There are over 300 freshwater mussel species known to reside within North America, over 50 of which have been observed within Texas waters. Freshwater mussels are highly susceptible to habitat degradation and loss. Currently, fifteen native Texas mussel species are state listed as threatened. Within Texas, the Asian clam (*Corbicula fluminea*), purple-nacre corbicula (*Corbicula* sp.), and zebra mussel (*Dreissena polymorpha*) are prevalent and wide-spread exotic invasive species (Howells, 2014). The study area lies within the San Antonio Basin and includes a perennial river, unnamed tributary to San Geronimo Creek, which intersects the northwestern portion of the study area. **Table 3-8** provides a list of mussel species found within the San Antonio Basin (Randklev *et. al*., 2023) and potentially within the study area.

Table 3-8. Mussel Species with Potential to Occur in the Study Area

Common Name	Scientific Name
Asian clam	*Corbicula fluminea*
Giant floater	*Pyganodon grandis*
Lilliput	*Toxolasma parvum*
Louisiana fatmucket	*Lampsilis hydiana*
Mapleleaf	*Quadrula quadrula*
Paper pondshell	*Utterbackia imbecillis*
Pimpleback	*Cyclonaias pustulosa*
Pistolgrip	*Tritogonia verrucosa*
Pondhorn	*Uniomerus tetralasmus*
Pondmussel	*Sagittunio subrostrata*
Rock pocketbook	*Arcidens confragosus*
Round pearlshell	*Glebula rotundata*
Tampico pearly mussel	*Cyrtonaias tampicoensis*
Tapered pondhorn	*Uniomerus declivis*
Texas Lilliput	*Toxolasma texasiense*
Threeridge	*Amblema plicata*
Washboard	*Megalonaias nervosa*
Yellow sandshell	*Lampsilis teres*
Zebra mussel	*Dreissena polymorpha*
SOURCES: Randklev *et. al.*, 2023.	

3.1.10 Threatened and Endangered Species

The USFWS has the authority under the ESA to list and monitor species considered imperiled. The regulations implementing the ESA are codified and updated in 50 CFR Part 17 (USFWS, 1973). The federal process identifies potential candidates based on their biological vulnerability, considering many factors within the species' range and using the best available scientific data. Species listed as threatened or endangered by the USFWS receive full protection under the ESA, including a prohibition on indirect take, such as the destruction of critical habitat (i.e., areas formally designated by USFWS in the Federal Register).

In Texas, endangered species legislation established in 1973, and subsequent amendments (TPWD, 1975a, 1975b) created a state regulatory program for managing and protecting endangered (species in danger of extinction) and threatened species (likely to become endangered in the foreseeable future). Chapters 67 and 68 of the Texas Parks and Wildlife Code authorize the TPWD to create lists of threatened and endangered species and regulate their taking or possession. Under this authority, TPWD controls the taking, possession, transport, export, processing, selling, offering for sale, or shipping of threatened or endangered species.

The TPWD maintains the NDD to track known occurrences of threatened, endangered, and otherwise rare plant and animal species throughout Texas. The NDD provides information about the locations and descriptions of rare habitats and areas managed to achieve high species diversity as well as provide quality habitat for common and rare wildlife species. Typically, information obtained from the NDD includes a descriptive record with Element Occurrence Identification (EOID) numbers corresponding with mapped locations of all rare habitats within the study area. The NDD data was downloaded from TPWD NDD Information Request Tool in September 2024 (TPWD, 2024b). It is important to note that, because the NDD is based on the best data available to TPWD regarding rare species, these data cannot provide a definitive statement as to the presence, absence, or condition of special species, natural communities, or other significant features in any area. Given the small proportion of public versus private land in Texas, the NDD does not include a representative inventory of rare resources in the state. Also, the data are not complete, as there are gaps in coverage due to the lack of access to land or data and a lack of staff and resources to collect and process data on all rare and significant resources.

A review of federal and state listed endangered or threatened species was conducted to include both Bexar and Medina counties. Thirty-seven federal- and state-listed threatened, endangered, proposed endangered, proposed threatened, and candidate species were identified by USFWS as having the potential to occur in the study area, with TPWD identifying these species as having the potential to occur in Bexar or Medina counties. **Table 3-9** lists these species, their habitat descriptions, and suitable habitat determinations within the study area. **Table 3-9** also denotes those species for which the USFWS has designated or proposed critical habitat that may require special management and protection. There are designated critical habitat units (CHUs) for six federally listed species within the study area (USFWS, 2024a). All CHUs within or intersecting the study area are within Government Canyon State Natural Area (GCSNA). Unless otherwise noted, the information below is drawn primarily from TPWD (2024b), USFWS (2024b, 2024c), and NatureServe Explorer (2024) online data and publications. Twelve listed or proposed species are identified as having suitable habitat within the study area as demonstrated in **Table 3-9**.

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Table 3-9. Threatened and Endangered Species

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
Amphibians						
Cascade Caverns Salamander	*Eurycea latitans*	-	T	This species inhabits springs, outflow channels, and subterranean voids in northern Bexar, western Comal, and southern Kendall counties. These areas are part of the southeastern Balcones Canyonlands, a subregion of the Edwards Plateau. Cascade Caverns salamanders require access to both surface and subsurface aquatic habitats year-round. These habitats must have flowing groundwater with chemical components within the natural range. Additionally, the natural physical form of spring openings, spring runs, creeks, and subterranean spaces must remain free from human-caused disturbances that could degrade or destroy these systems.	No	The study area is not located within the species known range.
San Marcos Salamander	*Eurycea nana*	T	T	San Marcos salamanders inhabit areas with cobble, gravel, and boulder substrates, often covered by *Amblystegium* moss or filamentous algae. They avoid mud or silt substrates and rooted macrophytes, preferring thermally stable spring environments with water velocities around one centimeter per second. High velocities can erode their habitat, while low velocities allow sediment to fill the spaces they use. Determining subsurface habitat characteristics is challenging due to the difficulty of accessing subterranean environments.	No	The study area is not located within the species known range.
Texas Salamander	***Eurycea neotenes***	**-**	**T**	**This exclusively aquatic species is only known to occur in the immediate vicinity of freshwater spring outflows. The species is primarily found under rocks and leaves and in the gravel substrates of subaquatic springs.**	**Yes**	**The study area is located within the species known range. Multiple EO records for the species are within the study area.**
Texas Blind Salamander	*Eurycea rathbuni*	E	E	This rare salamander lives in the Edwards Plateau region, found in the relatively constant temperatures of the water-filled subterranean caverns of the Edwards Aquifer near San Marcos, Texas. The Texas blind salamander requires a constant supply of clean, cool water from the Edwards Aquifer.	No	The study area is not located within the species known range.
Arachnids						
Cokendolpher Cave Harvestman	*Texella cokendolpheri*	E	S1	A subterranean obligate, the species occurs in small isolated karstic features within the Edwards Limestone Formation. Sensitive to low humidity and temperature, it is found under large rocks in dark cool parts of caves. The species is only known to inhabit a single mile-long cave system in a highly urbanized area of Bexar County, Texas.	No	The study area is not located within the species known range.

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
Government Canyon Bat Cave Meshweaver	***Cicurina vespera***	**E**	**S1**	**This species is endemic to Texas, where it is known to exist in only one Bexar County cave: the Government Canyon Bat Cave. This species is an obligate cave-dweller, spending all of its life within a subterranean environment. This troglobitic species requires high humidity and stable temperatures (around 22 degrees Celsius).**	**Yes**	**The study area is located within the species known range and includes the only CHU for the species.**
Government Canyon Bat Cave Spider	***Tayshaneta microps***	**E**	**S1**	**Known from the following two caves in the Government Canyon State Natural Area, Bexar County, Texas: Government Canyon Bat Cave and Surprise Sink, this species is an obligate cave-dweller spending all of its life within these limestone features. This troglobitic species requires high humidity and stable temperatures (around 22 degrees Celsius).**	**Yes**	**The study area is located within the species known range and includes the only CHU for the species.**
Madla Cave Meshweaver	***Cicurina madla***	**E**	**S1**	**A subterranean obligate, the species occurs in small isolated karstic features within the Edwards Limestone Formation. Sensitive to low humidity and temperature, it is found under large rocks in dark cool parts of caves. This species is known to originate from eight or nine caves in Bexar County, spending its entire life in subterranean environments.**	**Yes**	**The study area is located within the species known range and includes CHUs for the species.**
Robber Baron Cave Meshweaver	*Cicurina baronia*	E	S1	This troglobitic species inhabits the limestone caves and mesocaverns of Bexar County, Texas. The species has only been identified in two Bexar County caves: the Robber Baron Cave and another in Alamo Heights. This species likely requires high humidity (near 100 percent) and stable temperatures (around 22 degrees Celsius).	No	The study area is not located within the species known range and is only known from KFRs outside of the study area.
Birds						
Golden-cheeked Warbler	***Setophaga chrysoparia***	**E**	**E**	**This migratory species breeds in central Texas along the Balcones Escarpment on the eastern edge of the Edwards Plateau and ranges from southwest of Fort Worth to northeast of Del Rio. Breeding habitat consists of juniper-oak woodlands dominated by Ashe juniper (*Juniperus ashei*) and various oak (*Quercus* sp.) species and deciduous trees found in areas with steep slopes, canyon heads, draws, and adjacent ridgetops. The species is dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are generally placed in upright forks of mature Ashe junipers or various deciduous species. Occupied sites usually contain junipers at least 40 years old.**	**Yes**	**Juniper-oak woodlands with sufficient canopy coverage and age are present in the study area and it is within the modeled range of the species. Multiple EO records are within the study area.**

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
Piping Plover	*Charadrius melodus*	T	T	This migratory species overwinters in Texas, where it occurs on beaches, ephemeral sand flats, barrier islands, sand, mud, algal flats, washover passes, salt marshes, lagoons, and dunes along the Gulf Coast and adjacent offshore islands, including spoil islands in the Intracoastal Waterway. Sand flats appear to be preferred habitat, but algal flats appear to be the highest quality habitat because of their relative inaccessibility and their continuous availability throughout all tidal conditions.	No	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the piping plover.
Rufa Red Knot	*Caladris canutus rufa*	T	T	The species is a winter resident and migrant in Texas. It is primarily found in marine habitats such as sandy beaches, salt marshes, lagoons, mudflats of estuaries and bays, and mangrove swamps during winter months. It primarily occurs along the Gulf coast on tidal flats and beaches and less frequently in marshes and flooded fields. It has occasionally been observed along shorelines of large lakes and freshwater marshes.	No	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the rufa red knot.
White-faced Ibis	*Plegadis chihi*	-	T	The species is found in the Western Gulf Coastal Plains ecoregion of Texas. Preferred habitat includes freshwater wetlands, marshes, ponds, rivers, irrigated land, and sloughs, but it occasionally forages in brackish or saltwater marshes. It nests in marshes in low trees, on the ground in bulrushes (*Scirpus* sp.) or reeds, or on floating mats.	No	No freshwater marshes, sloughs, irrigated rice fields, or brackish habitats were identified within the study area.
Wood Stork	*Mycteria americana*	-	T	Prefers to nest in large tracts of bald cypress or red mangrove (*Rhizophora mangle*); forages in prairie ponds, flooded pastures or fields, ditches, and other standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.	No	No large tracts of bald cypress or red mangrove, prairie ponds, or flooded pastures or fields were identified within the study area.
Whooping Crane	*Grus americana*	-	E	This migratory species breeds in the South Central Plains of east Texas and throughout the southeastern U.S. In Texas, breeding habitat occurs between sea level and 230 meters in elevation in bottomland forests, cypress swamps, pine glades, and freshwater marshes skirting large lakes. It nests near the tops of trees that are higher than the surrounding stand, often near a clearing or the edge of a forest or woodland. It prefers to nest in pines, but occasionally uses species such as bald cypress (*Taxodium distichum*), water oak (*Quercus nigra*), or cottonwood (*Populus deltoides*).	No	No lowland forested regions, including swamps and marshes with tall trees, were identified within the study area.

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
Yellow-billed cuckoo	*Chordeiles minor*	T	-	In Texas, the populations of concern are found breeding in riparian areas in the Trans Pecos (know as part of the Western Distinct Population Segment). It is the Western DPS that is on the U.S. ESA threatened list and includes the Texas counties Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio. Riparian woodlands below 6,000' in elevation consisting of cottonwoods and willows are prime habitat. This species is a long-distant migrant that summers in Texas, but winters mainly in South America. Breeding birds of the Trans Pecos populations typically arrive on their breeding grounds possibly in late April, but the peak arrival time is in May. Threats to preferred habitat include hydrologic changes that don't promote the regeneration of cottonwoods and willows, plus livestock browsing and trampling of sapling trees in sensitive riparian areas.	No	The study area is outside of the breeding and wintering habitat for the species.
Zone-tailed hawk	*Buteo albonotatus*	-	T	Arid open country, including open deciduous or pine-oak woodland, mesa or mountain county, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains; nests in various habitats and sites, ranging from small trees in lower desert, giant cottonwoods in riparian areas, to mature conifers in high mountain regions	No	The study area is outside of the breeding and wintering habitat for the species**.**
Crustaceans						
Peck's Cave Amphipod	*Sygobromus pecki*	E	-	This species inhabits the areas where the groundwater meets the surface found in the headwaters of the Comal Spring complex and Hueco Springs fed by the Edwards Balcones Fault Zone Aquifer groundwater. This species is primarily found near or within the hollowed-out limestone spaces in underground aquifers. This species is only known to occur in four cavern areas of Bexar County, Texas: Comal Springs, Hueco Springs, Landa Park, and Panther Canyon.	No	The study area is not located within the species known range.
Fishes						
Fountain Darter	*Etheostoma fonticola*	E	-	This species requires undisturbed stream floor habitats containing a mix of submergent plants, clear and clean water, invertebrates for food, constant water temperatures and adequate spring flows. The fountain darter is only found in the Comal and upper San Marcos rivers in Texas.	No	The study area is not located within the species known range.
Widemouth Blindcat	*Satan eurystomus*	PE	T	This species exists in total darkness, 900 feet below the surface under San Antonio, Texas. Thes species inhabits the groundwater in the Edwards Balcones Fault Zone Aquifer where it is presumed to eat invertebrates. The	No	This species occurs at depths not affected by the proposed project type.

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
				known range includes five artesian wells that penetrate the San Antonio Pool of the Edwards Aquifer (Edwards Limestone, Lower Cretaceous) in and around San Antonio, Bexar County, Texas.		
Toothless Blindcat	*Trogloglanis pattersoni*	PE	T	This species exists in total darkness, 900 feet below the surface under San Antonio, Texas. Thes species inhabits the groundwater in the Edwards Balcones Fault Zone Aquifer where it is presumed to scavenge food sources from invertebrates and fungus. The known range includes five artesian wells that penetrate the San Antonio Pool of the Edwards Aquifer (Edwards Limestone, Lower Cretaceous) in and around San Antonio, Bexar County, Texas.	No	This species occurs at depths not affected by the proposed project type.
Flowering Plants						
Texas Wild-rice	*Zizania texana*	E	E	This species is known only from the spring-fed upper San Marcos River in Central Texas. This species is primarily found in shallow areas of the river (1 m) and at high current velocities (≥ 0.46 m/s^{-1}). Texas wild-rice is more commonly associated with native species than non-native, occupying sites with moderately coarse to coarse sandy soils.	No	The study area does not fall within the known range of this species.
Bracted twistflower	***Streptanthus bracteatus***	**T**	**S1**	**This species primarily exists along the boundary of Edwards or Devils River limestone formations with the Glen Rose limestone formation. Typically found on rocky hillsides and slopes, it frequently grows near Ashe juniper (*Juniperus ashei*), Texas live oak (*Quercus fusiformis*), Texas mountain laurel (*Sophora secundiflora*), Texas red oak (*Quercus buckleyi*), and other trees. This plant often associates with shrubs, which likely serves as protection against deer herbivory rather than a requirement for shade.**	**Yes**	**Suitable geologic, vegetation, and topographic criteria are present within the study area. Modeled habitat is also present in the study area.**
Tobusch fishhook cactus	*Sclerocactus brevihamatus* ssp. *tobuschii*	T	E	Shallow, moderately alkaline, stony clay and clay loams over massive fractured limestone; usually on level to slightly sloping hilltops; occasionally on relatively level areas on steeper slopes, and in rocky floodplains; usually open areas within a mosaic of oak-juniper woodlands, occasionally in pine-oak woodlands, rarely in cenizo shrublands or little bluestem grasslands; sites are usually open with only herbaceous cover, although the cactus may be somewhat protected by rocks, grasses, or spikemosses; flowering (late January-) February-March (rarely early April).	No	The study area is outside of the known range and preferred soil associations for this species.
Insects						

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
Beetle (no common name)	***Rhadine exilis***	**E**	**S1**	**Limited to only a few caves in north and northwest Bexar County, this troglobitic beetle is found in the subterranean limestone voids of 47 caves. This species likely requires high humidity (near 100 percent) and stable temperatures (around 22 degrees Celsius).**	**Yes**	**The study area is located within the species known range and includes CHUs for the species.**
Beetle (no common name)	***Rhadine infernalis***	**E**	**S1**	**Limited to only a few caves in north and northwest Bexar County, this troglobitic beetle is found in the subterranean limestone voids of 39 caves. This species likely requires high humidity (near 100 percent) and stable temperatures (around 22 degrees Celsius).**	**Yes**	**The study area is located within the species known range and includes CHUs for the species.**
Comal Springs Dryopid Beetle	*Stygoparnus comalensis*	E	S1	This aquatic beetle lives in and out of the bubbling, boiling spring openings found in the headwaters of the Comal Spring complex and Fern Bank Springs fed by the Edwards Aquifer groundwater. Adults inhabit the subterranean species associated with springs, and their association with the surface can only be hypothesized. Once at the surface, they inhabit gravel and cobble-dominated substrates with aquatic vegetation and submerged wood present.	No	The study area is not located within the species known range.
Comal Springs Riffle Beetle	*Heterelmis comalensis*	E	S1	This aquatic beetle lives in and out of the bubbling, boiling spring openings found in the headwaters of the San Marcos and Comal Spring complexes that are fed by the Edwards Balcones Fault Zone Aquifer groundwater. This species is primarily found where groundwater meets the surface.	No	The study area is not located within the species known range.
Helotes Mold Beetle	***Batrisodes venyivi***	**E**	**S1**	**Found exclusively in the dark zones of eight caves in Bexar County, Texas, these troglobitic beetles likely require high humidity (nearly 100 percent) and stable temperatures (around 22 degrees Celsius). This species is known only from Christmas Cave and Helotes Hilltop Cave.**	**Yes**	**The study area is located within the species known range and includes CHUs for the species.**
Monarch Butterfly	***Danaus plexippus***	**C**	**-**	**Found statewide. Adults are found in a variety of habitats including native prairies, pastures, open woodlands and savannas, desert scrub, roadsides, and other habitats with abundant nectar plants, including urbanized areas. Although adults may be present year-round, they are primarily encountered between March and November, and are most commonly observed in the summer and fall during breeding and migration. Caterpillars are found on various species of the family Asclepiadaceae (occasionally treated as a subfamily of Apocynaceae). Common host plants in Texas include milkweeds (*Asclepias* spp.), milkvines (*Matelea* spp.), twinevines (*Funastrum* spp.), swallowworts (*Cynanchum* spp.) and anglepod (*Gonolobus***	**Yes**	**This species is a habitat generalist and suitable habitat may be present along vegetated roadsides and other open areas with nectar plants, species of host plants in the Asclepiadaceae family, and/or other desirable species.**

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
				***suberosus* [=*Matalea gonocarpus*]). Caterpillars are most frequently observed between April and September.**		
Mammals						
Black Bear	*Ursus amerianus*	-	T	Black bears inhabit forests, forested wetlands, and nearby openings. They use various dens, including fallen trees, tree cavities, hollow logs, underground sites, and dense cover, with young born in these dens. Preferring mixed deciduous-coniferous forests with thick understory, they also thrive in large hardwood swamps and pocosins on the Atlantic Coastal Plain. Southeastern bears benefit from enhancing pocosins, mature gum, oak, and disturbed habitats.	No	The study area lacks suitable forested areas and aquatic features for this species.
White-nosed Coati	*Nasua narica*	-	T	This species is primarily found in woodlands, riparian corridors and canyons. Most individuals in Texas are probably transients from Mexico; diurnal and crepuscular; very sociable; forages on ground and in trees; omnivorous; may be susceptible to hunting, trapping, and pet trade	No	The study area is outside of the known range for the species.
Tricolored Bat	***Perimyotis subflavus***	**PE**	**NL**	**In Texas, tricolored bats may be found year-round. In the spring, summer, and fall they primarily nest on leaves or bark of live and dead trees, or epiphytic vegetation such as Spanish moss (*Tillandsia usneoides*). They may also roost among ferns and crevices on limestone and sandstone bluffs and cliffs during this time. From late winter to early spring, they may roost in culverts, abandoned buildings, and large hollow trees. In central Texas caves serve as important roost sites. Tricolored bats typically roost alone or in small groups. During the winter they may go into periods of torpor during colder temperatures however they will emerge to feed on warm evenings. Foraging habitat consists of open woodlands, riparian corridors, and forest edge.**	**Yes**	**Trees, abandoned buildings, and/or culverts may be present within the study area. There is no modeled habitat within the study area.**
Mollusks						
False Spike	*Fusconaia mitchelli*	**-**	T	Freshwater mussel currently known from the Colorado and Brazos River basins. The species occurs in small to medium-sized streams and rivers with various substrates including mud and mixtures of sand, gravel, and cobble. It is often found in riffle and pool habitats, and host species include the red (*Cyprinella lutrensis*) and blacktail shiner (*C. venusta*).	No	The proposed study area is not located within the species known river basins.

Common Name	Scientific Name	Listing Status		Habitat Description	Suitable Habitat within Study Area	Determination
		USFWS	TPWD			
Reptiles						
Texas Tortoise	***Gopherus berlandieri***	**-**	**T**	**The Texas tortoise lives in southern Texas and in north-east Mexico. In Mexico it inhabits semi-desert areas and in southern Texas it lives in scrub forests in humid, subtropical areas, preferring open scrub woods and well-drained, sandy soils.**	**Yes**	**Some scrub forests are present in the study area and an EO record for the species is adjacent to the study area.**
Cagle's Map Turtle	*Graptemys caglei*	-	T	This aquatic prefers shallow water with swift to moderate flow and gravel or cobble bottom, connected by deeper pools with a slower flow rate and a silt or mud bottom; gravel bar riffles	No	The waterways within the study area does not have adequate flow and/or deep pools suitable for this species.
Texas Horned Lizard	*Phrynosoma cornutum*	-	T	This lizard inhabits open arid and semiarid regions with sparse vegetation (deserts, prairies, playa edges, bajadas, dunes, foothills) with grass, cactus, or scattered brush. Soil may vary in texture from sandy to rocky.	No	The study area does not have suitable habitat with sparse vegetation for this species.

SOURCE: USFWS, 2024c; TPWD, 2024b
NOTES:
*Does not include species under review for federal listing or delisted species in recovery.
C = Candidate, E = Endangered, NL = Not Listed, P = Proposed, T = Threatened, S1 = State ranked as critically imperiled, extremely rare, vulnerable to extirpation
Bold entries include federally listed species that have the potential to occur in the study area (i.e., does not include the entire county) based on the IPaC (USFWS, 2024c). State-listed entries include the entire county.

Species of Greatest Conservation Need

Species designated as SGCN by TPWD whose geographic range includes any portion of Bexar or Medina counties were reviewed. Approximately 148 state-listed SGCN and rare species were identified by TPWD as having the potential to occur in Bexar and Medina counties. Desktop review identified potential suitable habitat for 35 state-listed SGCN species within the study area. These species are shown in **Table 3-10** along with any associated EOIDs in the study area (TPWD, 2024b). Within the study area, suitable habitats for SGCN include both terrestrial and aquatic environments. Terrestrial habitats may consist of forested uplands, grassland uplands, wooded floodplains, riparian zones, herbaceous vegetation, and native prairie vegetation, which provide essential resources for species dependent on a mix of open spaces and cover. Aquatic habitats, particularly near the tributary to San Geronimo Creek, include perennial and ephemeral streams and wetlands with varying substrates, such as rocky or sandy beds, that are crucial for species requiring both terrestrial and aquatic elements for their life cycles. These habitats support species adapted to fragmented or modified landscapes, offering shelter, foraging opportunities, and breeding sites despite the urban context. However, it should be noted that these species do not receive additional protections beyond those provided under the BGEPTA and the MBTA.

Table 3-10. SGCN Species with Potential Habitat in the Study Area

Common Name	Scientific Name	EOID
Amphibians		
Woodhouse's toad	*Anaxyrus woodhousii*	-
Arachnids		
Reddell's Cave millipede	*Speodesmus reddelli*	-
Birds		
black-capped vireo	*Vireo atricapilla*	-
Crustaceans		
No accepted common name	*Brackenridgia reddelli*	-
Insects		
American bumblebee	*Bombus pensylvanicus*	-
No accepted common name	*Bombus variabilis*	-
No accepted common name	*Pygarctia lorula*	-
Mammals		
Ghost-faced bat	*Mormoops megalophylla*	-
Cave myotis bat	*Myotis velifer*	-
Western pipistrelle	*Parastrellus hesperus*	-
Eastern spotted skunk	*Spilogale putorius*	-
Plains spotted skunk	*Spilogale interrupta*	-
Reptiles		
Eastern box turtle	*Terrapene carolina*	-
Plants		
Plateau milkvine	*Matelea edwardsensis*	10173
Narrowleaf brickellbush	*Brickellia eupatorioides* var. *gracillima*	-
Texas barberry	*Berberis swaseyi*	-

Common Name	Scientific Name	EOID
Heller's marbleseed	*Onosmodium helleri*	-
Tree dodder	*Cuscuta exaltata*	-
Hill Country wild-mercury	*Argythamnia aphoroides*	-
Darkstem noseburn	*Tragia nigricans*	-
Texas amorpha	*Amorpha roemeriana*	7815
Net-leaf bundleflower	*Desmanthus reticulatus*	10143
Canyon bean	*Phaseolus texensis*	-
Turnip-root scurfpea	*Pediomelum cyphocalyx*	-
Texas mock-orange	*Philadelphus texensis* var. *texensis*	-
Big red sage	*Salvia pentstemonoides*	-
Scarlet leather-flower	*Clematis texensis*	-
Texas almond	*Prunus minutiflora*	-
Osage Plains false foxglove	*Agalinis densiflora*	-
Threeflower penstemon	*Penstemon triflorus* var. *triflorus*	-
Texas seymeria	*Seymeria texana*	-
Siler's huaco	*Manfreda sileri*	-
Glass Mountains coral-root	*Hexalectris nitida*	-
Texas fescue	*Festuca versuta*	8787
Buckley tridens	*Tridens buckleyanus*	12467
SOURCE: TPWD, 2024b		

3.2 Human Resources/Community Values

3.2.1 Land Use

The entire study area covers approximately 37 square miles and is located within the City of San Antonio, the extraterritorial jurisdiction of San Antonio, and the City of Helotes. The study area is located within the jurisdictional boundary of Bexar and Medina counties. Jurisdiction does not necessarily represent land ownership. Potential conflicts that could arise from crossing jurisdictional boundaries were evaluated in this study.

Land uses within the study area consist of a mix of urban/developed, planned land use, agriculture, quarries, transportation/aviation/utility features, communication towers, and parks and recreation areas. A significant portion of the study area is occupied by the GCSNA. The primary sources of land use information were obtained from interpretation of aerial photographs, USGS topographical maps, and vehicular reconnaissance surveys from accessible public viewpoints. Planned land use features were limited to known features obtained from governmental entities and mobility authorities.

Residential Areas

The urban/developed classification represents concentrations of surface disturbing land uses, which include habitable structures and other developed areas, characterized with low, medium and high intensities. The various levels of development include a mix of institutional, commercial, and/or industrial land uses. Developed low, medium, and high intensity areas were analyzed using aerial photograph interpretation and reconnaissance surveys. These classifications are described below:

- **Developed Low Intensity** areas typically include rural settings with single-family housing units.
- **Developed Medium Intensity** areas typically include single-family housing units that are grouped in residential subdivisions and might include peripheral commercial structures.
- **Developed High Intensity** includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses, and commercial/industrial parks. Areas with the highest concentration of development are typically located closer to urban centers and major arterials.

The study area is predominantly rural, with the highest concentration of residential subdivisions, commercial and industrial developments located in the southern portion of the study area. The habitable structures near SH 211 and SH 16 would be classified as low intensity developments, while the southeastern part of the study area consists mainly of medium intensity developments. Habitable structures were identified using aerial photographs (NearMap, 2024), Google Street View, and reconnaissance surveys. The PUC definition of a habitable structure was used for this EA. The PUC's Substantive Rules (16 TAC § 25.101(a)(3)) define habitable structures as "structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis. Habitable structures include, but are not limited to, single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools."

Schools

The study area is located within the Northside Independent School District (ISD) and Medina Valley ISD. There were three Northside ISD public schools identified within the study area (Texas Education Agency [TEA], 2024).

- Dr. Pat Henderson Elementary
- Nathan Kallison Elementary
- John M. Harlan High School

Planned Land Use

The planned land use component identifies objectives and/or policies regarding land use goals and plans, including conservation easements, managed lands, and proposed developments. Cities and counties typically prepare comprehensive land use plans to provide strategic direction by goals and objectives for the individual city or county. City and county websites were reviewed, and correspondence was submitted to local and county officials to identify potential planned land use conflicts. The City of San Antonio also has a Master Plan intended to provide guidance in future decisions related to land use, infrastructure improvements, transportation, and more (City of San Antonio, 2024a, 2024b). Additionally, the City of San Antonio has set up zoning districts to provide information on how a property may be developed. No Neighborhood Conservation Districts were identified within the study area, but there are platted subdivisions. Bexar County is implementing a parks master plan last updated in 2021 (Bexar County, 2024), while Medina County does not have a parks master plan. No zoning was identified for either Bexar or Medina County.

Conservation Easements

A conservation easement is a restriction that property owners voluntarily place on specified uses of their property to protect natural, productive or cultural features. The property owner retains legal title to the property and determines the types of uses to allow or restrict. The property can still be bought, sold, and inherited, but the conservation easement is tied to the land and binds all present and future owners to its terms and restrictions. Conservation easement language will vary as to the individual property owner's allowances for additional developments on the land. The land trusts facilitate the easement and ensure compliance with the specified terms and conditions.

According to a review of various non-governmental organizations (e.g., the Nature Conservancy [TNC], Texas Land Conservancy [TLC], and the National Conservation Easement Database [NCED]), which function as land trusts and maintain databases for conservation easements within Texas, there were 20 conservation easements within or intersecting the study area (NCED, 2024; TNC, 2024; TLC, 2024). **Table 3-11** presents a brief description of the conservation easements within or intersecting the study area.

Table 3-11. Conservation Easements

Name	Ownership	Approximate Acreage
Canyon Ranch	TPWD	421
Dreiss Property	TPWD	6
Elizabeth P. Hill Preserve / San Geronimo Creek Macrosite	TNC	716
Gallagher	TPWD	710
Gallagher - Tract 1	Landowner	598
Gallagher - Tract 2	Landowner	7
Gallagher HQ	Landowner	135
Goodhorse Tract	TPWD	229
Hampton	TPWD	50
Hampton Ranch	Landowner	116
Hilton Ranch	Landowner	191
Kallison Ranch	TPWD	1,164
Laredo Culebra I Property	TPWD	56
Laredo Culebra II Property	TPWD	110
MaBe-Canyon Ranch	TPWD	461
Mayberry	TPWD	345
McNeel Ranch	Landowner	822
Rancho Blanco	Landowner	1,105
Schuchart	TPWD	91
Windgate	TPWD	1,024
SOURCE: NCED, 2024		

3.2.2 Agriculture

Agriculture is an important component of the economy for Bexar and Medina counties, as indicated by representative agricultural statistics from the United States Department of Agriculture (USDA) National Agricultural Statistics Service's 2017 and 2022 Census of Agriculture shown in **Table 3-12**. The 2022 Census of Agriculture shows that in Bexar County, the total market value for agricultural products sold increased by almost eight percent from 2017. Livestock sales accounted for 34 percent of agricultural sales, while crop sales made up 66 percent. The total number of farms decreased by 20 percent and total farm acreage decreased by 25 percent from 2017. Medina County experienced a 12 percent decrease in the total market value for agricultural products sold. Livestock sales represented 55 percent of agricultural sales, while crop sales comprised 45 percent. The total number of farms decreased by three percent and total farm acreage decreased by 19 percent from 2017 (USDA, 2017, 2022).

Table 3-12. Agricultural Statistics for Bexar and Medina Counties

Statistical Category	Bexar County 2017 / 2022	Medina County 2017 / 2022
Market Value of Products Sold (in $ millions)		
Crop Sales	$50.6M / $48.1M	$45.8M / $37.1M
Livestock Sales	$17.3M / $25.1M	$48.1M / $45.5M
Total Sales	$67.9M / $73.2M	$93.9M / $82.6M
Farms		
Number	2,520 / 2,107	2,281 / 2,204
Total Acreage	331,904 / 248,545	782,391 / 637,224
SOURCE: USDA, 2017, 2022.		

3.2.3 Transportation/Aviation

Transportation

Federal, state, and local roadways were identified using TxDOT county transportation maps, Texas Natural Resources Information System (TNRIS) data, and field reconnaissance surveys. The major roadway transportation system within the study area includes SH 16, SH 211, FM 471, FM 1283 and multiple County Roads (CR) but there are no IH or US highways. Numerous local public and private roadways were identified in the study area as well (TxDOT, 2022a).

TxDOT's "Project Tracker," which contains detailed information by county for every project that is or could be scheduled for construction, was reviewed to identify any state roadway projects planned within the study area. The TxDOT Project Tracker indicated there are ten state roadway projects planned or underway within the study area (TxDOT, 2022b). **Table 3-13** summarizes the planned or underway projects within the study area. A review of the City of San Antonio Transportation and Capital Improvements did not indicate any city roadway projects planned within the study area (City of San Antonio, 2024c).

Table 3-13. TxDOT Projects within Study Area

Roadway	CSJ*	County	Limits	Project Description	Status
FM 1283	1730-02-024	Medina	From Bandara / Medina County line to FM 471	Seal coat	Construction begins within 4 years
FM 471	0849-02-053	Medina	From FM 1283 to US 90	Seal coat	Construction begins within 4 years
FM 471	0849-02-043	Medina	At SH 211	Safety improvement projects	Construction underway or begins soon
FM 471	0849-01-053	Bexar	At SH 211	Safety improvement projects	Construction underway or begins soon
FM 471	0849-02-045	Medina	From Medina County line to SH 211	Widen non-freeway	Construction underway or begins soon
FM 471	0849-01-055	Bexar	From Old FM 471 to Medina County line	Widen non-freeway	Construction underway or begins soon
SH 211	3544-02-008	Bexar	From SH 16 to Bexar / Medina County line	Seal coat	Construction begins within 4 years
SH 211	3544-03-009	Medina	From Bexar / Medina County line to FM 471	Seal coat	Construction begins within 4 years
SH 16	0291-09-132	Bexar	From Medina / Bexar County line to Scenic Loop Road	Seal coat	Construction begins within 4 years

Roadway	CSJ*	County	Limits	Project Description	Status
SH 16	0291-09-131	Bexar	From 0.2 miles east of Helotes Ridge to 1.14 miles north of FM 1560	Safety improvement projects	Construction underway or begins soon
SOURCE: TxDOT, 2022b. NOTES: *Control Section Job (CSJ) is TxDOT nomenclature for referencing project numbers					

Railroads

No railroads were identified within the study area (TxDOT, 2022a).

Aviation

Halff reviewed the San Antonio Sectional Aeronautical Chart (FAA, 2024a) and the Chart Supplement for the South Central US (formerly the Airport/Facility Directory) (FAA, 2024b) to identify FAA registered facilities within the study area subject to notification requirements listed in 14 CFR Part 77.9. Facilities subject to notification requirements listed in 14 CFR Part 77.9 include public-use airports listed in the Airport/Facility Directory (currently the Chart Supplement), public-use or military airports under construction, airports operated by a federal agency or DoD, or an airport or heliport with at least one FAA-approved instrument approach procedure.

The Chart Supplement for the South Central US used in conjunction with the San Antonio Sectional Aeronautical Chart, contains all public-use airports, seaplane bases and public-use heliports, military facilities, and selected private-use facilities specifically requested by the DoD for which a DoD Instrument Approach Procedure has been published in the US Terminal Procedures Publication.

No public-use or military FAA registered airports were identified within the study area. One FAA registered public use airport, San Geronimo Airpark, was identified within 20,000 feet of the study area boundary (FAA, 2024a), approximately 5,000 feet southeast of the existing Talley Road Substation.

Although pre-existing landing areas (PELAs) for air ambulance services may exist in the study area, no public-use heliports or heliports with an instrument approach procedure are listed for the study area in the Chart Supplement for the South Central US (FAA, 2024b).

In addition, Halff also reviewed the FAA database (FAA, 2024c), USGS topographic maps, recent aerial photography, and conducted field reconnaissance from publicly accessible areas to identify private-use airstrips and private-use heliports not subject to notification requirements listed in 14 CFR Part 77.9. There were no private-use airstrips and no private-use heliports identified within the study area.

3.2.4 Communication Towers

Review of the Federal Communication Commission (FCC) database indicated that there are five amplitude modulation radio (AM radio) transmitters within 10,000 feet of the study area, all of which are approximately 10,200 feet southwest of the existing Talley Road Substation. There are 13 frequency modulation radio (FM radio) transmitter/microwave tower/other electronic installations identified within the study area. There are two additional FM radio transmitters/microwave towers/other electronic installations within 2,000 feet of the study area boundary (FCC, 2024).

3.2.5 Utility Features

Utility features reviewed include existing electrical transmission lines, distribution lines, pipelines, water and gas/oil wells, and water and gas/oil storage tanks. Data sources used to identify existing electrical transmission and distribution lines include utility company and regional system maps, aerial imagery, USGS topographic maps, additional available planning documents, and field reconnaissance surveys. Existing transmission lines identified within the study area include multiple transmission lines that originate from the Ranchtown and Talley Road substations, as shown on **Figure 3-1** located in **Appendix C** (map pocket). Distribution lines are prevalent throughout the developed portions of the study area; however, these features were not mapped or inventoried.

Data was obtained from the Railroad Commission of Texas (RRC) which provided a GIS layer for existing oil and gas wells, pipelines, and supporting facilities (RRC, 2024). The 2024 RRC dataset along with aerial photograph interpretation and field reconnaissance were used to identify and map existing oil and gas related facilities. In the study area, only one natural gas pipeline was found; no oil and gas wells were identified (RRC, 2024). Water wells were more common within the study area as shown on **Figure 3-1** located in **Appendix C** (map pocket). Within the study area, there are a total of 28 water wells, with seven designated for public water supply (TWDB, 2024). There is a SAWS water infrastructure project called The Woodlands Offsite Water, located along FM 471 in the southern portion of the study area and involves the construction of 10,000 feet of water main and related infrastructure (SAWS, 2024).

3.2.6 Socioeconomics

This section presents a summary of economic and demographic characteristics for Bexar and Medina counties and describes the socioeconomic environment of the study area. Literature sources reviewed include publications of the United States Census Bureau (USCB), and the Texas Demographic Center (TDC).

Population Trends

Bexar County experienced a population increase between 2010 and 2020 of 17 percent, while Medina County saw a 10 percent increase (USCB, 2010a, 2010b, 2020a, 2020b). By comparison, population at the state level increased by nearly 16 percent during this same time period (USCB, 2010c, 2020c).

According to TDC projections, Bexar County is projected to experience a 26 percent population growth in the next 30 years (from 2020 to 2050), while Medina County is projected to experience an 8 percent population growth. By comparison, the population of Texas is expected to increase by nearly 22 percent over the next three decades. (TDC, 2022). **Table 3-14** presents the past population trends and projections for the study area counties and the state of Texas.

Table 3-14. Population Trends

State/County	Past		Projected		
	2010	2020	2030	2040	2050
Texas	25,145,561	29,145,505	31,621,474	33,772,879	35,465,604
Bexar County	1,714,773	2,009,324	2,211,656	2,387,174	2,524,414
Medina County	46,006	50,748	52,700	54,147	54,761
SOURCES: USCB, 2010a, 2010b, 2010c, 2020a, 2020b, 2020c; TDC, 2022.					

Employment

From 2010 to 2022, the civilian labor force (CLF) in Bexar County increased by almost 28 percent (220,706 people). During this same time period the CLF increased by 13 percent (2,681 people) in Medina County. By comparison, the CLF at the state level grew by almost 23 percent (2,711,288 people) over the same time period (USCB, 2010d, 2022). **Table 3-15** presents the CLF for the study area counties and the state of Texas for the years 2010 and 2022.

Between 2010 and 2022, Bexar County experienced a decrease in its unemployment rate from 6.9 percent in 2010, to 5.5 percent in 2022; while in Medina County the unemployment rate went from 8.6 percent to 2.4 percent. By comparison, the state of Texas also experienced a decrease in the unemployment rate over the same period. The state's unemployment rate decreased from 7.0 percent in 2010, to 5.2 percent in 2022 (USCB, 2010d, 2022). **Table 3-15** presents the employment and unemployment data for the study area counties and the state of Texas for the years 2010 and 2022.

Table 3-15. Civilian Labor Force and Employment

State/County	2010	2022
Texas		
Civilian Labor Force	11,962,847	14,674,135
Employment	11,125,616	13,908,128
Unemployment	837,231	766,007
Unemployment Rate (Percent)	7	5.2
Bexar County		
Civilian Labor Force	793,358	1,014,064
Employment	738,564	957,948
Unemployment	54,794	56,116
Unemployment Rate (Percent)	6.9	5.5
Medina County		
Civilian Labor Force	20,145	22,826
Employment	18,412	22,289
Unemployment	1,733	537
Unemployment Rate (Percent)	8.6	2.4
SOURCES: USCB, 2010d, 2022.		

Leading Economic Sectors

The main occupations in Bexar and Medina counties in 2022 fall under the category of management, business, science, and arts, followed by sales and office occupations (USCB, 2022). **Table 3-16** presents the number of persons employed in each occupation category during 2022 in the study area counties.

Table 3-16. Employment Occupations

Occupation	Bexar County	Medina County
Management, business, science, and arts occupations	359,381	7,937
Service occupations	177,740	3,465
Sales and office occupations	221,469	4,871
Natural resources, construction, and maintenance occupations	91,230	3,143
Production, transportation, and material moving occupations	108,128	2,873
SOURCE: USCB, 2022.		

In 2022 the industry group that employed the highest number of people in Bexar and Medina County was educational services, health care, and social assistance (USCB, 2022). **Table 3-17** presents the number of persons employed in each of the industries in the study area counties for 2022.

Table 3-17. Industry Occupations

Occupation	Bexar County	Medina County
Agriculture, forestry, fishing and hunting, and mining	9,829	1,037
Construction	78,240	2,081
Manufacturing	52,214	1,601
Wholesale trade	20,302	457
Retail trade	112,093	2,689
Transportation and warehousing, and utilities	50,748	1,221
Information	15,106	406
Finance and insurance, and real estate and rental and leasing	84,923	1,539
Professional, scientific and management, and administrative and waste management services	117,949	2,033
Educational services, and health care and social assistance	221,059	5,341
Arts, entertainment, recreation, accommodations and food services	105,164	1,418
Other services, except public administration	45,614	1,103
Public administration	44,707	1,363
SOURCE: USCB, 2022.		

3.2.7 Community Values

The term "community values" is included for the evaluation of the project consistent with Section 37.056(c)(4) of the Texas Utilities Code which requires an assessment of values and resources important to the local community. At times, community values and resources could include the following:

- habitable structure locations;
- AM, FM, microwave, and other electronic installations in the study area;
- FAA-registered airstrips, private airstrips, and heliports located in the study area;
- irrigated pasture or croplands utilizing center-pivot or other traveling irrigation systems;
- approvals or permits required from other governmental agencies; and
- comments received from community leaders and members of the public.

In addition, Halff also evaluated the Project for community values and resources that might not be specifically listed by the PUC, but that might be of importance to a particular community as a whole. Although the term "community values" is not formally defined, the term "community values" may be defined as a shared appreciation of an area or other natural resource by a national, regional, or local community. Examples of a community resource would be a park or recreational area, historical or archeological site, or a scenic vista (aesthetics). Halff mailed consultation letters to various local elected and appointed officials to identify and collect information regarding community values and community resources. **Section 5.0** and **Appendix A** provide information regarding correspondence with these agencies and officials.

3.3 Recreation and Park Areas

The PUC's CCN application specifically requires reporting of recreational and park areas owned by a governmental body or an organized group, club, or church. Federal and state database searches and county/local maps were reviewed to identify any parks and/or recreational areas within the study area. Reconnaissance surveys were also conducted to identify any additional park or recreational areas.

3.3.1 National/State/County/Local Parks

A review of federal, state, and local websites and maps, as well as a field reconnaissance survey, found only one park/recreational facility within the study area. The GCSNA is a TPWD-owned and managed natural area protecting 12,244 acres in Bexar and Medina counties (TPWD, 2024c). A significant portion of the study area is occupied by the GCSNA as shown on **Figure 3-1** located in **Appendix C** (map pocket). Management is based on the conservation of the natural state of the land and its resources including wildlife, plants, and paleontology within the GCSNA. Access and recreation by the public is limited and managed. There are no other TPWD parks or public hunting units located within or near the study area (TPWD, 2024c, 2024d).

A review of the National Park Service (NPS) website did not indicate any national parks, national historic trails, national historic sites, national monuments, national memorials or national battlefields within the study area (NPS, 2024a, 2024b).

3.3.2 Wildlife Viewing Trails

Review of the TPWD Great Texas Wildlife Trails Heart of Texas East indicates that there is one wildlife viewing loop, Cibolo Loop, within the study area. There is one site of interest, GCSNA, located within the study area (TPWD, 2024e). GCSNA received funding from the United States Land and Water Conservation Fund Act (LWCF) in 1993, 2002, and 2013 for acquisition and development purposes. No other parks, recreation areas, scientific areas, wildlife refuges, or historic sites funded by the LWCF were found within the study area (LWCF Coalition, 2024). No wildlife management associations have been identified in the study area

3.4 Aesthetic Values

Aesthetics are included as a factor for consideration in the evaluation of transmission facilities consistent with Section 37.056(c)(4)(A)-(D) of the Texas Utilities Code. There are currently no formal guidelines provided for managing visual resources on private, state, or county owned lands. For the purposes of this study, the term “aesthetics” is utilized by Halff to address the subjective perception of natural beauty in a landscape. This evaluation attempts to define and evaluate the scenic qualities of an area. Related literature, aerial photograph interpretation, and field reconnaissance surveys were used to describe the regional setting and to determine the landscape character types for the study area.

Consideration of the visual environment includes a determination of aesthetic values (where the major potential effect of an action on the resource is considered visual) and recreational values (where the location of a transmission line could potentially affect the scenic enjoyment of the area). Halff considered the following aesthetic values in this study, which combine to give an area its aesthetic identity:

- topographical variation (hills and valleys);
- prominence of water in the landscape (rivers and lakes);
- vegetation variety (woodlands, meadows);
- diversity of scenic elements;
- degree of human development or alteration; and
- overall uniqueness of the scenic environment compared to the larger region.

Based on its proximity to the GCSNA and multiple conservation easements, the study area is predominantly forested and rural. However, there are residential, commercial and industrial land uses in the southern portion of the study area and/or adjacent to SH 16, SH 211 and FM 471. These land uses area associated with residential structures, commercial activities, mining facilities, local roadways and utility corridors. Overall, the study area viewscape consists of medium intensity development in the south and low intensity development elsewhere.

Halff conducted a review of Texas scenic drive locations that are identified as having particularly strong aesthetic views or settings and found that none of these scenic drives were located within the study area (TripAdvisor, 2024). In 1997, the THC designated Heritage Trail Regions throughout the state of Texas to create a statewide heritage tourism program centered on the original 10 scenic driving routes identified in the 1968 Texas Heritage Trails Program. These Heritage Trail Regions incorporate the historic highways, historic sites, hiking and biking paths, natural beauty, and cultural attractions unique to the 10 regions (THC, 2024a). The study area is within the Hill Country Trail Region. The suggested driving trail for this region incorporates portions of FM 1957 (Potranco Rd) and US 90, both of which are south of the study area. The nearest suggested attraction within the Hill Country Trail Region is in the City of Castroville, which is approximately 11 miles southwest of the study area along US 90 (THC, 2010). A review of the National Wild and Scenic Rivers System (NWSRS) website did not indicate any wild and scenic rivers within the study area (NWSRS, 2024). No other aesthetic resources, designated as scenic views, scenic roadways, or unique visual elements, were identified from the literature review or field reconnaissance of the study area. Although some portions of the study area might be visually appealing, the aesthetic quality of the study area overall is not distinguishable from that of other nearby areas.

3.5 Historical (Cultural Resource) Values

PURA § 37.056(c)(4)(A-D) incorporates historical and aesthetic values as a consideration when evaluating proposed electric transmission facilities. The PUC's CCN application requires that known cultural resources sites within 1,000 feet of a proposed Project route be listed, mapped, and their distance from the centerline of the route documented in the application filed for consideration. Archeological sites within 1,000 feet of a proposed route are required to be listed and their distance from the centerline documented, but they need not be shown on maps for the protection of the site. Sources consulted to identify known sites (national, state, or local commission) must also be listed.

The THC is the state agency responsible for preservation of the state's cultural resources. The THC, working in conjunction with TARL and the Center for Archeological Studies (CAS), maintains records of previously recorded cultural resources as well as records of previous field investigations. Information from the THC's restricted-access TASA and THSA was acquired in addition to GIS shapefiles acquired from TARL, to identify and map locations of previously recorded cultural (archeological and historical) resources within the study area. TxDOT's historic bridges database was also reviewed for bridges that are listed or determined eligible for listing on the NRHP. At the national level, NPS websites and data centers were reviewed to identify locations and boundaries for nationally designated historic landmarks, trails, and battlefield monuments.

Together, Pre- and Post-Contact sites are often referred to as cultural resources. Under the NPS standardized definitions, cultural resources include districts, sites, buildings, structures, or objects important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. For this study, cultural resources have been divided into three major categories: archeological resources, historical resources, and cemeteries. These three categories correlate to the organization of cultural resource records maintained by the THC and TARL.

Archeological resources are sites where human activity has measurably altered the earth and left deposits of physical remains (e.g., burned rock middens, stone tools, petroglyphs, house foundations, trails, trash scatters). Most archeological sites in Texas are Native American (Pre-Contact), Euro/African American, or Hispanic in origin. Much of the study area has not been studied intensively for archeological resources. Therefore, high probability areas (HPAs) for Pre-Contact and Post-Contact archeological resources were determined based on proximity to perennial water sources, certain topographic features, and the presence of structures on historic maps in currently undeveloped areas.

Historical resources include standing buildings or structures (e.g., houses, barns and outbuildings), and may also include dams, canals, bridges, transportation routes, silos, etc., and districts that are non-archeological in nature and generally more than 50 years of age.

Cemeteries are locations of intentional human interment and may include large public burial grounds with multiple individuals, small family plots with only a few burials, or individual grave sites. In some instances, cemeteries may be designated as Historic Texas Cemeteries (HTCs) by the THC or recognized with an Official Texas Historical Marker. Cemeteries may also be documented as part of the THC Record-Investigate-Protect Program.

3.5.1 Cultural Setting

The study area is within the Central Texas archeological region (Perttula, 2004), which spans from when humans first spread throughout North America (Pre-Contact Period) to the time of contact with European explorers (Contact Period). Within this framework, and for the purpose of this project, six generalized time periods (see **Table 3-18**) established for Central Texas by Collins (2004) are synthesized to characterize the Pre-Contact and Contact cultural chronologies of the study area. The before present (BP) intervals are based on radiocarbon dates with a cut off year of 1950.

Table 3-18. Cultural Chronology for Central Texas

Time Period	Interval (BP)	Interval (BC / AD)
European Contact	400 – 150 BP	AD 1550 – 1800
Austin and Toyah	1200 – 400 BP	AD 750 – 1550
Late Archaic	4000 – 1200 BP	2050 BC – AD 750
Middle Archaic	6000 – 4000 BP	4050 – 2050 BC
Early Archaic	8800 – 6000 BP	6850 – 4050 BC
Paleoindian	11,500 – 8800 BP	9550 – 6850 BC

Paleoindian Period (11,500 to 8,800 BP)

The Paleoindian period began toward the end of the Pleistocene epoch, a period during when now-extinct megafauna such as mammoth and bison species were among the prey of early Paleoindian hunter-gatherers. The early Paleoindian period is characterized primarily by the occurrence of distinct fluted and lanceolate-shaped projectile points such as Clovis and Folsom forms. Although Clovis is often viewed as the earliest cultural horizon in North America, recent studies suggest that the first inhabitants were present in Central Texas much earlier and well prior to 11,500 BP (Dillehay et al., 2008; Waters et al., 2011; Waters and Stafford, 2007). Sites common during the early Paleoindian include kill, quarry/stone-working, cache, camp, ritual, and burial types (Bousman et al., 2004; Collins, 2004). In addition to diagnostic projectile point forms produced from high quality local cherts and exotic stone materials (e.g., obsidian), chipped stone artifacts were also produced using prismatic blade techniques.

Subsistence during Clovis times in Central Texas (11,500 to 10,900 BP) was not exclusively reliant on large herbivores such as mammoth, bison, and horse. Investigations at Gault, Kincaid Rockshelter, Pavo Real, and Wilson-Leonard indicate, for example, that smaller animals such as turtles, alligator, mice, badger, and raccoon were also hunted (Black, 1989; Bousman et al., 2004; Collins, 1995). A variety of wild plants are presumed to have also been an important element of the Clovis diet.

Subsistence strategies during the Folsom and Plainview intervals (10,900 to 8800 BP) seem to have been dependent on specialized hunting of big game such as bison. This transition in subsistence strategies is evidenced by a tool kit comprised of fluted (Folsom) and unfluted (Midland and Plainview) points, end scrapers, and large, thin bifaces, which are thought to represent the trappings of hunters (Collins, 2004). Settlement patterns during the late Paleoindian period consist of camps, stone working, and kill sites in or near grassland habitats, owing to the notion of a focus on hunting grazing herds of bison. Due to highly mobile settlement and exploitation patterns, the geographical range of hunter-gatherers during the Paleoindian period stretches throughout North America.

Archaic Period (8,800 to 1,200 BP)

The Archaic period has been divided into three subperiods: Early (8800 to 6000 BP), Middle (6000 to 4000 BP) and Late (4000 to 1200 BP) Archaic, which are differentiated primarily by changes in paleoclimate and chipped stone technologies. The Archaic period in Central Texas is perhaps best known by the ubiquitous use of heated stones that manifest archeologically as various forms of hearths, earth ovens, scatters and middens. The accumulation of burned rock middens represents the remnants of hearths, or heating elements of earth ovens that were used primarily to transform a variety of geophytes and desert succulents into edible foods (Black and Thoms, 2014). In general, discrete cultural elements of the Archaic period are difficult to demarcate given the wide geographical distribution of sites dating to the Early, Middle and Late periods, and the stratigraphic mixing of these components due to a host of formation processes.

<u>Early Archaic</u>

The Early Archaic in Texas is marked by the extinction of Pleistocene megafauna and a warming climatic trend, which may have intensified the hunting and gathering of local resources. The transition to Archaic subsistence patterns is represented archeologically by a diverse material culture, which includes the application of groundstone technology (i.e., manos and metates). Chipped stone tools that are known from the Early Archaic include notched and split-stemmed Martindale and Uvalde projectile points, Clear Fork and Guadalupe bifaces or gouges thought to represent woodworking tools, and notched stones interpreted as net sinkers or bola stones. Site types containing Early Archaic components are usually campsites, represented archeologically at sites: Loeve, Wilson-

Leonard, Richard Beene, Sleeper, Jetta Court, Youngsport, Camp Pearl Wheat, and Landslide.

The wide distribution of artifacts across the Edwards Plateau and adjacent regions suggests that mobility was frequent, with undefined territories composed of small nomadic bands. Early Archaic sites appear concentrated along the Balcones Escarpment, which could reflect the greater availability of water resources afforded by this feature during arid climatic intervals (McKinney, 1981; Hester, 1989). Oscillations between mesic and xeric climates could have led to marked scarcities of bison and/or antelope, causing Early Archaic peoples to rely heavily on smaller animals and plant foods.

Middle Archaic

The Middle Archaic is marked by an increase in site densities, reflecting an expanding population, and changes in settlement, technology, social organization and perhaps territorial boundaries (Black and McGraw, 1985). Subsistence strategies during this interval are thought to have focused on resources such as acorns and white-tailed deer that are prominent on the Balcones Escarpment, and portions of the live oak savanna on the Edwards Plateau. Collins (2004) subdivides the Middle Archaic into three intervals based on projectile point styles, Bell-Andice-Calf Creek, Taylor, and Nolan-Travis. Collins accredits the first two intervals to a shift in technology to accommodate specialized bison hunting weaponry. The return of bison to the region is thought to have correlated with mesic conditions during the early part of the Middle Archaic. The transition to the Nolan-Travis projectile point forms during the last interval may have been in response to the onset of extremely xeric conditions in Central Texas. The Middle Archaic also marks the waning of large, burned rock features (e.g., hearths and earth ovens) and the debut of burned rock middens. Although their exact function(s) remain unclear, the accumulation of burned rock middens is likely the product of a variety of different subsistence practices such as intensive utilization of acorns and cooking xerophytes such as sotol (Johnson and Goode, 1994). The latter plant food would have thrived during arid climatic episodes.

Late Archaic

The Late Archaic is characterized by an intensification of the subsistence patterns observed in the Middle Archaic (Hester, 1989; Collins, 1995). The xeric climate of the Late Archaic likely resulted in the spread of grasslands on the Edwards Plateau. This would have attracted bison, which may account for increasing human populations during this interval. In addition, burned rock middens peak during the Late Archaic, suggesting that the baking of succulents such as sotol and yucca remained an important element of subsistence.

The xeric conditions of the early part of the Late Archaic eventually waned and the climate gradually became more mesic over time. Johnson and Goode (1994) subdivide this interval into early (Late Archaic I) and late (Late Archaic II) subperiods based on changes in lithic technologies. Projectile points common to the Late Archaic I consist of Bulverde, Pedernales, Marshall, Montell, and Castroville styles. During the Late Archaic II, smaller expanding-stem points such as Marcos, Ensor, Frio, and Darl are common.

The shift from the broad face stylistic tradition of the Late Archaic I projectile points (e.g., Pedernales and Montell), and the similarity of Late Archaic II projectiles to dart points on the Southern Plains may indicate the influx of hunter-gatherer groups from northern areas during the late subperiod. The large cemeteries noted during this interval could also reflect the incursion of new people and perhaps Eastern religious ideologies into the Edwards Plateau (Johnson and Goode, 1994; Prewitt, 1985), and the establishment of territories during the late interval. The recovery of non-local stone artifacts from Late Archaic burials on the Edwards Plateau and stone tools made from Edwards chert from Caddo areas in northeast Texas suggests an extensive trade network of goods and ideas.

Austin and Toyah Phases (1,200 to 400 BP)

The period following the Archaic is marked by a variety of changes in the material culture. This is represented by the initial appearance of bow and arrow use, followed by pottery, and perhaps marginal agriculture. Two subperiods, consisting of an early (Austin) and late (Toyah) phase are recognized on the Edwards Plateau during this interval (Prewitt, 1981). According to Collins (2004), the only significant change seen at the beginning of the Austin interval is from a prevalence of dart points (atlatl use) to that of arrow points (bow and arrow use). Based on the premise that basic hunting and gathering continued during the Austin Phase, Johnson and Goode (1994) suggested that the Late Archaic should be extended from 1200 BP to 800 BP. The Austin Phase is characterized by a distinct expanding-stemmed projectile point known as Scallorn, although Darl points are also found.

The late subperiod, or Toyah Phase, is represented by a contracting-stemmed arrow point known as Perdiz, as well as large, thin bifaces, end scrapers, prismatic blades, and pottery that is both local and imported from the Caddo area. Although the presence of pottery in this interval has been associated with horticultural practice, the stone tool kit suggests intensive hunting of bison, deer and antelope, which dominate Toyah faunal assemblages. The Toyah culture area covers the largest geographical range in Texas and stretches from the northern perimeter of the Edwards Plateau to portions of the South Texas Plains and Gulf Prairies. The occurrence of distinctive cultural traits along a similar timeline and across a wide range begs the question of whether Toyah represents the spread of people (i.e., a single ethnic group) across the landscape or the spread of ideas and their adoption by different peoples.

European Contact Period (400 to 150 BP)

This period is marked by the initial contact between Indigenous and European cultures. Prior to the arrival of European explorers into Central Texas in the 17th century, Indigenous peoples from northern Mexico and southern Texas began migrating into the region to escape forced occupation and labor at Spanish mines, missions, and ranches. Around the same time, Spanish horses acquired by Apache bison hunters of the High Plains afforded a significant advantage over pedestrian Indigenous groups. In addition to an improved ability for long-distance travel and hunting game, mounted Apache groups forced many native groups to the east and southeast to flee, some into Central Texas (Newcomb, 1993). Due to the fragmentation of Indigenous groups resulting from Apache raids, the growth of Spanish missions, and spread of European diseases, the accounts of the first European explorers do not provide direct analogs to their lifeways, but rather reflect a time of drastic cultural change (Collins, 2004). However, some Indigenous cultural patterns prevailed during the early part of European contact, which is represented archeologically by large encampments likely composed of mixed ethnic affiliations, and small band-sized residential camps. Spanish and French documents indicate continued hunting of bison, deer and antelope by Indigenous groups as well as extensive exchange of bison products.

Historical Context

Although portions of the study area include the western limits of the current-day city limits of the City of San Antonio, nearby Helotes, Texas was identified as a the more representative historical population center nearest the study area. Located approximately 20 miles northwest of downtown San Antonio on SH 16 in northwestern Bexar County, the town was settled in the 1850s by immigrants primarily from Germany and Mexico. The following summary derived from Massey (2012) provides an overview of the local historic context.

The pioneer whose land encompassed what is now known as Old Town Helotes was Scottish immigrant and surgeon Dr. George F. Marnoch, who purchased the property in 1858 and built a two-and-a-half-story limestone house in 1859; the house was awarded a Texas Historic Landmark designation in 2010. By 1873, was home to an official post office with German immigrant Carl Mueller as the town's first postmaster. He and wife Amalie Stolz Mueller also ran the Helotes Stagecoach Inn. Helotes remained a farming community for decades and was the frequent site of cattle drives between San Antonio and Bandera in the late nineteenth and early twentieth centuries. A general store, homestead, blacksmith shop, and saloon represented the focal point of downtown Helotes by 1881 making the Bandera Road-Helotes Creek intersection the new hub of commerce and activity.

As the 20th century commenced, new downtown landowner Wilbert "Bert" Hileman added a dance hall and boarding house. In 1919, the Helotes post office handled mail for sixty-four area families, sixty of them involved in farming. In 1942, John T. Floore came to town and by 1946 opened what would become the world-renowned John T. Floore Country Store, a Texas Historic Landmark listed in the NRHP in the 2010s. Helotes remained primarily rural until the late twentieth century, when the sale of farmland to developers created a housing boom.

3.5.2 Records Review

A records review was conducted to determine the likelihood of impacts to cultural resources within the study area. The research was conducted using the Atlas database, which contains published and unpublished data on prior cultural resources surveys, districts and properties listed in or eligible for the NRHP, SALs, OTHMs cemeteries, and previously recorded archeological historic properties, including those listed in or eligible for listing in the NRHP or SAL designation (THC, 2024b). The results of the review are summarized in **Table 3-19**.

Table 3-19. Recorded Cultural Resources within the Study Area

Archeological Sites	NRHP-Listed Resources	NRHP Determined-Eligible Resources	State Antiquities Landmarks	Cemeteries	OTHM
152	1	0	0	3	1
SOURCE: THC, 2024b.					

A review of the Atlas conducted on July 8, 2024, revealed that the study area contains 152 previously recorded archeological sites, three cemeteries, one OTHM and one NRHP district (see **Table 3-20).** The NRHP Ryall Luther White Ranch (R.L. White Ranch) was originally one of the largest ranches in northwest Bexar County (THC, 2024b). The R.L. White Ranch is the original complex of 28 contributing features, including buildings, structures, and sites on an approximately 10,000-acre ranch that was built, purchased, and developed beginning in ca. 1926.

Regarding the three cemeteries documented in the study area, Texas laws strictly enforce protections of cemeteries as outlined in Chapters 711–715 of the Texas Health and Safety Code (Title 13, Part 2, Chapter 22 of the TAC), and sections of the Penal Code (THC, 2024c). Avoidance of impacts to cemeteries in the study area is recommended.

Table 3-20. Archeological Sites Documented in the Study Area

Resource ID	Atlas Record Summary	NRHP Eligibility	Year(s) Recorded
41BX1195	Precontact lithic procurement site and burned rock midden	Eligible	1996
41BX1196	Precontact lithic procurement site	Ineligible	1996
41BX1197	Precontact lithic procurement site	Eligible	1996
41BX1198	Precontact lithic procurement site	Eligible	1996
41BX1199	Precontact lithic procurement site	Undetermined	1996
41BX1200	Precontact lithic procurement site	Ineligible	1996
41BX1201	Lithic scatter composed of debitage, cores and a dart point fragment	Ineligible	1996
41BX1202	Precontact lithic procurement site	Eligible	1996
41BX1203	Precontact lithic procurement site	Ineligible	1996
41BX1204	Precontact lithic procurement site	Eligible	1996
41BX1205	Precontact lithic procurement site	Eligible	1996

Resource ID	Atlas Record Summary	NRHP Eligibility	Year(s) Recorded
41BX1207	Info not available	Undetermined	Info not available
41BX134	Multi-component burned rock midden, lithic scatter and farmstead	Undetermined	1987, 2002, 2012, 2014
41BX136	Lithic scatter with cores, early and late-stage bifaces, burned rock, utilized flakes, and formal stone tools	Undetermined	1972, 2002
41BX138	Lithic scatter with cores, early and late-stage bifaces, burned rock, utilized flakes, and formal stone tools; one Frio projectile point	Undetermined	1972, 2002
41BX140	Lithic scatter with cores, early and late-stage bifaces, burned rock; numerous projectile points including Caracara, Ellis, Shul	Undetermined	1972, 2002
41BX148	Lithic scatter with debitage, burned rock, projectile point and core	Eligible	1972, 2000, 2002
41BX1489	Lithic scatter with debitage, cores and early-stage bifaces	Undetermined	2002
41BX1490	Lithic scatter with cores and early-stage bifaces	Undetermined	2002
41BX1491	Lithic scatter with 1 Langtry projectile point, one Frio projectile point, cores, early-stage bifaces, late-stage bifaces, debitage	Undetermined	2002
41BX1492	Lithic scatter with cores, early-stage bifaces, late-stage bifaces, one projectile point	Undetermined	2002
41BX1493	Lithic scatter with late-stage bifaces, cores, three projectile points	Undetermined	2002
41BX1494	Lithic scatter with cores, early-stage bifaces, possible hammerstone, 1 biface	Undetermined	2002
41BX1495	Lithic scatter with debitage, possible cores, early-stage biface	Undetermined	2002
41BX1496	Multi-component historic ranching facility and Precontact campsite with debitage, bifaces, cores and burned rock	Undetermined	2002, 2012
41BX1497	Lithic scatter with debitage, bifaces and burned rock	Ineligible	2002
41BX1498	Lithic scatter with cores and early-stage bifaces	Undetermined	2002
41BX1499	Lithic scatter with cores and bifaces	Ineligible	2002
41BX1500	Lithic scatter with cores, bifaces, projectile points	Undetermined	2002
41BX1501	Lithic scatter with early-stage and late-stage bifaces	Ineligible	2002
41BX1502	Lithic scatter with debitage, cores, bifaces, burned rock, projectile point	Undetermined	2002
41BX1503	Lithic scatter with bifaces, debitage, formal stone tools, 1 Frio dart point	Undetermined	2002
41BX1504	Lithic scatter with bifaces and stone tools	Undetermined	2002
41BX1507	Lithic scatter with cores, bifaces and 1 projectile point	Undetermined	2002
41BX1508	Lithic scatter with core and bifaces	Undetermined	2002
41BX1509	Lithic scatter with cores, bifaces, burned rock, utilized flakes and stone tools	Undetermined	2002
41BX1510	Lithic scatter with debitage, biface and projectile point	Undetermined	2002
41BX1511	Lithic scatter with cores, bifaces and burned rock	Ineligible	2002
41BX1512	Lithic scatter with debitage and cores	Undetermined	2002
41BX1513	Lithic scatter with bifaces, burned rock, utilized flakes and stone tools	Undetermined	2002
41BX1514	Lithic scatter with bifaces, burned rock, utilized flakes and stone tools	Undetermined	2002
41BX1515	Precontact campsite	Ineligible	2002, 2012

Resource ID	Atlas Record Summary	NRHP Eligibility	Year(s) Recorded
41BX1516	Lithic scatter with cores and bifaces	Undetermined	2002
41BX1517	Lithic scatter with cores, bifaces, burned rock and stone tools	Undetermined	2002
41BX1518	Lithic scatter with cores and bifaces	Undetermined	2002
41BX1519	Subsurface collection of cores, bifaces and burned rock	Undetermined	2002
41BX1520	Subsurface collection of cores, bifaces, possible burned rock, possible flake tools, and a projectile point	Undetermined	2002
41BX1521	Subsurface collection of cores and debitage	Undetermined	2002
41BX1524	Lithic scatter of cores, bifaces and burned rock	Undetermined	2002
41BX1526	Subsurface collection of bifaces and burned rock	Undetermined	2002
41BX1527	Subsurface collection of cores, bifaces, burned rock, utilized flakes and stone tools	Undetermined	2002
41BX1528	Subsurface collection of cores, bifaces, utilized flakes and burned rock	Undetermined	2002
41BX1530	Subsurface collection of cores, bifaces, utilized flakes and burned rock	Undetermined	2002
41BX1531	Subsurface collection of cores, bifaces, utilized flakes, burned rock and stone tools	Undetermined	2002
41BX1533	Subsurface collection of cores, bifaces, debitage and a stone tool	Undetermined	2002
41BX162	Subsurface collection of cores, bifaces and burned rock	Undetermined	1972, 2002
41BX169	Rockshelter	Undetermined	1972
41BX195	One human skeleton, burned rock, archaic dart point, 3 Angostura, bone tools, hammerstones, biface drills, metates and manos	Undetermined	1973, 1990
41BX196	One hearth, four dart points, flakes and a core	Undetermined	1973
41BX714	Subsurface collection of cores, bifaces and burned rock	Undetermined	1987, 2002
41BX790	Lithic scatter with debitage	Undetermined	1989, 2005
41BX791	Lithic scatter with debitage	Ineligible	1989, 1990, 2005
41BX792	Lithic scatter with debitage and cores	Undetermined	1989, 2004
41BX845	Precontact open campsite and burned rock midden	Undetermined	1990, 2007
41BX887	Burned rock midden with debitage, Archaic dart points and one Angostina projectile point	Undetermined	1990
41BX888	Rockshelter with one core, charcoal ash and debitage	Undetermined	1990
41BX963	Surface scatter and subsurface collection of cores, bifaces, burned rock, flake tools and stone tools	Undetermined	1991, 2002
41BX964	Subsurface collection of cores, bifaces, burned rock and stone tools	Undetermined	1991, 2002
41BX965	Lithic scatter	Undetermined	1991
41BX966	Quarry site with cores and debitage	Undetermined	1991
41BX967	Quarry site with cores, debitage, stone tools and utilized flakes	Undetermined	1991
41BX968	Lithic scatter with debitage and cores	Undetermined	1991
41BX969	Quarry site with debitage, cores, scrapers and a gouge	Undetermined	1991
41BX970	Lithic scatter with debitage, scrapers and cores	Undetermined	1991
41BX971	Lithic scatter with one Scallorn point and debitage	Undetermined	1991
41BX972	Lithic scatter with debitage, a point base and subsurface collection of debitage	Undetermined	1991

Resource ID	Atlas Record Summary	NRHP Eligibility	Year(s) Recorded
41BX973	Subsurface collection of cores, bifaces, burned rock and a projectile point	Undetermined	1991, 2002
41BX974	Subsurface collection of cores, utilized flakes and stone tools	Undetermined	1991, 2002
41BX975	Quarry site with debitage, cores and a preform	Undetermined	1991
41BX977	Subsurface collection of cores, bifaces, burned rock, utilized flakes and stone tools	Undetermined	1991, 2002
41BX978	Lithic scatter with debitage and a point base	Undetermined	1991
41ME36	Lithic scatter with burned rock	Undetermined	1989, 1990
41ME38	Multi-component campsite and burned rock midden and 19th century structures	Undetermined	1989, 2007
41ME40	Campsite with burned rock and debitage	Undetermined	1990, 2022
41ME48	Lithic scatter of manos, a metate, hammerstones, debitage, cores and bone	Undetermined	1990
41ME54	Campsite with burned rock, a chert knife, a lithic scatter and a biface	Undetermined	1990
41ME56	Lithic scatter with debitage, a biface and a hand axe	Undetermined	1990
41ME57	Lithic scatter with burned rock and a mano	Undetermined	1990
41ME58	Lithic scatter with debitage and a dart point	Undetermined	1990
41ME59	Lithic scatter with burned rock, a Tortugas point, bifaces and debitage	Undetermined	1990
41ME60	Campsite with cores, debitage and burned rock	Undetermined	1990
41ME61	Rockshelter and lithic scatter	Undetermined	1990
41ME64	Quarry site with a lithic scatter of cores and cobbles	Undetermined	1990
41ME65	Lithic scatter with stone tools, debitage and burned rock	Undetermined	1990
41ME66	Lithic scatter with stone tools and burned rock	Undetermined	1990
41BX130	Lithic scatter and subsurface collection of debitage, stone tools, bifaces, utilized flakes and burned rock	Ineligible	1972, 2002, 2012
41BX132	Lithic scatter and subsurface collection of cores, bifaces, burned rock, utilized flakes and stone tools	Ineligible	1972, 2002, 2012
41BX133	Lithic scatter and subsurface collection of cores, bifaces, burned rock, flake tools and formal stone tools	Eligible	1972, 2002
41ME37	Lithic scatter with debitage and core fragments	Undetermined	1989, 2004
41BX135	Lithic scatter with burned rock, utilized flakes and bifaces	Undetermined	1972, 2002
41BX976	Lithic scatter and subsurface collection of debitage	Undetermined	1991
41BX137	Subsurface collection of cores, bifaces, burned rock and stone tools	Undetermined	1971, 1991, 2002
41BX139	Subsurface collection of debitage, cores, bifaces and two stone tools	Undetermined	1972, 1987, 2002
41BX1523	Subsurface collection of cores, bifaces, burned rock and utilized flakes	Undetermined	2002
41BX1522	Lithic scatter with cores, burned rock and stone tools	Undetermined	2002
41BX1506	Lithic scatter with bifaces and stone tools	Ineligible	2002
41BX141	Lithic scatter and subsurface collection of debitage, tools, one Pedernales point and one Marshall point	Undetermined	1972, 2002, 2012
41BX1068	One human burial in a vertical cave shaft	Undetermined	1997
41BX713	Subsurface collection of cores, bifaces, flake tools, burned rock and formal stone tools	Undetermined	1987, 2002
41BX142	Precontact campsite and concentration of historic artifacts	Undetermined	1972, 2002, 2012

Resource ID	Atlas Record Summary	NRHP Eligibility	Year(s) Recorded
41BX145	Lithic scatter with bifaces and stone tools	Ineligible	1972, 2002, 2012
41BX146	Lithic scatter with bifaces, debitage and burned rock	Undetermined	1972, 2002, 2012
41BX147	Subsurface collection of cores and bifaces	Ineligible	1972, 2002, 2012
41BX151	Subsurface collection of cores and burned rock	Undetermined	1972, 2002
41BX164	Subsurface collection of cores, bifaces, a flake tool, stone tools and possible burned rock	Undetermined	1972, 2002
41BX165	Subsurface collection of debitage, cores, bifaces and burned rock	Undetermined	1972, 2002
41BX166	Subsurface collection of bifaces and stone tools	Undetermined	1972, 2002
41BX167	Lithic scatter with cores and stone tools	Undetermined	1972, 2002
41BX168	Subsurface collection of burned rock, cores and bifaces	Ineligible	1972, 2002, 2012
41BX1602	Quarry site with scatter of utilized flakes, cores, tested cobbles and burned rock	Undetermined	2004
41BX1603	Lithic scatter of utilized flakes	Undetermined	2004
41BX1604	Quarry site with scatter of debitage, utilized flakes and cores	Undetermined	2004
41BX1605	Lithic scatter with burned rock, debitage, stone tools and faunal bone	Undetermined	2004
41BX1609	Dry-stone masonry rock wall made of tabular slabs of limestone	Undetermined	2005
41BX1610	Lithic scatter with debitage	Undetermined	2005
41BX1611	Lithic scatter with debitage and shatter	Undetermined	2005
41ME138	Historic structures including an open shed, metal shed with plumbing, concrete trough, wooden trough with a metal roof, a cedar cattle feeder, a cistern and cattle shoot	Ineligible	2004
41ME139	Lithic scatter with a core, debitage and burned rock	Undetermined	2004
41ME145	Lithic scatter with burned rock	Undetermined	2005
41BX1618	Early twentieth century farmhouse	Undetermined	2005
41BX1619	Early twentieth century farmstead with associated outbuildings	Undetermined	2005
41BX1762	Lithic scatter with scrapers, bifaces, preforms, utilized flakes, two Martindale points, one Nolan base and one dart point fragment	Undetermined	2008
41BX1525	Subsurface collection of cores, bifaces, utilized flakes and stone tools	Undetermined	2002
41BX1529	Subsurface collection of cores, bifaces, burned rock and utilized flakes	Undetermined	2002
41BX1859	Lithic scatter with debitage	Undetermined	2010
41BX1895	Lithic scatter with debitage and bifaces	Ineligible	2011
41BX1896	Lithic scatter and subsurface collection of debitage, bifaces, scrapers, choppers, burned rock and stone tools	Undetermined	2011
41BX1897	Wall inscription bearing the name “J.W. HOFFMAN,” original landowner of the property in the 1860’s	Eligible	2011
41BX1505	Subsurface collection of debitage, cores and burned rock	Undetermined	2002
41BX2059	Lithic scatter with debitage, stone tools and a Pedernales dart point	Undetermined	2014
41BX2060	Lithic scatter with debitage and stone tools	Undetermined	2014

Resource ID	Atlas Record Summary	NRHP Eligibility	Year(s) Recorded
41BX2061	Lithic scatter with debitage and stone tools	Undetermined	2014
41BX2062	Surface scatter of historic-age materials and structural remnants	Undetermined	2014
41BX2137	Two surficial flakes and one subsurface flake	Undetermined	2016
41ME280	Two surficial flakes and one subsurface flake	Ineligible	2016
41ME281	Lithic scatter and subsurface collection of bifaces, utilized flakes, six secondary flakes, five tertiary flakes, and one bifacially worked preform	Ineligible	2022
41BX1488	Subsurface collection of cores, bifaces and one stone tool	Undetermined	2002
41BX163	Subsurface collection of cores, bifaces, burned rock and stone tools	Undetermined	1972, 2002
41BX1194	Historic scatter with bricks, glass, metal and three standing structures	Undetermined	1996
41BX1206	Information not available	Undetermined	1996
41BX2237	Lithic scatter and historic structures	Undetermined	2018
41ME55	Lithic scatter with debitage, tested cobbles, cores, hammerstones and bifaces; historic-age feature, a low, linear rock wall that served as a property boundary marker	Undetermined	1990, 2020
BX-C102	Unknown (Chimenea Creek)	Non-HTC	N/A
BX-C070	Cepeda Cemetery	Non-HTC	N/A
BX-C071	Morales Lee Cemetery	Non-HTC	N/A
8000474	R. L. White Ranch	Listed	2008
5507017310	R. L. White Ranch	N/A	2012
SOURCE: THC, 2024b.			

3.5.3 Previous Investigations

According to the Atlas, a total of 18 cultural resource surveys have been conducted within the study area, which are listed below in **Table 3-21**.

Table 3-21. Previous Archeological Investigations

Antiquities Permit Number	Investigating Firm	Sponsor Agency	Year
Info not available	Info not available	Texas Department of Highways and Public Transportation	1978
Info not available	Info not available	U.S. Department of Housing and Urban Development	1972
Info not available	Info not available	Federal Highway Administration	1990
Info not available	Info not available	U.S. Department of Housing and Urban Development	1972
Info not available	Texas Department of Transportation	Texas Department of Transportation	2005
3563	PBS&J	Public Utilities Commission	2004
2582	UTSA	Texas Parks and Wildlife Department	2002

Antiquities Permit Number	Investigating Firm	Sponsor Agency	Year
2582	Center for Archaeological Research	Texas Parks and Wildlife Department	2001
1669	Info not available	Texas Parks and Wildlife Department	1996
1495	Info not available	Texas Parks and Wildlife Department	1985
2368	SWCA	Federal Housing Administration	2007
5918	SWCA	Texas Parks and Wildlife Department	2011
6379	William Self Associates, Inc.	Texas Department of Transportation	2012
Info not available	Info not available	U.S. Department of Housing and Urban Development	1972
38	Info not available	Texas Department of Highways and Public Transportation	1978
7703	SWCA	Bexar County Emergency Services	2016
Info not available	BGE, Inc.	Forestar (USA) Real Estate Group	2022
30846	Horizon Environmental Services	San Antonio Water Systems	2022
SOURCE: THC, 2024b.			

3.5.4 High Probability Areas

Despite previous studies and extensive recorded sites, the records review results do not include all possible cultural resources sites within the study area. To further assess and avoid potential impacts to cultural resources, HPAs for Pre-Contact archeological sites were defined during the route analysis process. HPAs were designated based on a review of the site and survey data within the study area, as well as soils and geologic data, and topographic variables. Within the study area, the Pre-Contact HPAs typically occur near and along larger streams. Terraces and topographic high points that would provide flats for camping and expansive landscape views as well as access to fresh water sources are also considered to have a high probability for containing Pre-Contact archeological sites. Post-Contact age resources are likely to be found near water sources. However, they will also be near primary and secondary transportation routes (e.g., trails, roads, and railroads) which provided access to the sites.

4.0 ENVIRONMENTAL IMPACT OF THE ALTERNATIVES

Potential impacts of the Project that could occur from, and are unique to, the construction and operation of a transmission line are discussed separately in this section of the EA. Evaluation of the potential impacts of the Project identified in **Section 3.0** was conducted by tabulating the data for each of the 46 evaluation criteria in **Table 2-1** for the proposed Project route. The data tabulation for land use and environmental criteria for the proposed Project route are presented in **Table 4-1**.

Table 4-1. Land Use and Environmental Data for the Proposed Project Route

EVALUATION CRITERIA		
Land Use		
1	Length of primary alternative route (miles)	12.11
2	Number of habitable structures[1] within 300 feet of right-of-way (ROW) centerline	37
3	Length of ROW using existing transmission line ROW	12.11
4	Length of ROW parallel and adjacent to existing transmission line ROW	1.31
5	Length of ROW parallel and adjacent to other existing ROW (roadways, railways etc.)	8.12
6	Length of ROW parallel and adjacent to apparent property lines (or other natural or cultural features, etc.)	10.09
7	Sum[2] of evaluation criteria 4, 5, 6	12.11
8	Percent[2] of evaluation criteria 4, 5, 6	100
9	Length of ROW across parks/recreational areas[3]	0.99
10	Number of additional parks/recreational areas[3] within 1,000 feet of ROW centerline	1
11	Length of ROW across cropland	0
12	Length of ROW across pasture/rangeland	7.70
13	Length of ROW across land irrigated by traveling systems (rolling or pivot type)	0
14	Length of route across conservation easements and/or mitigation banks (Special Management Area)	3.71
15	Length of route across gravel pits, mines, or quarries	0
16	Length of ROW parallel to existing pipeline ROW[4]	0
17	Number of pipeline crossings[4]	1
18	Number of transmission line crossings	0
19	Number of IH, US and state highway crossings	3
20	Number of FM or RM road crossings	0
21	Number of FAA registered airports[5] with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0
22	Number of FAA registered airports[5] having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	1
23	Number of private airstrips within 10,000 feet of the ROW centerline	0
24	Number of heliports within 5,000 feet of the ROW centerline	0
25	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0
26	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	5
27	Number of identifiable existing water wells within 200 feet of the ROW centerline	1
28	Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)	0
Aesthetics		
29	Estimated length of ROW within foreground visual zone[6] of US and state highways	9.76
30	Estimated length of ROW within foreground visual zone[6] of FM roads	0
31	Estimated length of ROW within foreground visual zone[6 & 7] of parks/recreational areas[3]	6.43
Ecology		
32	Length of ROW across upland woodlands/brushlands	2.50
33	Length of ROW across bottomland/riparian woodlands	0.49
34	Length of ROW across NWI mapped wetlands	0

EVALUATION CRITERIA		
35	Length of ROW across critical habitat of federally listed threatened or endangered species	0
36	Length of ROW across open water (lakes, ponds)	0
37	Number of stream and river crossings	16
38	Length of ROW parallel (within 100 feet) to streams or rivers	0.23
39	Length of ROW across Edwards Aquifer Recharge and Contributing Zones	11.37
40	Length of ROW across 100-year floodplains	0.87
Cultural Resources		
41	Number of cemeteries within 1,000 feet of the ROW centerline	0
42	Number of recorded cultural resource sites crossed by ROW	11
43	Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	9
44	Number of NRHP listed properties crossed by ROW	1
45	Number of additional NRHP listed properties within 1,000 feet of ROW centerline	0
46	Length of ROW across areas of high archeological site potential	11.30

NOTES: All length measurements are shown in miles unless noted otherwise
1. Single-family and multi-family dwellings, and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less.
2. Length of apparent property boundaries adjacent to and paralleling existing roads or highways are not “double-counted” in the sum length of ROW paralleled of criteria 4,5, and 6.
3. Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the proposed Project route.
4. Only steel pipelines six inches and greater in diameter carrying hydrocarbons were quantified in the pipeline crossing and paralleling calculations.
5. As listed in the Chart Supplement South Central US (FAA, 2024b formerly known as the Airport/Facility Directory South Central US) and FAA, 2024a.
6. One-half mile, unobstructed. Lengths of ROW within the foreground visual zone of Interstates, US and state highway criteria are not “double-counted” in the length of ROW within the foreground visual zone of FM roads criteria.
7. One-half mile, unobstructed. Lengths of ROW within the foreground visual zone of parks/recreational areas may overlap with the total length of ROW within the foreground visual zone of interstates, US and state highway criteria and/or with the total length of ROW within the foreground visual zone of FM roads criteria.

4.1 Impacts on Natural Resources/Environmental Integrity

4.1.1 Physiography and Geology

Construction of the proposed transmission line is expected to have negligible effects on physiographic features, geologic features and/or natural resources of the area. For the portions of the proposed Project route that will be rebuilt, the installation of pole structures would involve the excavation and/or minor disturbance of small quantities of near-surface materials. However, it is not expected to have any significant impacts on the geological resources along the proposed Project route.

The proposed Project route occurs near the location of the four documented caves within the study area, with the closest caves (Bandera Road Cut Cave and Lookout Cave) being approximately 80 feet from the proposed Project route. However, no impacts to these features are anticipated to occur because these features are located near the Vacant Position Segment of the proposed Project route where the Project will be utilizing existing structures. Due to the potential for karst features to occur within the study area, a site-specific karst survey would be conducted for the PUC approved route in accordance with the USFWS, Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys for Endangered Karst Invertebrates in Central Texas. Surveys would include a review of available existing information on regional caves, soils, historical land use practices, topography, and geology of the proposed Project route vicinity. Field surveys would include a pedestrian survey to identify karst features, which includes a description and assessment of observed features. The scope of this survey would not include an evaluation of the structural development or subgrade extent of the biological content (i.e., presence/absence of endangered cave invertebrate species) of potential karst features. Surface karst features may indicate the potential presence of suitable habitat for federally listed karst invertebrates. A biologist holding a USFWS 10(a)(1)(A) permit for karst invertebrates would be required to further investigate a feature to determine the presence of suitable habitat for listed species.

4.1.2 Soils

Potential impacts to soils from the construction, operation, and maintenance of electric transmission lines include erosion and compaction. Such impacts can be avoided by CPS Energy's implementation of appropriate mitigative measures during construction. No conversion of prime farmland soils is anticipated to occur as a result of proposed Project route.

The highest risk for soil erosion and compaction is associated with the clearing and construction phases of the Project. In accordance with CPS Energy standard construction specifications, woody vegetation would be cleared within the ROW, to the minimum amount as necessary or practicable, to achieve conductor to ground clearance of the transmission line. Areas with vegetation removed would have the highest potential for soil erosion, and the movement of heavy equipment through the cleared ROW creates the greatest potential for soil compaction. Prior to construction, CPS Energy would develop a SWPPP to minimize potential impacts associated with soil erosion, compaction, and external ROW sedimentation. Implementation of this plan would incorporate temporary and permanent BMPs to minimize soil erosion on the ROW during rainfall events. The SWPPP would also establish the criteria for mitigating soil compaction and re-vegetation to maintain soil stabilization during the construction and post construction phases. The existing herbaceous layer of vegetation would be maintained, to the extent practicable, during construction. Denuded areas would be revegetated and/or further stabilized with the implementation of permanent soil berms or interceptor slopes to stabilize disturbed areas and minimize soil erosion potential. The ROW would be inspected during and post construction to identify potential high erosion areas to ensure that best management practices are implemented and maintained. The potential for erosion and compaction will be minimized by CPS Energy's development and implementation of a SWPPP for the proposed Project.

4.1.3 Surface Water

The proposed Project route crosses various mapped surface waters within the study area. CPS Energy proposes to span all surface waters and construct any structures outside of the ordinary high-water marks for any surface waters. CPS Energy will limit the removal of woody vegetation as necessary to meet the necessary conductor to ground clearances. The shorter understory and herbaceous layers of vegetation will remain, where allowable, and BMPs will be implemented in accordance with the SWPPP for the Project to reduce the potential for sedimentation into surface waters. Since CPS Energy intends to span all surface waters and a SWPPP will be implemented during construction, no significant impacts to surface waters are anticipated for the proposed Project route. The length of open water crossings (i.e., lakes or ponds), number of streams and rivers crossed, and length of the proposed Project route paralleling (within 100 feet) streams or rivers are provided in **Table 4-1**.

The proposed Project route has 16 linear surface water crossings (i.e., stream or creek feature) and does not cross any rivers or open waters. The length of the proposed Project route that is parallel (within 100 feet) to any stream or creek is 0.23 miles. These determinations are based on the NHD and, since the dataset's inception, the hydrology of some stream features may have been altered by construction of drainage ditches, impoundments, and residential areas.

4.1.4 Groundwater

The proposed Project route occurs entirely within the recharge and contributing zones of the Edwards Aquifer which is regulated by TCEQ and EAA (EEA, 2024b). Due to the Project's location within the Edwards Aquifer and within the EAA's Jurisdictional Boundary, CPS Energy will consult with the TCEQ Edwards Aquifer Protection Program and the EAA to ensure compliance with program requirements

During construction activities, a potential impact to groundwater resources is related to fuel and/or other chemical spills. Avoidance and minimization measures of potential contamination of water resources will be identified in the SWPPP. CPS Energy will take all necessary precautions to avoid the occurrence of these spills. If an unauthorized discharge occurs during construction, CPS Energy will comply with EAA notification requirements. The construction, operation, and maintenance of the Project are not anticipated to adversely affect groundwater resources within the study area.

The proposed Project route includes 11.37 miles across the regulated recharge and contributing zones of the Edwards Aquifer (see **Table 4-1**). Specifically, the proposed Project route crosses 5.11 miles of the Edwards Aquifer Recharge Zone, 6.26 miles of the Edwards Aquifer Contributing Zone and 0.74 mile of the Edwards Aquifer Transition Zone.

4.1.5 Floodplains

The construction of the proposed Project route is not anticipated to impact the overall function of any floodplains within the study area, or adversely affect adjacent or downstream properties. Engineering design should alleviate the potential of construction activities to adversely impact flood channels and proper structure placement will minimize any flow impedance during a major flood event. Typically, the small footprint of pole structures, as proposed for the Project, does not significantly alter the flow of water within a floodplain.

The proposed Project route crosses 0.87 miles of FEMA-mapped floodplain associated with San Geronimo Creek, Los Reyes Creek and tributaries of Culebra Creek (see **Table 4-1**). Prior to construction CPS Energy will coordinate with the appropriate county floodplain administrator to acquire any permits.

4.1.6 Wetlands

As indicated in **Table 4-1**, the proposed Project route does not cross any NWI mapped wetlands. Four NWI mapped wetlands were identified within the study area; unmapped wetlands still have the potential to occur within the study area. Furthermore, NWI-mapped features may not represent wetlands as defined by regulatory statutes. Nonetheless, removal of vegetation in wetlands increases the potential for erosion and sedimentation, which can be detrimental to downstream plant communities and aquatic life. Wetland areas also provide habitat to numerous species and are often used as migration corridors for wildlife. Mitigation measures with BMPs will be implemented, as appropriate, in identified areas of wetland potential during construction activities to further avoid and minimize impacts to those areas. CPS Energy proposes to implement BMPs as a component of their SWPPP to prevent off-ROW sedimentation and degradation of potential wetland areas. With the use of these avoidance and minimization measures, the proposed Project route is not anticipated to have a significant impact on potential wetlands.

The temporary and/or permanent placement of fill material within jurisdictional waterways and wetlands may require a permit from the USACE under Section 404, as outlined in **Section 1.6.2**. If necessary, CPS Energy will coordinate with the USACE – Fort Worth District prior to clearing and construction to ensure compliance with Section 404. If a Section 404 permit is needed, it is anticipated that the Project would be authorized under a Nationwide Permit.

4.1.7 Coastal Natural Resource Areas

The study area is not located within the CMZ boundary as defined by 31 TAC § 503.1, which excludes the Project from CMP conditions.

4.1.8 Vegetation

Potential impacts to vegetation will result from clearing the ROW of woody vegetation and/or mowing/clearing of herbaceous vegetation. These activities facilitate ROW access for structure construction, line stringing, and future maintenance activities of the proposed transmission line. Impacts to vegetation will generally be limited to the transmission line ROW. Additional clearing might be necessary for temporary easements outside of the ROW to facilitate the construction of the transmission line. The clearing activities will be completed while minimizing the impacts to existing groundcover vegetation when practical. Future ROW maintenance activities might include periodic mowing and/or herbicide applications to maintain an herbaceous vegetation layer within the ROW. Clearing trees and shrubs from woodland areas typically generates a degree of habitat fragmentation. The proposed Project route will minimize habitat fragmentation by utilizing an existing transmission line corridor. Vegetation clearing will occur only where necessary to provide access, workspace, and future maintenance access to the ROW.

As indicated in **Table 4-1**, the proposed Project route crosses 0.49 mile of bottomland/riparian woodlands and 2.50 miles of upland woodlands/brushlands.

4.1.9 Wildlife

The primary impacts of construction activities on wildlife species are typically associated with temporary disturbances from construction activities, and with the removal of vegetation (habitat modification). Increased noise and equipment movement during construction might temporarily displace relatively mobile wildlife species from the immediate workspace area. These impacts are considered short-term and normal wildlife movements would be expected to resume after construction is completed. Potential long-term impacts include those resulting from habitat modifications and/or fragmentation. The proposed Project route crosses areas of upland woodlands/brushlands, which can represent the highest degree of habitat fragmentation by converting the area within a maintained ROW to an herbaceous habitat.

Construction activities might impact small, immobile, or fossorial (living underground) animal species through incidental impacts or from the alteration of local habitats. Incidental impacts to these species might occur due to equipment or vehicular movement on the ROW by direct impact or due to the compaction of the soil if the species is fossorial. Potential impacts of this type are not typically considered significant and are not likely to have an adverse effect on any overall species population dynamics.

If ROW clearing occurs during bird nesting seasons, potential impacts could occur within the ROW area related to nesting birds, bird eggs, and/or nestlings. Increases in noise and equipment activity levels during construction could also potentially disturb breeding or other activities of species' nesting in areas immediately adjacent to the ROW. If ROW clearing activities are necessary during the migratory bird nesting season (March 15 to September 15), CPS Energy will comply with state (TPWC Chapter 64) and federal (MBTA) regulations regarding avian species by having a qualified biologist conduct surveys for active nests prior to vegetation clearing.

Transmission lines can also present additional hazards to birds due to electrocutions and/or collisions. Measures will be implemented to minimize this risk with transmission line engineering designs. The electrocution risk to birds will not be significant since the engineering design distance between conductors, conductor to structure, or conductor to ground wire for the proposed transmission line is greater than the wingspan of any bird typically within the area (i.e., greater than eight feet). The risk for avian collisions with the shield wire can be minimized by installing bird flight diverters or other marking devices on the line within determined high bird use areas.

Construction of the proposed Project route is not anticipated to have significant impacts to wildlife within the study area. Direct impacts to wildlife would be associated with the loss of woodland/brushland habitat, the removal of which is addressed in the vegetation analysis above. The proposed Project route will minimize habitat fragmentation by utilizing an existing transmission line corridor. While highly mobile animals might temporarily be displaced from habitats near the ROW during the construction phase, normal movement patterns should return after construction is complete.

4.1.10 Aquatic Resources

Potential impacts to aquatic resources would include potential effects of erosion, siltation, and sedimentation. Vegetation clearing of the ROW might result in increased suspended solids entering surface waters near the proposed Project route. Increases in suspended solids might adversely affect aquatic organisms that require relatively clear water for foraging and/or reproduction. Physical aquatic habitat loss or alteration could result wherever riparian vegetation is removed and at temporary crossings required for access. Increased levels of siltation or sedimentation might also potentially impact downstream areas primarily affecting filter feeding benthic and other aquatic invertebrates. Implementation of a SWPPP utilizing BMPs will minimize these potential impacts. No significant adverse impacts are anticipated to aquatic habitats crossed or located adjacent to the ROW for the proposed Project route.

4.1.11 Threatened and Endangered Species

In order to assess potential impacts to threatened or endangered species, Halff utilized available information for the species under review. Known occurrence data from NDD for the study area and project scoping comments from TPWD were reviewed (TPWD, 2024b). A USFWS IPaC consultation, TPWD county listings, and USFWS designated critical habitat locations were included in the review and are summarized in **Section 3.1.10** (USFWS, 2024c, TPWD, 2024b).

The NDD data provides a GIS data record of state-listed, rare, and federally threatened and endangered species and special status vegetation communities that have been documented within a given area. The absence of species within the NDD database is not a substitute for a species-specific field survey. Prior to construction, a field survey would be completed of the PUC approved proposed Project route to determine if suitable habitat for threatened and endangered species is present. Additional consultation with the USFWS and TPWD may be required if suitable habitat is observed during field surveys.

Threatened and Endangered Plant Species

Review of the TPWD (2024b) and USFWS (2024c) data identified three plant species that are federally listed, candidates or proposed for federal listing, and/or state-listed for Bexar and Medina counties (see **Table 3-9** and **Table 3-10** in **Section 3.1.10**).

Two of the species (Texas wild-rice [*Zizania texana*] and Tobusch fishhook cactus [*Sclerocactus brevihamatus ssp. tobuschii*]) are not expected to occur as they are outside of their range and habitat conditions are not present. The bracted twistflower (*Streptanthus bracteatus*), a federally threatened species, may potentially occur within the study area, as the area contains suitable geological, vegetative, and topographic features. Modeled habitat for the bracted twistflower is also present in the study area. Federally listed plant species, including the bracted twistflower, are only afforded protection from take if they are located on federal lands or if federal funding or actions are involved. If necessary, coordination with the USFWS would be conducted regarding this species. Construction of the proposed Project is not anticipated to have any adverse effects on federally listed threatened or endangered plant species.

Threatened and Endangered Animal Species

Review of the TPWD (2024b) and USFWS (2024c) data identified thirty-four animal species that are federally listed, candidates or proposed for federal listing for Bexar and Medina counties (see **Table 3-19** and **Table 3-10** in **Section 3.1.10**). A field survey for potential suitable habitat for federally protected species would be completed after PUC approval of the proposed Project route.

CPS Energy proposes to conduct ROW clearing activities in compliance with state (TPWC Chapter 64) and federal (MBTA) regulations regarding avian species and appoint a qualified biologist to conduct surveys for active nests prior to vegetation clearing. Additionally, CPS Energy proposes to conduct a site-specific karst survey prior to construction to avoid potential impacts to cave-obligate species and implement BMPs within their SWPPP to minimize impacts to aquatic species. A field survey for potential suitable habitat for state and federal protected species will be completed upon PUC approval of the proposed Project route. Additional consultation with TPWD and the USFWS for avoidance and mitigation measures may be required if suitable habitat is observed during the field survey of the PUC approved route.

Federally Listed and Candidate Species

As indicated in **Table 4-1**, none of proposed Project route crosses critical habitat of federally listed endangered or threatened species.

The study area is located outside of the known distributions for the San Marcos salamander (*Eurycea nana*), Texas blind salamander (*Eurycea rathbuni*), Cokendolpher Cave harvestman (*Texella cokendolpheri*), Robber Baron Cave meshweaver (*Cicurina baronia*), Peck's Cave amphipod (*Sygobromus pecki*), fountain darter (*Etheostoma fonticola*), Comal Springs dryopid beetle (*Stygoparnus comalensis*), Comal Springs riffle beetle (*Heterelmis comalensis*), fountain darter (*Etheostoma fonticola*), widemouth blindcat (*Satan eurystomus*), toothless blindcat (*Trogloglanis pattersoni*), and other aquatic species. The piping plover (*Charadrius melodus*), rufa red knot (*Caladris canutus rufa*), and yellow-billed cuckoo (*Chordeiles minor*) are not anticipated to occur within the study area due to the lack of potential suitable habitat. No impacts to these species are anticipated from the proposed Project due to the lack of suitable habitat within the study area.

The Government Canyon Bat Cave meshweaver (*Cicurina vespera*), Government Canyon Bat Cave spider (*Tayshaneta microps*), Madla Cave meshweaver (*Cicurina madla*), Helotes mold beetle (*Batrisodes venyivi*), and the two unnamed beetles (*Rhadine exilis* and *Rhadine infernalis*) occur within the study area. They may occur along the proposed Project route if suitable cave or karst habitat is present. The study area falls within the known range for these species and includes designated CHUs. CPS Energy will conduct a site-specific karst survey following USFWS protocols prior to construction to avoid potential impacts to these cave-obligate species. If a structure is planned in a location where there is a known cave or karst feature, the structure should be relocated to another location to avoid impacts to the cave or karst feature.

The golden-cheeked warbler occurs within the study area and may occur along the proposed Project route as suitable juniper-oak woodland habitat is present. Using the Model C habitat model developed by Diamond et al. (2010), the potential habitat for golden-cheeked warbler was assessed and identified throughout the study area. The presence of multiple EOID records within the study area further indicates the presence of the species within the study area and the potential for this species along the proposed Project route. CPS Energy will consult with USFWS to determine appropriate mitigation and avoidance measures if suitable habitat (e.g., nesting, foraging) is confirmed in or adjacent to the ROW during field surveys. Vegetation removal is anticipated within and adjacent to potential golden-cheeked warbler habitat.

The federally proposed endangered tricolored bat may also occur within the study area, particularly in trees, culverts, or abandoned buildings. Because tricolored bat habitat is highly adaptable and can include many types of forested communities, one must assume that suitable habitat may be removed, if ROW clearing is performed. CPS Energy will conduct surveys for active roosting sites and coordinate with USFWS to determine any necessary avoidance or mitigation measures if these sites are identified.

The monarch butterfly, listed as a candidate species, may also occur within the study area as a habitat generalist. It is commonly found along vegetated roadsides and open areas with nectar plants. CPS Energy will avoid impacting this species by minimizing habitat disruption during construction.

Although no longer federally listed, the bald eagle (*Haliaeetus leucocephalus*) is still afforded additional federal protections and may occur within the study area if suitable habitat is available. Bald eagles and their nests are protected under the MBTA and BGEPA. Nests are protected if they have been used within the previous five nesting seasons. If nests are identified or individuals are observed during the field survey of the PUC approved route, CPS Energy will further coordinate with the TPWD and USFWS to determine avoidance or mitigation measures.

Field surveys for potential suitable habitat for federally protected species will be completed following PUC approval of the proposed Project route. If suitable habitat for any of the listed species is identified, CPS Energy will coordinate with USFWS to develop appropriate mitigation measures and follow the CPS Energy Habitat Conservation Plan.

State Listed Species

The white-faced ibis (*Plegadis chihi*), wood stork (*Mycteria americana*), whooping crane (*Grus americana*), zone-tailed hawk (*Buteo albonotatus*), black bear (*Ursus americanus*), white-nosed coati (*Nasua narica*), Cascade Caverns salamander (*Eurycea latitans*), false spike (*Fusconaia mitchelli*), Texas horned lizard (*Phrynosoma cornutum*), and Cagle's map turtle (G*raptemys caglei*) are not anticipated to occur within the study area due to the lack of potential suitable habitat. No adverse impacts to these species are anticipated due to the Project.

The Texas tortoise (*Gopherus berlandieri*) may occur within the study area if suitable habitat, such as scrub forests and semi-arid regions, is available. CPS Energy will conduct field surveys to identify potential habitats and implement avoidance measures to minimize disturbance. If present, these species may experience temporary disturbance during construction or harm if they have burrowed during colder months. With avoidance measures, the Project is not expected to result in significant impacts to their populations.

The Texas salamander (*Eurycea neotenes*) may occur within the study area if suitable aquatic habitats are present, particularly near spring outflows. CPS Energy proposes to span all surface waters crossed by the PUC-approved route and will implement a SWPPP to prevent sedimentation into these waters and a groundwater protection plan if groundwater is encountered during bedrock excavation, ensuring protection for aquatic species.

4.2 Impacts on Human Resources/Community Values

4.2.1 Land Use

The magnitude of potential impacts to land use resulting from the construction of a transmission line is determined by the amount of land (land use type) temporarily or permanently displaced by the actual ROW and by the compatibility of the facility with adjacent land uses. During construction, temporary impacts to land uses within the ROW might occur due to the movement of workers, equipment, and materials through the area. Construction noise and dust, as well as temporary disruptions of traffic flow, might also temporarily affect local residents and businesses in the area immediately adjacent the ROW. Coordination between CPS Energy, their respective contractors, and landowners regarding ROW access and construction scheduling should minimize these disruptions.

The evaluation criteria used to compare potential land use impacts include overall route length, route length parallel to existing linear features (including apparent property boundaries), route proximity to habitable structures, route proximity to park and recreational areas, and route length across various land use types. An analysis of the existing land use within and adjacent to the existing and proposed ROW is required to evaluate the potential impacts.

Route Length

The length of a proposed route can be an indicator of the relative magnitude of land use impacts. Generally, all other factors being equal, a shorter route results in crossing less land, which can result in fewer potential impacts. The total length of the proposed Project route is 12.11 miles (see **Table 4-1**).

Compatible ROW

PUC Substantive Rule 25.101(b)(3)(B) requires that an applicant for a CCN, and ultimately the PUC, consider whether a new transmission line is within existing compatible ROWs and/or are parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features. Criteria were used to evaluate the use of existing transmission line ROW, length parallel and adjacent to existing transmission line ROW, length of route parallel to other existing linear ROWs, and length of ROW parallel and adjacent to apparent property lines. The entire 12.11 miles of the proposed Project route will be utilizing an existing transmission line ROW. The proposed Project route utilizes an open circuit on an existing transmission line for 10.80 miles (Vacant Position Segment). The remaining portion of the proposed Project route, 1.31 miles, will be rebuilt within an existing transmission line corridor which as part of this Project will be expanded (parallel and adjacent to the existing ROW) with additional easements to accommodate new structures (Rebuild Segment). The proposed Project route is also parallel or adjacent to apparent property lines for 10.09 miles and parallel to other existing ROW (roadways, railways, utilities, etc.) for 8.12 miles (see **Table 4-1**).

Typically, a more representative account for the consideration of whether a new transmission line route is parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features is demonstrated with the percentage of the total route length parallel to any of these existing linear features. This percentage can be calculated for the proposed Project route by adding up the total length parallel to existing transmission lines, other existing ROW, and apparent property lines and then dividing the result by the total length of the route. The percentage of the proposed Project route paralleling and/or utilizing existing linear features is 100 percent (see **Table 4-1**).

Developed and Residential Areas

Typically, one of the most important measures of potential land use impacts is the number of habitable structures located in the vicinity of the route. Based on direction provided by the PUC, habitable structure identification is included with the CCN application. Halff determined the number and distance of habitable structures located within 300 feet of the centerline of the proposed Project route through the use of GIS software, interpretation of aerial photography and verification during reconnaissance surveys, where practical. To account for photographic interpretation limitations such as shadows, tree canopies, and horizontal accuracy of the photography, Halff identified all habitable structures within a measured distance of 320 feet of the proposed Project route. The proposed Project route has 37 habitable structures located within 300 feet of its centerline (see **Table 4-1**).

Table 4-2 presents detailed information on the habitable structures. All known habitable structure locations are shown on **Figure 3-1** located in **Appendix C** (map pocket).

Table 4-2. Habitable Structures in the Vicinity of the Proposed Project Route

Figure 3-1 Habitable Structure Map ID	Structure Type	Approximate Distance from Route Centerlines (feet)[1]	Direction[2]
1	Industrial	94	West
2	SFR[3]	144	Northeast
3	SFR	249	North
4	SFR	279	East
5	SFR	65	West
6	SFR	58	West
7	SFR	56	West

Figure 3-1 Habitable Structure Map ID	Structure Type	Approximate Distance from Route Centerlines (feet)[1]	Direction[2]
8	Commercial	219	East
9	SFR	210	East
10	SFR	284	West
11	Commercial	97	East
12	Commercial	113	East
13	SFR	170	East
14	SFR	104	East
15	SFR	142	East
16	SFR	173	East
17	SFR	110	East
18	SFR	156	East
19	SFR	74	East
20	SFR	137	East
21	SFR	131	West
22	SFR	217	West
23	SFR	158	East
24	SFR	236	East
25	Commercial	210	West
26	Commercial	91	East
27	SFR	210	East
28	SFR	255	North
29	SFR	201	West
30	SFR	319	South
31	SFR	249	East
32	Industrial	237	East
33	Commercial	95	East
34	Commercial	132	East
35	Commercial	108	East
36	Industrial	166	Northeast
37	Industrial	147	North

NOTES:
[1] To account for photographic interpretation limitations such as shadows, tree canopies, and horizontal accuracy of the aerial photography, Halff identified all habitable structures within a measured distance of 320 feet of the proposed route centerlines.
[2] Direction represents the distance beginning from the habitable structure towards the nearest proposed route centerline.
[3] Denotes single-family residence

Lands with Conservation Easements

As discussed in **Section 3.2.1**, there are 20 known conservation easements within or intersecting the study area. Ten of these easements (see **Table 4-3**) are crossed by the proposed Project route. All ten of the easement crossings will occur within an existing transmission line corridor on existing structures. Therefore, vegetation clearing will occur only where necessary to provide access, workspace, and future maintenance access to the ROW. The length of the proposed Project route through these conservation easements is 3.71 miles (see **Table 4-3**).

Table 4-3. Conservation Easements Crossed

Name
Elizabeth P. Hill Preserve / San Geronimo Creek Macrosite
Gallagher
Gallagher - Tract 2
Gallagher HQ
Hampton
Hampton Ranch
Hilton Ranch
Mayberry
McNeel Ranch
Rancho Blanco
SOURCE: NCED, 2024.

4.2.2 Agriculture

Impacts to agricultural land uses can generally be ranked by degree of potential impact, with the least potential impact occurring in areas where cultivation is not the primary use (pastureland/rangeland), followed by cultivated croplands, which have a higher degree of potential impact. Most existing agricultural land uses may be resumed within the ROW following construction. The proposed Project route does not cross any cropland (see **Table 4-1**).

The proposed Project route crosses 7.70 miles of land categorized as pastureland/rangeland; however, because the ROW for this project will not be fenced or otherwise separated from adjacent lands, there will be no significant long-term displacement of ongoing activities. The proposed Project route does not cross any lands with known traveling irrigation systems (rolling or pivot type). The length of the proposed Project route, which crosses cropland, pastureland/rangeland, and land with known mobile irrigation systems, is presented in **Table 4-1**.

4.2.3 Transportation/Aviation

Transportation Features

Potential impacts to transportation could include temporary disruption of traffic or conflicts with future proposed roadways and/or utility improvements. Traffic disruptions would include those associated with the movement of equipment and materials to the ROW, and slightly increased traffic flow and/or periodic congestion during the construction phase of the Project. In the less developed portions of the study area, these impacts are typically considered minor, temporary, and short-term. In the more developed portions of the study area, the temporary impacts to traffic flow can be significant during construction but would be temporary and short-term. As mentioned in

Section 3.2.3, there are ten state roadway projects planned or underway within the study area. The proposed Project route is not expected to have any significant impacts on these roadway projects. The proposed Project route crosses SH 211 once and SH 16 twice, totaling three crossings (see **Table 4-1**). The proposed Project route does not cross any US highways or FM roads. CPS Energy will coordinate with the appropriate agencies to address any traffic flow impacts or necessary permits.

Aviation Facilities

According to FAA regulations, Title 14 CFR Part 77, the construction of a transmission line requires FAA notification if tower structure heights exceed the height of an imaginary surface extending outward and upward at a slope of 100:1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of a public or military airport having at least one runway longer than 3,200 feet. The FAA also requires notification if tower structure heights exceed a 50:1 slope for a horizontal distance of 10,000 feet from the nearest runway of a public or military airport where no runway is longer than 3,200 feet in length, and if tower structure heights exceed a 25:1 slope for a horizontal distance of 5,000 feet for heliports.

There is one public FAA registered airport having no runway longer than 3,200 feet located within 10,000 feet of the proposed Project route (San Geronimo Airpark). The nearest portion of the proposed Project route to the San Geronimo Airpark runway is approximately 4,690 feet (0.88 miles) to the northwest. The estimated runway length at San Geronimo Airpark is 3,000 feet and the 50:1 slope is not expected to be exceeded by the existing or proposed pole heights for this project. Following PUC approval of the proposed Project route, CPS Energy would make a final determination of the need for FAA notification, based on the specific route location and structure design of the approved route. The result of this notification, and any subsequent coordination with the FAA, could include changes in the line design and/or potential requirements to mark the conductors and/or light the structures.

No public FAA registered airports with at least one runway longer than 3,200 feet were identified within 20,000 feet of the proposed Project route. There were no private airstrips identified within 10,000 feet of the proposed Project route, nor were there any heliports identified within 5,000 feet.

The number of airports, airstrips, and heliports for the proposed Project as it relates to applicable CCN criteria are presented in **Table 4-1**. The distance for each airport/airstrip from the nearest portion of the proposed Project route was measured using GIS software and aerial photography interpretation. All known airport/airstrip locations are shown on **Figure 3-1** located in **Appendix C** (map pocket). The proposed Project route is not expected to have a significant impact on aviation activities within the study area.

4.2.4 Communication Towers

All known facilities, including fifth generation, licensed with the FCC have been identified. No commercial AM radio transmitters were identified within 10,000 feet of the proposed Project route. However, there are five other electronic communication facilities (i.e., FM radio, microwave, cellular, etc.) located within 2,000 feet of the proposed Project route. The proposed Project route is not anticipated to have a substantial impact on electronic communication facilities or operations in the study area.

The number of other communication facilities located within 2,000 feet of the proposed Project route is presented in **Table 4-1**. The distance to these electronic communication facilities from the closest portion of the proposed Project route was measured using GIS software and aerial photograph interpretation (**see Table 4-4**) and displayed on **Figure 3-1** located in **Appendix C** (map pocket).

Table 4-4. Electronic Communication Facilities

Figure 3-1 Tower Map ID	Facility Type	Distance (ft)	Direction to Route
1	Private Land Mobile Radio	1,530	Northwest
2	Private Land Mobile Radio, Cellular, and Microwave	880	North
3	Cellular and Microwave	810	North
4	Private Land Mobile Radio	500	West
5	Microwave	150	North
SOURCE: FCC, 2024.			

4.2.5 Utility Features

Utility features include existing electrical transmission lines, distribution lines, water wells, pipelines, and oil and gas wells. Numerous water wells were identified within the study area and are mapped on **Figure 3-1** located in **Appendix C** (map pocket). There is one water well within 200 feet of the proposed Project route that is not a public supply water well (see **Table 4-1**). The proposed Project route does not cross any existing electrical transmission lines. No oil and gas wells or associated facilities were identified within the study area; however, the proposed Project route crosses one natural gas pipeline. Furthermore, the proposed Project route is not parallel or adjacent to any pipelines. Additionally, the proposed Project route is adjacent to but does not cross any gravel pits, mines, or quarries (see **Table 4-1**). If additional unidentified utility features are crossed by or are in close vicinity to the proposed Project route approved by the PUC, CPS Energy will coordinate with appropriate entities to obtain necessary permits or permission as required.

4.2.6 Socioeconomics

Construction and operation of the Project is not anticipated to result in a significant change in the population or employment rate within the study area. For this Project, some short-term employment would be generated. CPS Energy normally uses contract labor supervised by each entity's respective employees during the clearing and construction phases of transmission line projects. Construction workers for the project would likely commute to the work site on a daily or weekly basis instead of permanently relocating to the area. The temporary workforce increase would likely result in an increase in local retail sales due to purchases of lodging, food, fuel, and other merchandise for the duration of construction activities. No additional CPS Energy staff would be required for line operations and maintenance.

4.2.7 Community Values

Adverse effects upon community values are defined as aspects of the project that would significantly and negatively alter the use, enjoyment, or intrinsic value attached to an important area or resource by a community. This definition assumes that community concerns are applicable to this specific project's location and characteristics, and do not include objections to electric transmission lines in general.

Potential impacts to community resources can be classified into direct and indirect effects. Direct effects are those that would occur if the location and construction of a transmission line and stations result in the removal or loss of public access to a valued resource. Indirect effects are those that would result from a loss in the enjoyment or use of a resource due to the characteristics (primarily aesthetic) of the proposed transmission line, structures, or ROW.

4.3 Impacts on Recreation and Park Areas

Potential impacts to parks or recreation areas include the disruption or preemption of recreation activities. As previously mentioned in **Section 3.3.1**, one park or recreational area meeting the definition set forth in the PUC application was identified within the study area. The proposed Project route crosses and is therefore within 1,000 feet of the GCSNA. This park is crossed in two remote wilderness locations, within an existing transmission line corridor on existing structures, where the addition of a new circuit will have no impact on recreational services. The proposed Project route crosses GCSNA for a total of 0.99 miles. No substantial impacts to the use of any parks and recreation areas located within the study area are anticipated from proposed Project route. Also, no adverse impacts are anticipated for any other potential fishing or hunting areas from the proposed Project route. The number of park or recreational areas located within 1,000 feet of the proposed Project route is presented in **Table 4-1**. All known park or recreational area locations are shown on **Figure 3-1** located in **Appendix C** (map pocket).

4.4 Impacts on Aesthetic Values

Aesthetic impacts, or impacts to visual resources, exist when the ROW, lines and/or structures of a transmission line system create an intrusion into, or substantially alter the character of the existing view. The significance of the impact is directly related to the quality of the view, in the case of natural scenic areas, or to the importance of the existing setting in the use and/or enjoyment of an area, in the case of valued community resources and recreational areas.

Construction of the Project could have both temporary and permanent aesthetic impacts. Temporary impacts would include views of the actual assembly and erection of the tower structures. If wooded areas are cleared, the brush and wood debris could have an additional negative temporary impact on the local visual environment. Permanent impacts from the Project would involve the views of the cleared ROW, tower structures, and lines from public viewpoints including roadways, recreational areas, and scenic overlooks.

The study area is located within the Texas Hill Country. However, there are no designated landscapes protected by legislation, and most forms of development exist within the study area. Potential visibility impacts were evaluated by estimating the length of the proposed Project route that would fall within the foreground visual zones (one-half mile with unobstructed views) of major highways, FM roads, and parks or recreational areas. The proposed Project route lengths within the foreground visual zone of US highways, state highways, FM roads, and parks or recreational areas were tabulated and are discussed below.

The proposed Project route is situated within the foreground visual zone of state highways (SH 211 and SH 16) for 9.76 miles. The proposed Project route is also within the foreground visual zone of FM 471, but this area is already accounted for within the foreground visual zone of state highways (SH 211). Additionally, 6.43 miles of the proposed Project route is located within the foreground visual zone of a park or recreational area (GCSNA) (see **Table 4-1**).

The predominantly forested and rural landscape in the study area is influenced by its proximity to GCSNA and conservation easements but still includes residential, commercial, and industrial land uses, especially in the southern portion and near SH 16, SH 211, and FM 471. The aesthetic quality has been affected by residential subdivisions, commercial activities, mining facilities, local roadways, and existing utility corridors. Which includes the existing transmission line corridor and structures with the vacant position along SH 211 and SH 16 that a portion of the proposed Project route will be utilizing (Vacant Position Segment). Therefore, the construction of the proposed Project route is not expected to significantly impact the landscape's aesthetic quality.

4.5 Impacts on Historical (Cultural Resource) Values

Methods for identifying, evaluating, and mitigating impacts to cultural resources have been established for federal projects or permitting actions, primarily for purposes of compliance with the National Historic Preservation Act (NHPA). Similar methods are often used when considering cultural resources affected by state-regulated undertakings. In either case, this process generally involves identification of significant (i.e., national- or state-designated) cultural resources within a Project's study area, determining the potential impacts of the Project on those resources, and implementing measures to avoid, minimize, or mitigate those impacts.

Impacts associated with the construction, operation, and maintenance of transmission lines can affect cultural resources either directly or indirectly. Construction activities associated with any proposed project can adversely impact cultural resources if those activities alter the integrity of key characteristics that contribute to a property's significance as defined by the standards of the NRHP or the Antiquities Code of Texas. These characteristics might include location, design, setting, materials, workmanship, feeling, or association for architectural and engineering resources or archeological information potential for archeological resources.

4.5.1 Direct Impacts

Typically, direct impacts could be caused by the actual construction of the line or through increased vehicular and pedestrian traffic and excavation for towers during the construction phase. If construction is required near historic structures, landscapes, or districts, proper mitigation and avoidance measures would avoid adversely impacting such features during construction of a transmission line. Additionally, an increase in vehicular and/or pedestrian traffic might damage surficial or shallowly buried sites. Excavation for transmission structures could impact shallow or deeply buried archeological sites. Direct impacts might also include isolation of cultural resource from or alteration of its surrounding environment.

4.5.2 Indirect Impacts

Indirect impacts include those affects caused by the Project that are farther removed in distance or that occur later in time but are reasonably foreseeable. These indirect impacts might include introduction of visual or audible elements that are out of character with the resource or its setting. Indirect impacts might also occur as a result of alterations in the pattern of land use, changes in population density, accelerated growth rates, or increased pedestrian or vehicular traffic. Absent best management practices, proper mitigation, and avoidance measures, historic buildings, structures, landscapes, and districts are among the types of resources that could be adversely impacted by the indirect impact of a transmission line.

The preferred form of mitigation for direct and indirect impacts to cultural resources is avoidance through project modifications. Additional mitigation measures for direct impacts might include implementing a program for data recovery excavations if an archeological site cannot be avoided. Indirect impacts on historic properties and landscapes can be lessened through careful design and landscaping considerations, such as using vegetation screens or berms, if practicable. Additionally, relocation might be possible for some structures.

4.5.3 Summary of Cultural Resource Impacts

A review of the THC, NPS, and TxDOT data, described in **Section 3.5**, indicated that 21 archeological sites are recorded within 1,000 feet of the proposed Project route (see **Table 4-5**). Of the 21 archeological sites, one NRHP-listed site and 11 sites of undetermined or ineligible NRHP status are crossed by the proposed Project route. The distance of each recorded site located within 1,000 feet of the proposed Project route was measured using GIS software and aerial photography interpretation. The cultural resources recorded within 1,000 feet of the proposed Project route are summarized below.

Although portions of the proposed Project route have been previously surveyed for cultural resources, the potential for undiscovered cultural resources does exist along the route. To assess this potential, a review of site and survey data within the study area, as well as soils and geologic data, and topographic variables was undertaken by a professional archeologist to identify areas along the route where unrecorded archeological resources have a higher probability to occur. These HPAs were identified near and along streams and water sources, terraces, topographic high points, the NRHP property, near previously recorded sites, and particularly where previous surveys have not been conducted. To facilitate the data evaluation each HPA was mapped using GIS and the length of HPA tabulated. Based on the analysis, the proposed Project route crosses 11.30 miles of HPA (see **Table 4-1**).

Table 4-5. Archeological Sites Recorded within 1,000 Feet of the Proposed Project Route

Resource ID	Atlas Record Summary	NRHP Eligibility	Distance (ft) to Route Centerline
41BX790	**Lithic scatter with debitage**	**Undetermined**	**0**
41BX791	**Lithic scatter with debitage**	**Ineligible**	**0**
41BX792	**Lithic scatter with debitage and cores**	**Undetermined**	**0**
41BX845	Precontact open campsite and burned rock midden	Undetermined	125
41BX887	Burned rock midden with debitage, Archaic dart points and one Angostina projectile point	Undetermined	790
41ME36	**Lithic scatter with burned rock**	**Undetermined**	**0**
41ME38	**Multi-component campsite and burned rock midden and 19th century structures**	**Undetermined**	**0**
41ME48	Lithic scatter of manos, a metate, hammerstones, debitage, cores and bone	Undetermined	880
41ME64	Quarry site with a lithic scatter of cores and cobbles	Undetermined	600
41ME65	Lithic scatter with stone tools, debitage and burned rock	Undetermined	900
41ME66	Lithic scatter with stone tools and burned rock	Undetermined	540
41ME37	**Lithic scatter with debitage and core fragments**	**Undetermined**	**0**
41BX1602	**Quarry site with scatter of utilized flakes, cores, tested cobbles and burned rock**	**Undetermined**	**0**
41BX1603	Lithic scatter of utilized flakes	Undetermined	295
41BX1604	Quarry site with scatter of debitage, utilized flakes and cores	Undetermined	125
41BX1605	**Lithic scatter with burned rock, debitage, stone tools and faunal bone**	**Undetermined**	**0**
41BX1610	Lithic scatter with debitage	Undetermined	115
41BX1611	**Lithic scatter with debitage and shatter**	**Undetermined**	**45**
41ME138	**Historic structures including an open shed, metal shed with plumbing, concrete trough, wooden trough with a metal roof, a cedar cattle feeder, a cistern and cattle shoot**	**Ineligible**	**0**
41ME139	**Lithic scatter with a core, debitage and burned rock**	**Undetermined**	**30**
8000474	**R. L. White Ranch**	**Listed**	**0**
NOTE: **Bold** entries are crossed by the existing ROW.			

5.0 AGENCY CORRESPONDENCE

A list of federal, state, and local regulatory agencies elected officials and organizations was developed to receive a consultation letter regarding the project. The purpose of the letter was to inform the various agencies and officials of the project and provide them with an opportunity to provide information regarding resources and potential issues within the study area. Various federal, state and local agencies and officials that may have potential concerns and/or regulatory permitting requirements for the proposed project were contacted. Halff utilized websites and telephone confirmations to identify local officials. Copies of all correspondence with the various state/federal regulatory agencies and local/county officials and departments are included in **Appendix A**.

Federal, state and local agencies/officials contacted are listed below.

Federal

- Federal Aviation Administration (FAA)
- Federal Emergency Management Agency (FEMA) – Region 6
- United States Congress Representative – District 23
- United States Department of Defense (DoD) Military Aviation and Installation Siting Clearinghouse
- Natural Resources Conservation Service (NRCS) – San Antonio Service Center
- United States Army Corps of Engineers (USACE) – Fort Worth District
- United States Environmental Protection Agency (EPA) – Region 6
- United States Fish and Wildlife Service (USFWS) – Austin Ecological Services Field Office

State

- Texas State Soil and Water Conservation Board – Area 2 Medina Valley
- Railroad Commission of Texas (RRC)
- Texas Agricultural Land Trust
- Texas Cave Management Association
- Texas Commission on Environmental Quality (TCEQ)
- Texas Department of Transportation (TxDOT) – Aviation Division, Environmental Affairs Division, Planning and Programming, and San Antonio District Engineer

- Texas General Land Office (GLO)
- Texas Historical Commission (THC)
- Texas House of Representatives – Districts 53 and 122
- Texas Land Trust Council (TLTC)
- Texas Land Conservancy (TLC)
- Texas Parks and Wildlife Department (TPWD)
- Texas State Senators – Districts 19, 24, and 25
- Texas Water Development Board (TWDB)
- The Nature Conservancy (TNC) – Texas Chapter

Local Agencies/Officials

- Alamo Area Council of Governments
- Alamo Soil and Water Conservation District – Chairman and Area 3 Representative
- Bexar County Judge and Commissioners Court Precinct 2 and 3
- Bexar County Economic and Community Development
- Bexar County Manager
- Bexar County Floodplain Development Services Engineer
- Bexar County Historical Commission
- City of Helotes Mayor and City Council Member – Place 1
- City of San Antonio Mayor and City Council Member – District 6
- City of San Antonio Economic Development Department
- City of San Antonio Department of Planning
- Office of Historic Preservation (OHP) Development and Business Services Center – City of San Antonio
- City of San Antonio Public Works Department
- City of San Antonio Transportation Department
- Edwards Aquifer Authority (EAA) – Districts 4, 6, 7 and 13
- Medina County Judge and Commissioners Court Precinct 1
- Medina County Floodplain Administrator
- Medina County Historical Commission
- Medina Valley Independent School District (ISD)
- Northside ISD
- San Antonio River Authority (SARA)

- San Antonio Water System (SAWS) Resource Compliance Division and President, Chief Executive Officer
- World Heritage Office – City of San Antonio

In addition to letters sent to the agencies listed, Halff also requested and reviewed NDD Element Occurrence Records from TPWD (TPWD, 2024b). Halff also requested and reviewed previously recorded archeological site information from TARL and reviewed the THC's TASA for additional cultural resource information. As of the date of this document, written responses to letters sent in relation to the study area that were received are listed and summarized below.

Federal

The FAA responded by email on July 2, 2024, stating that if CPS Energy is planning to sponsor any construction or alterations which may affect navigable airspace, an FAA Form 7460-1 must be filed electronically via a website listed on the attached letter.

FEMA responded by email on July 16, 2024, requesting the community floodplain administrator be contacted for the review and possible permit requirements the Project.

The United States DoD Military Aviation and Installation Siting Clearinghouse responded by email on June 21, 2024, expressing gratitude for the opportunity to review the project. A follow-up email was received on September 6, 2024, stating the project, as proposed, will have minimal impact on military operations conducted in the area. Furthermore, it stated only an informal review was conducted and the DoD is bound by this conclusion. The DoD requested that Project Number 2024-06-T-DEV-23 be provided in the comments section in the filing of the Obstruction Evaluation Airport Airspace Analysis (OE/AAA) process, to expediate the process.

The NRCS responded by email on July 2, 2024, the agency acknowledged a USDA-NRCS easement (Rancho Blanco) in the study area and encouraged the use of acceptable erosion control method during the construction of the Project. An exhibit of the Rancho Blanco easement location and a Custom Soil Resources Report for the study area were provided.

The USACE Regulatory Division responded by email on July 3, 2024, stating the Project has been assigned a regulatory project manager and Project Number SWF-2024-00324 for all future correspondence. They also noted that it is unlawful to start work without a Department of the Army permit if one is required. The USACE sent a follow-up email dated July 9, 2024, stating that they were unable to determine if a USACE permit would be required from the information provided. The USACE stated they would close the current request and re-open it when additional information is received.

State

The TCEQ responded by email on July 18, 2024, stating that the Project would need to conform with the requirements of the Clean Air Act due to Bexar County being located within a designated nonattainment area. The Office of Water did not anticipate significant long term environmental impacts provided construction and waste disposal activities associated with the Project are completed in accordance with applicable local, state, and federal environmental permits, statutes, and regulations. The proposed project is in an area designated as a Sole Source Aquifer by the EPA. Specifically, the site appears to be within the Edwards Aquifer Recharge, Transition, and Contributing Zones, all of which are regulated under TCEQ's Edwards Aquifer Protection Program (EAPP).

The GLO responded with a letter dated July 1, 2024, stating that it did not appear that the GLO will have any environmental issues or land use constraints at this time. Additionally, the GLO requested further coordination if the proposed Project route would cross any streambeds or Permanent School Fund lands which would a require an easement from their agency.

The THC responded by email on July 9, 2024, stating that there are several recorded archaeological sites within the study area. Some of these sites are listed as eligible for or have undetermined eligibility for listing in the NRHP or as a SAL. They also mentioned that it is likely an archaeological survey would be required, as much of the study area has not undergone previous archaeological investigation or was surveyed using outdated and inadequate methods. Therefore, they recommended that a professional archaeologist search for previously recorded historical properties and identify high-probability areas for the archaeological survey. Regarding above-ground resources, they noted that there are known historic resources located in the identified study area, including the R. L. White Ranch, which was listed in the NRHP in 2008 and designated as a Recorded Texas Historic Landmark (RTHL) in 2012.

Furthermore, the THC stated that Federal regulations require consultation with the USACE and other appropriate agencies to determine if there are any jurisdictional lands along the route. If the project ultimately involves a federal undertaking, compliance with Section 106 of the NHPA will be required. If any portion of the project crosses lands or waters owned or controlled by the State of Texas or any political subdivision thereof, or has the potential to affect a SAL, those areas will also be subject to the Antiquities Code of Texas. Consequently, a Texas Antiquities Permit will be required before conducting a survey across these lands.

The TLTC responded by email on July 2, 2024, acknowledging notification of the Project and request for information about environmental and land use constraints. They stated that the NCED should be consulted to avoid properties with permanent conservation easements.

The TPWD's Wildlife Habitat Assessment (WHAB) program sent an email on June 21, 2024, acknowledging receipt of notification about the Project. They followed up on August 2, 2024, with a list of state and federal regulations related to the Project and provided recommendations and BMPs for complying with these regulations. TPWD appreciated that the proposed Project route used an existing transmission line corridor or other previously disturbed area and recommended BMPs to minimize potential impacts on waterways, karst zones, nesting and migratory birds, bird collisions with electrical transmission line facilities, and listed threatened, endangered (state and federal), or rare species.

On July 15, 2024, a representative from TNC responded by phone to discuss the project scope. During this conversation, it was determined that the proposed Project route, which falls within an existing transmission line corridor, would intersect a number of conservation easements. The agency representative further stated the TLTC and NCED websites and databases should be reviewed for locations and information regarding the conservation easements within the study area. On August 9, 2024, an email was received which included a copy of the easement terms for one of TNC's conservation easements adjacent to SH 211. Lastly, a meeting was requested to further discuss the proposed project (see **Section 6.1**).

Local Agencies/Officials

On July 5, 2024, a representative from the Bexar County Floodplain Development Services responded by phone to discuss the project scope. During this conversation, it was determined that the proposed Project route, which falls within an existing transmission line corridor, will not have any impacts on planned floodplain projects.

A representative from the City of San Antonio's Parks and Recreation Department's EAPP reached out via voice message and follow-up email on July 15, 2024. On July 16, 2024, Halff discussed with the City via phone call, the project scope, conservation easements and natural areas within the study area, and a request from the City to be included in future correspondence regarding the project. During this conversation the EAPP representative offered GIS features displaying the approximate boundaries of the conservation easements within or intersecting the study area. A follow-up email was sent from Halff to the EAPP representative on July 29, 2024, requesting the GIS conservation easement features, which were subsequently provided via email on July 30, 2024.

Medina County Floodplain Administrator responded by email on June 24, 2024, stating that a floodplain development permit would be required but no additional permits issued by Medina County would be necessary. It was also mentioned that for a project of this size, all floodplain crossings and development could be managed with a single permit containing appropriate project descriptions.

The San Antonio River Authority responded by email on July 26, 2024, stating the proposed Project route crosses the 100-year floodplain, most notably San Geronimo Creek west of Helotes. Additionally, they stated that the agency does not have bed and bank ownership near the proposed Project route. They also advised conducting thorough due diligence with other entities and relevant environmental databases, as they are not aware of any environmental or land use constraints in the area but cautioned that their absence should not be assumed.

The SAWS responded via phone on July 3, 2024, to discuss the Project scope and receive clarification of what information was needed from the agency. SAWS stated that the Project would have no impact on any SAWS projects within the area. Following this conversation, an email was received stating block maps and as-builts displaying water and sewer utilities within the study area are available on the provided SAWS websites.

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6.0 PUBLIC INVOLVEMENT

CPS Energy hosted a public open house meeting within the study area to solicit comments, concerns and input from residents, landowners, public officials, and other interested parties. The purpose of this meeting was to:

- Promote a better understanding of the Project, including the purpose, need, potential benefits and impacts, and the PUC CCN application approval process.
- Inform the public with regard to the routing procedure, schedule, and decision-making process.
- Ensure that the decision-making process adequately identifies and considers the values and concerns of the public and community leaders.

The public meeting was held on August 12, 2024, from 5:30 p.m. to 7:30 p.m. at Los Reyes Elementary School, 10785 Triana Parkway in Helotes, Texas. Invitation letters were sent to landowners who owned property within 350 feet of the proposed Project route. CPS Energy mailed 101 invitation letters to landowners. Each landowner that received an invitation letter also received a map of the study area depicting the proposed Project route (see **Appendix B**). An advertisement for the open house was also published in the San Antonio Express News on August 4 and August 11, 2024, La Prensa on August 4, 2024, and in the Conexión on August 7, 2024 (see **Appendix B**).

At the meeting, engineers, GIS analysts, biologists, project managers, and regulatory professionals from CPS Energy and Halff were available to answer questions regarding the Project. Manned information stations were set up that provided typical 138 kV pole types, a list of agencies contacted, land-use and environmental criteria for transmission lines, and an environmental and land use constraints map on aerial base. The station displays shown at the public meeting are available in **Appendix B**. Since there were no changes to the proposed Project route after the open house meeting, the environmental and land use constraints map shown at that meeting is the same as **Figure 3-1** located in **Appendix C** (map pocket). CPS Energy also provided a GIS interactive station operated by a Halff GIS analyst. This GIS computer station allowed attendees to view more-detailed digital maps of proposed Project route and submit comments digitally and spatially. The information station format is advantageous because it facilitates one-on-one discussions and encourages personalized landowner interactions.

Each individual in attendance was offered the opportunity to sign their name on the sign-in sheet and given three handouts. The first handout was an information brochure that provided general information about the Project. The second handout was a questionnaire that solicited comments on the Project and an evaluation of the information presented at the public meeting. Individuals were asked to fill out the questionnaire after visiting the information stations and speaking with Halff and CPS Energy personnel. The third handout was a Frequently Asked Questions document providing an overview of the Project as well as a description of the regulatory process. Copies of the brochure, questionnaire, and Frequently Asked Questions are located in **Appendix B**.

A total of 16 individuals signed in as attendees at the public meeting and five submitted questionnaire responses at or after the public meeting. Results of the completed questionnaires supported that the need for the proposed project had been adequately explained and that the exhibits and explanations of the need for the proposed project were helpful. Likewise, the respondents indicated that the information presented was helpful to them in understanding the proposed project.

The questionnaire requested input from the respondents regarding a list of 13 factors that are taken into consideration when identifying and evaluating proposed transmission line projects (see a complete list of the criteria on the questionnaire in **Appendix B**). They were asked to rank each of these criteria, with **1** being the most important factor and **5** being the least important factor. Of those attendees that ranked the criteria, the three criteria that were ranked by the respondents as being the most important are listed in descending order:

- Impact to residences: 3 (60 percent)
- Parallel to existing transmission lines: 1 (20 percent)
- Parallel to property lines: 1 (20 percent)

Respondents were asked if there are other factors that should be considered when identifying and evaluating proposed transmission line project. Written responses included:

- Concerns about electromagnetic fields
- Concerns about access to lines and towers

When asked which of the situations applied to them, written responses were as follows:

- four indicated that a proposed transmission line project is near their home/business
- five indicated that a proposed transmission line project crosses their property

Respondents were also asked if there was any other information, they would like the Project Team to know or take into consideration when evaluating the Project, responses included:

- Stated that they would like to be notified when accessing their property

6.1 Post Open House

After the open house meeting on August 20, 2024, CPS Energy staff had a phone conversation with the Conservation Easement Program Manager for TNC's Texas chapter. During the discussion, they focused on the part of the project that would cross a TNC conservation easement along SH 211. CPS Energy staff informed TNC that they planned to use existing transmission line structures for the portion crossing the conservation easement and did not expect to need any new easements in that location. A summary of this conversation was sent to TNC in an email dated August 21, 2024, and a copy of this email is included in **Appendix A**.

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7.0 LIST OF PREPARERS

Halff prepared this EA for CPS Energy; **Table 7-1** provides a list of the project team with primary responsibilities for the preparation of this document.

Table 7-1. List of Preparers

Responsibility	Name	Title
Project Manager	Jody Urbanovsky[1]	Project Manager
Physiography and Geology	Barrett Clark[2] Erin Berkencamp[2] Liza Colucci[2]	Environmental Scientist
Water Resources and Soils	Barrett Clark[2] Erin Berkencamp[2] Liza Colucci[2]	Environmental Scientist
Vegetation Ecology	Barrett Clark[2] Erin Berkencamp[2] Liza Colucci[2]	Environmental Scientist
Fish and Wildlife Ecology	Barrett Clark[2] Erin Berkencamp[2] Liza Colucci[2]	Environmental Scientist
Land Use/Aesthetics	Jody Urbanovsky[1]	Project Manager
Maps/Figures/Graphics	Alicin McCloud[1] Marie Church[1]	GIS Project Manager Environmental Scientist
GIS Data Management	Alicin McCloud[1] Jody Urbanovsky[1] Wendy Dickerson[2]	GIS Project Manager Project Manager
Cultural Resources	Mike Mudd[1] Annie Carter[1]	Archeologist
Quality Review	Russell Marusak[1]	Senior Project Manager
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Map Name	Year
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Jack Mountain	2022
Helotes	2022
Van Raub	2022

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Appendix A
Agency and Other Correspondence

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Ranchtown — Talley Road 138 kV Transmission Line Project in Medina and Bexar Counties, Texas

Federal, State and Local Agencies/Officials Contact List

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Ranchtown — Talley Road 138 kV Transmission Line Project in Medina and Bexar Counties, Texas

Federal, State and Local Agencies/Officials Contact List

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Ranchtown — Talley Road 138 kV Transmission Line Project in Medina and Bexar Counties, Texas

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June 21, 2024
AVO 55396.001

Mr. Rob Lowe
Southwest Region Regional Administrator
Federal Aviation Administration
10101 Hillwood Parkway
Fort Worth, Texas 76117

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Lowe:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

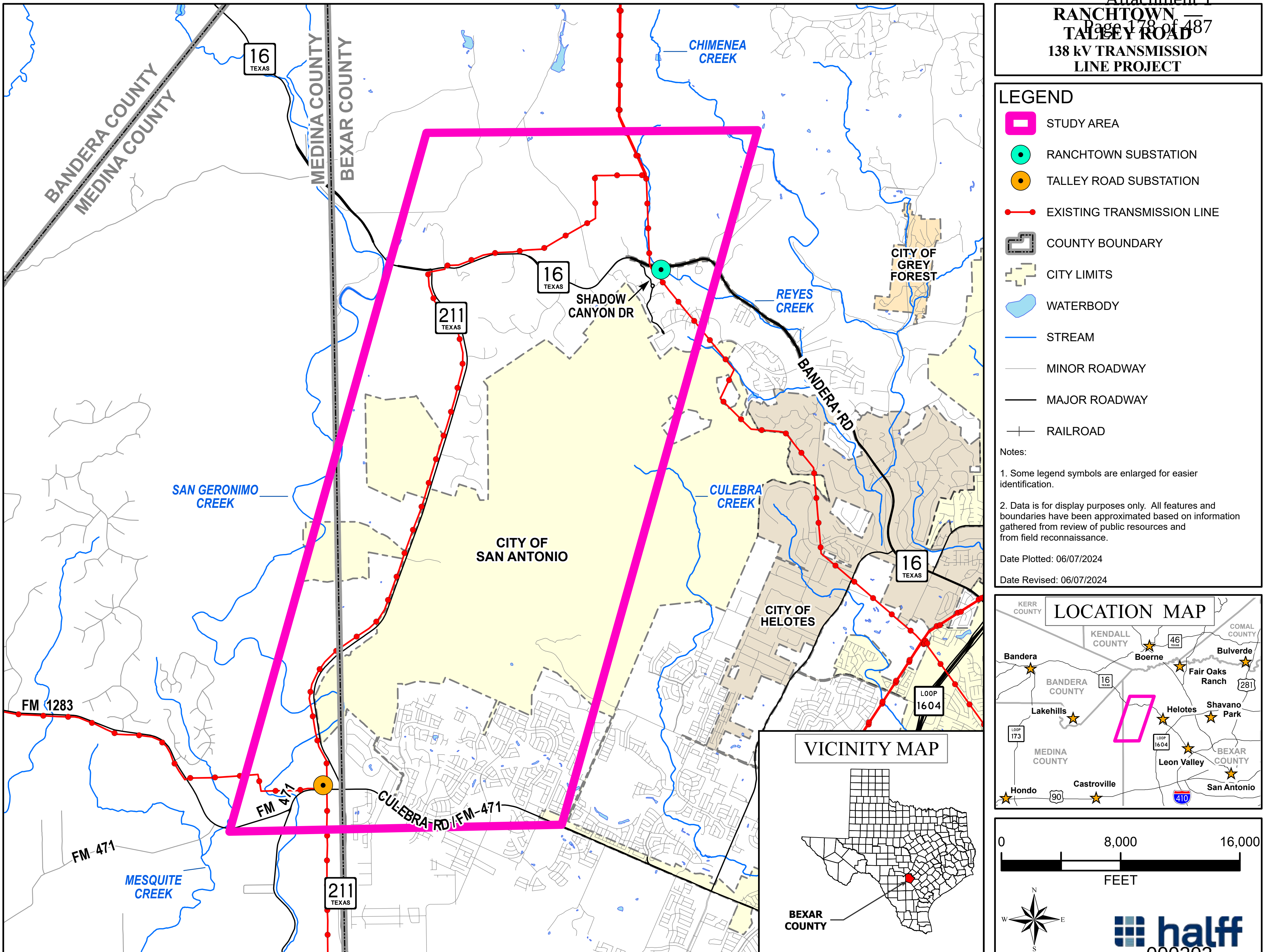
Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map


RANCHTOWN — TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
EXISTING TRANSMISSION LINE
COUNTY BOUNDARY
CITY LIMITS
WATERBODY
STREAM
MINOR ROADWAY
MAJOR ROADWAY
RAILROAD
Notes:
1. Some legend symbols are enlarged for easier identification.
2. Data is for display purposes only. All features and boundaries have been approximated based on information gathered from review of public resources and from field reconnaissance.
Date Plotted: 06/07/2024
Date Revised: 06/07/2024
BANDERA COUNTY
MEDINA COUNTY
MEDINA COUNTY
BEXAR COUNTY
CHIMENEA CREEK
REYES CREEK
CITY OF GREY FOREST
SHADOW CANYON DR
BANDERA RD
SAN GERONIMO CREEK
CULEBRA CREEK
CITY OF SAN ANTONIO
CITY OF HELOTES
FM 1283
FM 471
CULEBRA RD / FM-471
FM 471
MESQUITE CREEK
16 TEXAS
211 TEXAS
LOOP 1604
LOCATION MAP
KERR COUNTY
KENDALL COUNTY
COMAL COUNTY
Bandera
Boerne
Bulverde
Fair Oaks Ranch
BANDERA COUNTY
Lakehills
Helotes
Shavano Park
MEDINA COUNTY
Leon Valley
BEXAR COUNTY
Castroville
San Antonio
Hondo
VICINITY MAP
BEXAR COUNTY
0
8,000
16,000
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Southwest Region
10101 Hillwood Parkway
Fort Worth, TX 76177

June 26, 2024

Jody Urbanovsky
1201 N. Bowser Road
Richardson, TX 75081

Dear Mrs. Urbanovsky,

This is in response to your June 21, 2024, correspondence concerning CPS Energy's proposed construction of a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina Country, Texas. You requested information regarding environmental and land use constraints within the study area. You also requested information about permits, easements, or other approvals that could affect the project.

As set forth in Title 14 of the Code of Federal Regulations Part 77, Objects that Affect the Navigable Airspace, the prime concern of the Federal Aviation Administration is the effect of certain proposed construction on the safe and efficient use of the navigable airspace.

To accomplish this mission, aeronautical studies are conducted based on information provided by sponsors on FAA Form 7460-1, Notice of Proposed Construction or Alteration. If your organization is planning to sponsor any construction or alterations that may affect navigable airspace, you must file FAA Form 7460-1 electronically via:
https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

For additional information and assistance, please feel free to contact the Obstruction Evaluation Group via email, OEGroup@faa.gov, at 10101 Hillwood Parkway, Fort Worth, Texas, 76177, or (817) 222-5954.
Sincerely,

Rob Lowe
Regional Administrator,
Southwest Region

CC: Obstruction Evaluation Group, AJV-A520

halff

June 21, 2024
AVO 55396.001

Mr. Tony Robinson
Region 6 Administrator
Federal Emergency Management Agency - Region VI
800 North Loop 288
Denton, Texas 76209

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Robinson:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: Dracoulis, Danielle <danielle.dracoulis@fema.dhs.gov>
Sent: Tuesday, July 16, 2024 4:03 PM
To: Jody Urbanovsky
Cc: pat.brawner@medinatx.org; givler@givlerengineering.com
Subject: CPS Energy's proposed Ranchtown - Talley Road
Attachments: RA # 24-6-117839_CPS Energy's proposed Ranchtown - Talley Road 138 kV transmissin line project in Bexar and Medina counties, Texas.pdf; 117839 CPS Energy Talley Road EA Assessment.pdf

Attached please find FEMA Region 6's formal response.

Thank you!

Danielle Dracoulis
Program Support Assistant
| Mitigation Division | Region 6
Federal Emergency Management Agency (FEMA)
800 North Loop 288 | Denton, TX 76209-3698
Phone: (940) 231-6845 | Email: Danielle.dracoulis@fema.dhs.gov

The best teams are made up of nobodies, who love everybody, and serve anybody and don't care about becoming somebody.

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

RE: CPS Energy's proposed Ranchtown Talley Road 138 kv transmission line project in Bexar and Medina Counties

NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

☐ We have no comments to offer. ☒ We offer the following comments:

WE WOULD REQUEST THAT THE COMMUNITY FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. IF FEDERALLY FUNDED, WE WOULD REQUEST PROJECT TO BE IN COMPLIANCE WITH EO11988 & EO 11990.

Medina County Contact:
Pat Brawner
Floodplain Administrator
830-741-6195
Pat.brawner@medinatx.org

Bexar County Contact:
David Gilver
Floodplain Engineer
210-342-3991
givler@givlerengineering.com

REVIEWER:

Charles Cook
Floodplain Management and Insurance Branch
Mitigation Division
Charles.Cook4@fema.dhs.gov
(940) 898-5400

DATE: July 16, 2024

RA # 24-6-117839

halff

Date Rec'd: 6/24/24		
Rec'd by:		
	Action	Info
RA		
Deputy RA		
XA		
Analyst		
RES		
REC		
MIT	✓	
MSD		
NP		
Grants		
File		
Suspense Date: 7/8/24		

June 21, 2024
AVO 55396.001

Mr. Tony Robinson
Region 6 Administrator
Federal Emergency Management Agency - Region VI
800 North Loop 288
Denton, Texas 76209

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

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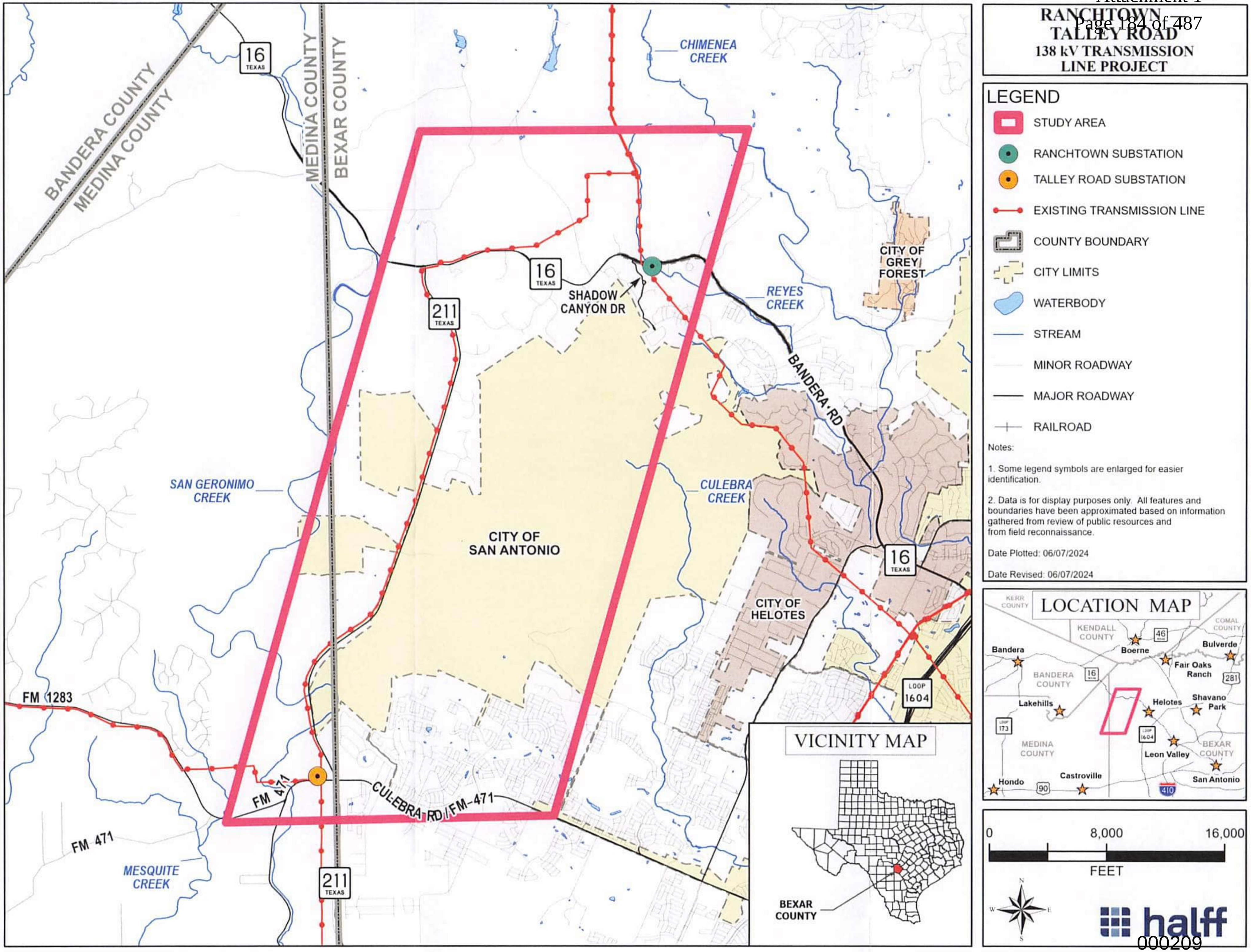
Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map


RANCHTOWN – TALLEY ROAD
138 kV TRANSMISSION LINE PROJECT
LEGEND
STUDY AREA
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CITY OF SAN ANTONIO
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FM 1283
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MESQUITE CREEK
16 TEXAS
211 TEXAS
LOOP 1604
LOCATION MAP
KERR COUNTY
KENDALL COUNTY
COMAL COUNTY
Bandera
Boerne
Bulverde
Fair Oaks Ranch
BANDERA COUNTY
Lakehills
Helotes
Shavano Park
MEDINA COUNTY
Leon Valley
BEXAR COUNTY
Castroville
San Antonio
Hondo
VICINITY MAP
BEXAR COUNTY
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16,000
FEET
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halff

June 21, 2024
AVO 55396.001

The Honorable Tony Gonzales
U.S. Representative, District 23
U.S. Congress
4372 North Loop 1604 West, Suite 205
San Antonio, Texas 78249

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Congressman Gonzales:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Transmitted via Certified Mail and email: 7021 1970 0001 0920 8030
osd.dod-siting-clearinghouse@mail.mil

Military Aviation and Installation Assurance Siting Clearinghouse
U.S. Department of Defense
3400 Defense Pentagon, Room 5C646
Washington, DC 20301

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

To Whom It May Concern:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC <osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil>
Sent: Friday, June 21, 2024 10:47 AM
To: Jody Urbanovsky
Cc: OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC
Subject: RE: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

Good morning Mr. Urbanovsky,

Your Informal Review request for the Ranchtown -- Talley Road 138 kV Transmission Line Project has been received. We will begin processing the request shortly.

Thank you for the opportunity to review the project.

Very Respectfully,

The Clearinghouse
Military Aviation and Installation Assurance Siting Clearinghouse
Office of the Assistant Secretary of Defense (Energy, Installations and Environment)
Email: osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil

From: Jody Urbanovsky <jurbanovsky@halff.com>
Sent: Friday, June 21, 2024 10:45 AM
To: OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC <osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil>
Subject: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

To whom it may concern,
Please see the attached formal letter and study area map for the referenced transmission line project in Bexar and Medina counties, Texas. Please also see the attached KMZ for the project study area and the completed Informal Review Request Form. A hard copy of the attached letter with the study area map has been sent by certified mail consistent to CPS Energy company protocols. If you have any questions, please don't hesitate to let me know. Thanks, and have a great day.

-Jody

Jody Urbanovsky
Project Manager

Halff
O: 214.346.6357
E: jurbanovsky@halff.com

We improve lives and communities
by turning ideas into reality.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3400 DEFENSE PENTAGON
WASHINGTON, DC 20301-3400

ENERGY, INSTALLATIONS
AND ENVIRONMENT

September 6, 2024

Jody Urbanovsky
Halff
1201 N. Bowser Road
Richardson, TX 75081

Dear Mr. Urbanovsky,

As requested, the Military Aviation and Installation Assurance Siting Clearinghouse coordinated within the Department of Defense (DoD) an informal review of the Ranchtown -- Talley Road 138kV Transmission Line Project. The results of our review indicated that the transmission line project, located in Medina and Bexar Counties, Texas, as proposed, will have minimal impact on military operations conducted in the area.

Please note that this informal review by the DoD Military Aviation and Installation Assurance Siting Clearinghouse does not constitute an action under 49 United States Code Section 44718 and that the DoD is not bound by the conclusion arrived at under this informal review. To expedite our review in the Obstruction Evaluation Airport Airspace Analysis (OE/AAA) process, please add the project number 2024-06-T-DEV-23 in the comments section of the filing. If you have any questions, please contact me at robbin.e.beard.civ@mail.mil.

Sincerely,

Robbin E Beard

Robbin Beard
Deputy Director
Military Aviation and Installation
Assurance Siting Clearinghouse

halff

June 21, 2024
AVO 55396.001

Transmitted via U.S. Mail and email: CESWF-Permits@usace.army.mil

Ms. Jennifer Walker, Chief
Evaluation Branch Regulatory Division
U.S. Army Corps of Engineers
P.O. Box 17300
Fort Worth, Texas 76102

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Walker:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: Gray, Natasha A CIV USARMY CESWF (USA) <Natasha.A.Gray@usace.army.mil>
Sent: Wednesday, July 3, 2024 9:52 AM
To: Jody Urbanovsky
Cc: Eckert, Annabelle N CIV USARMY CESWF (USA)
Subject: SWF-2024-00324 (Ranchtown-Talley Road 138 kV Transmission Line)

Dear Ms. Urbanovsky:

Thank you for your letter received June 21, 2024, concerning a proposal for the construction of a new 138kV transmission line located in Bexar and Medina Counties, Texas. The project has been assigned Project Number SWF-2024-00324, please include this number in all future correspondence concerning this project.

Ms. Annabelle Eckert has been assigned as the regulatory project manager for your request and will be evaluating it as expeditiously as possible.

You may be contacted for additional information about your request. For your information, please refer to the Fort Worth District Regulatory Division homepage at http://www.swf.usace.army.mil/Missions/regulatory and particularly guidance on submittals at https://swf-apps.usace.army.mil/pubdata/environ/regulatory/introduction/submital.pdf and mitigation at https://www.swf.usace.army.mil/Missions/Regulatory/Permitting/Mitigation that may help you supplement your current request or prepare future requests.

If you have any questions about the evaluation of your submittal or would like to request a copy of one of the documents referenced above, please refer to our website at http://www.swf.usace.army.mil/Missions/Regulatory or contact Ms. Annabelle Eckert by telephone 817-886-1009, or by email annabelle.n.eckert@usace.army.mil, and refer to your assigned project number. Please note that it is unlawful to start work without a Department of the Army permit if one is required.

Please help the regulatory program improve its service by completing the survey on the following website: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

Brandon W. Mobley
Chief, Regulatory Division

Please assist us in better serving you by completing the survey at the following website:
https://regulatory.ops.usace.army.mil/customer-service-survey/

From: Eckert, Annabelle N CIV USARMY CESWF (USA) <Annabelle.N.Eckert@usace.army.mil>
Sent: Tuesday, July 9, 2024 11:53 AM
To: Jody Urbanovsky
Subject: RE: SWF-2024-00324 (Ranchtown-Talley Road 138 kV Transmission Line)

Good morning Ms. Urbanovsky,

This communication is in regard to information received 21 June, 2024, concerning a proposal to construct a 138Kv transmission line located in Bexar County, Texas. This project has been assigned Project Number SWF-2024-00324. Please include this number in all future correspondence concerning this project.

We have reviewed this project in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Under Section 404, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill material into waters of the United States, including wetlands. Our responsibility under Section 10 is to regulate any work in, or affecting, navigable waters of the United States. Any such discharge or work requires Department of the Army authorization in the form of a permit.

More information is required for the submitted project to be considered complete. In order for us to continue our evaluation of your proposed project please provide and/or be aware of the following:

1. Please continue to have your cultural resources principal investigator coordinate with our USACE Regulatory Archaeologist, Mr. Arlo McKee (Arlo.M.Mckee@usace.army,mil), to resolve all outstanding Section 106 requirements.

1. Review of this project cannot begin until the project boundaries are received. Please submit a map using the most recent aerial image possible showing the entire route of the project, as well as a kmz of the entire project area.
    a. Clearly mark (such as by circling) and number the location of each proposed utility line crossing of a water of the United States and any appurtenant structure(s) in waters of the United States on the map.

2. For each potential utility line crossing or appurtenant structure in a water of the United States, please provide the following site specific information when applicable:

    a. 7.5-minute USGS quadrangle map name, universal transverse mercator (UTM) coordinates, county or parish, waterway name;

    b. a brief characterization of the crossing area (stream, forested wetland, non-forested wetland, etc.) including the National Wetland Inventory classification and soil series;

    c. distance between ordinary high water marks;

    d. proposed method of crossing;

    e. length of proposed crossing;

    f. width of temporary and permanent rights-of-way;

g. type and amount of dredged or fill material proposed to be discharged;

h. acreage of proposed temporary and permanent adverse impacts to waters of the United States, including wetlands; and

i. a typical cross-section.

We encourage you to avoid and minimize adverse impacts to streams, wetlands, and other waters of the United States in planning this project. Please forward your response to us so that we may continue our evaluation of your request. If we do not receive information within 30 days of this email, we will consider your application withdrawn. If withdrawn, you may re-open your application at a later date by submitting the requested information.

Please note that it is unlawful to start work without a Department of the Army permit when one is required.

You may be contacted for additional information about your request. For your information, please refer to the Fort Worth District Regulatory Division homepage at http://www.swf.usace.army.mil/Missions/regulatory and particularly guidance on submittals at http://media.swf.usace.army.mil/pubdata/environ/Regulatory/introduction/submital.pdf, and mitigation at http://www.swf.usace.army.mil/Missions/Regulatory/Permitting/Mitigation that may help you supplement your current request or prepare future requests.

If you have any questions about the evaluation of your submittal or would like to request a copy of one of the documents referenced above, please feel free to contact me and refer to your assigned project number.

Very Respectfully,

Annabelle Eckert
Project Manager
US Army Corps of Engineers
Fort Worth District CESWF-RDE
819 Taylor Street, Room 3A37
Fort Worth, Texas 76102-0300
Cell: 817.319.9859
Office: 817.886.1009
Annabelle.N.Eckert@USACE.Army.Mil

Regulatory webpage: www.swf.usace.army.mil/Missions/Regulatory

Application forms: www.swf.usace.army.mil/Missions/Regulatory/Permitting/Application-Submittal-Forms

Application submittal process: www.swf.usace.army.mil/Missions/Regulatory/Electronic-Submittal-Instructions (email to CESWF-Permits@usace.army.mil)

Report an alleged violation: www.swf.usace.army.mil/Missions/Regulatory/Enforcement (email to CESWF-Compliance@usace.army.mil)

Customer service survey: https://regulatory.ops.usace.army.mil/ords/f?p=136:4

June 21, 2024
AVO 55396.001

Mr. Jacob Bailey, District Conservationist
San Antonio Service Center
USDA - Natural Resources Conservation Services
727 E. Cesar E Chavez Boulevard, Room A507
San Antonio, Texas 78206

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Bailey:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: Anderson, Ashley - FPAC-NRCS, TX <ashley.anderson@usda.gov>
Sent: Tuesday, July 2, 2024 3:19 PM
To: Jody Urbanovsky
Cc: Stahnke, Alan - FPAC-NRCS, TX
Subject: Environmental Assessment Request, Bexar and Medina Counties
Attachments: CPS_Energy_Transmission_Response_Letter.pdf; Helotes Ranch, LTD Proposed Easement Boundary.pdf; CPS_RanchtownTalleyLine_Soil_Report.pdf

Jody,

Please see attached letter, soil report, and easement location map for the environmental assessment that was requested for the CPS Energy Ranchtown – Talley Road 138 kV transmission line project. I f you need anything else, please let me know.

Thanks,

Ashley Anderson

Soil Scientist

Temple, Texas

USDA-NRCS

Cell: 254-721-6485

Office: 254-742-9836

USDA
United States Department of Agriculture

Natural Resources
Conservation Service

State Office

101 S. Main Street
Temple, TX 76501
Voice 254.742.9800
Fax 254.742.9819

July 2, 2024

Halff Associates, Inc.
1201 N. Bowser Road
Richardson, Texas 75081

Attention: Jody Urbanovsky, Project Manager

Subject: CPS Energy Ranchtown – Talley Road 138 kV Transmission Line Project, Bexar and Medina Counties, TX

Thank you for the opportunity to provide input on the potential environmental effects of the CPS Energy Ranchtown – Talley Road 138 kV Transmission Line Project, Bexar and Medina Counties, TX. The proposed site has been evaluated and does involve a USDA-NRCS easement. See attached map for the location of the easement.

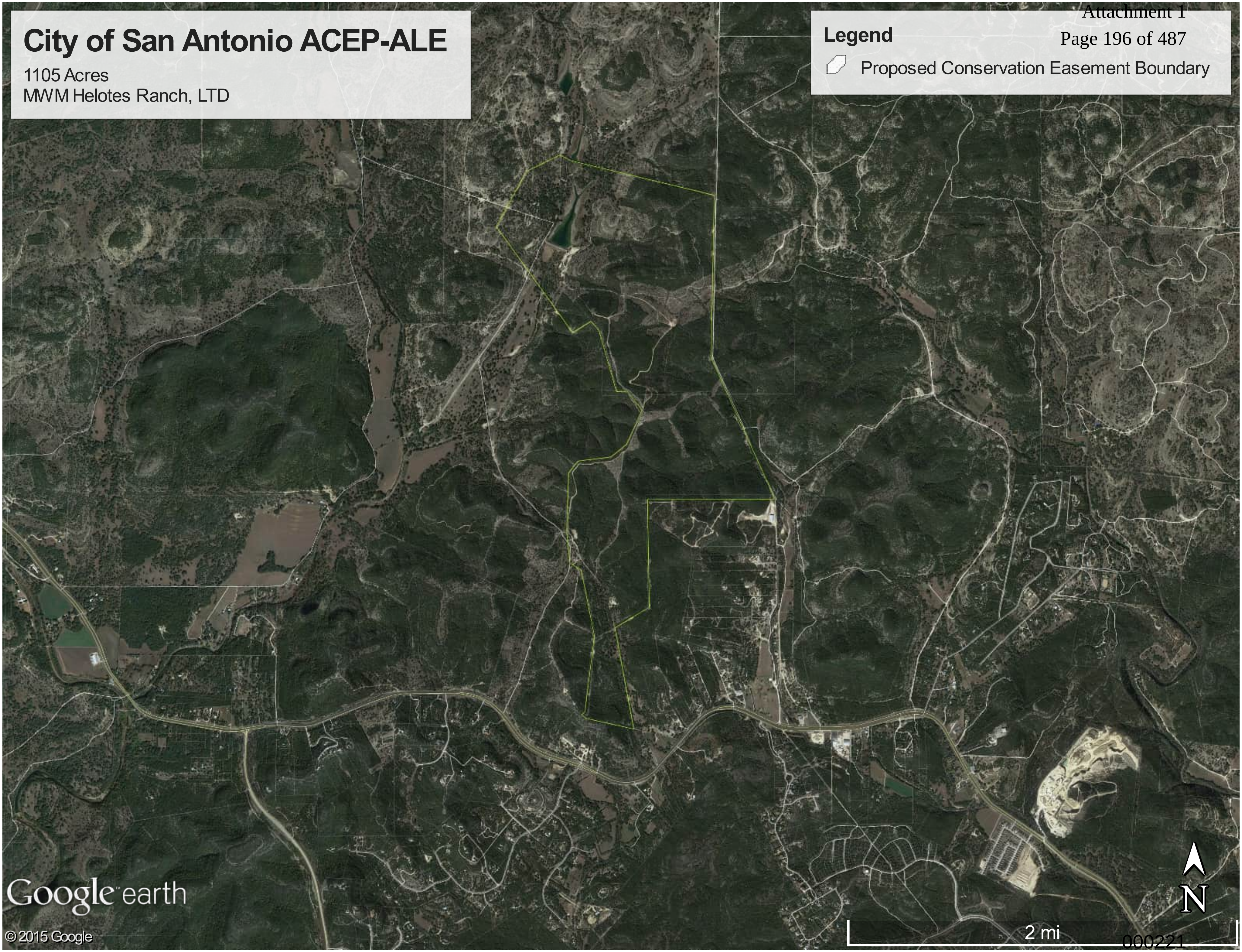
The soils in the proposed project area have been reviewed. There are a few soil limitations in the project area that should be taken into consideration while planning for the project. As with any project, soil erosion is a main concern and erosion prevention practices are recommended. Another major soil limitation for the project area is the depth to a restrictive layer. The most limiting of these being indurated bedrock within 10 to 20 inches of the soil surface and rock outcrop. There is a moderate to high potential for steel corrosion and low potential for concrete corrosion for most of the area. There are no areas with hydric soils, which can be indicators of wetlands. There are a few areas that flood.

Enclosed is a Web Soil Survey map and reports illustrating the location of the soils as well as the ratings for related interpretations that are described above. We encourage you to consider this information during the construction of the proposed transmission line and substation and take measures to protect the soils and water quality.

If you have any questions, please contact me at by email at ashley.anderson@usda.gov

Sincerely,
Ashley Anderson

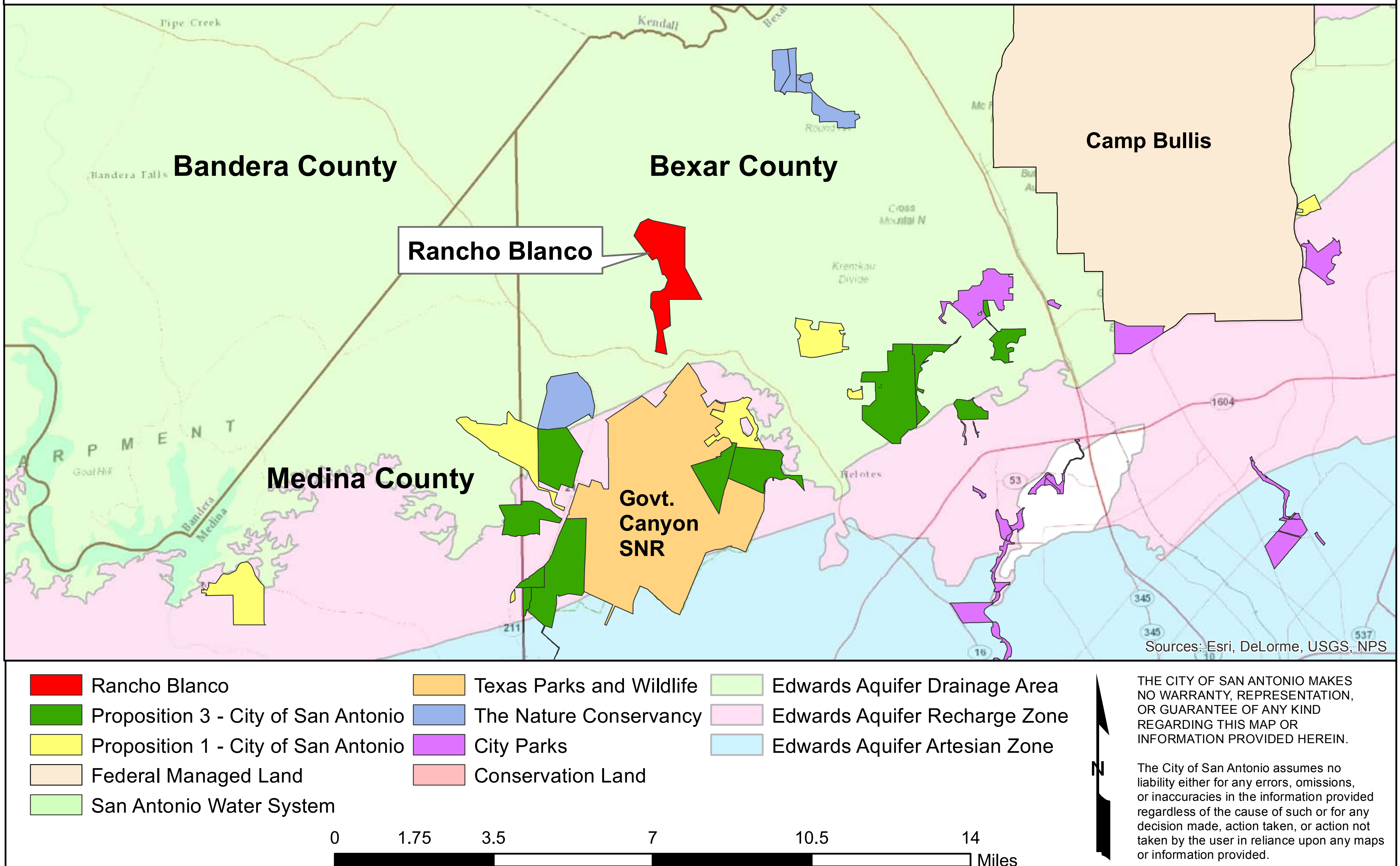
Attachments: Helotes Ranch, LTD Proposed Easement Boundary.pdf
CPS_RanchtownTalleyLine_Soil_Report.pdf


City of San Antonio ACEP-ALE
1105 Acres
MWM Helotes Ranch, LTD
Legend
Proposed Conservation Easement Boundary
Google earth
© 2015 Google
2 mi
N

City of San Antonio
Edwards Aquifer Protection Program
Rancho Blanco

CITY OF SAN ANTONIO EDWARDS AQUIFER PROTECTION PROGRAM

City of San Antonio



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United States Department of Agriculture

NRCS

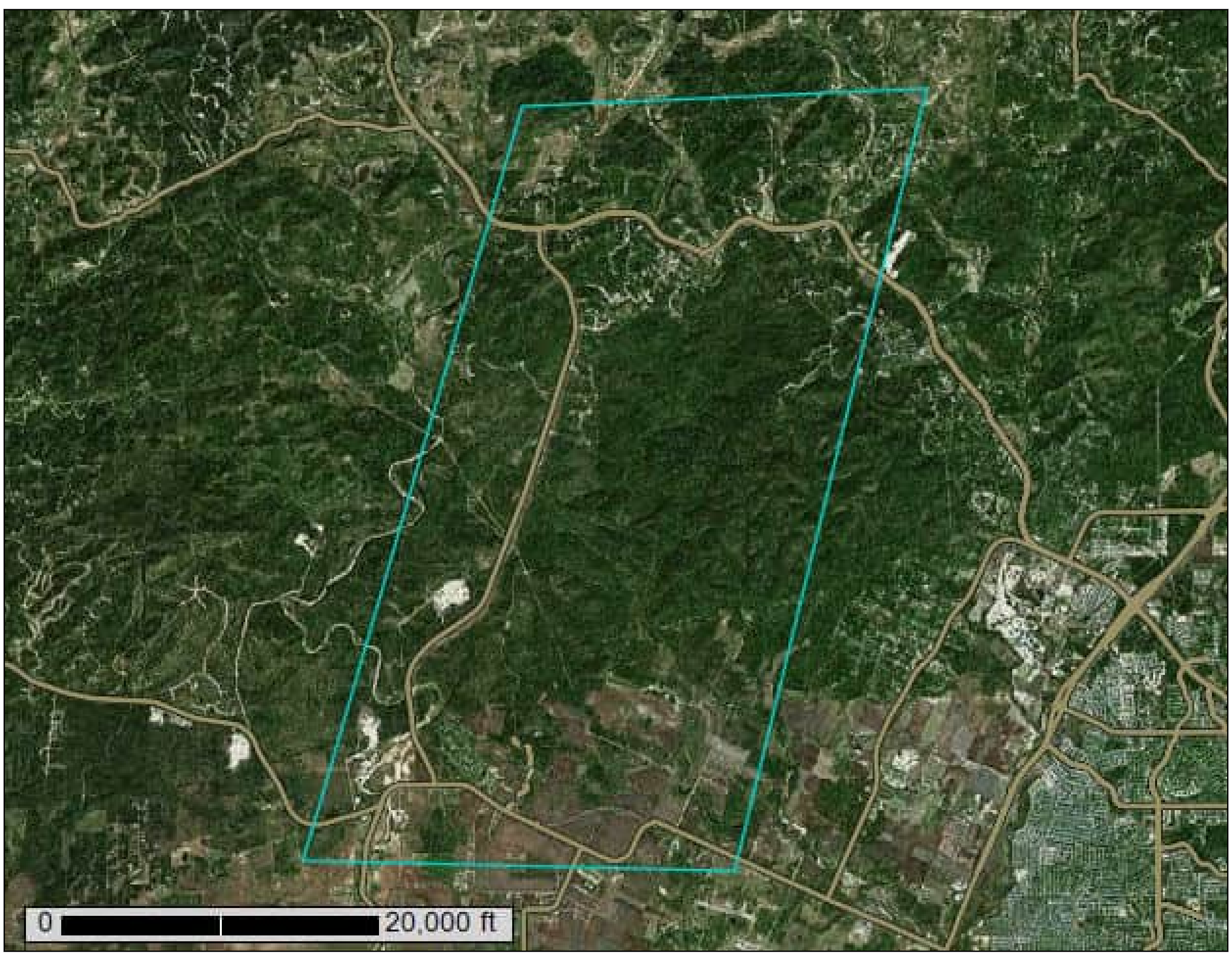
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Bexar County, Texas, and Medina County, Texas

CPS Energy Ranchtown - Talley Road 138 kV Transmission Line Project



July 1, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

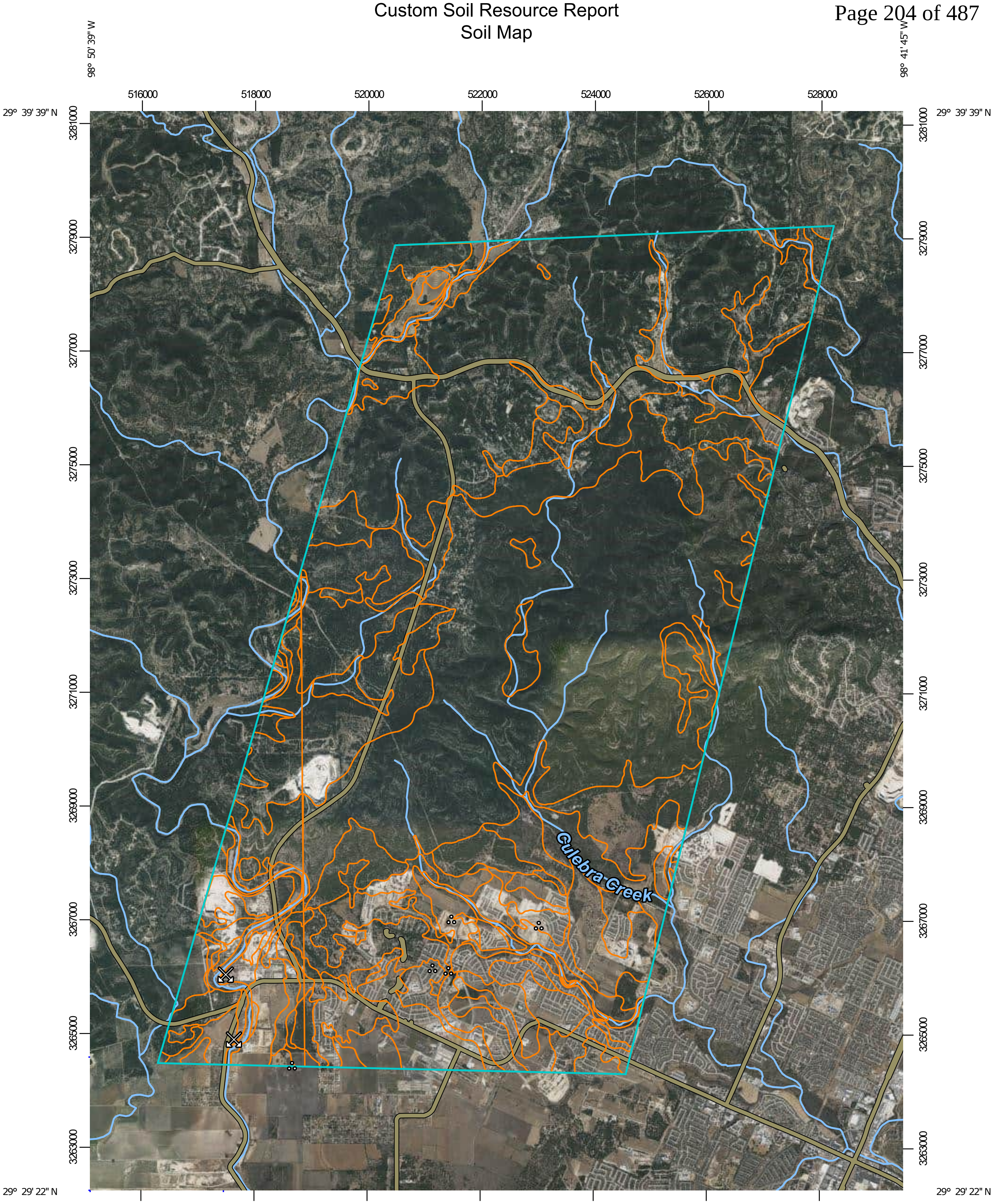
The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map



Map Scale: 1:92,700 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0, 1000, 2000, 4000, 6000

Feet: 0, 4500, 9000, 18000, 27000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 27, Aug 31, 2023

Soil Survey Area: Medina County, Texas
Survey Area Data: Version 22, Sep 5, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2014—Mar 26, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AuC	Austin silty clay, 2 to 5 percent slopes, moderately eroded	80.5	0.3%
BrE	Brackett gravelly clay loam, 12 to 20 percent slopes	70.6	0.2%
BtE	Brackett-Eckrant association, 20 to 60 percent slopes	5,621.6	19.4%
Ca	Anhalt clay, 0 to 2 percent slopes	50.7	0.2%
Cb	Crawford, stony and Bexar soils, 0 to 5 percent slopes	610.4	2.1%
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	91.3	0.3%
HtA	Branyon clay, 0 to 1 percent slopes	864.7	3.0%
HtB	Branyon clay, 1 to 3 percent slopes	189.4	0.7%
KaB	Atco loam, 1 to 3 percent slopes	2.6	0.0%
Kr	Krum clay, 1 to 5 percent slopes	919.3	3.2%
LvA	Lewisville silty clay, 0 to 1 percent slopes	708.6	2.4%
LvB	Lewisville silty clay, 1 to 3 percent slopes	1,766.5	6.1%
Or	Orif soils, moist, 0 to 3 percent slopes, frequently flooded	22.6	0.1%
PaA	Patrick soils, 0 to 1 percent slopes, rarely flooded	139.5	0.5%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	1,515.8	5.2%
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	228.0	0.8%
Pt	Pits and Quarries, 1 to 90 percent slopes	6.0	0.0%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	2,163.7	7.4%
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	2,524.3	8.7%
TaD	Eckrant-Rock outcrop association, 8 to 30 percent slopes	8,284.6	28.5%
Tb	Eddy gravelly clay loam, 1 to 8 percent slopes	175.1	0.6%
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	184.7	0.6%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
W	Water	7.1	0.0%
Subtotals for Soil Survey Area		**26,227.5**	**90.3%**
Totals for Area of Interest		**29,045.0**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AtA	Atco loam, 0 to 1 percent slopes	54.7	0.2%
AtB	Atco loam, 1 to 3 percent slopes	243.2	0.8%
CsA	Castroville clay loam, 0 to 1 percent slopes	327.5	1.1%
CsB	Castroville clay loam, 1 to 3 percent slopes	24.9	0.1%
DNC	Dina association, gently undulating	15.2	0.1%
Do	Divot clay loam, occasionally flooded	58.9	0.2%
KAD	Kavett-Tarrant association, undulating	49.7	0.2%
KnA	Knippa clay, 0 to 1 percent slopes	80.3	0.3%
KnB	Knippa clay, 1 to 3 percent slopes	194.0	0.7%
McB	Montell clay, 1 to 3 percent slopes	23.3	0.1%
MeB	Stephen clay, 1 to 3 percent slopes	24.3	0.1%
Or	Orif soils, 0 to 3 percent slopes, frequently flooded	219.3	0.8%
PrB	Pratley clay, 0 to 3 percent slopes	18.6	0.1%
RED	Real association, undulating	169.9	0.6%
SaC	Sabenyo clay loam, 1 to 5 percent slopes	42.0	0.1%
SPD	Speck association, 1 to 8 percent slopes	35.4	0.1%
TAD	Eckrant-Rock outcrop association, 1 to 10 percent slopes	696.0	2.4%
TAF	Eckrant-Rock outcrop association, 8 to 30 percent slopes	470.8	1.6%
VaB	Valco clay loam, 0 to 2 percent slopes	65.4	0.2%
Subtotals for Soil Survey Area		**2,813.4**	**9.7%**
Totals for Area of Interest		**29,045.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bexar County, Texas

AuC—Austin silty clay, 2 to 5 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2vtgk
Elevation: 420 to 1,050 feet
Mean annual precipitation: 32 to 44 inches
Mean annual air temperature: 63 to 69 degrees F
Frost-free period: 228 to 272 days
Farmland classification: Not prime farmland

Map Unit Composition

Austin, moderately eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Austin, Moderately Eroded

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from chalk

Typical profile

Ap - 0 to 16 inches: silty clay
Bw - 16 to 22 inches: silty clay
Bk - 22 to 29 inches: silty clay
Cr - 29 to 57 inches: bedrock

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 22 to 39 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 85 percent
Maximum salinity: Nonsaline to very slightly saline (0.5 to 2.1 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

Minor Components

Houston black

Percent of map unit: 15 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

BrE—Brackett gravelly clay loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2yly2
Elevation: 1,000 to 2,000 feet
Mean annual precipitation: 34 to 36 inches
Mean annual air temperature: 65 to 67 degrees F
Frost-free period: 220 to 245 days
Farmland classification: Not prime farmland

Map Unit Composition

Brackett and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brackett

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 4 inches: gravelly clay loam
Bw - 4 to 12 inches: clay loam
Cr - 12 to 60 inches: bedrock

Properties and qualities

Slope: 12 to 20 percent
Surface area covered with cobbles, stones or boulders: 3.0 percent
Depth to restrictive feature: 6 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Minor Components

Eckrant

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 2 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Frio

Percent of map unit: 1 percent
Landform: Flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

BtE—Brackett-Eckrant association, 20 to 60 percent slopes

Map Unit Setting

National map unit symbol: 2yly3

Elevation: 1,000 to 2,400 feet
Mean annual precipitation: 30 to 37 inches
Mean annual air temperature: 65 to 70 degrees F
Frost-free period: 220 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Brackett and similar soils: 60 percent
Eckrant and similar soils: 36 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brackett

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 4 inches: gravelly clay loam
Bw - 4 to 12 inches: clay loam
Cr - 12 to 60 inches: bedrock

Properties and qualities

Slope: 20 to 60 percent
Depth to restrictive feature: 6 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex

Parent material: Residuum weathered from limestone

Typical profile
A1 - 0 to 4 inches: very cobbly clay
A2 - 4 to 12 inches: very cobbly clay
R - 12 to 30 inches: bedrock

Properties and qualities
Slope: 20 to 60 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 0.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R081CY363TX - Steep Rocky 29-35 PZ
Hydric soil rating: No

Minor Components

Krum
Percent of map unit: 2 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Crawford
Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

Patrick
Percent of map unit: 1 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ

Hydric soil rating: No

Ca—Anhalt clay, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t2m8
Elevation: 570 to 2,200 feet
Mean annual precipitation: 31 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 220 to 260 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Anhalt and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Anhalt

Setting

Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile

Ap - 0 to 12 inches: clay
Bss - 12 to 28 inches: clay
Cr - 28 to 60 inches: bedrock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D

Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

Minor Components

Krum

Percent of map unit: 8 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Tarrant

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex, linear
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Tarpley

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Cb—Crawford, stony and Bexar soils, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ylv8
Elevation: 900 to 1,400 feet
Mean annual precipitation: 30 to 37 inches
Mean annual air temperature: 65 to 70 degrees F
Frost-free period: 220 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Crawford, stony, and similar soils: 51 percent
Bexar and similar soils: 36 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crawford, Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 8 inches: stony clay
Bss - 8 to 34 inches: stony clay
R - 34 to 50 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 21 to 45 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

Description of Bexar

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 8 inches: cobbly clay loam
A2 - 8 to 18 inches: very cobbly clay loam
Bt - 18 to 27 inches: cobbly clay
R - 27 to 41 inches: bedrock

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: 20 to 36 inches to lithic bedrock

Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Minor Components

Eckrant

Percent of map unit: 9 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Tarpley

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

HnC2—Heiden clay, 3 to 5 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2v1vb
Elevation: 300 to 1,390 feet
Mean annual precipitation: 33 to 48 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 233 to 278 days
Farmland classification: Not prime farmland

Map Unit Composition

Heiden, moderately eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Heiden, Moderately Eroded

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from mudstone

Typical profile

A - 0 to 13 inches: clay
Bss - 13 to 22 inches: clay
Bkss - 22 to 58 inches: clay
CBdk - 58 to 80 inches: clay

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: 40 to 65 inches to densic material
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 12.0
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R086AY009TX - Southern Eroded Blackland
Hydric soil rating: No

Minor Components

Houston black

Percent of map unit: 10 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Circular gilgai
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R086AY011TX - Southern Blackland

Hydric soil rating: No

Ferris, severely eroded

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY009TX - Southern Eroded Blackland
Hydric soil rating: No

HtA—Branyon clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2shgv
Elevation: 290 to 1,050 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 65 to 70 degrees F
Frost-free period: 238 to 288 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Branyon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Branyon

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone of pleistocene age

Typical profile

Ap - 0 to 12 inches: clay
Bkss - 12 to 72 inches: clay
BCkss - 72 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 7.0
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Minor Components

Lewisville

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

Houston black

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Burleson

Percent of map unit: 5 percent
Landform: Stream terraces, stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai, circular gilgai
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

HtB—Branyon clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2shgw
Elevation: 290 to 1,040 feet
Mean annual precipitation: 33 to 39 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 243 to 288 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Branyon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Branyon

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone of pleistocene age

Typical profile

Ap - 0 to 12 inches: clay
Bkss - 12 to 72 inches: clay
BCkss - 72 to 80 inches: clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 7.0
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Minor Components

Lewisville

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

Houston black

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Burleson

Percent of map unit: 5 percent
Landform: Stream terraces, stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai, circular gilgai
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

KaB—Atco loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: f3b7
Elevation: 650 to 1,500 feet
Mean annual precipitation: 20 to 30 inches
Mean annual air temperature: 70 to 73 degrees F
Frost-free period: 215 to 265 days
Farmland classification: Farmland of statewide importance, if irrigated

Map Unit Composition

Atco and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atco

Setting

Landform: Erosion remnants on stream terraces
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous loamy alluvium

Typical profile

H1 - 0 to 20 inches: loam
H2 - 20 to 60 inches: loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R083AY019TX - Gray Sandy Loam
Hydric soil rating: No

Kr—Krum clay, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ylv9
Elevation: 600 to 1,600 feet
Mean annual precipitation: 30 to 37 inches
Mean annual air temperature: 65 to 70 degrees F
Frost-free period: 220 to 270 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Krum and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Krum

Setting

Landform: Stream terraces

Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium derived from limestone

Typical profile
A - 0 to 26 inches: clay
Bw1 - 26 to 36 inches: clay
Bw2 - 36 to 50 inches: clay
BCk - 50 to 79 inches: clay

Properties and qualities
Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Minor Components

Eckrant
Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Brackett
Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Frio
Percent of map unit: 2 percent

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

LvA—Lewisville silty clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2vtgz
Elevation: 330 to 1,360 feet
Mean annual precipitation: 32 to 40 inches
Mean annual air temperature: 66 to 69 degrees F
Frost-free period: 258 to 274 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Lewisville and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lewisville

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone

Typical profile

Ap - 0 to 17 inches: silty clay
Bk1 - 17 to 44 inches: silty clay
Bk2 - 44 to 61 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline (0.7 to 1.1 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

Minor Components

Branyon

Percent of map unit: 10 percent
Landform: Stream terraces, stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai, circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

LvB—Lewisville silty clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2vtgn
Elevation: 240 to 1,470 feet
Mean annual precipitation: 32 to 44 inches
Mean annual air temperature: 63 to 68 degrees F
Frost-free period: 240 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Lewisville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lewisville

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone

Typical profile

Ap - 0 to 15 inches: silty clay
Bk1 - 15 to 38 inches: silty clay
Bk2 - 38 to 69 inches: silty clay

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline (0.7 to 1.1 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

Minor Components

Altoga
Percent of map unit: 10 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY007TX - Southern Clay Loam
Hydric soil rating: No

Branyon
Percent of map unit: 5 percent
Landform: Stream terraces, stream terraces
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai, circular gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Or—Orif soils, moist, 0 to 3 percent slopes, frequently flooded

Map Unit Setting
National map unit symbol: 2t0sp
Elevation: 500 to 1,270 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 66 to 69 degrees F
Frost-free period: 230 to 265 days
Farmland classification: Not prime farmland

Map Unit Composition

Orif, moist, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orif, Moist

Setting

Landform: Flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Calcareous sandy and gravelly alluvium derived from limestone

Typical profile

A - 0 to 20 inches: gravelly loamy sand
2C1 - 20 to 60 inches: extremely gravelly loamy sand
3C2 - 60 to 80 inches: coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 95 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

Minor Components

Oakalla

Percent of map unit: 8 percent
Landform: Flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

Riverwash

Percent of map unit: 4 percent
Landform: Flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Concave, linear
Hydric soil rating: No

Frio

Percent of map unit: 2 percent
Landform: Flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

Unnamed, hydric

Percent of map unit: 1 percent
Landform: Depressions on flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

PaA—Patrick soils, 0 to 1 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: f3bk
Elevation: 800 to 1,900 feet
Mean annual precipitation: 28 to 34 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 258 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Patrick and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Patrick

Setting

Landform: Paleoterraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvium of quaternary age derived from mixed sources and/or sandy alluvium of quaternary age derived from mixed sources

Typical profile

H1 - 0 to 21 inches: clay loam
H2 - 21 to 60 inches: very gravelly sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 55 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

PaB—Patrick soils, 1 to 3 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: f3bl
Elevation: 800 to 1,900 feet
Mean annual precipitation: 28 to 34 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 258 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Patrick and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Patrick

Setting

Landform: Paleoterraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvium of quaternary age derived from mixed sources and/or sandy alluvium of quaternary age derived from mixed sources

Typical profile

H1 - 0 to 17 inches: clay loam
H2 - 17 to 60 inches: very gravelly sand

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 55 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

PaC—Patrick soils, 3 to 5 percent slopes, rarely flooded

Map Unit Setting
National map unit symbol: f3bm
Elevation: 800 to 1,900 feet
Mean annual precipitation: 28 to 34 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 258 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition
Patrick and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Patrick

Setting
Landform: Paleoterraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvium of quaternary age derived from mixed sources and/or sandy alluvium of quaternary age derived from mixed sources

Typical profile
H1 - 0 to 17 inches: gravelly clay loam
H2 - 17 to 60 inches: very gravelly sand

Properties and qualities
Slope: 3 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 55 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

Pt—Pits and Quarries, 1 to 90 percent slopes

Map Unit Setting

National map unit symbol: f3bn
Elevation: 20 to 8,750 feet
Mean annual precipitation: 9 to 56 inches
Mean annual air temperature: 54 to 73 degrees F
Frost-free period: 180 to 350 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits

Typical profile

H1 - 0 to 80 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

TaB—Eckrant cobbly clay, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0sg
Elevation: 650 to 1,900 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: cobbly clay
A2 - 4 to 11 inches: very cobbly clay
R - 11 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Bexar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

TaC—Eckrant very cobbly clay, 5 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2yltv
Elevation: 1,000 to 2,400 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 220 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: very cobbly clay
A2 - 4 to 12 inches: very cobbly clay
R - 12 to 30 inches: bedrock

Properties and qualities

Slope: 5 to 15 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Minor Components

Krum

Percent of map unit: 4 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Bexar

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Crawford

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

TaD—Eckrant-Rock outcrop association, 8 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2t0sb
Elevation: 750 to 2,400 feet
Mean annual precipitation: 28 to 37 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 65 percent
Rock outcrop: 27 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 7 inches: very cobbly clay
A2 - 7 to 12 inches: extremely cobbly clay
R - 12 to 80 inches: bedrock

Properties and qualities

Slope: 8 to 30 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D
Ecological site: R081CY363TX - Steep Rocky 29-35 PZ
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Limestone

Typical profile

R - 0 to 80 inches: bedrock

Properties and qualities

Slope: 8 to 30 percent
Depth to restrictive feature: 0 to 2 inches to lithic bedrock
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Kerrville

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Tarpley

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex

Across-slope shape: Convex
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Tb—Eddy gravelly clay loam, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: f3by
Elevation: 400 to 1,000 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 230 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eddy and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eddy

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk

Typical profile

H1 - 0 to 4 inches: gravelly clay loam
H2 - 4 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: 3 to 15 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Available water supply, 0 to 60 inches: Very low (about 0.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

Tf—Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2y0v4
Elevation: 410 to 1,470 feet
Mean annual precipitation: 28 to 34 inches
Mean annual air temperature: 65 to 70 degrees F
Frost-free period: 232 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Tinn and similar soils: 70 percent
Frio and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tinn

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous clayey alluvium

Typical profile

A - 0 to 18 inches: clay
Bss - 18 to 72 inches: clay
Bkssy - 72 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 5w
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: R086AY013TX - Clayey Bottomland
Hydric soil rating: No

Description of Frio

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous loamy and/or clayey alluvium

Typical profile

A1 - 0 to 22 inches: clay loam
A2 - 22 to 40 inches: silty clay loam
Bk - 40 to 80 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): 5w
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C
Ecological site: R086AY012TX - Loamy Bottomland
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Medina County, Texas

AtA—Atco loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 30d4q
Elevation: 650 to 6,560 feet
Mean annual precipitation: 20 to 30 inches
Mean annual air temperature: 70 to 74 degrees F
Frost-free period: 215 to 280 days
Farmland classification: Farmland of statewide importance, if irrigated

Map Unit Composition

Atco and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atco

Setting

Landform: Erosion remnants on stream terraces
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Convex, linear
Parent material: Calcareous loamy alluvium

Typical profile

A1 - 0 to 9 inches: loam
Bk2 - 9 to 48 inches: loam
Cd - 48 to 75 inches: loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 29 to 71 inches to densic bedrock
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: B
Ecological site: R083AY019TX - Gray Sandy Loam
Hydric soil rating: No

Minor Components

Sabenyo

Percent of map unit: 10 percent

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R083AY027TX - Western Clay Loam
Hydric soil rating: No

AtB—Atco loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 30d4s
Elevation: 650 to 6,560 feet
Mean annual precipitation: 20 to 30 inches
Mean annual air temperature: 70 to 74 degrees F
Frost-free period: 215 to 280 days
Farmland classification: Farmland of statewide importance, if irrigated

Map Unit Composition

Atco and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atco

Setting

Landform: Erosion remnants on stream terraces
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Calcareous loamy alluvium

Typical profile

A1 - 0 to 9 inches: loam
Bk2 - 9 to 48 inches: loam
Cd - 48 to 75 inches: loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 29 to 71 inches to densic bedrock
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R083AY019TX - Gray Sandy Loam
Hydric soil rating: No

Minor Components

Sabenyo

Percent of map unit: 10 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R083AY027TX - Western Clay Loam
Hydric soil rating: No

CsA—Castroville clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: dfky
Elevation: 650 to 1,250 feet
Mean annual precipitation: 26 to 32 inches
Mean annual air temperature: 70 degrees F
Frost-free period: 230 to 260 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Castroville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Castroville

Setting

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous silty alluvium derived from limestone

Typical profile

H1 - 0 to 16 inches: clay loam
H2 - 16 to 52 inches: clay
H3 - 52 to 84 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups
Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 2c
Hydrologic Soil Group: B
Ecological site: R083AY027TX - Western Clay Loam
Hydric soil rating: No

Minor Components

Unnamed
Percent of map unit: 15 percent
Hydric soil rating: No

CsB—Castroville clay loam, 1 to 3 percent slopes

Map Unit Setting
National map unit symbol: dfkz
Elevation: 650 to 1,250 feet
Mean annual precipitation: 26 to 32 inches
Mean annual air temperature: 70 degrees F
Frost-free period: 230 to 260 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Castroville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Castroville

Setting
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous silty alluvium derived from limestone

Typical profile
H1 - 0 to 16 inches: clay loam
H2 - 16 to 52 inches: clay
H3 - 52 to 84 inches: clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: R083AY027TX - Western Clay Loam
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 15 percent
Hydric soil rating: No

DNC—Dina association, gently undulating

Map Unit Setting

National map unit symbol: dfl1
Elevation: 1,000 to 2,300 feet
Mean annual precipitation: 23 to 32 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 210 to 245 days
Farmland classification: Not prime farmland

Map Unit Composition

Dina and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dina

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 11 inches: gravelly silt loam
H2 - 11 to 31 inches: extremely gravelly clay
H3 - 31 to 48 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Surface area covered with cobbles, stones or boulders: 7.5 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water supply, 0 to 60 inches: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: R081BY340TX - Redland 23-31 PZ
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 30 percent
Hydric soil rating: No

Do—Divot clay loam, occasionally flooded

Map Unit Setting

National map unit symbol: dfl3
Elevation: 250 to 900 feet
Mean annual precipitation: 23 to 30 inches
Mean annual air temperature: 70 to 72 degrees F
Frost-free period: 240 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Divot and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Divot

Setting

Landform: Flood-plain steps
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium

Typical profile

H1 - 0 to 16 inches: clay loam
H2 - 16 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: R083BY013TX - Loamy Bottomland
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 19 percent
Hydric soil rating: No

Tiocano

Percent of map unit: 1 percent
Landform: Depressions
Ecological site: R083AY007TX - Lakebed
Hydric soil rating: Yes

KAD—Kavett-Tarrant association, undulating

Map Unit Setting

National map unit symbol: dflc
Elevation: 1,000 to 2,500 feet
Mean annual precipitation: 18 to 32 inches

Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 220 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Kavett and similar soils: 57 percent
Tarrant, pe <44, and similar soils: 24 percent
Minor components: 19 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kavett

Setting

Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 14 inches: clay
H2 - 14 to 16 inches: cemented material
H3 - 16 to 20 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Surface area covered with cobbles, stones or boulders: 10.0 percent
Depth to restrictive feature: 10 to 20 inches to petrocalcic; 11 to 26 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R081BY343TX - Shallow 23-31 PZ
Hydric soil rating: No

Description of Tarrant, Pe <44

Setting

Landform: Plains
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 16 inches: cobbly clay
H2 - 16 to 24 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 15.0 percent
Depth to restrictive feature: 6 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R081BY337TX - Low Stony Hill 23-31 PZ
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 19 percent
Hydric soil rating: No

KnA—Knippa clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t0s9
Elevation: 700 to 1,650 feet
Mean annual precipitation: 23 to 33 inches
Mean annual air temperature: 68 to 70 degrees F
Frost-free period: 240 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Knippa and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Knippa

Setting

Landform: Stream terraces on plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Linear
Parent material: Calcareous clayey alluvium derived from limestone

Typical profile

Ap - 0 to 18 inches: clay
Bw - 18 to 28 inches: clay
Bk1 - 28 to 35 inches: clay
Bk2 - 35 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: R083AY027TX - Western Clay Loam
Hydric soil rating: No

Minor Components

Montell

Percent of map unit: 3 percent
Landform: Stream terraces on plains
Landform position (three-dimensional): Tread
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R083BY018TX - Clay Flat
Hydric soil rating: No

Valco

Percent of map unit: 2 percent
Landform: Stream terraces on plains
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: R083AY005TX - Shallow
Hydric soil rating: No

Castroville

Percent of map unit: 2 percent
Landform: Stream terraces on plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Convex, linear
Ecological site: R083AY026TX - Eastern Clay Loam
Hydric soil rating: No

Olmos

Percent of map unit: 1 percent
Landform: Stream terraces on plains
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: R083AY002TX - Shallow Ridge
Hydric soil rating: No

KnB—Knippa clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t0sj
Elevation: 700 to 1,650 feet
Mean annual precipitation: 23 to 33 inches
Mean annual air temperature: 68 to 70 degrees F
Frost-free period: 240 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Knippa and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Knippa

Setting

Landform: Stream terraces on plains
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous clayey alluvium derived from limestone

Typical profile

Ap - 0 to 18 inches: clay
Bw - 18 to 28 inches: clay
Bk1 - 28 to 35 inches: clay
Bk2 - 35 to 80 inches: silty clay loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups
Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R083AY027TX - Western Clay Loam
Hydric soil rating: No

Minor Components

Castroville
Percent of map unit: 2 percent
Landform: Stream terraces on plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear
Across-slope shape: Linear, convex
Ecological site: R083AY026TX - Eastern Clay Loam
Hydric soil rating: No

Sabenyo
Percent of map unit: 2 percent
Landform: Stream terraces on plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear
Across-slope shape: Linear, convex
Ecological site: R083AY026TX - Eastern Clay Loam
Hydric soil rating: No

Valco
Percent of map unit: 1 percent
Landform: Stream terraces on plains
Landform position (three-dimensional): Riser, tread
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: R083AY005TX - Shallow
Hydric soil rating: No

McB—Montell clay, 1 to 3 percent slopes

Map Unit Setting
National map unit symbol: dflk
Elevation: 400 to 1,200 feet
Mean annual precipitation: 23 to 26 inches
Mean annual air temperature: 70 to 72 degrees F
Frost-free period: 240 to 270 days

Farmland classification: Not prime farmland

Map Unit Composition

Montell and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montell

Setting

Landform: Plains
Microfeatures of landform position: Circular gilgai
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium

Typical profile

H1 - 0 to 7 inches: clay
H2 - 7 to 17 inches: clay
H3 - 17 to 66 inches: clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 10 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 40.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R083BY015TX - Saline Clay
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 15 percent
Hydric soil rating: No

MeB—Stephen clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: dfll
Elevation: 400 to 1,000 feet
Mean annual precipitation: 30 to 42 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 230 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Stephen and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Stephen

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 17 inches: clay
H2 - 17 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 14 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 25 percent
Hydric soil rating: No

Or—Orif soils, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2t0sc
Elevation: 650 to 1,600 feet
Mean annual precipitation: 25 to 32 inches
Mean annual air temperature: 66 to 70 degrees F
Frost-free period: 240 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Orif and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orif

Setting

Landform: Draws, flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Calcareous sandy and gravelly alluvium derived from limestone

Typical profile

A - 0 to 12 inches: fine sandy loam
2C1 - 12 to 40 inches: extremely gravelly sand
3C2 - 40 to 80 inches: coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 95 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

Minor Components

Dev

Percent of map unit: 10 percent
Landform: Draws, flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

Riverwash

Percent of map unit: 8 percent
Landform: Draws, flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Frio

Percent of map unit: 8 percent
Landform: Flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R081CY561TX - Loamy Bottomland 29-35 PZ
Hydric soil rating: No

Vanderpool

Percent of map unit: 3 percent
Landform: Stream terraces on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Unnamed, hydric

Percent of map unit: 1 percent
Landform: Flood plains on river valleys
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

PrB—Pratley clay, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t0sd
Elevation: 800 to 2,050 feet
Mean annual precipitation: 25 to 35 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 220 to 260 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pratley and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pratley

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Calcareous clayey pedisediment over residuum weathered from limestone

Typical profile

A - 0 to 8 inches: clay
Bw - 8 to 35 inches: clay
Bk - 35 to 39 inches: extremely flaggy clay
Bkm - 39 to 40 inches: cemented material
Cr - 40 to 60 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 22 to 40 inches to petrocalcic; 22 to 46 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Minor Components

Campwood

Percent of map unit: 6 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Eckrant

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Doss

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Topia

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

Real

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

RED—Real association, undulating

Map Unit Setting

National map unit symbol: dfm2
Elevation: 1,000 to 2,100 feet
Mean annual precipitation: 26 to 34 inches
Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 220 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Real and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Real

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 4 inches: gravelly clay loam
H2 - 4 to 13 inches: extremely gravelly clay loam
H3 - 13 to 20 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: 8 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Available water supply, 0 to 60 inches: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081BY320TX - Adobe 23-31 PZ
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 15 percent
Hydric soil rating: No

SaC—Sabenyo clay loam, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: dfm6
Elevation: 1,000 to 2,000 feet
Mean annual precipitation: 20 to 30 inches
Mean annual air temperature: 70 to 72 degrees F
Frost-free period: 240 to 280 days
Farmland classification: Farmland of statewide importance, if irrigated

Map Unit Composition

Sabenyo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sabenyo

Setting

Landform: Terraces on drainageways
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy alluvium derived from limestone

Typical profile

H1 - 0 to 10 inches: clay loam
H2 - 10 to 17 inches: clay loam
H3 - 17 to 52 inches: clay loam
H4 - 52 to 80 inches: sandy loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R083AY027TX - Western Clay Loam
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 15 percent
Hydric soil rating: No

SPD—Speck association, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0sh
Elevation: 900 to 2,050 feet
Mean annual precipitation: 25 to 32 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 240 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Speck and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Speck

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey residuum and/or slope alluvium derived from limestone

Typical profile

A - 0 to 7 inches: clay loam
Bt - 7 to 15 inches: clay
R - 15 to 40 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R081BY340TX - Redland 23-31 PZ
Hydric soil rating: No

Minor Components

Comfort

Percent of map unit: 12 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081BY337TX - Low Stony Hill 23-31 PZ
Hydric soil rating: No

Kavett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081BY343TX - Shallow 23-31 PZ
Hydric soil rating: No

Topia

Percent of map unit: 6 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081BY328TX - Deep Redland 23-31 PZ
Hydric soil rating: No

Eckrant

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081BY337TX - Low Stony Hill 23-31 PZ
Hydric soil rating: No

TAD—Eckrant-Rock outcrop association, 1 to 10 percent slopes

Map Unit Setting

National map unit symbol: 2t0sm
Elevation: 620 to 2,400 feet
Mean annual precipitation: 29 to 35 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 58 percent
Rock outcrop: 16 percent
Minor components: 26 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: very cobbly clay
A2 - 4 to 11 inches: extremely cobbly clay
R - 11 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 10 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Limestone

Typical profile

R - 0 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 10 percent
Depth to restrictive feature: 0 to 2 inches to lithic bedrock
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Tarpley

Percent of map unit: 11 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Real

Percent of map unit: 6 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Brackett

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex

Across-slope shape: Linear
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Pratley

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

TAF—Eckrant-Rock outcrop association, 8 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2t0sb
Elevation: 750 to 2,400 feet
Mean annual precipitation: 28 to 37 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 65 percent
Rock outcrop: 27 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 7 inches: very cobbly clay
A2 - 7 to 12 inches: extremely cobbly clay
R - 12 to 80 inches: bedrock

Properties and qualities

Slope: 8 to 30 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained

Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R081CY363TX - Steep Rocky 29-35 PZ
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Limestone

Typical profile

R - 0 to 80 inches: bedrock

Properties and qualities

Slope: 8 to 30 percent
Depth to restrictive feature: 0 to 2 inches to lithic bedrock
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Kerrville

Percent of map unit: 2 percent

Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Tarpley

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

VaB—Valco clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: dfmf
Elevation: 150 to 1,200 feet
Mean annual precipitation: 18 to 32 inches
Mean annual air temperature: 70 to 73 degrees F
Frost-free period: 260 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Valco and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valco

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve

Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly, loamy alluvium

Typical profile

H1 - 0 to 16 inches: clay loam
H2 - 16 to 19 inches: cemented material
H3 - 19 to 40 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 8 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R083AY005TX - Shallow
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 25 percent
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Corrosion of Concrete (Ranchtown - Talley Road Transmission Line)

ENG

Engineering

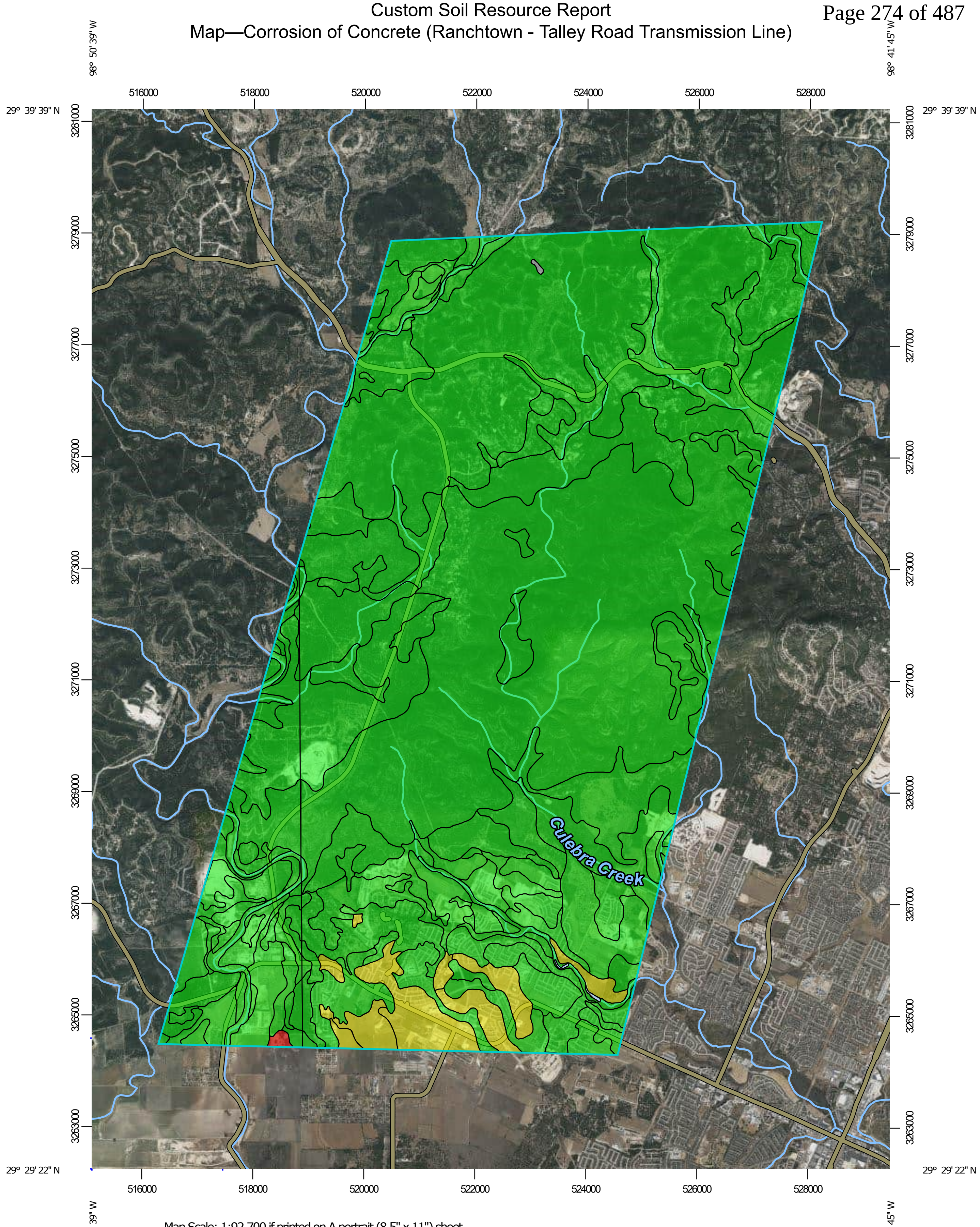
AGR

Agronomy

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Custom Soil Resource Report
Map—Corrosion of Concrete (Ranchtown - Talley Road Transmission Line)



Map Scale: 1:92,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 1000, 2000, 4000, 6000

Feet: 0, 4500, 9000, 18000, 27000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

High

Moderate

Low

Not rated or not available

Soil Rating Lines

High

Moderate

Low

Not rated or not available

Soil Rating Points

High

Moderate

Low

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 27, Aug 31, 2023

Soil Survey Area: Medina County, Texas
Survey Area Data: Version 22, Sep 5, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2014—Mar 26, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Corrosion of Concrete (Ranchtown - Talley Road Transmission Line)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AuC	Austin silty clay, 2 to 5 percent slopes, moderately eroded	Low	80.5	0.3%
BrE	Brackett gravelly clay loam, 12 to 20 percent slopes	Low	70.6	0.2%
BtE	Brackett-Eckrant association, 20 to 60 percent slopes	Low	5,621.6	19.4%
Ca	Anhalt clay, 0 to 2 percent slopes	Low	50.7	0.2%
Cb	Crawford, stony and Bexar soils, 0 to 5 percent slopes	Low	610.4	2.1%
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	Low	91.3	0.3%
HtA	Branyon clay, 0 to 1 percent slopes	Moderate	864.7	3.0%
HtB	Branyon clay, 1 to 3 percent slopes	Moderate	189.4	0.7%
KaB	Atco loam, 1 to 3 percent slopes	Low	2.6	0.0%
Kr	Krum clay, 1 to 5 percent slopes	Low	919.3	3.2%
LvA	Lewisville silty clay, 0 to 1 percent slopes	Low	708.6	2.4%
LvB	Lewisville silty clay, 1 to 3 percent slopes	Low	1,766.5	6.1%
Or	Orif soils, moist, 0 to 3 percent slopes, frequently flooded	Low	22.6	0.1%
PaA	Patrick soils, 0 to 1 percent slopes, rarely flooded	Low	139.5	0.5%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	Low	1,515.8	5.2%
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	Low	228.0	0.8%
Pt	Pits and Quarries, 1 to 90 percent slopes		6.0	0.0%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	Low	2,163.7	7.4%
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	Low	2,524.3	8.7%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TaD	Eckrant-Rock outcrop association, 8 to 30 percent slopes	Low	8,284.6	28.5%
Tb	Eddy gravelly clay loam, 1 to 8 percent slopes	Low	175.1	0.6%
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	Low	184.7	0.6%
W	Water		7.1	0.0%
Subtotals for Soil Survey Area			**26,227.5**	**90.3%**
Totals for Area of Interest			**29,045.0**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AtA	Atco loam, 0 to 1 percent slopes	Low	54.7	0.2%
AtB	Atco loam, 1 to 3 percent slopes	Low	243.2	0.8%
CsA	Castroville clay loam, 0 to 1 percent slopes	Low	327.5	1.1%
CsB	Castroville clay loam, 1 to 3 percent slopes	Low	24.9	0.1%
DNC	Dina association, gently undulating	Low	15.2	0.1%
Do	Divot clay loam, occasionally flooded	Low	58.9	0.2%
KAD	Kavett-Tarrant association, undulating	Low	49.7	0.2%
KnA	Knippa clay, 0 to 1 percent slopes	Low	80.3	0.3%
KnB	Knippa clay, 1 to 3 percent slopes	Low	194.0	0.7%
McB	Montell clay, 1 to 3 percent slopes	High	23.3	0.1%
MeB	Stephen clay, 1 to 3 percent slopes	Low	24.3	0.1%
Or	Orif soils, 0 to 3 percent slopes, frequently flooded	Low	219.3	0.8%
PrB	Pratley clay, 0 to 3 percent slopes	Low	18.6	0.1%
RED	Real association, undulating	Low	169.9	0.6%
SaC	Sabenyo clay loam, 1 to 5 percent slopes	Low	42.0	0.1%
SPD	Speck association, 1 to 8 percent slopes	Low	35.4	0.1%
TAD	Eckrant-Rock outcrop association, 1 to 10 percent slopes	Low	696.0	2.4%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TAF	Eckrant-Rock outcrop association, 8 to 30 percent slopes	Low	470.8	1.6%
VaB	Valco clay loam, 0 to 2 percent slopes	Low	65.4	0.2%
Subtotals for Soil Survey Area			**2,813.4**	**9.7%**
Totals for Area of Interest			**29,045.0**	**100.0%**

Rating Options—Corrosion of Concrete (Ranchtown - Talley Road Transmission Line)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Corrosion of Steel (Ranchtown - Talley Road Transmission Line)

ENG

Engineering

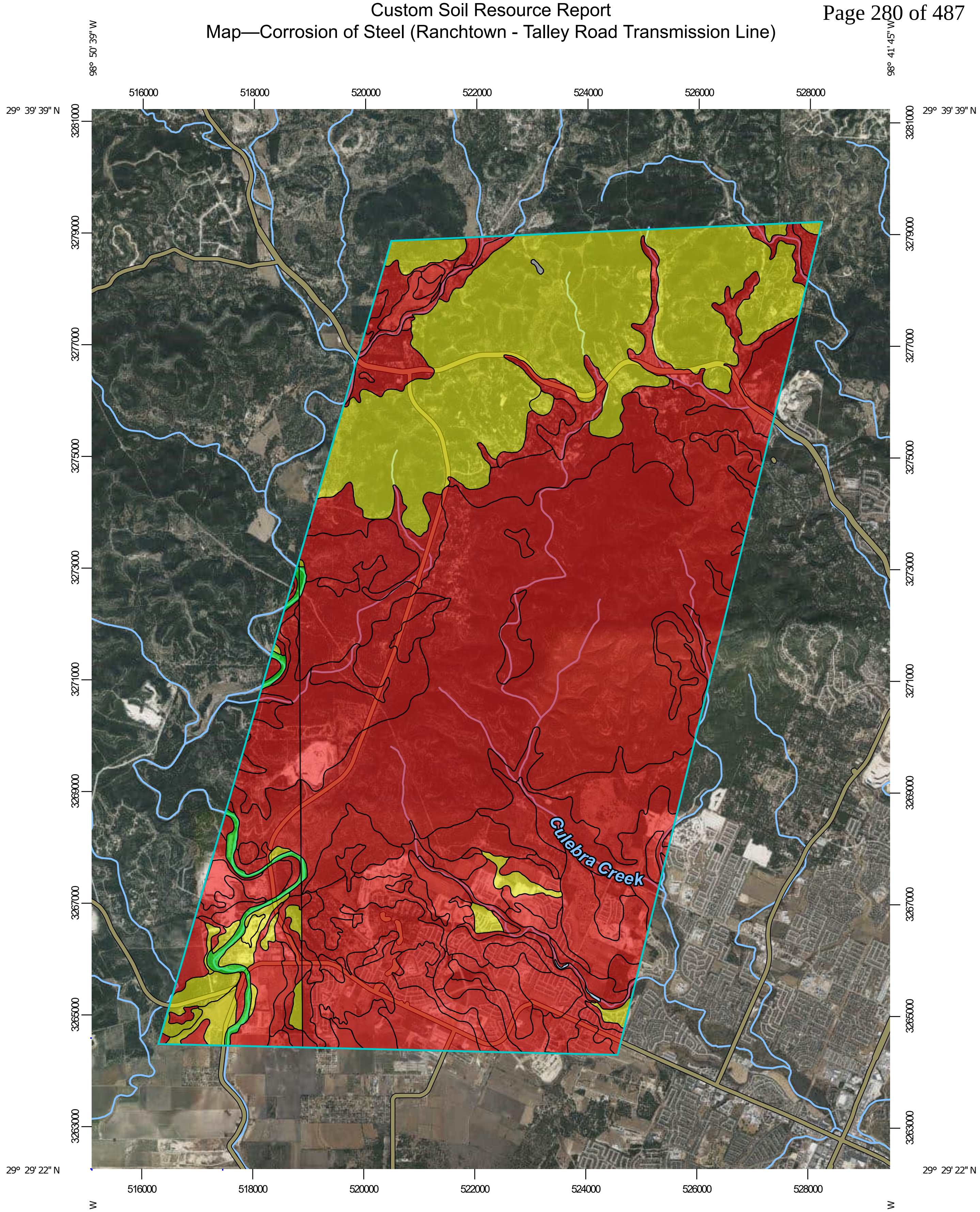
AGR

Agronomy

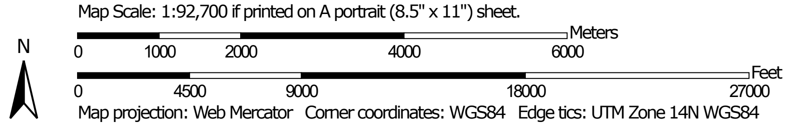
"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Custom Soil Resource Report
Map—Corrosion of Steel (Ranchtown - Talley Road Transmission Line)



Map Scale: 1:92,700 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

High

Moderate

Low

Not rated or not available

Soil Rating Lines

High

Moderate

Low

Not rated or not available

Soil Rating Points

High

Moderate

Low

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 27, Aug 31, 2023

Soil Survey Area: Medina County, Texas
Survey Area Data: Version 22, Sep 5, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2014—Mar 26, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Corrosion of Steel (Ranchtown - Talley Road Transmission Line)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AuC	Austin silty clay, 2 to 5 percent slopes, moderately eroded	High	80.5	0.3%
BrE	Brackett gravelly clay loam, 12 to 20 percent slopes	Moderate	70.6	0.2%
BtE	Brackett-Eckrant association, 20 to 60 percent slopes	Moderate	5,621.6	19.4%
Ca	Anhalt clay, 0 to 2 percent slopes	High	50.7	0.2%
Cb	Crawford, stony and Bexar soils, 0 to 5 percent slopes	High	610.4	2.1%
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	High	91.3	0.3%
HtA	Branyon clay, 0 to 1 percent slopes	High	864.7	3.0%
HtB	Branyon clay, 1 to 3 percent slopes	High	189.4	0.7%
KaB	Atco loam, 1 to 3 percent slopes	Moderate	2.6	0.0%
Kr	Krum clay, 1 to 5 percent slopes	High	919.3	3.2%
LvA	Lewisville silty clay, 0 to 1 percent slopes	High	708.6	2.4%
LvB	Lewisville silty clay, 1 to 3 percent slopes	High	1,766.5	6.1%
Or	Orif soils, moist, 0 to 3 percent slopes, frequently flooded	Low	22.6	0.1%
PaA	Patrick soils, 0 to 1 percent slopes, rarely flooded	High	139.5	0.5%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	High	1,515.8	5.2%
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	High	228.0	0.8%
Pt	Pits and Quarries, 1 to 90 percent slopes		6.0	0.0%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	High	2,163.7	7.4%
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	High	2,524.3	8.7%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TaD	Eckrant-Rock outcrop association, 8 to 30 percent slopes	High	8,284.6	28.5%
Tb	Eddy gravelly clay loam, 1 to 8 percent slopes	Moderate	175.1	0.6%
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	High	184.7	0.6%
W	Water		7.1	0.0%
Subtotals for Soil Survey Area			**26,227.5**	**90.3%**
Totals for Area of Interest			**29,045.0**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AtA	Atco loam, 0 to 1 percent slopes	Moderate	54.7	0.2%
AtB	Atco loam, 1 to 3 percent slopes	Moderate	243.2	0.8%
CsA	Castroville clay loam, 0 to 1 percent slopes	High	327.5	1.1%
CsB	Castroville clay loam, 1 to 3 percent slopes	High	24.9	0.1%
DNC	Dina association, gently undulating	High	15.2	0.1%
Do	Divot clay loam, occasionally flooded	High	58.9	0.2%
KAD	Kavett-Tarrant association, undulating	High	49.7	0.2%
KnA	Knippa clay, 0 to 1 percent slopes	High	80.3	0.3%
KnB	Knippa clay, 1 to 3 percent slopes	High	194.0	0.7%
McB	Montell clay, 1 to 3 percent slopes	High	23.3	0.1%
MeB	Stephen clay, 1 to 3 percent slopes	High	24.3	0.1%
Or	Orif soils, 0 to 3 percent slopes, frequently flooded	Low	219.3	0.8%
PrB	Pratley clay, 0 to 3 percent slopes	High	18.6	0.1%
RED	Real association, undulating	Moderate	169.9	0.6%
SaC	Sabenyo clay loam, 1 to 5 percent slopes	Moderate	42.0	0.1%
SPD	Speck association, 1 to 8 percent slopes	High	35.4	0.1%
TAD	Eckrant-Rock outcrop association, 1 to 10 percent slopes	High	696.0	2.4%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TAF	Eckrant-Rock outcrop association, 8 to 30 percent slopes	High	470.8	1.6%
VaB	Valco clay loam, 0 to 2 percent slopes	Moderate	65.4	0.2%
Subtotals for Soil Survey Area			**2,813.4**	**9.7%**
Totals for Area of Interest			**29,045.0**	**100.0%**

Rating Options—Corrosion of Steel (Ranchtown - Talley Road Transmission Line)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit (Ranchtown - Talley Road Transmission Line)

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

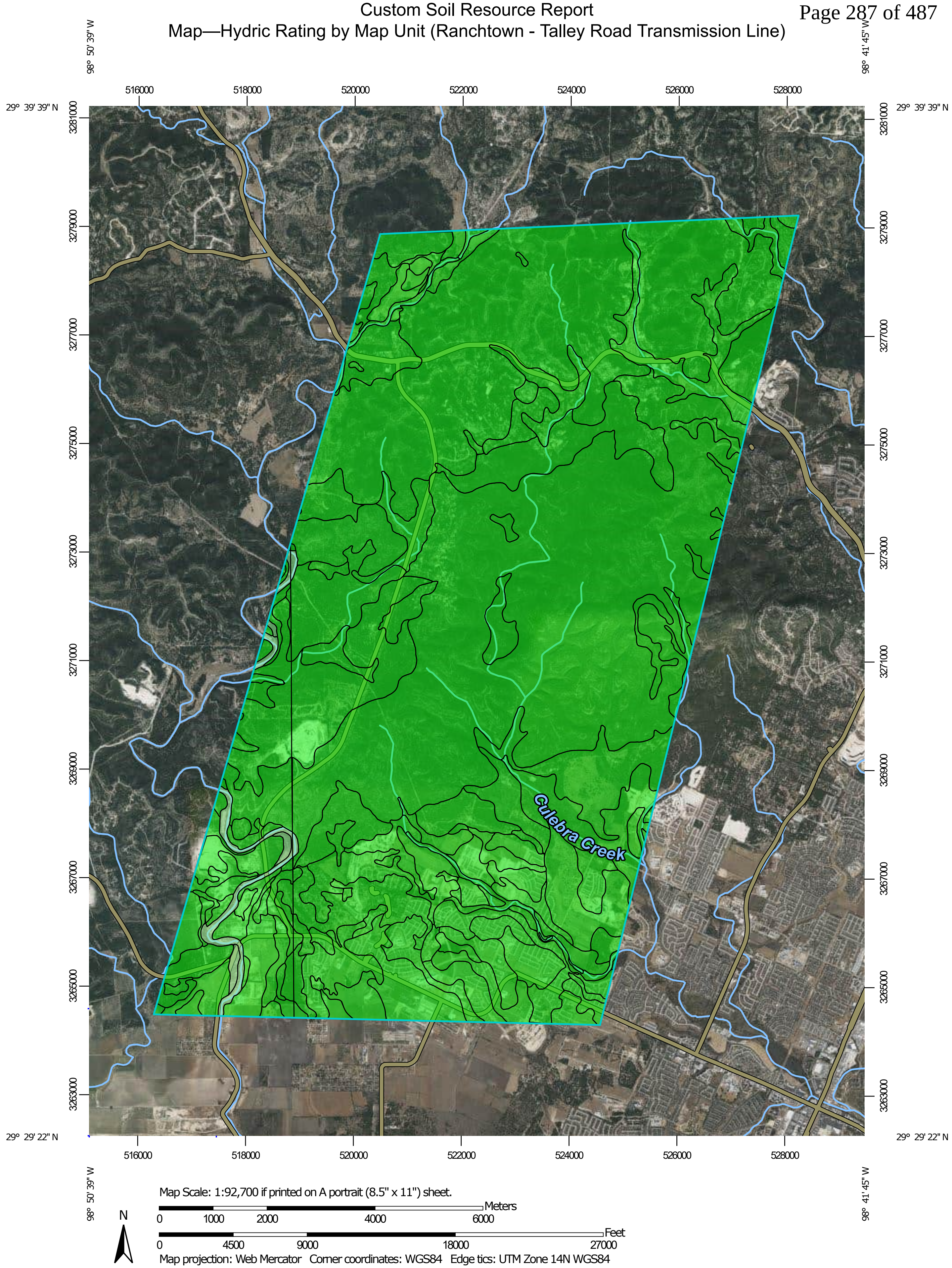
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report
Map—Hydric Rating by Map Unit (Ranchtown - Talley Road Transmission Line)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Soil Rating Lines

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Soil Rating Points

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 27, Aug 31, 2023

Soil Survey Area: Medina County, Texas
Survey Area Data: Version 22, Sep 5, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2014—Mar 26, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydric Rating by Map Unit (Ranchtown - Talley Road Transmission Line)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AuC	Austin silty clay, 2 to 5 percent slopes, moderately eroded	0	80.5	0.3%
BrE	Brackett gravelly clay loam, 12 to 20 percent slopes	0	70.6	0.2%
BtE	Brackett-Eckrant association, 20 to 60 percent slopes	0	5,621.6	19.4%
Ca	Anhalt clay, 0 to 2 percent slopes	0	50.7	0.2%
Cb	Crawford, stony and Bexar soils, 0 to 5 percent slopes	0	610.4	2.1%
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	0	91.3	0.3%
HtA	Branyon clay, 0 to 1 percent slopes	0	864.7	3.0%
HtB	Branyon clay, 1 to 3 percent slopes	0	189.4	0.7%
KaB	Atco loam, 1 to 3 percent slopes	0	2.6	0.0%
Kr	Krum clay, 1 to 5 percent slopes	0	919.3	3.2%
LvA	Lewisville silty clay, 0 to 1 percent slopes	0	708.6	2.4%
LvB	Lewisville silty clay, 1 to 3 percent slopes	0	1,766.5	6.1%
Or	Orif soils, moist, 0 to 3 percent slopes, frequently flooded	1	22.6	0.1%
PaA	Patrick soils, 0 to 1 percent slopes, rarely flooded	0	139.5	0.5%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	0	1,515.8	5.2%
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	0	228.0	0.8%
Pt	Pits and Quarries, 1 to 90 percent slopes	0	6.0	0.0%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	0	2,163.7	7.4%
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	0	2,524.3	8.7%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TaD	Eckrant-Rock outcrop association, 8 to 30 percent slopes	0	8,284.6	28.5%
Tb	Eddy gravelly clay loam, 1 to 8 percent slopes	0	175.1	0.6%
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	0	184.7	0.6%
W	Water	0	7.1	0.0%
Subtotals for Soil Survey Area			**26,227.5**	**90.3%**
Totals for Area of Interest			**29,045.0**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AtA	Atco loam, 0 to 1 percent slopes	0	54.7	0.2%
AtB	Atco loam, 1 to 3 percent slopes	0	243.2	0.8%
CsA	Castroville clay loam, 0 to 1 percent slopes	0	327.5	1.1%
CsB	Castroville clay loam, 1 to 3 percent slopes	0	24.9	0.1%
DNC	Dina association, gently undulating	0	15.2	0.1%
Do	Divot clay loam, occasionally flooded	1	58.9	0.2%
KAD	Kavett-Tarrant association, undulating	0	49.7	0.2%
KnA	Knippa clay, 0 to 1 percent slopes	0	80.3	0.3%
KnB	Knippa clay, 1 to 3 percent slopes	0	194.0	0.7%
McB	Montell clay, 1 to 3 percent slopes	0	23.3	0.1%
MeB	Stephen clay, 1 to 3 percent slopes	0	24.3	0.1%
Or	Orif soils, 0 to 3 percent slopes, frequently flooded	1	219.3	0.8%
PrB	Pratley clay, 0 to 3 percent slopes	0	18.6	0.1%
RED	Real association, undulating	0	169.9	0.6%
SaC	Sabenyo clay loam, 1 to 5 percent slopes	0	42.0	0.1%
SPD	Speck association, 1 to 8 percent slopes	0	35.4	0.1%
TAD	Eckrant-Rock outcrop association, 1 to 10 percent slopes	0	696.0	2.4%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TAF	Eckrant-Rock outcrop association, 8 to 30 percent slopes	0	470.8	1.6%
VaB	Valco clay loam, 0 to 2 percent slopes	0	65.4	0.2%
Subtotals for Soil Survey Area			**2,813.4**	**9.7%**
Totals for Area of Interest			**29,045.0**	**100.0%**

Rating Options—Hydric Rating by Map Unit (Ranchtown - Talley Road Transmission Line)

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Water Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)

"Water Erosion Potential (TX)" is a qualitative interpretation that evaluates a soil's potential to erode through the action of water. The potential assumes that the area being affected is bare, smooth, and exposed to the water erosion processes. The interpretation provides the user with a qualitative rating of the vulnerability of the soil to the action of water; it is not a measure of actual soil loss from erosion.

The water erosion potential of the soil is based on those soil properties or a combination of soil properties and landscape characteristics that contribute to runoff and have low resistance to water erosion processes. Soil features that contribute to water erosivity are surface-layer particle size, saturated hydraulic conductivity, and high runoff landscapes. Conversely, soil features that resist the erosive effect of water are high organic matter content in the surface layer and low runoff landscapes. The water erosion potential is a function of the interaction between those soil features that make the soil susceptible to water erosion and those that resist the water erosion process.

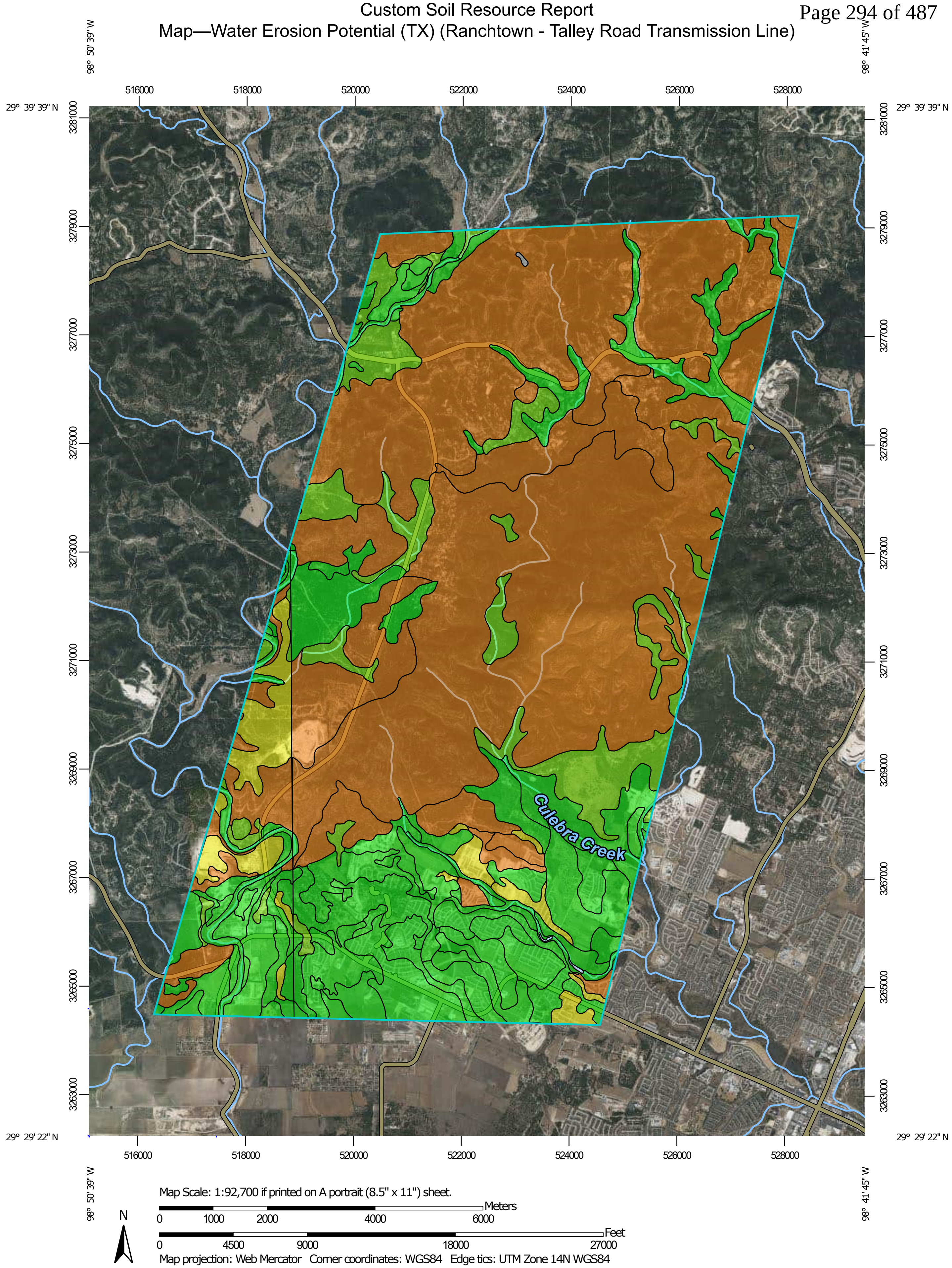
The ratings are both verbal and numerical. Numerical ratings indicate the soil's relative water erosion potential. They are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil has the greatest water erosion potential (1.00) and the point at which a soil has very low water erosion potential (0.00).

Verbal soil rating classes are based on the highest numerical rating for the most limiting soil feature(s) considered in the rating process. "Very high" (numerical values less than or equal to 1.0 to greater than 0.9) indicates that the soil has the greatest relative water erosion vulnerability. "High" (numerical value less than or equal to 0.9 to greater than 0.65) indicates that the soil has large relative water erosion vulnerability. "Moderate" (numerical value less than or equal to 0.65 to greater than 0.35) indicates that the soil has medium relative water erosion vulnerability. "Low" (numerical value less than or equal to 0.35 to greater than 0.1) indicates that the soil has small relative water erosion vulnerability. "Very low" (numerical value less than or equal to 0.10) indicates that the soil has little or no relative water erosion vulnerability.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—Water Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)



Map Scale: 1:92,700 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 1000, 2000, 4000, 6000

Feet: 0, 4500, 9000, 18000, 27000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Very high water erosion potential

High water erosion potential

Moderate water erosion potential

Low water erosion potential

Very low water erosion potential

Not rated or not available

Soil Rating Lines

Very high water erosion potential

High water erosion potential

Moderate water erosion potential

Low water erosion potential

Very low water erosion potential

Not rated or not available

Soil Rating Points

Very high water erosion potential

High water erosion potential

Moderate water erosion potential

Low water erosion potential

Very low water erosion potential

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 27, Aug 31, 2023

Soil Survey Area: Medina County, Texas
Survey Area Data: Version 22, Sep 5, 2023

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Date(s) aerial images were photographed: Jul 25, 2014—Mar 26, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Water Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
AuC	Austin silty clay, 2 to 5 percent slopes, moderately eroded	High water erosion potential	Austin, moderately eroded (85%)	Percs slowly (1.00)	80.5	0.3%
				Organic matter (0.98)		
				Silt content (0.80)		
				LS factor (0.70)		
BrE	Brackett gravelly clay loam, 12 to 20 percent slopes	High water erosion potential	Brackett (90%)	LS factor (1.00)	70.6	0.2%
				Percs slowly (0.99)		
				Organic matter (0.95)		
				Silt content (0.71)		
BtE	Brackett-Eckrant association, 20 to 60 percent slopes	High water erosion potential	Brackett (60%)	LS factor (1.00)	5,621.6	19.4%
				Percs slowly (0.99)		
				Organic matter (0.95)		
				Silt content (0.71)		
			Eckrant (36%)	LS factor (1.00)		
				Organic matter (1.00)		
				Percs slowly (0.99)		
				Silt content (0.58)		
Ca	Anhalt clay, 0 to 2 percent slopes	Very low water erosion potential	Anhalt (85%)	Percs slowly (1.00)	50.7	0.2%
				Organic matter (1.00)		
				Silt content (0.44)		
				LS factor (0.01)		
Cb	Crawford, stony and Bexar soils, 0 to 5 percent slopes	Very low water erosion potential	Crawford, stony (51%)	Percs slowly (1.00)	610.4	2.1%
				Organic matter (0.97)		
				Silt content (0.34)		
				LS factor (0.10)		
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	Moderate water erosion potential	Heiden, moderately eroded (85%)	Percs slowly (1.00)	91.3	0.3%
				Organic matter (0.98)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				LS factor (0.70)		
				Silt content (0.49)		
HtA	Branyon clay, 0 to 1 percent slopes	Very low water erosion potential	Branyon (85%)	Percs slowly (1.00)	864.7	3.0%
				Organic matter (0.97)		
				Silt content (0.58)		
HtB	Branyon clay, 1 to 3 percent slopes	Very low water erosion potential	Branyon (85%)	Percs slowly (1.00)	189.4	0.7%
				Organic matter (0.97)		
				Silt content (0.58)		
				LS factor (0.10)		
KaB	Atco loam, 1 to 3 percent slopes	Very low water erosion potential	Atco (100%)	Organic matter (0.97)	2.6	0.0%
				Percs slowly (0.92)		
				Silt content (0.81)		
				LS factor (0.10)		
Kr	Krum clay, 1 to 5 percent slopes	Very low water erosion potential	Krum (90%)	Percs slowly (1.00)	919.3	3.2%
				Organic matter (0.97)		
				Silt content (0.40)		
				LS factor (0.15)		
LvA	Lewisville silty clay, 0 to 1 percent slopes	Very low water erosion potential	Lewisville (90%)	Percs slowly (1.00)	708.6	2.4%
				Organic matter (0.97)		
				Silt content (0.77)		
LvB	Lewisville silty clay, 1 to 3 percent slopes	Very low water erosion potential	Lewisville (85%)	Percs slowly (1.00)	1,766.5	6.1%
				Organic matter (0.97)		
				Silt content (0.77)		
				LS factor (0.10)		
Or	Orif soils, moist, 0 to 3 percent slopes, frequently flooded	Very low water erosion potential	Orif, moist (85%)	Organic matter (0.97)	22.6	0.1%
				Silt content (0.07)		
				LS factor (0.01)		
PaA	Patrick soils, 0 to 1 percent slopes, rarely flooded	Very low water erosion potential	Patrick (100%)	Organic matter (0.97)	139.5	0.5%
				Percs slowly (0.92)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Silt content (0.49)		
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	Very low water erosion potential	Patrick (100%)	Organic matter (0.97)	1,515.8	5.2%
				Percs slowly (0.92)		
				Silt content (0.49)		
				LS factor (0.10)		
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	Moderate water erosion potential	Patrick (100%)	Organic matter (0.97)	228.0	0.8%
				Percs slowly (0.92)		
				LS factor (0.70)		
				Silt content (0.49)		
Pt	Pits and Quarries, 1 to 90 percent slopes	Not rated	Pits (100%)		6.0	0.0%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	Low water erosion potential	Eckrant (85%)	Organic matter (1.00)	2,163.7	7.4%
				Percs slowly (0.99)		
				Silt content (0.59)		
				LS factor (0.35)		
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	High water erosion potential	Eckrant (90%)	LS factor (1.00)	2,524.3	8.7%
				Organic matter (1.00)		
				Percs slowly (0.99)		
				Silt content (0.58)		
TaD	Eckrant-Rock outcrop association, 8 to 30 percent slopes	High water erosion potential	Eckrant (65%)	LS factor (1.00)	8,284.6	28.5%
				Organic matter (1.00)		
				Percs slowly (0.99)		
				Silt content (0.62)		
Tb	Eddy gravelly clay loam, 1 to 8 percent slopes	High water erosion potential	Eddy (100%)	Percs slowly (0.95)	175.1	0.6%
				Organic matter (0.95)		
				LS factor (0.93)		
				Silt content (0.69)		
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	Very low water erosion potential	Tinn (70%)	Percs slowly (1.00)	184.7	0.6%
				Organic matter (0.98)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Silt content (0.30)		
			Frio (30%)	Percs slowly (0.99)		
				Organic matter (0.98)		
				Silt content (0.91)		
W	Water	Not rated	Water (100%)		7.1	0.0%
Subtotals for Soil Survey Area					**26,227.5**	**90.3%**
Totals for Area of Interest					**29,045.0**	**100.0%**

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
AtA	Atco loam, 0 to 1 percent slopes	Very low water erosion potential	Atco (90%)	Organic matter (0.96)	54.7	0.2%
				Percs slowly (0.92)		
				Silt content (0.81)		
AtB	Atco loam, 1 to 3 percent slopes	Very low water erosion potential	Atco (90%)	Organic matter (0.96)	243.2	0.8%
				Percs slowly (0.92)		
				Silt content (0.81)		
				LS factor (0.10)		
CsA	Castroville clay loam, 0 to 1 percent slopes	Very low water erosion potential	Castroville (85%)	Organic matter (0.98)	327.5	1.1%
				Percs slowly (0.92)		
				Silt content (0.91)		
CsB	Castroville clay loam, 1 to 3 percent slopes	Very low water erosion potential	Castroville (85%)	Organic matter (0.98)	24.9	0.1%
				Percs slowly (0.92)		
				Silt content (0.91)		
				LS factor (0.10)		
DNC	Dina association, gently undulating	Low water erosion potential	Dina (70%)	Organic matter (1.00)	15.2	0.1%
				Percs slowly (0.99)		
				Silt content (0.94)		
				LS factor (0.35)		
Do	Divot clay loam, occasionally flooded	Very low water erosion potential	Divot (80%)	Percs slowly (0.99)	58.9	0.2%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Organic matter (0.98)		
				Silt content (0.40)		
KAD	Kavett-Tarrant association, undulating	Low water erosion potential	Kavett (57%)	Organic matter (1.00)	49.7	0.2%
				Percs slowly (0.99)		
				Silt content (0.42)		
				LS factor (0.35)		
KnA	Knippa clay, 0 to 1 percent slopes	Very low water erosion potential	Knippa (92%)	Percs slowly (0.99)	80.3	0.3%
				Organic matter (0.97)		
				Silt content (0.64)		
KnB	Knippa clay, 1 to 3 percent slopes	Very low water erosion potential	Knippa (95%)	Percs slowly (0.99)	194.0	0.7%
				Organic matter (0.97)		
				Silt content (0.64)		
				LS factor (0.10)		
McB	Montell clay, 1 to 3 percent slopes	Very low water erosion potential	Montell (85%)	Percs slowly (1.00)	23.3	0.1%
				Organic matter (0.97)		
				Silt content (0.32)		
				LS factor (0.10)		
MeB	Stephen clay, 1 to 3 percent slopes	Very low water erosion potential	Stephen (75%)	Percs slowly (0.99)	24.3	0.1%
				Organic matter (0.98)		
				Silt content (0.34)		
				LS factor (0.10)		
Or	Orif soils, 0 to 3 percent slopes, frequently flooded	Very low water erosion potential	Orif (70%)	Organic matter (0.97)	219.3	0.8%
				Silt content (0.63)		
				Percs slowly (0.23)		
				LS factor (0.06)		
PrB	Pratley clay, 0 to 3 percent slopes	Very low water erosion potential	Pratley (80%)	Organic matter (1.00)	18.6	0.1%
				Percs slowly (0.99)		
				Silt content (0.51)		
				LS factor (0.10)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
RED	Real association, undulating	High water erosion potential	Real (85%)	Organic matter (1.00)	169.9	0.6%
				LS factor (0.93)		
				Percs slowly (0.92)		
				Silt content (0.63)		
SaC	Sabenyo clay loam, 1 to 5 percent slopes	Low water erosion potential	Sabenyo (85%)	Organic matter (0.94)	42.0	0.1%
				Percs slowly (0.92)		
				Silt content (0.61)		
				LS factor (0.35)		
SPD	Speck association, 1 to 8 percent slopes	Low water erosion potential	Speck (70%)	Percs slowly (1.00)	35.4	0.1%
				Organic matter (0.96)		
				Silt content (0.73)		
				LS factor (0.35)		
TAD	Eckrant-Rock outcrop association, 1 to 10 percent slopes	Moderate water erosion potential	Eckrant (58%)	Organic matter (1.00)	696.0	2.4%
				Percs slowly (0.99)		
				LS factor (0.70)		
				Silt content (0.59)		
TAF	Eckrant-Rock outcrop association, 8 to 30 percent slopes	High water erosion potential	Eckrant (65%)	LS factor (1.00)	470.8	1.6%
				Organic matter (1.00)		
				Percs slowly (0.99)		
				Silt content (0.62)		
VaB	Valco clay loam, 0 to 2 percent slopes	Very low water erosion potential	Valco (75%)	Organic matter (0.97)	65.4	0.2%
				Percs slowly (0.92)		
				Silt content (0.63)		
				LS factor (0.01)		
Subtotals for Soil Survey Area					**2,813.4**	**9.7%**
Totals for Area of Interest					**29,045.0**	**100.0%**

Rating	Acres in AOI	Percent of AOI
High water erosion potential	17,397.3	59.9%
Very low water erosion potential	8,309.2	28.6%
Low water erosion potential	2,306.0	7.9%

Rating	Acres in AOI	Percent of AOI
Moderate water erosion potential	1,015.3	3.5%
Null or Not Rated	13.1	0.0%
Totals for Area of Interest	**29,045.0**	**100.0%**

Rating Options—Water Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Wind Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)

The higher the numerical rating the greater the vulnerability rating class. The "very high" potential class (numerical values less than or equal to 1.0 to greater than 0.9) indicates that the soil has the greatest relative wind erosion vulnerability. The "high" class (numerical value less than or equal to 0.9 to greater than 0.65) indicates that the soil has large relative wind erosion vulnerability. The "moderate" class (numerical value less than or equal to 0.65 to greater than 0.4) indicates that the soil has medium relative wind erosion vulnerability. The "low" class (numerical value less than or equal to 0.4 to greater than 0.2) indicates that the soil has small relative wind erosion vulnerability. The "very low" class (numerical value less than or equal to 0.20) indicates that the soil has little or no relative wind erosion vulnerability.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site. The Wind Erosion Potential (TX) is a qualitative interpretation which evaluates a soil's potential to erode through the action of wind. The potential assumes that the area being affected is bare, smooth, and has a long distance exposed to the wind. The soil wind erosion potential provides the user with a qualitative rating of the vulnerability of the soil to the action of the wind and is not a measure of actual soil loss from erosion.

The wind erosion potential of the soil is based on those surface soil properties that by themselves or in combination with others contribute to the soil's potential wind erosivity. Those surface soil features that contribute to wind erosivity are particle size and carbonate content. Conversely, surface features that resist the erosive effect of wind are organic matter content and coarse fragments. The soil wind erosion potential is a function of the interaction between surface soil features that make the soil susceptible to wind erosion and those that resist the wind erosion process.

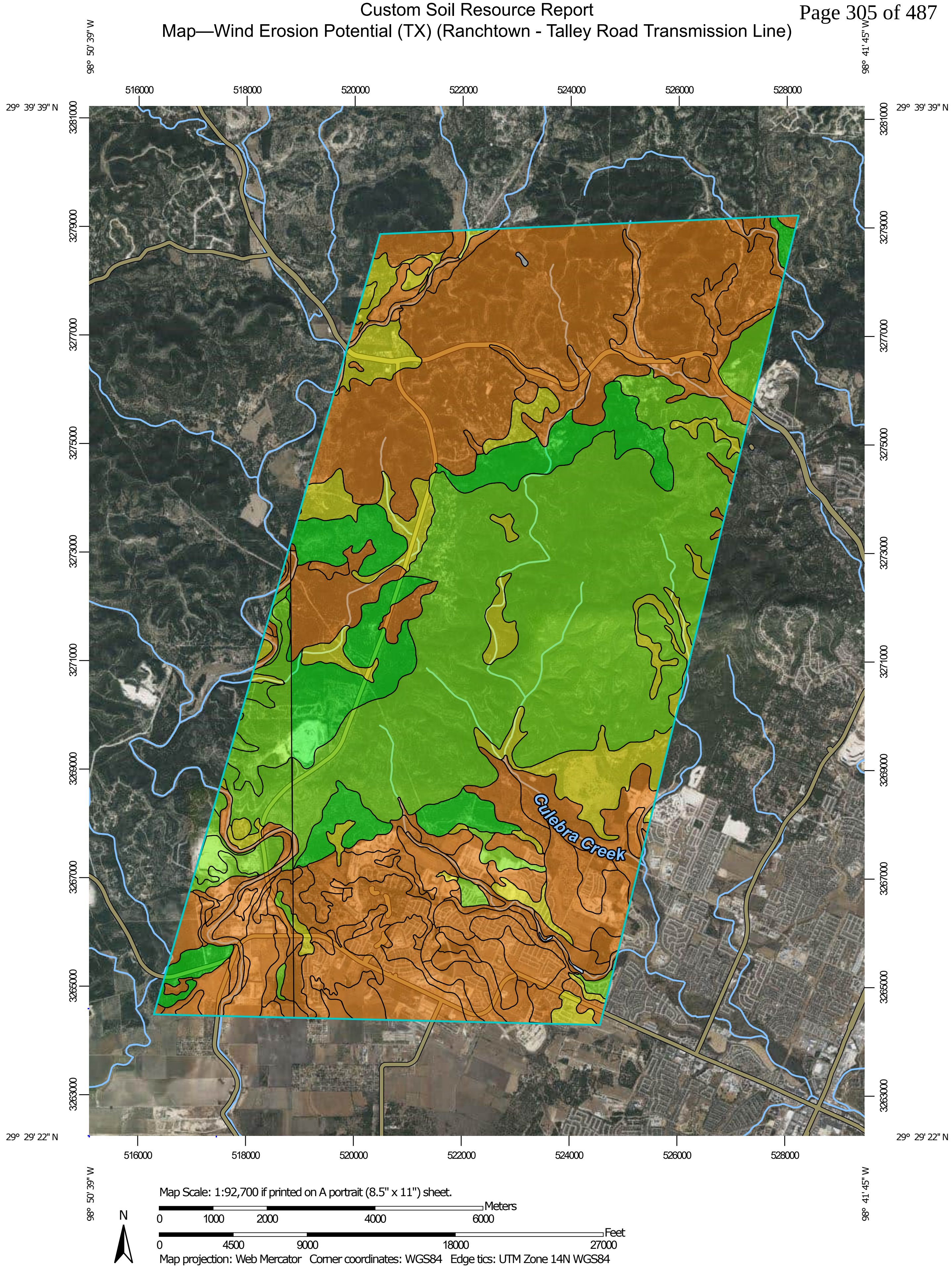
Numerical ratings or values indicate the soil's relative wind erosion potential. Ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil has the greatest wind erosion potential (1.00), and the point at which a soil has very low wind erosion potential (0.00).

The ratings are both verbal and numerical. The potential degree to which a soil is susceptible to wind erosion will range from "very high" to "very low" (from 1.0 to 0.0). Soils that have favorable surface particle size, high organic matter content, or protective coarse fragments will have "very low" wind erosion potential. Soils that have "very high" wind erosion potential are those with a surface layer that has a sandy particle size, high carbonate content, low organic matter content, or no coarse fragment protection.

The higher the numerical rating the greater the vulnerability rating class. The "very high" potential class (numerical values less than or equal to 1.0 to greater than 0.9) indicates that the soil has the greatest relative wind erosion vulnerability. The "high" class (numerical value less than or equal to 0.9 to greater than 0.65) indicates that the soil has large relative wind erosion vulnerability. The "moderate" class (numerical value less than or equal to 0.65 to greater than 0.4) indicates that the soil has medium relative wind erosion vulnerability. The "low" class (numerical value less than or equal to 0.4 to greater than 0.2) indicates that the soil has small relative wind erosion vulnerability. The "very low" class (numerical value less than or equal to 0.20) indicates that the soil has little or no relative wind erosion vulnerability.

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation

Custom Soil Resource Report
Map—Wind Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very high
- High
- Moderate
- Low
- Very low
- Not rated or not available

Soil Rating Lines
- Very high
- High
- Moderate
- Low
- Very low
- Not rated or not available

Soil Rating Points
- Very high
- High
- Moderate
- Low
- Very low
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 27, Aug 31, 2023

Soil Survey Area: Medina County, Texas
Survey Area Data: Version 22, Sep 5, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2014—Mar 26, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Wind Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
AuC	Austin silty clay, 2 to 5 percent slopes, moderately eroded	High wind erosion potential	Austin, moderately eroded (85%)	Carbonate content of surface (0.86)	80.5	0.3%
				Clay content of surface (0.85)		
				Silt content of surface (0.22)		
				Organic matter content of surface (0.01)		
BrE	Brackett gravelly clay loam, 12 to 20 percent slopes	High wind erosion potential	Brackett (90%)	Carbonate content of surface (0.86)	70.6	0.2%
				Clay content of surface (0.63)		
				Sand content of surface (0.21)		
				Rock fragment content of surface (0.19)		
				Silt content of surface (0.08)		
BtE	Brackett-Eckrant association, 20 to 60 percent slopes	High wind erosion potential	Brackett (60%)	Carbonate content of surface (0.86)	5,621.6	19.4%
				Clay content of surface (0.63)		
				Sand content of surface (0.21)		
				Rock fragment content of surface (0.19)		
				Silt content of surface (0.08)		
Ca	Anhalt clay, 0 to 2 percent slopes	Moderate wind erosion potential	Anhalt (85%)	Clay content of surface (0.85)	50.7	0.2%
				Organic matter content of surface (0.20)		
				Silt content of surface (0.06)		
				Rock fragment content of surface (0.01)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Cb	Crawford, stony and Bexar soils, 0 to 5 percent slopes	High wind erosion potential	Crawford, stony (51%)	Clay content of surface (0.85)	610.4	2.1%
				Rock fragment content of surface (0.09)		
				Silt content of surface (0.02)		
			Bexar (36%)	Clay content of surface (0.71)		
				Sand content of surface (0.26)		
				Silt content of surface (0.05)		
				Rock fragment content of surface (0.02)		
				Organic matter content of surface (0.01)		
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	High wind erosion potential	Heiden, moderately eroded (85%)	Clay content of surface (0.85)	91.3	0.3%
				Silt content of surface (0.02)		
				Organic matter content of surface (0.01)		
				Rock fragment content of surface (0.01)		
HtA	Branyon clay, 0 to 1 percent slopes	High wind erosion potential	Branyon (85%)	Clay content of surface (0.85)	864.7	3.0%
				Silt content of surface (0.06)		
				Rock fragment content of surface (0.02)		
HtB	Branyon clay, 1 to 3 percent slopes	High wind erosion potential	Branyon (85%)	Clay content of surface (0.85)	189.4	0.7%
				Silt content of surface (0.06)		
				Rock fragment content of surface (0.02)		
KaB	Atco loam, 1 to 3 percent slopes	High wind erosion potential	Atco (100%)	Carbonate content of surface (0.86)	2.6	0.0%
				Sand content of surface (0.46)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Silt content of surface (0.11)		
				Clay content of surface (0.07)		
				Rock fragment content of surface (0.00)		
Kr	Krum clay, 1 to 5 percent slopes	High wind erosion potential	Krum (90%)	Clay content of surface (0.85)	919.3	3.2%
				Carbonate content of surface (0.16)		
				Sand content of surface (0.03)		
				Silt content of surface (0.02)		
LvA	Lewisville silty clay, 0 to 1 percent slopes	High wind erosion potential	Lewisville (90%)	Carbonate content of surface (0.86)	708.6	2.4%
				Clay content of surface (0.85)		
				Silt content of surface (0.19)		
				Rock fragment content of surface (0.01)		
LvB	Lewisville silty clay, 1 to 3 percent slopes	High wind erosion potential	Lewisville (85%)	Carbonate content of surface (0.86)	1,766.5	6.1%
				Clay content of surface (0.85)		
				Silt content of surface (0.19)		
				Rock fragment content of surface (0.01)		
Or	Orif soils, moist, 0 to 3 percent slopes, frequently flooded	High wind erosion potential	Orif, moist (85%)	Sand content of surface (1.00)	22.6	0.1%
				Carbonate content of surface (0.86)		
				Rock fragment content of surface (0.33)		
				Sandy surface texture (0.20)		
				Organic matter content of surface (0.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
PaA	Patrick soils, 0 to 1 percent slopes, rarely flooded	High wind erosion potential	Patrick (100%)	Clay content of surface (0.85)	139.5	0.5%
				Sand content of surface (0.12)		
				Silt content of surface (0.04)		
				Rock fragment content of surface (0.02)		
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	High wind erosion potential	Patrick (100%)	Clay content of surface (0.85)	1,515.8	5.2%
				Sand content of surface (0.12)		
				Silt content of surface (0.04)		
				Rock fragment content of surface (0.02)		
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	Moderate wind erosion potential	Patrick (100%)	Clay content of surface (0.85)	228.0	0.8%
				Rock fragment content of surface (0.25)		
				Sand content of surface (0.12)		
				Silt content of surface (0.04)		
Pt	Pits and Quarries, 1 to 90 percent slopes	Not rated	Pits (100%)		6.0	0.0%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	Moderate wind erosion potential	Eckrant (85%)	Clay content of surface (0.85)	2,163.7	7.4%
				Organic matter content of surface (0.40)		
				Silt content of surface (0.11)		
				Rock fragment content of surface (0.01)		
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	Very low wind erosion potential	Eckrant (90%)	Clay content of surface (0.85)	2,524.3	8.7%
				Organic matter content of surface (0.40)		
				Rock fragment content of surface (0.32)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Silt content of surface (0.10)		
TaD	Eckrant-Rock outcrop association, 8 to 30 percent slopes	Low wind erosion potential	Eckrant (65%)	Clay content of surface (0.85)	8,284.6	28.5%
				Organic matter content of surface (0.40)		
				Rock fragment content of surface (0.17)		
				Silt content of surface (0.11)		
Tb	Eddy gravelly clay loam, 1 to 8 percent slopes	Low wind erosion potential	Eddy (100%)	Carbonate content of surface (0.86)	175.1	0.6%
				Clay content of surface (0.63)		
				Rock fragment content of surface (0.57)		
				Sand content of surface (0.22)		
				Silt content of surface (0.08)		
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	High wind erosion potential	Tinn (70%)	Clay content of surface (0.85)	184.7	0.6%
				Silt content of surface (0.02)		
				Carbonate content of surface (0.02)		
				Organic matter content of surface (0.01)		
				Rock fragment content of surface (0.00)		
			Frio (30%)	Carbonate content of surface (0.86)		
				Clay content of surface (0.83)		
				Silt content of surface (0.13)		
				Organic matter content of surface (0.02)		
				Rock fragment content of surface (0.02)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
W	Water	Not rated	Water (100%)		7.1	0.0%
Subtotals for Soil Survey Area					**26,227.5**	**90.3%**
Totals for Area of Interest					**29,045.0**	**100.0%**

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
AtA	Atco loam, 0 to 1 percent slopes	High wind erosion potential	Atco (90%)	Carbonate content of surface (0.86)	54.7	0.2%
				Sand content of surface (0.46)		
				Silt content of surface (0.10)		
				Clay content of surface (0.08)		
				Rock fragment content of surface (0.02)		
AtB	Atco loam, 1 to 3 percent slopes	High wind erosion potential	Atco (90%)	Carbonate content of surface (0.86)	243.2	0.8%
				Sand content of surface (0.46)		
				Silt content of surface (0.10)		
				Clay content of surface (0.08)		
				Rock fragment content of surface (0.02)		
CsA	Castroville clay loam, 0 to 1 percent slopes	High wind erosion potential	Castroville (85%)	Carbonate content of surface (0.86)	327.5	1.1%
				Clay content of surface (0.76)		
				Silt content of surface (0.12)		
				Sand content of surface (0.03)		
				Organic matter content of surface (0.01)		
CsB	Castroville clay loam, 1 to 3 percent slopes	High wind erosion potential	Castroville (85%)	Carbonate content of surface (0.86)	24.9	0.1%
				Clay content of surface (0.76)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Silt content of surface (0.12)		
				Sand content of surface (0.03)		
				Organic matter content of surface (0.01)		
DNC	Dina association, gently undulating	Very low wind erosion potential	Dina (70%)	Organic matter content of surface (0.40)	15.2	0.1%
				Rock fragment content of surface (0.38)		
				Clay content of surface (0.37)		
				Silt content of surface (0.27)		
Do	Divot clay loam, occasionally flooded	High wind erosion potential	Divot (80%)	Carbonate content of surface (0.86)	58.9	0.2%
				Clay content of surface (0.85)		
				Sand content of surface (0.04)		
				Silt content of surface (0.02)		
				Rock fragment content of surface (0.02)		
KAD	Kavett-Tarrant association, undulating	Moderate wind erosion potential	Kavett (57%)	Carbonate content of surface (0.86)	49.7	0.2%
				Clay content of surface (0.85)		
				Organic matter content of surface (0.29)		
				Sand content of surface (0.08)		
				Silt content of surface (0.03)		
			Tarrant, PE <44 (24%)	Carbonate content of surface (0.86)		
				Clay content of surface (0.85)		
				Organic matter content of surface (0.29)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Rock fragment content of surface (0.09)		
				Silt content of surface (0.02)		
KnA	Knippa clay, 0 to 1 percent slopes	High wind erosion potential	Knippa (92%)	Carbonate content of surface (0.86)	80.3	0.3%
				Clay content of surface (0.85)		
				Silt content of surface (0.09)		
				Rock fragment content of surface (0.01)		
				Organic matter content of surface (0.00)		
KnB	Knippa clay, 1 to 3 percent slopes	High wind erosion potential	Knippa (95%)	Carbonate content of surface (0.86)	194.0	0.7%
				Clay content of surface (0.85)		
				Silt content of surface (0.09)		
				Rock fragment content of surface (0.01)		
				Organic matter content of surface (0.00)		
McB	Montell clay, 1 to 3 percent slopes	High wind erosion potential	Montell (85%)	Carbonate content of surface (0.86)	23.3	0.1%
				Clay content of surface (0.85)		
				Silt content of surface (0.02)		
				Organic matter content of surface (0.01)		
				Rock fragment content of surface (0.00)		
MeB	Stephen clay, 1 to 3 percent slopes	High wind erosion potential	Stephen (75%)	Carbonate content of surface (0.86)	24.3	0.1%
				Clay content of surface (0.85)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Rock fragment content of surface (0.05)		
				Silt content of surface (0.02)		
				Organic matter content of surface (0.01)		
Or	Orif soils, 0 to 3 percent slopes, frequently flooded	High wind erosion potential	Orif (70%)	Sand content of surface (0.91)	219.3	0.8%
				Carbonate content of surface (0.86)		
				Rock fragment content of surface (0.07)		
				Silt content of surface (0.01)		
				Organic matter content of surface (0.00)		
PrB	Pratley clay, 0 to 3 percent slopes	Moderate wind erosion potential	Pratley (80%)	Clay content of surface (0.85)	18.6	0.1%
				Organic matter content of surface (0.40)		
				Carbonate content of surface (0.16)		
				Silt content of surface (0.08)		
				Rock fragment content of surface (0.01)		
RED	Real association, undulating	Very low wind erosion potential	Real (85%)	Carbonate content of surface (0.86)	169.9	0.6%
				Clay content of surface (0.67)		
				Organic matter content of surface (0.40)		
				Rock fragment content of surface (0.39)		
				Sand content of surface (0.27)		
SaC	Sabenyo clay loam, 1 to 5 percent slopes	High wind erosion potential	Sabenyo (85%)	Carbonate content of surface (0.86)	42.0	0.1%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Clay content of surface (0.76)		
				Sand content of surface (0.24)		
				Silt content of surface (0.04)		
				Rock fragment content of surface (0.00)		
SPD	Speck association, 1 to 8 percent slopes	Moderate wind erosion potential	Speck (70%)	Clay content of surface (0.71)	35.4	0.1%
				Silt content of surface (0.15)		
				Rock fragment content of surface (0.12)		
TAD	Eckrant-Rock outcrop association, 1 to 10 percent slopes	Low wind erosion potential	Eckrant (58%)	Clay content of surface (0.85)	696.0	2.4%
				Organic matter content of surface (0.40)		
				Rock fragment content of surface (0.14)		
				Silt content of surface (0.11)		
TAF	Eckrant-Rock outcrop association, 8 to 30 percent slopes	Low wind erosion potential	Eckrant (65%)	Clay content of surface (0.85)	470.8	1.6%
				Organic matter content of surface (0.40)		
				Rock fragment content of surface (0.17)		
				Silt content of surface (0.11)		
VaB	Valco clay loam, 0 to 2 percent slopes	High wind erosion potential	Valco (75%)	Carbonate content of surface (0.86)	65.4	0.2%
				Clay content of surface (0.67)		
				Sand content of surface (0.27)		
				Silt content of surface (0.05)		
				Rock fragment content of surface (0.02)		
Subtotals for Soil Survey Area					**2,813.4**	**9.7%**

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Totals for Area of Interest					**29,045.0**	**100.0%**

Rating	Acres in AOI	Percent of AOI
High wind erosion potential	14,145.9	48.7%
Low wind erosion potential	9,626.4	33.1%
Very low wind erosion potential	2,709.4	9.3%
Moderate wind erosion potential	2,546.1	8.8%
Null or Not Rated	13.1	0.0%
Totals for Area of Interest	**29,045.0**	**100.0%**

Rating Options—Wind Erosion Potential (TX) (Ranchtown - Talley Road Transmission Line)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Soil Qualities and Features

This folder contains tabular reports that present various soil qualities and features. The reports (tables) include all selected map units and components for each map unit. Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Soil Features (Ranchtown - Talley Road Transmission Line)

This table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage, or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (Ksat), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high.* It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Soil Features–Bexar County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
		In	*In*		*In*	*In*			
AuC—Austin silty clay, 2 to 5 percent slopes, moderately eroded									
Austin, moderately eroded	Paralithic bedrock	22- 29-39	—	Weakly coherent	0	0	None	High	Low
BrE—Brackett gravelly clay loam, 12 to 20 percent slopes									
Brackett	Paralithic bedrock	6- 12-20	—	Weakly coherent	0	0	None	Moderate	Low
BtE—Brackett-Eckrant association, 20 to 60 percent slopes									
Brackett	Paralithic bedrock	6- 12-20	—	Weakly coherent	0	0	None	Moderate	Low
Eckrant	Lithic bedrock	10- 12-20	—	Indurated	0	0	None	High	Low
Ca—Anhalt clay, 0 to 2 percent slopes									
Anhalt	Paralithic bedrock	20- 28-40	—	Moderately coherent	0	0	None	High	Low

Soil Features–Bexar County, Texas									
Map symbol and soil name	**Restrictive Layer**				**Subsidence**		**Potential for frost action**	**Risk of corrosion**	
	Kind	**Depth to top**	**Thickness**	**Hardness**	**Initial**	**Total**		**Uncoated steel**	**Concrete**
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
Cb—Crawford, stony and Bexar soils, 0 to 5 percent slopes									
Crawford, stony	Lithic bedrock	21-34-45	—	Indurated	0	0	None	High	Low
Bexar	Lithic bedrock	20-27-36	—	Indurated	0	0	None	High	Low
HnC2—Heiden clay, 3 to 5 percent slopes, eroded									
Heiden, moderately eroded	Densic material	40-58-65	10-40	noncoherent	0	0	None	High	Low
HtA—Branyon clay, 0 to 1 percent slopes									
Branyon		—	—		0	0	None	High	Moderate
HtB—Branyon clay, 1 to 3 percent slopes									
Branyon		—	—		0	0	None	High	Moderate
KaB—Atco loam, 1 to 3 percent slopes									
Atco		—	—		0	—	None	Moderate	Low
Kr—Krum clay, 1 to 5 percent slopes									
Krum		—	—		0	0	None	High	Low

Soil Features–Bexar County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
LvA—Lewisville silty clay, 0 to 1 percent slopes									
Lewisville		—	—		0	0	None	High	Low
LvB—Lewisville silty clay, 1 to 3 percent slopes									
Lewisville		—	—		0	0	None	High	Low
Or—Orif soils, moist, 0 to 3 percent slopes, frequently flooded									
Orif, moist		—	—		0	0	None	Low	Low
PaA—Patrick soils, 0 to 1 percent slopes, rarely flooded									
Patrick		—	—		0	—	None	High	Low
PaB—Patrick soils, 1 to 3 percent slopes, rarely flooded									
Patrick		—	—		0	—	None	High	Low
PaC—Patrick soils, 3 to 5 percent slopes, rarely flooded									
Patrick		—	—		0	—	None	High	Low

Soil Features–Bexar County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
Pt—Pits and Quarries, 1 to 90 percent slopes									
Pits		—	—		0	—			
TaB—Eckrant cobbly clay, 1 to 8 percent slopes									
Eckrant	Lithic bedrock	4- 11-20	—	Indurated	0	0	None	High	Low
TaC—Eckrant very cobbly clay, 5 to 15 percent slopes									
Eckrant	Lithic bedrock	10- 12-20	—	Indurated	0	0	None	High	Low
TaD—Eckrant-Rock outcrop association, 8 to 30 percent slopes									
Eckrant	Lithic bedrock	4- 12-20	—	Indurated	0	0	None	High	Low
Rock outcrop	Lithic bedrock	0- 0-2	—	Indurated	0	0			
Tb—Eddy gravelly clay loam, 1 to 8 percent slopes									
Eddy	Paralithic bedrock	3- 4-15	—	Weakly coherent	0	—	None	Moderate	Low
Tf—Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded									
Tinn		—	—		0	0	None	High	Low
Frio		—	—		0	0	None	High	Low

Soil Features–Bexar County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
W—Water									
Water		—	—		—	—			

Soil Features–Medina County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
		In	*In*		*In*	*In*			
AtA—Atco loam, 0 to 1 percent slopes									
Atco	Densic bedrock	29-48-71	—	noncoherent	0	0	None	Moderate	Low
AtB—Atco loam, 1 to 3 percent slopes									
Atco	Densic bedrock	29-48-71	—	noncoherent	0	0	None	Moderate	Low
CsA—Castroville clay loam, 0 to 1 percent slopes									
Castroville		—	—		0	—	None	High	Low
CsB—Castroville clay loam, 1 to 3 percent slopes									
Castroville		—	—		0	—	None	High	Low

Soil Features–Medina County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
DNC—Dina association, gently undulating									
Dina	Lithic bedrock	20- 31-40	—	Indurated	0	—	None	High	Low
Do—Divot clay loam, occasionally flooded									
Divot		—	—		0	—	None	High	Low
KAD—Kavett-Tarrant association, undulating									
Kavett	Petrocalcic	10- 14-20	4-17	Indurated	0	—	None	High	Low
	Lithic bedrock	11- 16-26	—	Indurated	0	—	None	High	Low
Tarrant, pe <44	Lithic bedrock	6- 16-20	—	Indurated	0	—	None	High	Low
KnA—Knippa clay, 0 to 1 percent slopes									
Knippa		—	—		0	0	None	High	Low
KnB—Knippa clay, 1 to 3 percent slopes									
Knippa		—	—		0	0	None	High	Low

Soil Features–Medina County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
McB—Montell clay, 1 to 3 percent slopes									
Montell		—	—		0	—	None	High	High
MeB—Stephen clay, 1 to 3 percent slopes									
Stephen	Paralithic bedrock	14- 17-20	—	Weakly coherent	0	—	None	High	Low
Or—Orif soils, 0 to 3 percent slopes, frequently flooded									
Orif		—	—		0	0	None	Low	Low
PrB—Pratley clay, 0 to 3 percent slopes									
Pratley	Petrocalcic	22- 39-40	0-6	Indurated	0	0	None	High	Low
	Paralithic bedrock	22- 40-46	—	Weakly coherent	0	0	None	High	Low
RED—Real association, undulating									
Real	Paralithic bedrock	8- 13-20	—	Weakly coherent	0	—	None	Moderate	Low
SaC—Sabenyo clay loam, 1 to 5 percent slopes									
Sabenyo		—	—		0	—	None	Moderate	Low

Soil Features–Medina County, Texas									
Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		Low-RV-High	*Range*		*Low-High*	*Low-High*			
SPD—Speck association, 1 to 8 percent slopes									
Speck	Lithic bedrock	14-15-20	—	Indurated	0	0	None	High	Low
TAD—Eckrant-Rock outcrop association, 1 to 10 percent slopes									
Eckrant	Lithic bedrock	4- 11-20	—	Indurated	0	0	None	High	Low
Rock outcrop	Lithic bedrock	0- 0-2	—	Indurated	0	0			
TAF—Eckrant-Rock outcrop association, 8 to 30 percent slopes									
Eckrant	Lithic bedrock	4- 12-20	—	Indurated	0	0	None	High	Low
Rock outcrop	Lithic bedrock	0- 0-2	—	Indurated	0	0			
VaB—Valco clay loam, 0 to 2 percent slopes									
Valco	Petrocalcic	8- 16-20	0-3	Strongly coherent	0	—	None	Moderate	Low

Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

Water Features (Ranchtown - Talley Road Transmission Line)

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. The kind of water table, apparent or perched, is given if a seasonal high water table exists in the soil. A water table is perched if free water is restricted from moving downward in the soil by a restrictive feature, in most cases a hardpan; there is a dry layer of soil underneath a wet layer. A water table is apparent if free water is present in all horizons from its upper boundary to below 2 meters or to the depth of observation. The water table kind listed is for the first major component in the map unit.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*		*Ft*				
AuC—Austin silty clay, 2 to 5 percent slopes, moderately eroded											
Austin, moderately eroded	D	High	Jan-Dec	—	—	—	—	—	None	—	None
BrE—Brackett gravelly clay loam, 12 to 20 percent slopes											
Brackett	D	High	Jan-Dec	—	—	—	—	—	None	—	None
BtE—Brackett-Eckrant association, 20 to 60 percent slopes											
Brackett	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
Eckrant	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
Ca—Anhalt clay, 0 to 2 percent slopes											
Anhalt	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
Cb—Crawford, stony and Bexar soils, 0 to 5 percent slopes											
Crawford, stony	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
Bexar	D	High	Jan-Dec	—	—	—	—	—	None	—	None
HnC2—Heiden clay, 3 to 5 percent slopes, eroded											
Heiden, moderately eroded	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
HtA—Branyon clay, 0 to 1 percent slopes											
Branyon	D	High	Jan-Dec	—	—	—	—	—	None	—	None
HtB—Branyon clay, 1 to 3 percent slopes											
Branyon	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
KaB—Atco loam, 1 to 3 percent slopes											
Atco	B	Low	Jan-Dec	—	—	—	—	—	None	—	None
Kr—Krum clay, 1 to 5 percent slopes											
Krum	C	High	Jan-Dec	—	—	—	—	—	None	—	None
LvA—Lewisville silty clay, 0 to 1 percent slopes											
Lewisville	C	Medium	Jan-Dec	—	—	—	—	—	None	—	None

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*		*Ft*				
LvB—Lewisville silty clay, 1 to 3 percent slopes											
Lewisville	C	High	Jan-Dec	—	—	—	—	—	None	—	None
Or—Orif soils, moist, 0 to 3 percent slopes, frequently flooded											
Orif, moist	A	Negligible	Jan-Mar	—	—	—	—	—	None	—	
			Apr-Oct	—	—	—	—	—	None	Brief (2 to 7 days)	Frequent
			Nov-Dec	—	—	—	—	—	None	—	
PaA—Patrick soils, 0 to 1 percent slopes, rarely flooded											
Patrick	B	Negligible	Jan-May	—	—	—	—	—	None	—	Rare
			Jun-Sep	—	—	—	—	—	None	—	
			Oct-Dec	—	—	—	—	—	None	—	Rare
PaB—Patrick soils, 1 to 3 percent slopes, rarely flooded											
Patrick	B	Low	Jan-May	—	—	—	—	—	None	—	Rare
			Jun-Sep	—	—	—	—	—	None	—	
			Oct-Dec	—	—	—	—	—	None	—	Rare
PaC—Patrick soils, 3 to 5 percent slopes, rarely flooded											
Patrick	B	Low	Jan-May	—	—	—	—	—	None	—	Rare
			Jun-Sep	—	—	—	—	—	None	—	
			Oct-Dec	—	—	—	—	—	None	—	Rare
Pt—Pits and Quarries, 1 to 90 percent slopes											
Pits	D	Low	Jan-Dec	—	—	—	—	—	None	—	None
TaB—Eckrant cobbly clay, 1 to 8 percent slopes											
Eckrant	D	Medium	Jan-Dec	—	—	—	—	—	None	—	None
TaC—Eckrant very cobbly clay, 5 to 15 percent slopes											
Eckrant	D	High	Jan-Dec	—	—	—	—	—	None	—	None

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*		*Ft*				
TaD—Eckrant-Rock outcrop association, 8 to 30 percent slopes											
Eckrant	D	High	Jan-Dec	—	—	—	—	—	None	—	None
Rock outcrop	D	Low	Jan-Dec	—	—	—	—	—	None	—	None
Tb—Eddy gravelly clay loam, 1 to 8 percent slopes											
Eddy	D	Medium	Jan-Dec	—	—	—	—	—	None	—	None
Tf—Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded											
Tinn	D	High	Jan	—	—	—	—	—	None	—	
			Feb-May	—	—	—	—	—	None	Brief (2 to 7 days)	Frequent
			Jun-Dec	—	—	—	—	—	None	—	
Frio	C	Low	Jan	—	—	—	—	—	None	—	
			Feb-May	—	—	—	—	—	None	Brief (2 to 7 days)	Frequent
			Jun-Dec	—	—	—	—	—	None	—	
W—Water											
Water	D		Jan-Dec	—	—	—	—	—	—	—	

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*		*Ft*				
AtA—Atco loam, 0 to 1 percent slopes											
Atco	B	Negligible	Jan-Dec	—	—	—	—	—	None	—	None
AtB—Atco loam, 1 to 3 percent slopes											
Atco	B	Low	Jan-Dec	—	—	—	—	—	None	—	None

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*		*Ft*				
CsA—Castroville clay loam, 0 to 1 percent slopes											
Castroville	B	Negligible	Jan-Dec	—	—	—	—	—	None	—	None
CsB—Castroville clay loam, 1 to 3 percent slopes											
Castroville	B	Low	Jan-Dec	—	—	—	—	—	None	—	None
DNC—Dina association, gently undulating											
Dina	C	Medium	Jan-Dec	—	—	—	—	—	None	—	None
Do—Divot clay loam, occasionally flooded											
Divot	C	Low	Jan-Apr	—	—	—	—	—	None	—	
			May-Sep	—	—	—	—	—	None	Very brief (4 to 48 hours)	Occasional
			Oct-Dec	—	—	—	—	—	None	—	
KAD—Kavett-Tarrant association, undulating											
Kavett	D	Medium	Jan-Dec	—	—	—	—	—	None	—	None
Tarrant, pe <44	D	High	Jan-Dec	—	—	—	—	—	None	—	None
KnA—Knippa clay, 0 to 1 percent slopes											
Knippa	C	Low	Jan-Dec	—	—	—	—	—	None	—	None
KnB—Knippa clay, 1 to 3 percent slopes											
Knippa	C	Medium	Jan-Dec	—	—	—	—	—	None	—	None
McB—Montell clay, 1 to 3 percent slopes											
Montell	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
MeB—Stephen clay, 1 to 3 percent slopes											
Stephen	D	Medium	Jan-Dec	—	—	—	—	—	None	—	None

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*		*Ft*				
Or—Orif soils, 0 to 3 percent slopes, frequently flooded											
Orif	A	Very low	Jan-Mar	—	—	—	—	—	None	—	
			Apr-Oct	—	—	—	—	—	None	Very brief (4 to 48 hours)	Frequent
			Nov-Dec	—	—	—	—	—	None	—	
PrB—Pratley clay, 0 to 3 percent slopes											
Pratley	C	Medium	Jan-Dec	—	—	—	—	—	None	—	None
RED—Real association, undulating											
Real	D	Medium	Jan-Dec	—	—	—	—	—	None	—	None
SaC—Sabenyo clay loam, 1 to 5 percent slopes											
Sabenyo	B	Low	Jan-Dec	—	—	—	—	—	None	—	None
SPD—Speck association, 1 to 8 percent slopes											
Speck	D	High	Jan-Dec	—	—	—	—	—	None	—	None
TAD—Eckrant-Rock outcrop association, 1 to 10 percent slopes											
Eckrant	D	Medium	Jan-Dec	—	—	—	—	—	None	—	None
Rock outcrop	D	Very low	Jan-Dec	—	—	—	—	—	None	—	None
TAF—Eckrant-Rock outcrop association, 8 to 30 percent slopes											
Eckrant	D	High	Jan-Dec	—	—	—	—	—	None	—	None
Rock outcrop	D	Low	Jan-Dec	—	—	—	—	—	None	—	None
VaB—Valco clay loam, 0 to 2 percent slopes											
Valco	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None

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halff

June 21, 2024
AVO 55396.001

Ms. Earthea Nance
Regional Administrator
U.S. Environmental Protection Agency
1201 Elm Street, Suite 500
Dallas, Texas 75270

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Nance:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Austin Ecological Services Field Office
U.S. Fish and Wildlife Service
1505 Ferguson Lane
Austin, Texas 78754

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

To Whom It May Concern:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Tony Franklin, Field Representative
Area 3 Alamo SWCD
Texas State Soil and Water Conservation Board
1497 Country View Lane
Temple, Texas 76504

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Franklin:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Ms. Kendria Ray, Field Representative
Area 2 Medina Valley SWCD
Texas State Soil and Water Conservation Board
257 State Highway 173 North, Suite 103
Hondo, Texas 78861

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Ray:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

Ms. Karen Sanchez
Legal Assistant
Railroad Commission of Texas
P.O. Box 12967
Austin, Texas 78711

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Sanchez:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

CHRISTI CRADDICK, *CHAIRMAN*
WAYNE CHRISTIAN, *COMMISSIONER*
JIM WRIGHT, *COMMISSIONER*

ALEXANDER C. SCHOCH, *GENERAL COUNSEL*
GENERAL LAW SECTION

THE STATE OF TEXAS

RAILROAD COMMISSION OF TEXAS
OFFICE OF GENERAL COUNSEL

July 8, 2024

Jody Urbanovsky
Halff
1201 N. Bowser Road
Richardson, Texas 75081

Re: Open Records Request filed on June 27, 2024. Copy of letter enclosed

Dear Ms. Urbanovsky,

We do not file our information by address or map descriptions. All of our information is filed by lease number, API number, T-4 pipeline permit number or other RRC identifying numbers.

You can use our online GIS mapping system to determine if there are any RRC regulated facilities on or near the property you are interested in. Once you have any RRC identifying numbers for those facilities, we will be happy to search for any available responsive information.

The mapping system can be found on our website at rrc.texas.gov.

Sincerely,

Karen Sanchez

Karen Sanchez
Legal Assistant

RECEIVED
JUL 1 2 2024
By HALFF

halff

June 21, 2024
AVO 55396.001

FILED
2024 JUN 27 AM 8: 02
OFFICE OF GEN COUNSEL
RAILROAD COMMISSION
OF TEXAS

Ms. Karen Sanchez
Legal Assistant
Railroad Commission of Texas
P.O. Box 12967
Austin, Texas 78711

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

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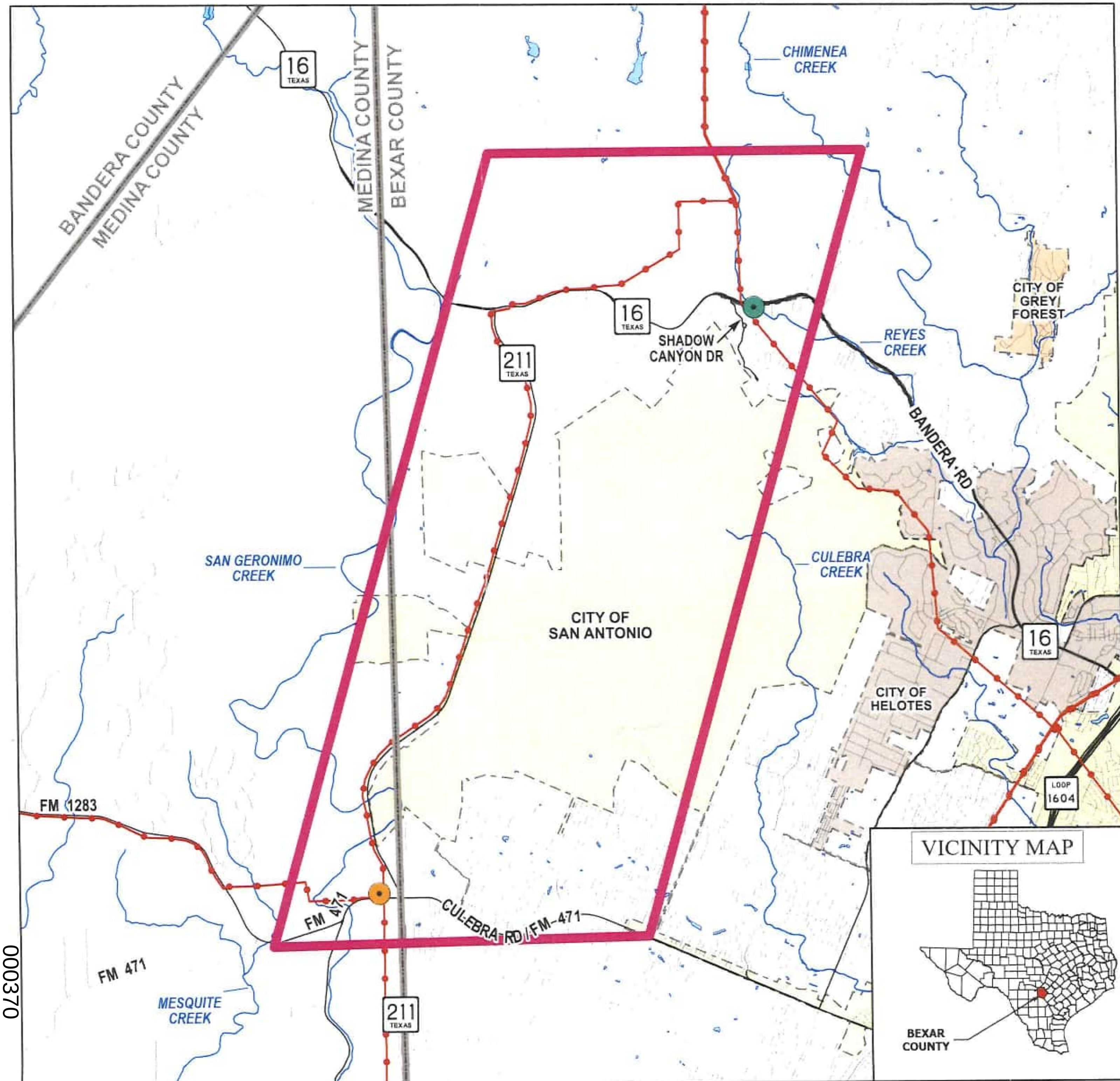
Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map



RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT

LEGEND

- STUDY AREA
- RANCHTOWN SUBSTATION
- TALLEY ROAD SUBSTATION
- EXISTING TRANSMISSION LINE
- COUNTY BOUNDARY
- CITY LIMITS
- WATERBODY
- STREAM
- MINOR ROADWAY
- MAJOR ROADWAY
- RAILROAD

Notes:

1. Some legend symbols are enlarged for easier identification.

2. Data is for display purposes only. All features and boundaries have been approximated based on information gathered from review of public resources and from field reconnaissance.

Date Plotted: 06/07/2024

Date Revised: 06/07/2024

0 8,000 16,000

FEET

halff

halff

June 21, 2024
AVO 55396.001

Mr. Chad Ellis
Chief Executive Director
Texas Agricultural Land Trust
P.O. Box 6152
San Antonio, Texas 78209

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Ellis:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Joe Ranzau, President
Texas Cave Management Association
2186 Jackson Keller Street, Suite 533
San Antonio, Texas 78214

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Ranzau:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Ms. Kelly Keel, Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087 (MC 109)
Austin, Texas 78711

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Keel:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: NEPA <NEPA@tceq.texas.gov>
Sent: Thursday, July 18, 2024 1:57 PM
To: Jody Urbanovsky
Subject: RANCHTOWN- TALLEY ROAD 138 TRANSMISSION LINE PROJECT NEPA REQUEST RESPONSE
Attachments: NEPA_Response Letter_Bexar and Medina County_07.18.2024.pdf; doc00272520240626083154.pdf

Dear Mr. Urbanovsky,

Attached is the NEPA review by TCEQ for the proposed project "RANCHTOWN- TALLEY ROAD 138 TRANSMISSION LINE PROJECT" in Bexar and Medina County.

Please feel free to contact us if you require additional information.

Have a great day!

Stefania Muñoz
Information Specialist II
External Relations Division
Texas Commission on Environmental Quality
Ph: 512-239-5538
stefania.munoz@tceq.texas.gov

National Environmental Policy Act
www.tceq.texas.gov/permitting/nepa

How's our Customer service? Please fill out our **Customer Satisfaction Survey**.

-----Original Message-----
From: Calen Roome Calen.Roome@tceq.texas.gov
Sent: Wednesday, June 26, 2024 8:30 AM
To: NEPA NEPA@tceq.texas.gov
Subject: FW:

Good morning, please process the attached as NEPA. It was received via mail on 6/24/24.

I will notify Exec that we're handling.

Thanks,
Calen

-----Original Message-----
From: irgw55@tceq.texas.gov <irgw55@tceq.texas.gov>
Sent: Wednesday, June 26, 2024 8:32 AM
To: Calen Roome <Calen.Roome@tceq.texas.gov>
Subject:

TASKalfa 5004i
[00:17:c8:db:ae:67]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 18, 2024

Jody Urbanovsky
Project Manager
Halff
14800 St Marys Ln #160
Houston, TX 77079

Via: **E-mail**

Re: **TCEQ NEPA Request #2024-198.** RANCHTOWN- TALLEY ROAD 138 TRANSMISSION LINE PROJECT**. Bexar and Medina County.**

Dear Mr. Urbanovsky,

The Texas Commission on Environmental Quality (TCEQ) has reviewed the above-referenced project and offers the following comments:

The proposed action is located in Bexar County, which is designated nonattainment for the 2015 eight-hour ozone National Ambient Air Quality Standard (NAAQS) with a classification of moderate; therefore, federal Clean Air Act, §176(c) general conformity requirements apply. Per federal general conformity regulations at 40 CFR §93.153, a conformity demonstration may be required when the total projected direct and indirect volatile organic compounds (VOC) and nitrogen oxides (NOX) emissions—precursor pollutants that lead to the formation of ozone—from an applicable federal action are equal to or exceed the de minimis emissions level of 100 tons per year for ozone NAAQS moderate nonattainment areas.
For emissions analyses conducted to determine general conformity applicability, the TCEQ recommends using a methodology consistent with the requirements at 40 CFR §93.159.

The Office of Water does not anticipate significant long term environmental impacts from this project as long as construction and waste disposal activities associated with it are completed in accordance with applicable local, state, and federal environmental permits, statutes, and regulations. We recommend that the applicant take necessary steps to ensure that best management practices are used to control runoff from construction sites to prevent detrimental impact to surface and ground water.

The proposed project is located in an area designated as a Sole Source Aquifer by US E.P.A. Specifically, the site appears to be within the Edwards Aquifer Recharge, Transition, and Contributing Zones, all of which are regulated under TCEQ's Edwards Aquifer Protection Program (EAPP) rules, 30 TAC Chapter 213. The Environmental Assessment should include a review of these rules to determine what controls, abatement plans, and applications may be needed to protect the aquifer and comply with the regulations.
Any debris or waste disposal should be at an appropriately authorized disposal facility.

Thank you for the opportunity to review this project. If you have any questions, please contact the agency NEPA coordinator at (512) 239-5538 or NEPA@tceq.texas.gov

Sincerely,

Ryan Vise,
Division Director
External Relations

TCEQ Route Slip

Date: 4/24/24

TO:	ERD	FROM:	EXEC
Building:	Mail Code: 118	Building:	Mail Code: 109
Division:		Division:	
Section:		Section:	

Attachment(s) for:

- ☐ Information
- ☐ Review
- ☐ Comment/Response
- ☐ Approval
- ☐ Your Signature
- ☐ Signature of: ____________

Comments: MALTA- Please let me know once received a handle as appropriate.

Thank you, Dennise and Keisha

TCEQ-0001 (Rev. 2-15-05)

halff

June 21, 2024
AVO 55396.001

Ms. Kelly Keel, Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087 (MC 109)
Austin, Texas 78711

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

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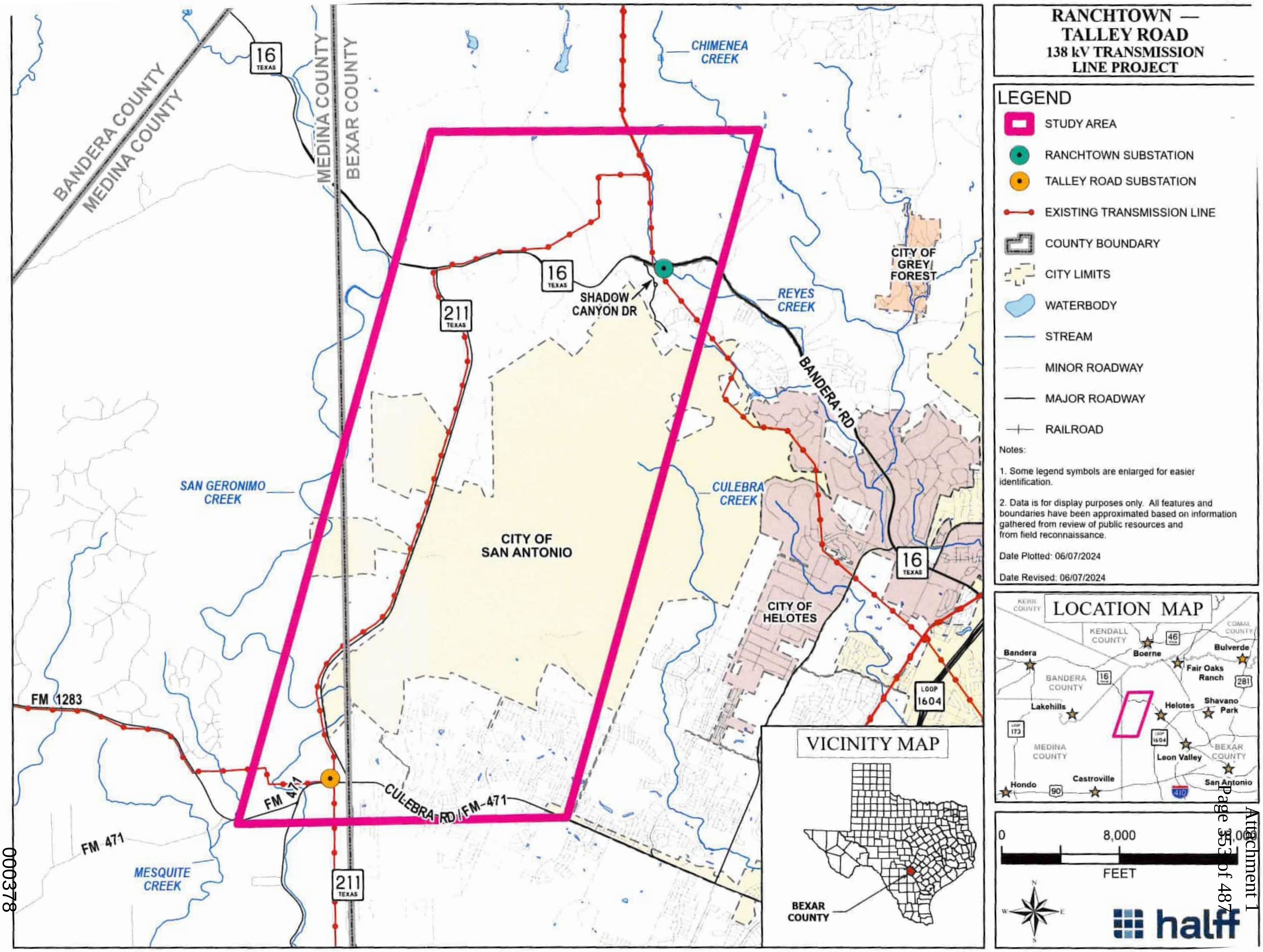
Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map


RANCHTOWN —
TALLEY ROAD
138 kV TRANSMISSION
LINE PROJECT
LEGEND
STUDY AREA
RANCHTOWN SUBSTATION
TALLEY ROAD SUBSTATION
EXISTING TRANSMISSION LINE
COUNTY BOUNDARY
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2. Data is for display purposes only. All features and boundaries have been approximated based on information gathered from review of public resources and from field reconnaissance.
Date Plotted: 06/07/2024
Date Revised: 06/07/2024
LOCATION MAP
KERR COUNTY
KENDALL COUNTY
COMAL COUNTY
BANDERA COUNTY
MEDINA COUNTY
BEXAR COUNTY
Bandera
Boerne
Bulverde
Fair Oaks Ranch
Lakehills
Helotes
Shavano Park
Leon Valley
Hondo
Castroville
San Antonio
0
8,000
FEET
halff
VICINITY MAP
BEXAR COUNTY
BANDERA COUNTY
MEDINA COUNTY
BEXAR COUNTY
CHIMENEA CREEK
REYES CREEK
CITY OF GREY FOREST
SHADOW CANYON DR
BANDERA RD
CULEBRA CREEK
SAN GERONIMO CREEK
CITY OF SAN ANTONIO
CITY OF HELOTES
LOOP 1604
FM 1283
FM 471
CULEBRA RD / FM-471
MESQUITE CREEK
16
211

halff

June 21, 2024
AVO 55396.001

Mr. Dan Harmon
Aviation Division Director
Texas Department of Transportation
6230 East Stassney Lane
Austin, Texas 78744

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Harmon:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Doug Booher
Environmental Affairs Division Director
Texas Department of Transportation
6230 East Stassney Lane
Austin, Texas 78744

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Booher:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

Mr. Humberto Gonzalez, Jr., Director
Planning and Programming
Texas Department of Transportation
6230 East Stassney Lane
Austin, Texas 78744

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Gonzalez:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Charles Benavidez, P.E.
San Antonio District Engineer
Texas Department of Transportation
4615 NW Loop 410
San Antonio, Texas 78229

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Benavidez:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

Dr. Dawn Buckingham
Commissioner
Texas General Land Office
1700 North Congress Avenue
Austin, Texas 78701

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Commissioner Buckingham:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

TEXAS GENERAL LAND OFFICE
COMMISSIONER DAWN BUCKINGHAM, M.D.

July 1, 2024

Jody Urbanovsky
Halff Associate, Inc.
1201 North Bowser Road
Richardson, TX 75081-2275

Re: CPS Energy's proposed Ranchtown – Talley Road 138 kV Transmission Line Project in Bexar and Medina Counties, Texas

Dear Mr. Urbanovsky:

On behalf of Commissioner Buckingham, I would like to thank you for your letter concerning the above- referenced project.

Using your map depicting the project's study area, it does not appear that the General Land Office will have any environmental issues or land use constraints at this time.

When a final route for this proposed project has been determined, please contact me and we can assess the route to determine if the project will cross any streambeds or Permanent School Fund (PSF) land that would require an easement from our agency.

In the interim, if you would like to speak to me further about this project, I can be reached by email at jeff.burroughs@glo.texas.gov or by phone at (512) 463-7845.

Again, thank you for your inquiry.

Sincerely,

Jeff Burroughs
Manager, Right-of-Way Department
Leasing Operations

RECEIVED
JUL 08 2024
By Halff

TEXAS GENERAL LAND OFFICE
COMMISSIONER DAWN BUCKINGHAM, M.D.

July 1, 2024

Jody Urbanovsky
Halff Associate, Inc.
1201 North Bowser Road
Richardson, TX 75081-2275

Re: CPS Energy's proposed Ranchtown – Talley Road 138 kV Transmission Line Project in Bexar and Medina Counties, Texas

Dear Mr. Urbanovsky:

On behalf of Commissioner Buckingham, I would like to thank you for your letter concerning the above- referenced project.

Using your map depicting the project's study area, it does not appear that the General Land Office will have any environmental issues or land use constraints at this time.

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In the interim, if you would like to speak to me further about this project, I can be reached by email at jeff.burroughs@glo.texas.gov or by phone at (512) 463-7845.

Again, thank you for your inquiry.

Sincerely,

Jeff Burroughs
Manager, Right-of-Way Department
Leasing Operations

RECEIVED
JUL 0 8 2024
By Halff

1700 North Congress Avenue, Austin, Texas 78701-1495
P.O. Box 12873, Austin, Texas 78711-2873
512-463-5001 glo.texas.gov

halff

June 21, 2024
AVO 55396.001

Mr. Edward Lengel, Executive Director
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Lengel:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: noreply@thc.state.tx.us
Sent: Tuesday, July 9, 2024 10:39 AM
To: Jody Urbanovsky; reviews@thc.state.tx.us
Subject: Talley Road 138 kV Transmission Line Project
Attachments: 202411678L.pdf

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under the Antiquities Code of Texas
THC Tracking #202411678
Date: 07/09/2024
Talley Road 138 kV Transmission Line Project
NW of FM 471 and SH 211

Description: Add new 138 kV transmission line circuit utilizing structures with an existing transmission line.

Dear Jody Urbanovsky:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the Executive Director of the Texas Historical Commission (THC), pursuant to review under the Antiquities Code of Texas.

A letter response is attached. We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: caitlin.brashear@thc.texas.gov, emily.dylla@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Bradford Patterson
Chief Deputy State Historic Preservation Officer

Please do not respond to this email.

TEXAS HISTORICAL COMMISSION
REAL PLACES TELLING REAL STORIES

P.O. Box 12276
Austin, Texas 78711-2276
512-463-6100
thc.texas.gov

July 9, 2024

Jody Urbanovsky
Halff
1201 N. Bowser Road
Richardson, TX 75081

Re: Project Review under the Antiquities Code of Texas, Talley Road 138 kV Transmission Line Project (THC Tracking No. 202411678)

Dear Jody Urbanovsky,

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the Executive Director of the Texas Historical Commission (THC), pursuant to review under the Antiquities Code of Texas.

The review staff, led by Emily Dylla and Caitlin Brashear, has completed its review. Per our records, there is a plethora of recorded archeological sites within the study area, some of which are listed as eligible for or have undetermined eligibility for listing in the National Register of Historic Places (NRHP) or as a State Antiquities Landmark (SAL). In addition, much of the Study Area has not undergone previously archeological investigation or was surveyed using outdated and inadequate methods to identify archeological sites. Because of these reasons, it is likely an archeological survey of the proposed Project Area will be required. Regarding above-ground resources, there are known historic resources located in the identified study area including the R. L. White Ranch, which was listed in the National Register of Historic Places (NRHP) in 2008 and designated as a Recorded Texas Historic Landmark (RTHL) in 2012.

We recommend consulting with a professional archeologist early in the project process to perform a comprehensive records search for previously recorded historic properties to be avoided, and to identify high-probability areas for archeological survey. Federal regulations require consultation with the USACE and other appropriate agencies to determine if there are any jurisdictional lands along the route. If the project will ultimately involve a federal undertaking, compliance with Section 106 of the National Historic Preservation Act will be required. If any portion of the project should cross lands or waters owned or controlled by the State of Texas or any political subdivision thereof or have the potential to affect a State Antiquities Landmark, those areas will also be subject to the Antiquities Code of Texas, and a Texas Antiquities Permit will be required before conducting survey across these lands. Once the route has been finalized and all regulatory jurisdictions have been established, a qualified professional archeologist should submit a scope of work meeting all applicable state and federal requirements for our review. We welcome submissions through our online eTRAC system. Links to the eTRAC portal and a user guide can be found on our website at https://www.thc.texas.gov/etrac-system.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: emily.dylla@thc.texas.gov and caitlin.brashear@thc.texas.gov.

Sincerely,

E. Dylla

For Bradford Patterson
Deputy Executive Director for Preservation Programs
Texas Historical Commission

BP | ed

halff

June 21, 2024
AVO 55396.001

The Honorable Andrew Murr
State Representative, House District 53
Texas House of Representatives
507 Earl Garrett Street
Kerrville, Texas 78028

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear State Representative Murr:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Mark Dorazio
State Representative, House District 122
Texas House of Representatives
4634 De Zavala Road
San Antonio, Texas 78249

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear State Representative Dorazio:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Ms. Lori Olson
Texas Land Trust Council
P.O. Box 2677
Wimberley, Texas 78676

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Olson:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: Lori Olson <lori@texaslandtrustcouncil.org>
Sent: Tuesday, July 2, 2024 1:58 PM
To: Jody Urbanovsky
Subject: Bexar Co Transmission line

Jody,
I am in receipt of your letter requesting information about environmental and land constraints for the Tally Road transmission line project. For this and future projects, you might consult the national conservation easement database (NCED) at conservationeasement.us to avoid properties with permanent conservation easements on them (many with federal funding/nexus).
Best,
Lori

Lori Olson, Executive Director
Texas Land Trust Council
512.994.8582
www.texaslandtrustcouncil.org

TEXAS
LAND TRUST
COUNCIL

halff

June 21, 2024
AVO 55396.001

Mr. Mark Steinbach, Executive Director
Texas Land Conservancy
P.O. Box 162481
Austin, Texas 78716

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Steinbach:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Transmitted via U.S. mail and email: whab@tpwd.texas.gov

Ms. Laura Zebehazy, Program Leader
Habitat Assessment Program
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Zebehazy:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: WHAB <WHAB@tpwd.texas.gov>
Sent: Friday, June 21, 2024 9:46 AM
To: Jody Urbanovsky
Cc: WHAB
Subject: TPWD has received your project review request

This is an automated message to inform you that the Wildlife Habitat Assessment (WHAB) program has received your email. Please note that responses to requests for project review generally take approximately 45 days to complete, and project schedules should accommodate the review timeline. Responses may be delayed due to workload and lack of staff. If you wish to speak to the biologist who will review your project, please visit https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/habitat_assessment/media/whab-map-2020.jpg for a staff directory by area of responsibility. Thank you.

From: Russell Hooten <Russell.Hooten@tpwd.texas.gov>
Sent: Friday, August 2, 2024 12:23 PM
To: Jody Urbanovsky
Cc: Russell Hooten
Subject: TPWD Review (#52534) Ranchtown to Talley 138-kV, Bexar/Medina Cos
Attachments: WL52534 Ranchtown to Talley 138kv Bexar_Medina C 08-02-2024.pdf

Good afternoon Jody,

TPWD's comments regarding the proposed project referenced in the Subject line above are attached. Please contact me with any questions.

Have a good weekend,

Russell

Russell Hooten

Environmental Review Biologist

Ecological and Environmental Planning Program

TPWD-Wildlife Division

1409 Waldron Road

Corpus Christi, TX 78418

russell.hooten@tpwd.texas.gov

361-431-6003 Office

361-414-3643 Cell

TEXAS PARKS & WILDLIFE

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August 2, 2024

Jody Urbanovsky
Halff
1201 N. Bowser Road
Richardson, TX 75081

RE: Proposed Ranchtown to Talley Road 138-kV transmission line and Substation Project, Bexar and Medina Counties, Texas
AVO 55396.001

Dear Mr. Urbanovsky:

Texas Parks and Wildlife Department (TPWD) received the preliminary request regarding the project referenced above. On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUCT).

Under Texas Parks and Wildlife Code (PWC) section 12.001 l(b)(2) and (b)(3), TPWD has authority to provide recommendations and informational comments that will protect fish and wildlife resources to local, state, and federal agencies that approve, license, or construct developmental projects or make decisions affecting those resources. TPWD is providing input on this proposed project to facilitate the incorporation of beneficial management practices (BMP) during construction, operation, and maintenance that may assist the project proponent in minimizing impacts to the state's natural resources. Pursuant to PWC section 12.0011(b)(2) and (b)(3), TPWD offers the following comments and recommendations concerning this project.

Project Description

CPS Energy is proposing to construct a new 138-kilovolt (kV) transmission line in Bexar and Medina Counties, Texas. The proposed line would begin at the existing Ranchtown Substation, located south of State Highway (SH) 16 approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, and continue approximately 12.1 miles to the southwest to the existing Talley Road Substation, located northwest of the intersection of Farm-to-Market Road (FM) 471 and SH 211 in Medina County, Texas. From the Talley Road Substation, the proposed transmission line would utilize an existing transmission line corridor with vacant positions on the support structures to accommodate the new circuit for approximately 10.8 miles. The remaining 1.3 miles of the new line would also utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate a new circuit.

Comment: When new construction is the only feasible option, TPWD typically recommends routing new transmission lines along existing road, pipeline, transmission line or other utility right-of-way (ROW) or easements to reduce habitat fragmentation. By utilizing previously disturbed areas, existing utility corridors, county roads, railroads, and highway ROW, adverse impacts to fish and wildlife resources would be mitigated by avoiding and/or minimizing impacts to undisturbed habitats. TPWD appreciates that existing easements or ROW would be used to accomplish the proposed project.

Federal Regulations

Clean Water Act

Section 404 of the Clean Water Act (CWA) establishes a federal program to regulate the discharge of dredged and fill material into waters of the U.S., including wetlands. The U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) are responsible for making jurisdictional determinations and regulating wetlands and other waters under Section 404 of the CWA.

TPWD identified several aquatic resources in the project study area. These include:
- San Geronimo Creek
- Los Reyes Creek
- Tributaries of Culebra Creek

as well as named and unnamed springs and ponds, potential wetlands and other features, which may be natural or manmade.

Recommendation: TPWD appreciates that potential impacts to aquatic resources in the area may be minimized by constructing the new line using existing infrastructure. Waterways in the study area, including those that have been manipulated or are completely manmade, provide habitat for wildlife. Natural buffers contiguous to any wetland or aquatic system should remain undisturbed to preserve wildlife cover, food sources, and travel corridors.

BMP for erosion control and sediment runoff should be installed prior to construction and maintained until disturbed areas are permanently revegetated using site-specific native vegetation. BMP should be properly installed in order to effectively minimize the amount of sediment and other debris entering the waterways. During construction, trucks and equipment should use existing bridge or culvert structures to cross waterways, ponds or depressional wetlands, and equipment staging areas should be located in previously disturbed areas away from aquatic areas and outside of riparian corridors.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits taking, attempting to take, capturing, killing, selling, purchasing, possessing, transporting, and importing of migratory birds, their eggs, parts, or nests, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. The USFWS Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

Review of aerial photography and the Ecological Mapping Systems of Texas (EMST), indicate that the study area consists primarily of Ashe juniper and live oak mottes, woodlands, and shrublands and urban development.

> **Recommendation:** TPWD appreciates that the proposed project would be completed within existing transmission line corridors. If vegetation clearing is necessary to establish access roads to the existing ROW, widen the ROW, or complete construction, TPWD recommends scheduling vegetation clearing or trampling to occur outside of the March 15 - September 15 migratory bird nesting season in order to comply with the MBTA.
>
> If vegetation clearing must be scheduled to occur during the nesting season, TPWD recommends the vegetation to be impacted should be surveyed for active nests by a qualified biologist. Nest surveys should be conducted no more than five days prior to the scheduled clearing to ensure recently constructed nests are identified. If active nests are observed during surveys, TPWD recommends a 100-foot radius buffer of vegetation remain around nests until eggs have hatched and the young have fledged; however, the size of the buffer zone is dependent on various factors and can be coordinated with the local or regional USFWS office.

The potential exists for birds to collide with transmission lines and associated guy wires and static lines. Bird fatalities can also occur due to electrocution if perching birds simultaneously make contact with energized and grounded structures. Birds most susceptible of colliding with electrical transmission lines (e.g. egrets, waterfowl, and doves) occur on the Government Canyon State Natural Area eBird hotspot species list within the project's study area.

> **Recommendation:** TPWD strongly recommends that transmission lines should be marked with line markers or bird flight diverters to reduce the potential of birds flying into the lines. Line alterations to prevent bird electrocutions should not necessarily be implemented after such events occur as all electrocutions

may not be known or documented. Incorporation of preventative measures along portions of the routes that are most attractive to birds (as indicated by frequent sightings) prior to any electrocutions is a preferred alternative.

TPWD recommends the transmission line design should utilize avian safety features described in the publication:

Avian Power Line Interaction Committee (APLIC). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Edison Electric Institute and APLIC. Washington, D.C.

In particular, the overhead ground wire should be marked with line markers to increase its visibility. Additional recommendations are available in the document entitled, "*TPWD Recommendations for Electrical Transmission/Distribution Line Design and Construction*" available on TPWD's website.

Endangered Species Act

Federally listed animal species and their habitat are protected from "take" on any property by the Endangered Species Act (ESA). Take of a federally listed species can be allowed if it is "incidental" to an otherwise lawful activity and must be permitted in accordance with Section 7 or 10 of the ESA. Federally listed plants are not protected from take except on lands under federal jurisdiction or for which a federal nexus (i.e., permits or funding) exists. Take of a federally listed species or its habitat without allowance from the U.S. fish and Wildlife Service (USFWS) is a violation of the ESA.

Karst invertebrates

All five karst zones occur within the proposed project study area boundary. Over half of the proposed project study area is located in Karst Zones 1 and 2. Karst Zone 1 is defined as, "areas known to contain endangered karst invertebrate species" and Karst Zone 2 is defined as, "areas having a high probability of containing suitable habitat for endangered karst invertebrate species." Karst invertebrates are troglobites, spending their entire lives underground, inhabiting caves and mesocavernous voids in karst limestone. Surface activities that may fill voids, cap or seal cave entrances, alter surface vegetation or alter drainage patterns can affect karst invertebrates. Excavations or other surface activities could inadvertently alter subsurface cave habitat.

The Texas Natural Diversity Database (TXNDD) contains occurrence records for the Government Canyon Bat Cave meshweaver (*Cicurina vespera*) and Government Canyon Bat Cave spider (*Neoleptoneta microps*), federally listed endangered eyeless spiders occurring in karst features, near the project area.

Recommendation: Due to the potential for karst features or caves without surface expression to be encountered in the area, TPWD recommends that if any ground disturbing work is necessary (*e.g.*, replacing support structures) and a cave or karst feature is encountered, work should immediately cease in the vicinity of the feature, the feature should be covered, and a Section 10(a)(1)(A) permitted scientist should inspect the site as soon as possible to evaluate potential for protected species habitat. All other applicable void discovery protocols, as outlined in the April 27, 2022 (or most recent) USFWS Section 10(a)(1)(A) Karst Invertebrate Survey Requirements document, should be followed. Additionally, if caves or karst features are encountered in the project area during construction, TPWD recommends that no work take place within 50 meters (164 feet) of a known cave.

Maintaining native vegetation in areas containing karst features is important. Surface vegetation provides nutrients to the cave ecosystem directly through plant material being washed into the karst feature with water and indirectly by providing habitat and food for the animal communities that contribute nutrients to the karst ecosystem (such as cave crickets, small mammals, and other vertebrates). A healthy vegetative community protects the karst environment from contaminates and may also help control the spread of exotic species such as red imported fire ants (*Solenopsis invicta*) and tawny crazy ants (*Nylanderia fulva*). Loss of the vegetation community could lead to nutrient depletion. Maintaining native surface vegetation in the vicinity of karst features can also help minimize temperature fluctuations, maintain moisture regimes, reduce potential for contamination, and reduce sedimentation from soil erosion.

TPWD recommends contacting the USFWS-Ecological Services Office in Austin for more information regarding appropriate measures to take to ensure potential impacts to karst invertebrates are avoided and/or minimized.

Golden-cheeked warbler

The TXNDD contains occurrence records for the golden-cheeked warbler (*Setophaga chrysoparia*), a federally endangered species, in the project study area. Additionally, multiple research grade observations of golden-cheeked warblers have been documented in the iNaturalist application within the general project area. Golden-cheeked warbler’s nest only in Central Texas in mixed Ashe juniper and oak woodlands on slopes and in ravines and canyons. They eat insects and spiders found on the leaves and bark of oaks and other trees and use long strips of Ashe juniper bark and spider webs to build their nests. They migrate to Texas in March to nest and raise their young and leave in July to spend the winter in Mexico and Central America.

> **Recommendation:** If any vegetation trimming or clearing is necessary, TPWD recommends surveying for suitable golden-cheeked warbler habitat within the affected area according to USFWS guidelines, including a 300-foot buffer of the project site boundary, prior to clearing. Even if habitat for these species would not be directly impacted by vegetation removal, if nesting pairs are present in the surrounding vegetation, they could be disrupted by noise and activity during construction. Because the definition of take in the ESA includes harming or harassing a listed species, this disturbance could constitute a violation of the ESA. If suitable habitat for this species is present within the project area, TPWD recommends assuming presence for the species and conducting project activities outside of the breeding and nesting season in any area where suitable habitat may occur (with the appropriate authorization from the USFWS). TPWD recommends coordinating this project with the USFWS for species occurrence data, guidance, permitting, survey protocols, and mitigation for this federally listed species. If the USFWS determines that suitable habitat is present and that there is a possibility for "take", TPWD recommends enrolling in the Southern Edwards Plateau Habitat Conservation Plan (SEP-HCP).

State Regulations

Parks and Wildlife Code, Chapter 64-Birds

State law prohibits any take or possession of nongame birds, including their eggs and nests. Laws and regulations pertaining to state-protection of nongame birds are contained in chapter 64 of the PWC; specifically, section 64.002 provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. PWC section 64.003, regarding destroying nests or eggs, provides that, no person may destroy or take the nests, eggs, or young and any wild game bird, wild bird, or wild fowl. PWC chapter 64 does not allow for incidental take.

Although not documented in the TXNDD, many bird species which are not listed as threatened or endangered are protected by chapter 64 of the PWC and are known to be year-round or seasonal residents or seasonal migrants through the proposed project area.

Recommendation: Please review the *Federal Regulations: Migratory Bird Treaty Act* section above for recommendations as they are applicable for chapter 64 of the PWC compliance.

Parks and Wildlife Code, Section 68.015

PWC regulates state listed threatened and endangered animal species. The capture, trap, take, or killing of state listed threatened and endangered animal species is unlawful unless expressly authorized under a permit issued by the USFWS or TPWD. A copy of *TPWD Guidelines for Protection of State-Listed Species*, which includes a list of penalties for take of species, can be found on the TPWD Wildlife Habitat Assessment Program website. State listed species may only be handled by persons with appropriate authorization from the TPWD Wildlife Permits Office. For more information regarding Wildlife Permits, please contact the Wildlife Permits Office at (512) 389-4647.

The potential occurrence of state listed species in the project area is primarily dependent upon the availability of suitable habitat. Direct impacts to high quality or suitable habitat therefore are directly proportional to the magnitude and potential to directly impact state-listed species. State listed reptiles that are typically slow moving or unable to move due to cool temperatures are especially susceptible to being directly impacted during ROW clearing and construction of the transmission line.

Recommendation: TPWD recommends reviewing the most current TPWD annotated county lists of rare species for Bexar and Medina Counties, as state listed species could be present depending upon habitat availability. These lists are available online at the TPWD Wildlife Diversity website. Environmental documents prepared for the project should include an inventory of existing natural resources within the proposed project ROW. Specific evaluations should be designed to predict project impacts upon these natural resources including potential impacts to state listed species.

The following state listed species have the potential to occur within the study area if suitable habitat is available:

Cascade Caverns salamander (*Eurycea latitans*)
Texas salamander (*E. neotenes*)
Texas horned lizard (*Phrynosoma cornutum*)
Texas tortoise (*Gopherus berlandieri*)

Cascade Caverns salamander and Texas salamander

Occurrences of the Texas salamander have been documented in the area by both TXNDD occurrence records and research grade observations in the iNaturalist TPWD-sponsored Herps of Texas Project. Occurrences of the Cascade Caverns salamander in the area have been documented by research grade observations in the iNaturalist TPWD-sponsored Herps of Texas Project. Both species occur in springs, streams, and caves with rocky or cobble beds.

> **Recommendation:** Please review the *Federal Regulations: Clean Water Act* section above for recommendations as they are applicable as BMP that would minimize potential negative impacts to amphibians including the Cascade Caverns salamander and Texas salamander.

Texas horned lizard

Research grade observations of Texas horned lizards have been documented in the iNaturalist TPWD-sponsored Herps of Texas Project within the general project area. This species can be found in open, arid, and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees. If present in the general project area, the Texas horned lizard could be impacted by ground disturbing activities. Texas horned lizards may hibernate on-site in loose soils a few inches below ground during the cooler months from September/October to March/April. Construction in these areas could harm hibernating lizards. Horned lizards are active above ground when temperatures exceed 75 degrees Fahrenheit. If horned lizards (nesting, gravid females, newborn young, lethargic from cool temperatures or hibernation) cannot move away from noise and approaching construction equipment, they could be negatively affected by construction activities.

> **Recommendation:** TPWD recommends avoiding disturbance of the Texas horned lizard, its burrows, and colonies of its primary food source, the harvester ant (*Pogonomyrmex* sp.), during clearing and construction. TPWD recommends a permitted biological monitor be present during construction to attempt to capture and relocate Texas horned lizards, if found. If the presence of a biological monitor is not feasible, Texas horned lizards observed during construction should be allowed to safely leave the site on their own.

Texas tortoise

The Texas tortoise occurs primarily in open woodlands and brush. It feeds primarily on fruits of prickly pear and succulent plants. Occurrences of the Texas tortoise I the project area have been documented in the TXNDD. Texas tortoises have low fecundity; individuals take over 10 years to reach maturity and females do not reproduce every year. Nesting occurs in spring and summer. The Texas tortoise has a home range of approximately five to ten acres. As indicated in the information provided, suitable habitat for the Texas tortoise appears to occur within the project study area. Tortoises are often found near or at the base of prickly pear cactus and may seek shade by crawling under parked vehicles.

Recommendation: TPWD recommends reviewing the Texas tortoise BMP document available online at TPWD's Wildlife Habitat Assessment Program homepage. Contractors and other staff should be made aware that in south-central Texas, the Texas tortoise is generally inactive from December through January and is therefore likely to be undetectable in a project area during this time. TPWD recommends a biological monitor be on site during any vegetation clearing to inspect sites subject to disturbance that may provide cover for tortoises (e.g., bases of prickly pear cactus) or provide sites for tortoise pallets (shallow excavations typically at the base of vegetation that are opportunistically occupied by tortoises). As indicated above, tortoises may seek cover (shade) underneath parked vehicles; therefore, TPWD recommends that before driving vehicles that have been parked within the project area, contractors should check underneath the vehicles to ensure no tortoises are present.

If a tortoise is located at the project site, it should be relocated only if it is found in an area in which imminent danger is present. Individuals that must be relocated should be transported to the closest suitable habitat outside of the proposed disturbance area but preferably within its five to ten acre range. After tortoises are removed from the immediate project area, TPWD recommends constructing an exclusion fence as described above under *General Construction Recommendations*.

Reduced speed limits should also be established and enforced in areas in which state listed reptiles could occur.

When inactive, tortoises may occupy the shallow depressions or pallets that are scratched out at the base of vegetative cover; tortoises may also be found sheltering in burrows.

Recommendation: If possible, TPWD recommends completing major ground disturbing activities before late fall or winter when reptiles become inactive and could be utilizing burrows in areas subject to disturbance. If ground disturbing construction activities must occur after October (e.g., to avoid migratory bird nesting season) in areas of suitable tortoise habitat, TPWD recommends surveying those areas for tortoises or indications of tortoise presence, e.g., the presence of burrows or pallets under prickly pear. If tortoises or indications of tortoise presence is observed, TPWD-Ecological and Environmental Planning Program staff should be contacted.

Parks and Wildlife Code, chapter 26-Protection of Public Parks and Recreational Lands

PWC chapter 26 requires that before a state agency can approve any project that will result in the use or taking of public land designated and used as a park, public recreation area, scientific area, wildlife refuge, or historic site, that state agency must provide certain notices to the public, conduct a hearing, and render a finding that there is no feasible and prudent alternative and that the project includes all reasonable planning to minimize harm to the property. Additionally, per section 6(f) of the U.S. Land and Water Conservation Fund Act (LWCF), no public outdoor recreation areas acquired or developed with LWCF assistance can be converted to non-recreational uses without Department of Interior approval. The conversion must be in accordance with the statewide outdoor recreation plan and replaced with other recreation land of reasonable equivalent usefulness and location.

The proposed project would add a new transmission line to existing infrastructure within an existing transmission line corridor paralleling SH 211, which also bisects tracts of TPWD's Government Canyon State Natural Area (SNA).

Recommendation: TPWD recommends avoiding lands owned or managed for conservation or recreation by city, county, state, and federal entities. Such entities should be contacted early in the planning process to determine if the proposed transmission line may impact their property. In cases where a park or similar recreation facility has received grant funds from TPWD, replacement of any land converted from recreational use is required.

TPWD recommends coordinating with TPWD Government Canyon SNA staff prior to beginning construction activities in easements through the SNA. TPWD also recommends reducing the amount of vegetation cleared, and minimizing clearing native vegetation, particularly mature, mast producing native trees and shrubs, and riparian or forested wetland areas, wherever possible.

Beneficial Management Practices

TPWD recommends implementing the following BMP to avoid or minimize impacts to wildlife and Species of Greatest Conservation Need (SGCN), including state listed SGCN, potentially occurring at the construction site for this project:

1. In general, TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from discrete areas to be disturbed. In many cases, sediment control fence placement for the purposes of controlling erosion and protecting water quality can be modified minimally to also provide the benefit of excluding wildlife access to construction areas. The exclusion fence should be buried at least six inches and be at least 24 inches high. The exclusion fence should be maintained for the life of the project and only be removed after the project activities are completed and the disturbed sites have been revegetated or otherwise stabilized. Construction personnel should be encouraged to examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities.

2. For soil stabilization and/or revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding due to a reduced risk to wildlife. If erosion control blankets or mats would be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting and hydromulch containing microplastics should be avoided.

3. TPWD recommends designing the project to minimize removal of vegetation and retain native habitats, particularly through areas being managed for wildlife conservation (i.e., Government Canyon SNA). TPWD recommends that precautions be taken to avoid impact to SGCN flora and fauna, natural plant communities, and priority habitat types of the ecoregion while working in Bexar and Medina Counties, or if encountered during project construction, operation, and maintenance activities. Areas exhibiting a native grass and forbs component should be protected from disturbance and from introduction of non-native vegetation. TPWD encourages clearly marking areas found to contain rare plants as work zone avoidance areas prior to construction, maintenance, and operation activities.

4. TPWD recommends informing employees and contractors of the potential for state listed species and other SGCN to occur in the project area and to avoid

impacts to all wildlife that are encountered. Wildlife observed during construction should be allowed to safely leave the site or be translocated to a nearby area with similar habitat that would not be disturbed during construction. TPWD recommends that any translocations of reptiles be the minimum distance possible, no greater than one mile, and preferably with 100-200 yards from the initial encounter location. For purposes of relocation, surveys, monitoring, and research, state listed species may only be handled by persons with the appropriate authorization obtained through the TPWD Wildlife Permits Program. For more information on this authorization, please contact the Wildlife Permits Office at (512) 389-4647.

5. Waterways, floodplains, riparian corridors, lakes, and wetlands provide valuable wildlife habitat, and TPWD recommends protecting them to the maximum extent possible. TPWD recommends establishing disturbance-free buffers contiguous to wetlands or aquatic systems to preserve wildlife cover, food sources, and travel corridors and constructing the transmission line to span all creeks. During construction, trucks and equipment should use existing bridges to cross creeks. Erosion control measures should be installed prior to construction and maintained until disturbed areas are permanently revegetated using site-specific native vegetation.

6. Significant declines in the population of migrating monarch butterflies (*Danaus plexippus*), a federal candidate species, have led to widespread concern about this species and other native insect pollinator species due to reduction in native floral resources. To support pollinators and migrating monarchs, TPWD encourages the establishment of native wildflower habitats on private and public lands. Infrastructure ROW can provide habit for a diverse community of pollinators, providing food, breeding, or nesting opportunities. Infrastructure ROW extend across a variety of landscapes and can aid dispersal of pollinators by linking fragmented habitats. By acting as refugia for pollinators in otherwise inhospitable landscapes, this habitat can contribute to the maintenance of healthy ecosystems and provide ecological services such as crop pollination. The publication, Monarch Habitat Development on Utility Rights of Way, can be found at the TPWD Wildlife Habitat Assessment Program webpage. TPWD encourages the project proponent to restore or revegetate impacted areas with vegetation that provides habitat for monarch butterflies and other pollinator species. Species appropriate for establishment within the project area can be found by accessing the Lady Bird Johnson Wildflower Center, working with TPWD biologist to develop an appropriate list of species, or utilizing resources found at the Monarch Watch website or the Xerces Society's Guidelines webpage. For areas of the site that already exhibit floral resources and for areas that are planted with floral resources, TPWD recommends incorporating

pollinator conservation into maintenance plans for the site to promote and sustain the availability of flowering species throughout the growing season. TPWD recommends scheduling vegetation maintenance to occur after seeds from pollinator plants have been released and avoiding herbicide that affect floral resources.

7. To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of SGCN to the TXNDD following the data submittal instructions found at the *TPWD Texas Natural Diversity Database: Submit Data* webpage. An additional method for reporting observations of species is through the iNaturalist community app where plant and animal observations are uploaded from a smartphone. The observer then selects to add the observation to specific TPWD Texas Nature Tracker Projects appropriate for the taxa observed, including Herps of Texas, Birds of Texas, Texas Eagle Nests, Texas Whooper Watch, Mammals of Texas, Rare Plants of Texas, Bees & Wasps of Texas, Terrestrial Mollusks of Texas, Texas Freshwater Mussels, Fishes of Texas, and All Texas Nature.

TPWD advises review and implementation of these recommendations in the preparation of the environmental document for the project. Please contact me at (361) 431-6003 or **russell.hooten@tpwd.texas.gov** if you have any questions or we may be of further assistance.

Sincerely,

Russell Hooten

Russell Hooten
Ecological and Environmental Planning Program
Wildlife Division

/rh 52534

June 21, 2024
AVO 55396.001

The Honorable Roland Gutierrez
State Senator, Senate District 19
Texas Senate
13131 SE Military Drive, Suite 207
San Antonio, Texas 78214

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Senator Gutierrez:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Pete Flores
State Senator, Senate District 24
Texas Senate
Shreiner One Center
819 Water Street, Suite 164
Kerrville, Texas 78028

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Senator Flores:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Donna Campbell
State Senator, Senate District 25
Texas Senate
229 Hunters Village, Suite105
New Braunfels, Texas 78132

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Senator Campbell:

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. David Firgens
Manager, Team 5 - Central
Texas Water Development Board
1700 North Congress Avenue
Austin, Texas 78701

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Firgens:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Ms. Suzanne Scott
State Director, Texas Chapter
The Nature Conservancy
200 East Grayson, Suite 202
San Antonio, Texas 78215

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Scott:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

The Nature Conservancy
Texas

August 9, 2024

Halff
Attn: Jody Urbanovsky *via email*
1201 N. Browser Road
Richardson, TX 75081

RE: CPS Energy's proposed Ranchtown – Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Urbanovsky,

Thank you for reaching out to The Nature Conservancy (TNC) regarding the transmission line project. The proposed line is through one of TNC's conservation easements adjacent to Texas Highway 211.

I have included a copy of the easement terms for your reference. The concern for TNC is whether the proposed transmission line will utilize the existing utility easement (requiring an amendment) or a new utility easement altogether.

TNC would like to futher discuss the proposed project, either in person at our San Antonio Office or by phone, at your convenience. We look forward to hearing from you.

Sincerely,

Kaitlin O'Brien-Friesenhahn

Kaitlin O'Brien-Friesenhahn
Conservation Easement Program Manager
The Nature Conservancy, Texas Chapter

cc: David Bezanson, TNC

Attachments:

Conservation Easement recorded December 30th, 1996; Vol. 6969, Pgs. 1634-1648, O.P.R Bexar County

CHICAGO TITLE GF# 965623-JH

CONSERVATION EASEMENT

96- 019842

This **CONSERVATION EASEMENT** made this 30 day of December, 1996,

RECITALS:

A. Christopher C. Hill, residing at 757 Grandview Pl. San Antonio, TX 78209, (the "Grantor") is the owner in fee simple of certain real property, (the "Protected Property") that has ecological, scientific, educational and aesthetic value in its present state as a natural area that has not been subject to development or exploitation. The Protected Property is located in Bexar County,Texas and is more particularly described in Exhibit A attached. THE NATURE CONSERVANCY (the "Grantee") is a non-profit corporation incorporated under the laws of the District of Columbia as a tax exempt public charity under Section 501(c)(3) and 509(a)(1) of the Internal Revenue Code, qualified under section 170(h) of the Internal Revenue Code to receive qualified conservation contributions, and having a local address at 711 Navarro Suite 410, P.O. Box 1440 , San Antonio TX 78295-1440, and whose purposes include, inter alia, preservation of natural areas for scientific, charitable, educational and aesthetic purposes.

B. The Protected Property is a significant natural area that qualifies as a "...relatively natural habitat of fish, wildlife, or plants, or similar ecosystem," as that phrase is used in P.L. 96-541, 26 USC 170(h)(4)(A)(ii), as amended, and in regulations promulgated thereunder; specifically the Protected Property is habitat for the federally endangered Golden-cheeked Warbler and an exceptional representation of the Edwards Escarpment and associated plant and animal communities with steep Ashe-Juniper-Oak hillsides and deep old growth wooded canyons. The Protected Property represents a portion of an undisturbed natural watershed that provides a significant quantity of high quality run-off recharging the Southern Edwards Aquifer, upon which four federally endangered species (Texas Blind Salamander, Fountain Darter, San Marcos Gambusia, and Texas Wild Rice), and one federally threatened species (San Marcos Salamander) rely for habitat.

C. The specific conservation values of the Property are documented in an Easement Documentation Report, prepared by Grantee and signed and acknowledged by the Grantor, that establishes the baseline condition of the Protected Property at the time of this grant and includes reports, maps, photographs, and other documentation.

D. The Grantor and Grantee have the common purpose of conserving the above-described conservation values of the Protected Property in perpetuity, and the State of Texas has authorized the creation of Conservation Easements pursuant to Chapter 183 of the Texas Natural Resource Code and Grantor and Grantee wish to avail themselves of the provisions of that law.

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NOW, THEREFORE, the Grantor, for and in consideration of the facts recited above and of the mutual covenants, terms, conditions and restrictions contained herein and as an absolute and unconditional gift, hereby gives, grants, bargains, sells and conveys unto the Grantee a Conservation Easement in perpetuity over the Protected Property of the nature and character as follows:

1. **Purpose**. The purpose of this Conservation Easement is to ensure that the Protected Property will be retained forever predominantly in its natural, scenic and open space condition; to protect any rare plants, animals, or plant communities on the Protected Property; and to prevent any use of the Protected Property that will significantly impair or interfere with the conservation values or interests of the Protected Property described above. The Grantor intends that this Conservation Easement will restrict the use of the Protected Property to only such activities as are consistent with the purpose of this Conservation Easement.

2. **Prohibited Uses**. Any activity on or use of the Protected Property inconsistent with the purpose of this Conservation Easement is prohibited. Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited, except as provided in paragraph 3 below:

   2.1 **No Construction**. There shall be no constructing or placing of any building, tennis or other recreational court, landing strip, mobile home, swimming pool, fence or sign (other than those required by the Grantee for appropriate management), asphalt or concrete pavement, billboard or other advertising display, antenna, utility pole, tower, conduit, line, sodium vapor light or any other temporary or permanent structure or facility on or above the Protected Property except as provided in section 3.3 herein. However, Grantee and Grantor mutually agree to the construction of viewing blinds, trails, and other structures so as to view, enjoy, and interpret the wildlife on the Protected Property. Specific construction and siting of such blinds, trails, and viewing structures will be by mutual consent in writing by Grantor and Grantee.

   2.2 **No Excavation**. There shall be no ditching, draining, diking, filling, excavating, dredging, mining or drilling, removal of topsoil, sand, gravel, rock, minerals or other materials, nor any building of additional roads or change in the topography or surface and subsurface hydrology of the Protected Property in any manner, except as may be necessary to restore, maintain, or enhance the natural hydrologic regime of the watershed.

   2.3 **No Cutting**. There shall be no removal, harvesting, destruction or cutting of trees, shrubs or plants, planting of trees, shrubs or plants, use of fertilizers, plowing, introduction of non-native animals, grazing of domestic animals, or disturbance or change in the natural habitat in any manner.

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However, Grantor and Grantee mutually agree to allow some removal of natural vegetation in areas deemed by Grantee as non sensitive habitat to allow scenic views and visual enjoyment of the Protected Property. Such removal of natural vegetation will be by mutual consent in writing by Grantor and Grantee.

2.4 **No Biocides**. There shall be no use of pesticides or biocides, including but not limited to insecticides, fungicides, rodenticides, and herbicides, and no use of devices commonly known as "bug-zappers".

2.5 **No Dumping**. There shall be no storage or dumping of ashes, trash, garbage, or other unsightly or offensive material, hazardous substance, or toxic waste, nor any placement of underground storage tanks in, on, or under the Protected Property; there shall be no changing of the topography through the placing of soil or other substance or material such as land fill or dredging spoils, nor shall activities be conducted on the Protected Property or on adjacent property, if owned by the Grantor, that could cause erosion or siltation on the Protected Property.

2.6 **No Pollution**. There shall be no pollution, alteration, depletion or extraction of surface water, natural water courses, lakes, ponds, marshes, subsurface water or any other water bodies, nor shall activities be conducted on the Protected Property that would be detrimental to water purity or that could alter the natural water level or flow in, over, or under the Protected Property.

2.7 **No Vehicles**. There shall be no operation of dune buggies, motorcycles, and all-terrain vehicles. Any other vehicle use shall be limited to existing roads or on driveways constructed pursuant to paragraph 3.3 below, or on any additional roads as approved by Grantee pursuant to paragraph 4.5 below.

2.8 **Subdivision**. The Protected Property may not be divided, partitioned, or subdivided, nor conveyed except in either its current configuration as an entity or as two parcels, the smallest of which shall not comprise less than 40% of the Protected Property, each individual parcel having the same prohibitions and rights herein, but for the right to further subdivide.

3. **Grantor's Reserved Rights**. The Grantor hereby reserves the following rights:

3.1 **Existing Uses**. The right to undertake or continue any activity or use of the Protected Property not prohibited by this Conservation Easement. Prior to making any change in use of the Protected Property, the Grantor shall notify the Grantee in writing to allow the Grantee a reasonable opportunity to determine whether such change would violate the terms of this Conservation Easement.

3.2 **Transfer**. The right to sell, give, mortgage, lease, or otherwise convey the Protected Property, provided such conveyance is subject to the terms of this Conservation Easement.

3.3 **Structures**. The right to maintain such structures and fences as currently exist on the Protected Property (including the right to replace, but not expand, on the same site, with like structures used for the same or similar purposes). Additionally, Grantor retains the right to construct, maintain, or replace a total of two single family residential dwellings on the Protected Property, one on each of the two subdivided parcels allowed in section 2.8 above. Grantor may construct and establish utilities, driveways, one water well, and incidental outbuildings on the Protected Property in association with each dwelling. All improvements shall be arranged in such a manner as to cause the least disturbance to the conservation values of the Protected Property. The location of the residence and associated improvements shall be subject to the approval of Grantee. Grantee agrees that if the location of the improvements meets the above standards its approval will not be unreasonably withheld.

3.4 **Diseased Trees**. The right to cut, trench, and remove diseased trees, shrubs, or plants and to cut firebreaks, subject to the prior written approval of the Grantee pursuant to paragraph 4.5 below, except that such approval shall not be required in the case of emergency firebreaks.

Grantee's Rights. To accomplish the purpose of this Conservation Easement, the following rights are conveyed to the Grantee by this Conservation Easement:

4.1 **Right to Protect**. The right to preserve and protect the conservation values of the Protected Property.

4.2 **Right of Entry**. The right to enter the Protected Property at all reasonable times and with prior notice for the purposes of: (a) inspecting the Protected Property to determine if the Grantor is complying with the covenants and purposes of this Conservation Easement; (b) enforcing the terms of this Conservation Easement; (c) taking any and all actions with respect to the Protected Property as may be necessary or appropriate, with or without order of court, to remedy or abate violations hereof; (d) making scientific and educational observations and studies and taking samples in such a manner as will not disturb the quiet enjoyment of the Protected

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Property by the Grantor; and (e) monitoring and management as described below. Grantee may notify Grantor of multiple visits with one notice.

4.3 **Monitoring and Management**. The right, but not the obligation, to monitor the condition of the rare plant and animal populations, plant communities, and natural habitats on and watershed characteristics of the Protected Property, and to manage them, to the extent deemed appropriate by the Grantee and approved by Grantor which consent shall not be unreasonably withheld, to ensure their continued presence and viability on the Protected Property. If a dispute arises out of or related to the reasonableness of Grantor's non-approval, and if said dispute cannot be settled through direct discussions, the parties agree to first endeavor to settle the dispute in an amicable manner by mediation under the Commercial Mediation Rules of the American Arbitration Association, before resorting to arbitration. Thereafter, any unresolved controversy shall be settled by arbitration in accordance with Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the decision rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Such management and monitoring activities shall be in accordance with management practices of the Grantee, which may include but not be limited to, mowing, fencing, trapping, or prescribed burning.

4.4 **Enforcement**. The right to prevent any activity on or use of the Protected Property that is inconsistent with the purpose of this Conservation Easement and to require the restoration of such areas or features of the Protected Property that may be damaged by any inconsistent activity or use, pursuant to paragraph 10.

4.5 **Discretionary Consent**. The Grantee's consent for activities otherwise prohibited under paragraph 2 above, or for any activities requiring Grantee's consent under paragraph 3 above, may be given under the following conditions and circumstances. If, owing to unforeseen or changed circumstances, any of the activities listed in paragraph 2 are deemed desirable by both the Grantor and the Grantee, the Grantee may, in its sole discretion, give permission for such activities, subject to the limitations herein. Such requests for permission, and permission for activities requiring the Grantee's consent under paragraph 3, shall be in writing and shall describe the proposed activity in sufficient detail to allow the Grantee to judge the consistency of the proposed activity with the purpose of this Conservation Easement. The Grantee may give its permission only if it determines, in its sole discretion, that such activities (1) do not violate the purpose of this Conservation Easement and (2) either enhance or do not impair any significant conservation interests associated

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with the Protected Property. Notwithstanding the foregoing, the Grantee and Grantor have no right or power to agree to any activities that would result in the termination of this Conservation Easement or to allow any residential, commercial or industrial structures or any commercial or industrial activities not provided for above.

5. **Access**. Nothing contained in this Conservation Easement shall give or grant to the public a right to enter upon or to use the Protected Property or any portion thereof.

6. **Costs and Liabilities**. The Grantor retains all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep and maintenance of the Protected Property, including the maintenance of comprehensive general liability insurance coverage. The Grantor shall keep the Grantee's interest in the Protected Property free of any mechanics liens arising out of any work performed for, materials furnished to or obligations incurred by the Grantor. Grantee shall maintain its own general liability insurance coverage.

   Each party agrees to release, hold harmless, defend and indemnify the other from any and all liabilities including, but not limited to, injury, losses, damages, judgments, costs, expenses and fees that the indemnified party may suffer or incur as a result of or arising out of the activities of the other party on the Protected Property.

7. **Taxes**. The Grantor agrees to pay any real estate taxes or other assessments levied on the Protected Property. If the Grantor becomes delinquent in payment of taxes or assessments, so that a lien is created against the Protected Property, the Grantee, at its option, shall, after written notice to the Grantor, have the right to purchase and acquire the Grantor's interest in the Protected Property by paying funds to discharge the lien or delinquent taxes or assessments, or to take such other actions as may be necessary to protect the Grantee's interest in the Protected Property and to assure the continued enforceability of this Conservation Easement.

8. **Title**. The Grantor covenants and represents that the Grantor is the sole owner and is seized of the Protected Property in fee simple and has good right to grant and convey this Conservation Easement; that the Protected Property is free and clear of any and all encumbrances except the permitted encumbrances specified in Exhibit "B" attached hereto, and that the Grantee shall have the use of and enjoy all of the benefits derived from and arising out of this Conservation Easement.

9. **Hazardous Waste**. To the best of Grantors knowledge Grantor covenants, represents and warrants to the Grantee that no hazardous substance or toxic waste exists nor has been generated, treated, stored, used, disposed of, or deposited in or on the Protected Property, and that there are not now any underground storage tanks located on the Protected Property.

10. **Grantee's Remedies**. If the Grantee becomes aware of a violation of the terms of this Conservation Easement, the Grantee shall give notice to the Grantor, at the Grantor's last known address, of such violation via certified mail, return receipt requested, and request corrective action sufficient to abate such violation and restore the Protected Property to its previous condition at the time of this grant. Grantor agrees that the Easement Documentation Report shall be deemed to provide objective information concerning the Protected Property's condition at the time of this grant. Failure by the Grantor to abate the violation and take such other corrective action as may be requested by the Grantee within thirty (30) days after receipt of such notice shall entitle the Grantee to bring an action at law or equity in a court of competent jurisdiction to enforce the terms of this Conservation Easement; to require the restoration of the property to its previous condition; to enjoin the non-compliance by ex parte temporary or permanent injunction in a court of competent jurisdiction; and/or to recover any actual damages arising from the noncompliance (punitive, compensatory, and/or consequential damages shall in no event be sought or recovered). Such damages, when recovered, must be applied by the Grantee to corrective action on the Protected Property. If the court determines that the Grantor has failed to comply with this Conservation Easement, the Grantor shall reimburse the Grantee for any reasonable costs of enforcement, including costs of restoration, court costs and reasonable attorneys fees.

10.1 **Emergency Enforcement**. If the Grantee, in its reasonable discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the conservation values of the Property, the Grantee may pursue its remedies under this paragraph with prior notice to the Grantor by personal communication, telephone, or pursuant to paragraph 17.6 herein, but without waiting for the period for cure to expire.

10.2 **Failure to Act or Delay**. The Grantee does not waive or forfeit the right to take action as may be necessary to insure compliance with this Conservation Easement by any prior failure to act and the Grantor hereby waives any defenses of waiver, estoppel or laches with respect to any failure to act or delay by the Grantee, its successors or assigns, in acting to enforce any restriction or exercise any rights under this Conservation Easement.

10.3 **Violations Due to Causes Beyond Grantor's Control**. Nothing herein shall be construed to entitle the Grantee to institute any enforcement proceedings against the Grantor for any changes to the Protected Property due to causes beyond the Grantor's control, such as changes caused by fire, flood, storm, earthquake or the unauthorized wrongful acts of third persons. In the event of violations of this Conservation Easement caused by the unauthorized wrongful acts of third persons, the Grantor agrees, upon request by the Grantee to join in any suit, or at the election of the Grantor to appoint the Grantee its attorney-in-fact for the purposes of pursuing enforcement action.

11. **Parties Subject to Easement**. The covenants agreed to and the terms, conditions, and restrictions imposed by this grant shall not only be binding upon the Grantor but also its lessees, agents, personal representatives, successors and assigns, and all other successors to Grantor in interest and shall continue as a servitude running in perpetuity with the Protected Property.

12. **Subsequent Transfers**. The Grantor agrees that the terms, conditions, restrictions and purposes of this grant or reference thereto will be inserted by the Grantor in any subsequent deed or other legal instrument by which the Grantor divests either the fee simple title or possessory interest in the Protected Property. In the event that Grantor intends to sell the Protected Property, Grantor shall give Grantee written notice specifying Grantor's terms and conditions for the sale of the Protected Property. Grantee shall have fifteen (15) days from the date of said notice to accept said terms and conditions by giving Grantor written notice thereof and thereafter purchasing the Protected Property within thirty (30) days from the date of Grantee's written acceptance. In the event Grantee fails to accept said terms and conditions to purchase the Protected Property within said fifteen (15) day period or fails to purchase the Protected Property within said thirty (30) day period, Grantor shall have the right to sell the Protected Property to any third party without further notice to Grantee within Nine (9) months from the date of Grantor's notice to Grantee of the intent to sell.

13. **Merger**. The Grantor and the Grantee agree that the terms of this Conservation Easement shall survive any merger of the fee and easement interest in the Protected Property.

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14. **Assignment**. The parties hereto recognize the benefits of this easement are in gross and assignable, however, Grantee shall not assign its rights and obligations under this Agreement, except by approval of Grantor, which will not be unreasonably withheld. Any assignment approved by Grantor shall be to a qualified organization as that term is defined in Section 170(h)(3) of the I. R. C. of 1986, that is organized and operated primarily for one of the conservation purposes specified in Section 170(h)(4)(A), of the I.R.C., and committed to hold the easement solely for the conservation purposes that the contribution was originally intended to advance. If a dispute arises out of or related to the reasonableness of Grantor's non-approval, and if said dispute cannot be settled through direct discussions, the Grantor and Grantee agree to follow similar procedure as described in paragraph 4.3 above as it relates to mediation and arbitration procedures.

15. **Extinguishment**. The Grantor hereby agrees that, at the time of the conveyance of this Conservation Easement to the Grantee, this Conservation Easement gives rise to a real property right, immediately vested in the Grantee, with a fair market value of the Conservation Easement as of the date of the conveyance that is at least equal to the proportionate value that this Conservation Easement at the time of the conveyance bears to the fair market value of the property as a whole at that time.

That proportionate value of the Grantee's property rights shall remain constant. When a change in conditions takes place which makes impossible or impractical any continued protection of the Protected Property for conservation purposes, and the restrictions contained herein are extinguished by judicial proceeding, the Grantee, upon a subsequent sale, exchange or involuntary conversion of the Protected Property, shall be entitled to a portion of the proceeds at least equal to that proportionate value of the Conservation Easement. The Grantee shall use its share of the proceeds in a manner consistent with the conservation purposes set forth herein or for the protection of a "relatively natural habitat of fish, wildlife, or plants or similar ecosystem," as that phrase is used in and defined under P.L. 96-541, 26 USC 170(h)(4)(A)(ii), as amended and in regulations promulgated thereunder.

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16. **Eminent Domain**. Whenever all or part of the Protected Property is taken in exercise of eminent domain by public, corporate, or other authority so as to abrogate the restrictions imposed by this Conservation Easement, the Grantor and the Grantee shall join in appropriate actions at the time of the taking to recover the full value of the taking and all incidental or direct damages resulting from it, and

the proceeds shall be divided in accordance with the proportionate value of the Grantee's and Grantor's interests, and Grantee's proceeds shall be used as specified above. All expenses incurred by the Grantor and the Grantee in such action shall be paid out of the recovered proceeds.

17. **Miscellaneous Provisions**.

17.1 **Severability**. If any provision of this Conservation Easement or the application thereof to any person or circumstance is found to be invalid, the remainder of the provisions of this Conservation Easement and the application of such provisions to persons or circumstances other than those as to which it is found to be invalid shall not be affected thereby.

17.2 **Successors and Assigns**. The term "Grantor" shall include the Grantor and the Grantor's heirs, executors, administrators, successors and assigns and shall also mean the masculine, feminine, corporate, singular or plural form of the word as needed in the context of its use. The term "Grantee" shall include The Nature Conservancy and its successors and assigns.

17.3 **Re-recording**. The Grantee is authorized to record or file any notices or instruments appropriate to assuring the perpetual enforceability of this Conservation Easement; for such purpose, the Grantor appoints the Grantee its attorney-in-fact to execute, acknowledge and deliver any necessary instrument on its behalf. Without limiting the foregoing, the Grantor agrees to execute any such instruments upon request.

17.4 **Captions**. The captions herein have been inserted solely for convenience of reference and are not a part of this Conservation Easement and shall have no effect upon construction or interpretation.

17.5 **Counterparts**. The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

17.6 **Notices**. Any notices required in this Conservation Easement shall be sent by registered or certified mail to the following address or such address as may be hereafter specified by notice in writing: Grantor: PO Box 12613 San Antonio, Texas 78212-0613. Grantee: The Nature Conservancy, Southeast Regional Office, Attention: Regional Attorney, P. O. Box 2267, Chapel Hill, NC 27515-2267 and Texas Field Office PO Box 1440 San Antonio, TX 78295-1440.

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TO HAVE AND TO HOLD the said Conservation Easement unto the said Grantee forever.

IN WITNESS WHEREOF, the Grantor has executed and sealed this document the day and year first above written.

CHRISTOPHER C. HILL
Grantor

By: ______________________
Christopher C. Hill

THE NATURE CONSERVANCY
Grantee

By: ______________________
Charles R. Bassett
Its Vice President

STATE OF TEXAS)
COUNTY OF BEXAR) SS.

On this 30th day of December, 1996 before me personally appeared Christopher C. Hill, to me personally known, who, being by me duly sworn, did depose and say that he is the person named in the foregoing instrument, and acknowledged said instrument to be his free act and deed.

ROSEMARY V. FLORES
Notary Public
State of Texas
My Comm. Exp. 04-08-98

Rosemary V. Flores
Notary Public
My Commission Expires:

STATE OF NORTH CAROLINA)
COUNTY OF ORANGE) SS:

On this 27th day of December, 1996, before me personally appeared Charles R. Bassett, to me personally known, who, being by me duly sworn did say that he is the Vice President of The Nature Conservancy, the corporation named in the foregoing instrument; that the seal affixed to said instrument is the corporation seal of said corporation; and acknowledged said instrument to be the free act and deed of said corporation.

Deborah S. Feldstein
Notary Public
My Commission Expires: 9-24-97

VOL 6969 PG 1645

RETURN TO:
CHICAGO TITLE INSURANCE CO
ATTN: CAROL PERRY
14607 SAN PEDRO, SUITE 175
SAN ANTONIO, TX 78232

EXHIBIT "A"

731.15 ACRE TRACT

STATE OF TEXAS
COUNTY OF BEXAR

All that certain tract or parcel of land containing 731.15 acres, more or less, in Bexar County, Texas, comprised of parts of the J. B. McMichael Survey No. 1, Abstract 1085, County Block 4498, being a part of the Heinrich Dahme Survey No. 176 1/10, Abstract 204, County Block 4512, being a part of the Adam Byerley Survey No. 178, Abstract 87, County Block 4504, being a part of the Alexander Ewing Survey No. 176, Abstract 222, County Block 4505, being a part of the George W. Garnett Survey No. 176 1/2, Abstract 1185, County Block 4494, and consisting of a portion of that certain tract called 3562.605 acres tract described in conveyance from Amy McNutt, a widow, and Amy Lillian McNeel to F. B. Rooke and Sons by deed dated July 26, 1983, and recorded in Volume 2882, Page 2315, Real Property Records of Bexar County, Texas, and recorded in Volume 326, Page 803-814, Deed Records of Medina County, Texas and being a portion of a 9691 acre tract described in conveyance from Gallagher Ranch Holdings Company to Amy Lillian McNeel, et al, recorded in Volume 1603, Page 456, Deed Records of Bexar County, Texas. Said 731.15 acre tract, being more particularly described by metes and bounds as follows:

BEGINNING: at a nail and cap in 10" dia. cedar corner post found on the Westerly angle corner of said 3562.605 acre tract, for the Southwest corner of this herein described tract, from which point a 1/2" iron pin found located at the Southwest corner of said 3562.605 acre tract bears: South 00 deg. 27 min. 17 sec. East, 13214.52 feet;

THENCE: along with the West line of the herein described tract, the following courses and distances:
North 14 deg. 38 min. 23 sec. East, 4362.49 feet to a 1/2" iron pin set;
North 02 deg. 01 min. 27 sec. West, 824.62 feet to a 1/2' iron pin found at the South corner of a tract called 90.663 acres recorded in Volume 3129, Page 1251, Real Property Records of Bexar County, Texas and continuing with the Southeast line of said 90.663 acre tract and the West boundary line of this herein described tract as follows:
North 25 deg. 06 min. 24 sec. East,. 339.88 feet to a 1/2" iron pin found;
North 31 deg. 34 min. 27 sec. East, 513.79 feet to a 1/2" iron pin found;
North 32 deg. 44 min. 47 sec. East, 227.10 feet to a 1/2" iron pin found at the East corner of said 90.633 acre tract, for the Northwest corner of this herein described tract;

THENCE: continuing with fence line on the North boundary line of said 3562.605 acre tract and same being the North boundary line of this herein described tract, the following courses and distances:
North 81 deg. 04 min. 26 sec. East, 1326.45 feet to a 1/2" iron pin found;
North 81 deg. 32 min. 46 sec. East, 1305.71 feet to a 1/2" iron pin found;
North 82 deg. 08 min. 48 sec. East, 429.75 feet to a 1/2" iron pin found;
North 01 deg. 09 min. 05 sec. West, 128.17 feet to a 1/2" iron pin found on the West right-of-way line of State Highway No. 211, for the Northeast corner of this herein described tract;

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THENCE: along with fence line on the West right-of-way line of said State Highway No. 211 and same being the East boundary line of this herein described tract: (Brass cap right-of-way monuments located at the end of each call, unless otherwise stated)
South 25 deg. 19 min. 11 sec. East, 336.50 feet;
South 41 deg. 46 min. 07 sec. East, 346.96 feet;
South 46 deg. 16 min. 16 sec, East, 825.43 feet;
South 43 deg. 31 min. 37 sec. East, 245.58 feet;
South 37 deg. 46 min. 59 sec. East, 268.46 feet;
South 31 deg. 46 min. 59 sec. East, 268.46 feet;
South 25 deg. 46 min. 59 sec. East, 268.46 feet;
South 19 deg. 46 min. 59 sec. East, 268.46 feet;
South 13 deg. 16 min. 51 sec. East, 128.96 feet to a 1/2" iron pin found, for an angle corner of this herein described tract;

CONTINUING............................

THENCE: with fence line leaving said State Highway No. 211 and continuing with the East boundary line of this herein described tract:
South 24 deg. 46 min. 19 sec. West, 502.14 feet to a 1/2" iron pin found;
South 18 deg. 18 min. 36 sec. West, 171.12 feet to a 1/2" iron pin found;
South 32 deg. 24 min. 23 sec, East, 94.34 feet to a 1/2" iron pin found;
South 30 deg. 57 min. 56 sec. East, 125.98 feet to a 1/2" iron pin found;
South 34 deg. 30 min. 35 sec. East, 820.33 feet to a 1/2" iron pin found on the West line of said State Highway No. 211, for a corner of this herein described tract;

THENCE: continuing with the West boundary line of said State Highway No. 211 and same being the East boundary line of this herein described tract, the following courses and distances: (Brass cap right-of-way monuments located at the end of each call, unless otherwise stated)
South 08 deg. 53 min. 25 sec. East, 24.34 feet to a 1/2" iron pin found;
South 03 deg. 27 min. 49 sec. East, 270.55 feet;
South 02 deg. 32 min. 11 sec. West, 270.55 feet;
South 08 deg. 32 min. 11 sec. West, 270.55 feet;
South 13 deg. 05 min. 54 sec. West, 246.06 feet;
South 16 deg. 59 min. 11 sec. West, 159.07 feet;
South 57 deg. 17 min. 25 sec. West, 186.66 feet;
North 88 deg. 00 min. 49 sec, West, 41.27 feet;
South 01 deg. 59 min. 11 sec. West, 120.00 feet to a found highway right-of-way monument, for the Southeast corner of this herein described tract;

THENCE along with the South boundary line of this herein described tract, the following courses and distances:
North 88 deg. 00 min. 49 sec. West, 125.00 feet to a 1/2" iron pin set;
North 10 deg. 08 min. 37 sec. West, 222.47 feet to a 1/2" iron pin set in fence line and continuing along with fence line in a Westerly direction:
South 60 deg. 37 min. 16 sec. West, 1502.25 feet to a 1/2" iron pin set;
South 60 deg. 46 min. 36 sec. West, 1121.35 feet to a 1/2" iron pin set;
South 61 deg. 04 min. 19 sec. West, 607.54 feet to a 1/2" iron pin set;
South 84 deg. 38 min. 29 sec. West, 1309.29 feet to a 1/2" iron pin set;
South 84 deg. 43 min. 45 sec. West, 634.01 feet to a 1/2" iron pin set;
North 79 deg. 04 min. 09 sec. West, 1404.66 feet to the POINT OF BEGINNING.

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Victor M. Seguin

VICTOR M. SEGUIN
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 1776
DECEMBER 26, 1996
JOB NO. 25778B2
(SEE ATTACHED PLAT)

EXHIBIT "B"

1/2 of all the oil, gas and other minerals, and all other rights in connection with same are excepted herefrom, as set forth in instrument recorded Volume 2882, Page 2315, Official Public Records of Real Property of Bexar County, Texas and filed of record in Volume 326, Page 803-814, Medina County Deed Records.. Title to said interest has not been investigated subsequent to the date of the aforesaid instrument.

30 foot ingress and egress easement and as shown on survey prepared by Victor Seguin Surveying and Mapping Company under Job Number 25778B.

VOL 6969 PG 1648

From: Demendonca, Antonio <ademendonca@CPSEnergy.com>
Sent: Thursday, August 22, 2024 8:22 AM
To: Jody Urbanovsky
Subject: FW: [InternetMail] RE: CPS Energy Ranchtown-Talley Rd Transmission Line Project Follow Up

Good morning Jody,
Please see below for response and follow up with Kaitlin from Nature Conservancy this morning.

Thanks,
Antonio DeMendonca, MBA, PMP
EDS Project Manager | S&T Regulatory Support
CPS Energy | 500 McCullough, San Antonio, TX 78215 |Mail Drop: RT0801
Office: (210) 353-5318| Mobile: (210) 850-6358
ademendonca@cpsenergy.com | cpsenergy.com

From: Demendonca, Antonio
Sent: Thursday, August 22, 2024 8:20 AM
To: 'Kaitlin O'Brien-Friesenhahn' <k.friesenhahn@TNC.ORG>; David Bezanson <dbezanson@TNC.ORG>
Cc: Otto, Daniel T. <DTOtto@cpsenergy.com>
Subject: RE: [InternetMail] RE: CPS Energy Ranchtown-Talley Rd Transmission Line Project Follow Up

Good morning Kaitlin,
Thank you for confirming and I'll make sure to update you should anything change.

Thanks,
Antonio DeMendonca, MBA, PMP
EDS Project Manager | S&T Regulatory Support
CPS Energy | 500 McCullough, San Antonio, TX 78215 |Mail Drop: RT0801
Office: (210) 353-5318| Mobile: (210) 850-6358
ademendonca@cpsenergy.com | cpsenergy.com

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From: Kaitlin O'Brien-Friesenhahn <k.friesenhahn@TNC.ORG>
Sent: Wednesday, August 21, 2024 4:37 PM
To: Demendonca, Antonio <ademendonca@CPSEnergy.com>; David Bezanson <dbezanson@TNC.ORG>
Cc: Otto, Daniel T. <DTOtto@cpsenergy.com>
Subject: [InternetMail] RE: CPS Energy Ranchtown-Talley Rd Transmission Line Project Follow Up

Mr. Demendonca,

Thank you for providing this information. At this time we don't see any issue with the transmission line within the scope provided since it will be on existing infrastructure. If at any point the scope changes, and could potentially impact the conservation easement, please let me know so we can ensure compliance with our easement.

I appreciate your response to this matter and please let me know if we may be of further assistance.

Best regards,

Kaitlin O'Brien-Friesenhahn
Conservation Easement Program Manager
The Nature Conservancy, Texas
k.friesenhahn@tnc.org | P: 210.639.9955 |
www.nature.org/texas

From: Demendonca, Antonio <ademendonca@CPSEnergy.com>
Sent: Wednesday, August 21, 2024 8:30 AM
To: Kaitlin O'Brien-Friesenhahn <k.friesenhahn@TNC.ORG>; David Bezanson <dbezanson@TNC.ORG>
Cc: Otto, Daniel T. <DTOtto@cpsenergy.com>
Subject: RE: CPS Energy Ranchtown-Talley Rd Transmission Line Project Follow Up

Good morning Kaitlin,
Thank you for returning my call yesterday regarding the Ranchtown – Talley Rd Transmission Line project. The scope of this project is to construct approximately twelve (12) miles of new 138kV transmission infrastructure connecting the existing Ranchtown and Talley Rd substations. Approximately eleven (11) miles of the new transmission line will be located on existing transmission line structures and approximately one (1) mile of the new transmission line will be located along an existing CPS Energy transmission line corridor.

The portion of this project that is located on your property along SH 211 is in the area where we will be installing the new transmission line on existing transmission line structures. At this time, we do not anticipate the need for any new easements on this portion since the existing transmission line structures has an open position and is within the existing easements.

Should you have any additional questions, please feel free to contact me via phone or this email. I've also included the project website link below for additional information.

Ranchtown to Talley Road Transmission Line Project (cpsenergy.com)

Thanks,
Antonio DeMendonca, MBA, PMP

EDS Project Manager | S&T Regulatory Support
CPS Energy | 500 McCullough, San Antonio, TX 78215 |Mail Drop: RT0801
Office: (210) 353-5318| Mobile: (210) 850-6358
ademendonca@cpsenergy.com | cpsenergy.com

From: Demendonca, Antonio
Sent: Monday, August 19, 2024 1:27 PM
To: k.friesenhahn@TNC.ORG; dbezanson@TNC.ORG
Cc: Otto, Daniel T. <DTOtto@cpsenergy.com>
Subject: CPS Energy Ranchtown-Talley Rd Transmission Line Project Follow Up

Good afternoon,
My name is Antonio DeMendonca, I am the project manager on the Ranchtown – Talley Rd project here in San Antonio. I am following up on my voicemail regarding your request for a meeting to further discuss this project.

Please feel free to contact me via phone to set up a meeting for further discussion.

Thanks,
Antonio DeMendonca, MBA, PMP
EDS Project Manager | S&T Regulatory Support
CPS Energy | 500 McCullough, San Antonio, TX 78215 |Mail Drop: RT0801
Office: (210) 353-5318| Mobile: (210) 850-6358
ademendonca@cpsenergy.com | cpsenergy.com

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June 21, 2024
AVO 55396.001

The Honorable Rob Kelly, Chairman
Alamo Area Council of Governments
2700 NE Loop 410, Suite 101
San Antonio, Texas 78217

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Judge Kelly:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

Mr. Gary Schott, Chairman
Alamo Soil and Water Conservation District
727 East Cesar E. Chavez Boulevard, Room A507
San Antonio, Texas 78206

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Schott:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Peter Sakai
Bexar County Judge
Bexar County
101 West Nueva, 10th Floor
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Judge Sakai:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. David Marquez
Executive Director of Economic and Community Development
Bexar County
101 West Nueva, Suite 944
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Marquez:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. David Smith
Bexar County Manager
Bexar County
101 West Nueva, 10th Floor
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Smith:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

The Honorable Justin Rodriguez
Precinct 2 Commissioner
Bexar County Commissioners Court
101 West Nueva, 10th Floor
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Commissioner Rodriguez:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Grant Moody
Precinct 3 Commissioner
Bexar County Commissioners Court
101 West Nueva, Suite 1007, 10th Floor
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Commissioner Moody:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

July 1, 2024
AVO 55396.001

Mr. Robert Brach, P.E.
Bexar County Floodplain Development Services Engineer
Bexar County Public Works Department
1948 Probandt
San Antonio, Texas 78214

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Brach:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Ms. Belinda Gavallos
Commission Chair
Bexar County Historical Commission
100 Dolorosa Street
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Chairwoman Gavallos:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Rich Whitehead
Mayor of Helotes
City of Helotes
P.O. Box 507
Helotes, Texas 78023

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mayor Whitehead:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Craig Sanders
Council Place 1 / Mayor Pro Tem
City of Helotes
P.O. Box 507
Helotes, Texas 78023

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Councilman Sanders:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Ron Nirenberg
Mayor of San Antonio
City of San Antonio
P.O. Box 839966
San Antonio, Texas 78283

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mayor Nirenberg:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Melissa Cabello Havrda
City Council, District 6
City of San Antonio
P.O. Box 839966
San Antonio, Texas 78283

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Councilwoman Cabello Havrda:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Ms. Brenda Hicks-Sorensen
Director
Economic Development Department
City of San Antonio
100 West Houston Street, 18th Floor
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Hicks-Sorensen:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Rudy Nino, Director
Department of Planning
City of San Antonio
100 West Houston Street, 18th Floor
San Antonio, Texas 78205

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Nino:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: Susan Courage (Parks) <Susan.Courage@sanantonio.gov>
Sent: Tuesday, July 30, 2024 4:22 PM
To: Jody Urbanovsky
Subject: RE: [EXTERNAL] RE: Proposed CPS Energy Ranch Town - Talley Road Transmission Line Project (Bexar & Medina Counties, TX)

Thanks Jody, much appreciated

Susan Courage
City of San Antonio
Edwards Aquifer Protection Program
5800 Historic Old Highway 90 West
San Antonio, TX 78227
Ph: 210-207-2162 / Fax: 210-207-8444

From: Jody Urbanovsky <jurbanovsky@halff.com>
Sent: Tuesday, July 30, 2024 8:35 AM
To: Susan Courage (Parks) <Susan.Courage@sanantonio.gov>
Cc: Phillip Covington (Parks) <Phillip.Covington@sanantonio.gov>
Subject: RE: [EXTERNAL] RE: Proposed CPS Energy Ranch Town - Talley Road Transmission Line Project (Bexar & Medina Counties, TX)

Susan,
Just letting you know I received the data and will incorporate it into the environmental constraints map. Thank you and I hope you have a great day.
-Jody

Jody Urbanovsky
Project Manager

Halff
O: 214.346.6357
E: jurbanovsky@halff.com

From: Susan Courage (Parks) <Susan.Courage@sanantonio.gov>
Sent: Monday, July 29, 2024 3:55 PM
To: Jody Urbanovsky <jurbanovsky@halff.com>
Cc: Phillip Covington (Parks) <Phillip.Covington@sanantonio.gov>

Subject: RE: [EXTERNAL] RE: Proposed CPS Energy Ranch Town - Talley Road Transmission Line Project (Bexar & Medina Counties, TX)

Hi Jody. Thanks for reaching out and apologies for the delay. I've attached the GIS shapefiles for all of our Edwards Aquifer Protection Program (EAPP) protected properties (conservation easement properties or natural areas) within the target area. I've also included a preserve owned by the Nature Conservancy (Elizabeth Hill Preserve), which is also in the target area.

Please let me know if you need anything else or have trouble accessing the data.

Thanks so much,

Susan Courage
City of San Antonio
Edwards Aquifer Protection Program
5800 Historic Old Highway 90 West
San Antonio, TX 78227
Ph: 210-207-2162 / Fax: 210-207-8444

From: Jody Urbanovsky <jurbanovsky@halff.com>
Sent: Monday, July 29, 2024 1:23 PM
To: Susan Courage (Parks) <Susan.Courage@sanantonio.gov>
Cc: Phillip Covington (Parks) <Phillip.Covington@sanantonio.gov>
Subject: [EXTERNAL] RE: Proposed CPS Energy Ranch Town - Talley Road Transmission Line Project (Bexar & Medina Counties, TX)

Susan,
Good afternoon. Can you or Phillip please send me the GIS shapefiles mentioned below? I will need this GIS data by this Wednesday (7/31) to incorporate any new data into our open house environmental constraints map before the meeting. Thanks in advance for your help.
-Jody

Jody Urbanovsky
Project Manager

Halff
O: 214.346.6357
E: jurbanovsky@halff.com

We improve lives and communities
by turning ideas into reality.

From: Susan Courage (Parks) <Susan.Courage@sanantonio.gov>
Sent: Monday, July 15, 2024 5:06 PM
To: Jody Urbanovsky <jurbanovsky@halff.com>

Cc: Phillip Covington (Parks) <Phillip.Covington@sanantonio.gov>
Subject: Proposed CPS Energy Ranch Town - Talley Road Transmission Line Project (Bexar & Medina Counties, TX)

Hi Jody,

I just left you a voicemail. We are stakeholders regarding the proposed CPS Energy Ranch Town project in Bexar and Medina Counties due to having several conservation easement properties within this area. The City of San Antonio also has natural areas within the project scope. We would like to be included in any future correspondence regarding this project and would like to submit public comments during the Environmental Assessment comment period.

You're welcome to email either myself or Phillip Covington (cc'd on this email) and please send any future mail to:

City of San Antonio
Parks and Recreation Department
ATTN: Edwards Aquifer Protection Program
5800 Historic Old Highway 90 West
San Antonio, TX 78227

I also have GIS shapefiles that I can provide with all of our conservation easement properties and city natural areas. Please let me know who to send that to.

You're welcome to give me a call back at your earliest convenience.

Thanks,

Susan Courage
City of San Antonio
Edwards Aquifer Protection Program
5800 Historic Old Highway 90 West
San Antonio, TX 78227
Ph: 210-207-2162 / Fax: 210-207-8444
CITY OF SAN ANTONIO TEXAS PARKS & RECREATION

halff

June 21, 2024
AVO 55396.001

Ms. Shannon Shea Miller, Director
Office of Historic Preservation Development and Business Services Center
City of San Antonio
P.O. Box 839966
San Antonio, Texas 78283

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Shea Miller:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Razi Hosseini, P.E. R.P.L.S, Director
City Engineer
Public Works Department
City of San Antonio
P.O. Box 839966
San Antonio, Texas 78283

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Hosseini:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Ms. Catherine Hernandez, Director
Transportation Department
City of San Antonio
P.O. Box 839966
San Antonio, Texas 78283

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Hernandez:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

Ms. Deborah Carington
Board Member
Edwards Aquifer Authority - District 6
900 East Quincy
San Antonio, Texas 78215

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Carington:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Benjamin Youngblood, III
Board Member, Secretary
Edwards Aquifer Authority - District 4
900 East Quincy
San Antonio, Texas 78215

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Youngblood:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Enrique Valdivia, Chairman
Edwards Aquifer Authority - District 7
900 East Quincy
San Antonio, Texas 78215

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Valdivia:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Mr. Russell Persyn
Board Member
Edwards Aquifer Authority - District 13
900 East Quincy
San Antonio, Texas 78215

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Persyn:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

The Honorable Keith Lutz
Medina County Judge
Medina County
1300 Avenue M, Room 250
Hondo, Texas 78861

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Judge Lutz:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

The Honorable Jessica Castiglione
Precinct 1 Commissioner
Medina County Commissioners Court
275 County Road 341
Hondo, Texas 78861

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Commissioner Castiglione:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Transmitted via U.S. Mail and email: pat.brawner@medinatx.org

Mr. Pat Brawner
Medina County Floodplain Administrator
Medina County Environmental Health Department
1502 Avenue K, 2nd Floor
Hondo, Texas 78861

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Brawner:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: 9-ASW-RA-Office (FAA) <9-ASW-RA-Office@faa.gov>
Sent: Tuesday, July 2, 2024 10:53 AM
To: Jody Urbanovsky
Subject: Transmission Line Project in Bexar and Medina Counties, Texas
Attachments: 2024-6-21 Halff.pdf

Hello,

Please find the response to your correspondence regarding the Transmission Line Project in Bexar and Medina Counties, Texas.

Have a great day!

~ Office of the ASW Regional Administrator

From: Pat Brawner <pat.brawner@medinatx.org>
Sent: Monday, June 24, 2024 10:28 AM
To: Jody Urbanovsky
Subject: RE: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

Good morning Jody, looking at the route I believe the only permit that will be required would be a flood plain development permit. No other permits would need to be issued by Medina County. On a project of this scope we would allow all of the flood plain crossings/development to be included on one permit with required project description.
Thanks,
Pat E. Brawner DR CFM
O: 830-741-6195

From: Jody Urbanovsky <jurbanovsky@halff.com>
Sent: Friday, June 21, 2024 9:45 AM
To: Pat Brawner <pat.brawner@medinatx.org>
Subject: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

Greetings,
Please see the attached formal letter and study area map for the referenced transmission line project in Bexar and Medina counties, Texas. Please also see the attached KMZ for the project study area. If you have any questions, please don't hesitate to let me know. Thanks, and have a great day.
-Jody

halff

Jody Urbanovsky
Project Manager

Halff
O: 214.346.6357
E: jurbanovsky@halff.com

We improve lives and communities
by turning ideas into reality.

halff

June 21, 2024
AVO 55396.001

Mr. Phil King, Chairman
Medina County Historical Commission
1100 16th Street
Hondo, Texas 78861

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Chairman King:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Dr. Scott Caloss
Superintendent
Medina Valley Independent School District
8449 FM 471 S.
Castroville, Texas 78009

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Dr. Caloss:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

halff

June 21, 2024
AVO 55396.001

Dr. John M. Craft
Superintendent
Northside Independent School District
5900 Evers Road
San Antonio, Texas 78238

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Dr. Craft:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

1201 N. Bowser Road, Richardson, TX 75081 | halff.com

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June 21, 2024
AVO 55396.001

Mr. Derek Boese
General Manager
San Antonio River Authority
100 East Guenther Street
San Antonio, Texas 78204

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Boese:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: Shaun Donovan <sdonovan@sariverauthority.org>
Sent: Friday, July 26, 2024 10:19 AM
To: Jody Urbanovsky
Subject: Environmental and Land Use Constraints Requests

Good Afternoon Jody,

This email is in response to the two requests you recently sent to the attention of our GM, Derek Boese. Moving forward, please direct these inquires to me via email, or make the letters to my attention if you prefer to send them through the mail.

As you know, both alignments cross the 100-year floodplain, with the bulk of the proposed routes near Leon Creek in the floodplain. The River Authority does not have bed and bank ownership near either of the proposed alignments, most notably San Geronimo Creek west of Helotes where the Ranchtown-Talley Road alignment crosses. The River Authority is not aware of any environmental or land use constraints in these areas. However, it should not be assumed that environmental or land use constraints do not exist in the areas, and thorough due diligence should be conducted with other entities and relevant environmental databases.

Thank you for reaching out and let us know if you have any questions on this response.

Thanks,
Shaun

Shaun Donovan (he/him/his) FP-C, PMP | **Manager, Environmental Sciences**
100 E. Guenther St., San Antonio, TX 78204 | W (210) 302-3258 C (210)639-8437 | sdonovan@sariverauthority.org

SAN ANTONIO RIVER AUTHORITY

halff

June 21, 2024
AVO 55396.001

Transmitted via U.S. Mail and email: Andrew.Wiatrek@saws.org

Mr. Andrew Wiatrek, Manager
Resource Compliance Division
San Antonio Water System
P.O. Box 2449
San Antonio, Texas 78298

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Wiatrek:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

From: Andrew Wiatrek <Andrew.Wiatrek@saws.org>
Sent: Wednesday, July 3, 2024 8:26 AM
To: Jody Urbanovsky
Subject: FW: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

Here is an email with some links for info

From: Aaron Faris L <Aaron.Faris@saws.org>
Sent: Monday, June 24, 2024 11:11 AM
To: Andrew Wiatrek <Andrew.Wiatrek@saws.org>
Cc: OpenRecords <openrecords@saws.org>
Subject: RE: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

Good morning. For this type of request we generally refer requestors to search the SAWS website so they can obtain block maps and as-builts for the subject area. You may wish to send them the following response:

> SAWS has apps available on our website that are free to use to obtain the information you seek. To obtain water and sewer as-built plans, please visit our online As-Built Portal at www.saws.org/business-center/developer-resources/. Utility locates and block maps can be accessed through the SAWS Locates App at https://locates.saws.org/.
>
> Utilizing these self-service apps is the least costly (free) and quickest way to obtain the records you seek. If you wish to request specific as-built or other records not found in the SAWS As-Built Portal, please submit an open records request directly through the SAWS Open Records Center portal by clicking here.

Please let me know if you have any questions. Thanks.

Aaron Faris
Open Records Analyst
San Antonio Water System
210-233-2385
www.saws.org/openrecords

Andrew.Wiatrek@saws.org>

Aaron.Faris@saws.org>
openrecords@saws.org>

From: Andrew Wiatrek <
Sent: Monday, June 24, 2024 10:40 AM
To: Aaron Faris L <
Cc: OpenRecords <
Subject: FW: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

Aaron,

Should this be an open records request? It is related to CPS but this is there consultant.

Andrew

From: Jody Urbanovsky <jurbanovsky@halff.com>
Sent: Friday, June 21, 2024 9:45 AM
To: Andrew Wiatrek <Andrew.Wiatrek@saws.org>
Subject: Ranchtown -- Talley Road 138 kV Transmission Line Project (Bexar/Medina Counties)

Greetings,
Please see the attached formal letter and study area map for the referenced transmission line project in Bexar and Medina counties, Texas. Please also see the attached KMZ for the project study area. If you have any questions, please don't hesitate to let me know. Thanks, and have a great day.
-Jody

halff

Jody Urbanovsky
Project Manager

Halff
O: 214.346.6357
E: jurbanovsky@halff.com

We improve lives and communities
by turning ideas into reality.

halff

June 21, 2024
AVO 55396.001

Mr. Robert Puente
President, Chief Executive Officer
San Antonio Water System
P.O. Box 2449
San Antonio, Texas 78298

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Mr. Puente:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

On behalf of CPS Energy, Halff is preparing an Environmental Assessment (EA) to support CPS Energy's application for a Certificate of Convenience and Necessity (CCN) from the Public Utility Commission of Texas (PUC). Halff is currently gathering data on the existing environment and identifying environmental and land use constraints within the project study area that will be used in the creation of an environmental and land use constraints map.

Halff is requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your comments will be an important consideration in the assessment of potential impacts. Upon certification for the proposed project, CPS Energy will determine the need for other approvals and/or permits. If your jurisdiction has approvals and/or permits that would apply to this project, please identify them in response to this inquiry. If permits are required from your office, CPS Energy will contact your office following route certification.

Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

June 21, 2024
AVO 55396.001

Ms. Colleen Swain, Director
World Heritage Office
City of San Antonio
P.O. Box 839966
San Antonio, Texas 78283

Re: CPS Energy's proposed Ranchtown—Talley Road 138 kV transmission line project in Bexar and Medina counties, Texas

Dear Ms. Swain:

CPS Energy proposes to construct a new 138 kilovolt (kV) transmission line beginning at the existing Ranchtown Substation, which is located south of SH 16 (Bandera Road), approximately 0.25 miles east of Shadow Canyon Drive in Bexar County, Texas, and continuing approximately 12.1 miles to the existing Talley Road Substation located northwest of the Farm-to-Market (FM) 471 and SH 211 intersection in Medina County, Texas. Beginning from the Talley Road Substation, for approximately 10.8 miles, the project will add a new 138 kV transmission line circuit utilizing structures within an existing transmission line corridor which has a vacant position to accommodate the new circuit. The remaining 1.3 miles of the new 138 kV transmission line circuit will utilize an existing transmission line corridor, portions of which may need to be rebuilt to accommodate the new circuit. Please refer to the attached map depicting the study area.

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Thank you for your assistance with this transmission line project. If you have any questions or require additional information, please contact me at (214) 346-6357 or jurbanovsky@halff.com. Your earliest reply will be appreciated.

Sincerely,

Jody Urbanovsky

Jody Urbanovsky, Project Manager
Attachment – Project Study Area Map

Appendix B
Public Involvement Information

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July 29, 2024

Dear CPS Energy Customer:

Thank you for being our customer. We invite you to attend an open house to learn about a proposed transmission line project in your area—the Ranchtown to Talley Road Project.

The project involves the proposed installation of a new 138 kilovolt (kV) transmission line. A significant portion of the project (10.8 miles) will involve installation of the new line on a vacant position on existing structures. A portion of the project (1.3 miles) will involve the rebuilding of existing single circuit transmission facilities for double circuit operation for the new line. In total, the project will consist of 12.1 miles of new transmission line connecting the existing Ranchtown and Talley Road substations.

At the Open House, you will have the opportunity to learn more about the project and the steps required to complete the work. We welcome your questions, comments, and input regarding this project. CPS Energy team members directly involved with the project will be present to answer your questions and receive feedback you provide.
The Open House will have an informal "come and go" format with information stations addressing specific areas of the proposed project.

CPS Energy Open House
Ranchtown to Talley Road Transmission Line Project
August 12, 2024
5:30pm - 7:30pm

Los Reyes Elementary School Cafeteria
10785 Triana Pkwy
Helotes, TX 78023

A brochure describing the proposed project and a map of the study area is included in this packet. Additional information will also be available at www.cpsenergy.com/infrastructure. Scroll down to the "Ranchtown to Talley Project."

We look forward to meeting you, receiving feedback you provide, and answering your questions. Thank you in advance for taking the time to join us.

Sincerely,

Antonio DeMendonca
Project Manager
S&T Regulatory Support

500 McCullough • San Antonio, Texas 78215

29 de julio de 2024

Estimado cliente de CPS Energy:

Gracias por ser nuestro cliente. Lo invitamos a asistir a una Feria en la Sede de CPS Energy para informarse sobre un proyecto de línea de transmisión propuesto en su área: el Proyecto Ranchtown a Talley Road.

El proyecto consiste en la instalación de una nueva línea de transmisión de 138 kilovoltios (kV). Una porción significativa del proyecto (10.8 millas) consistirá en la instalación de la nueva línea en una posición vacante en las estructuras existentes. Otra parte del proyecto (1.3 millas) consistirá en la reconstrucción de las instalaciones de transmisión de circuito único existentes para el funcionamiento de doble circuito para la nueva línea. En total, el proyecto consistirá en 12.1 millas de nueva línea de transmisión que conectará las subestaciones existentes de Ranchtown y Talley Road.

En la Feria en la Sede de CPS Energy tendrá la oportunidad de obtener más información sobre el proyecto y los pasos necesarios para completar las obras. Aceptamos sus preguntas, comentarios y opiniones sobre este proyecto. Los miembros del equipo de CPS Energy directamente implicados en el proyecto estarán presentes para responder a sus preguntas y recibir sus comentarios.
La Feria en la Sede de CPS Energy tendrá un formato informal de "entrada y salida" con puestos de información que abordarán áreas específicas del proyecto propuesto.

Feria en la Sede de CPS Energy
Proyecto de Línea de Transmisión de Ranchtown a Talley Road
12 de agosto de 2024
5:30pm - 7:30pm

Los Reyes Elementary School Cafeteria
10785 Triana Pkwy
Helotes, TX 78023

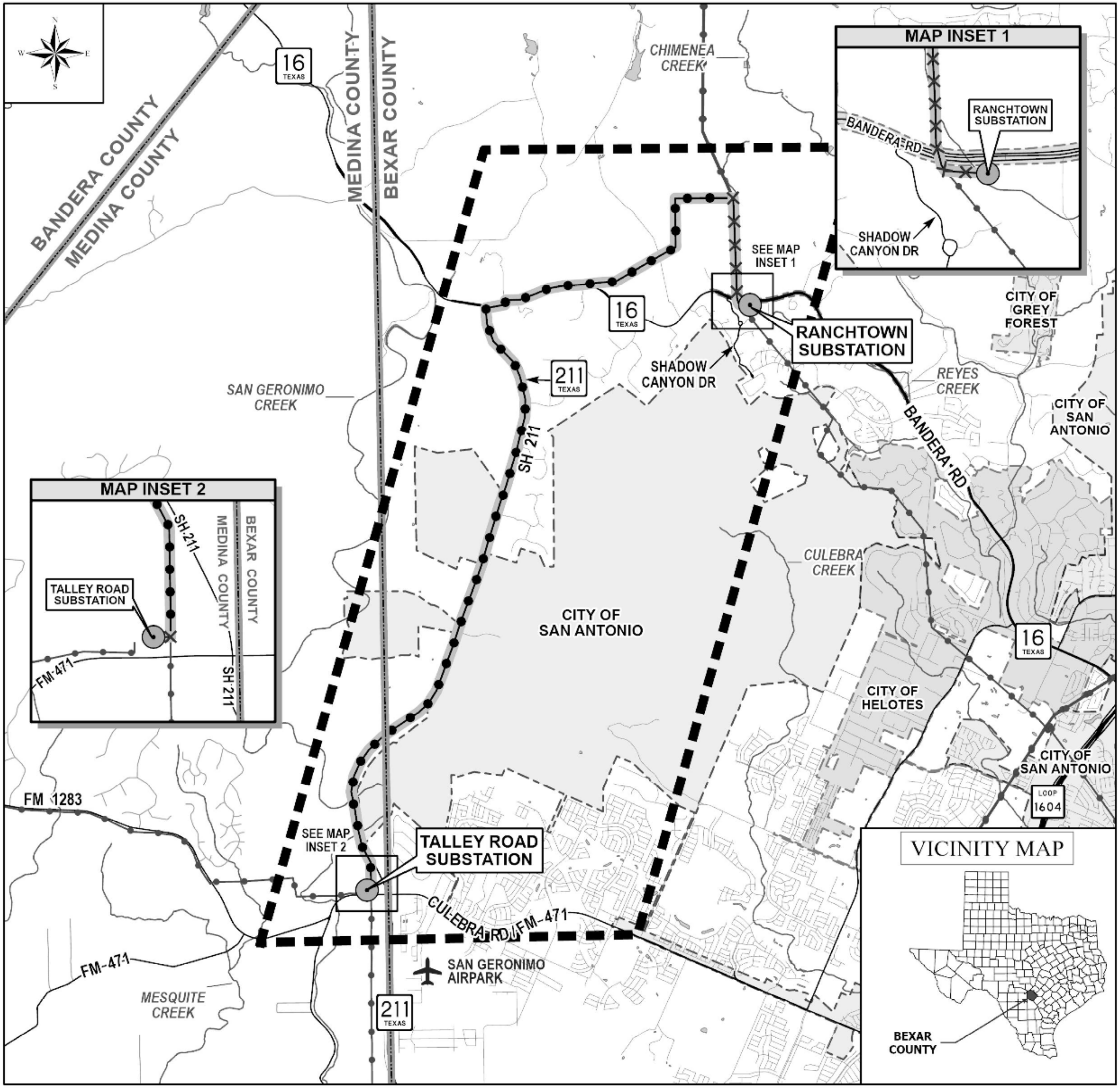
El presente paquete incluye un folleto en el que se describe el proyecto propuesto y un mapa de la zona de estudio. También habrá información adicional disponible en www.cpsenergy.com/infrastructure. Baje hasta “Proyecto de Ranchtown a Talley”.

Esperamos conocerlo, recibir sus comentarios y responder a sus preguntas. Gracias de antemano por dedicarnos su tiempo.

Atentamente,

Antonio DeMendonca
Project Manager
S&T Regulatory Support

RANCHTOWN — TALLEY ROAD 138 kV TRANSMISSION LINE PROJECT



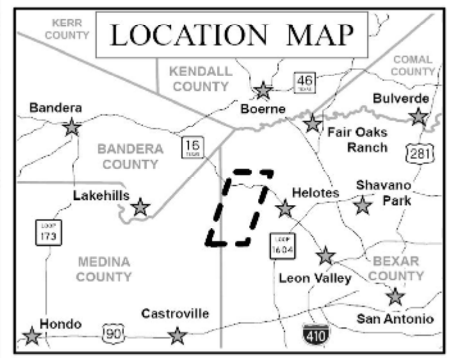
LEGEND

- STUDY AREA
- PROJECT ENDPOINTS
- EXISTING TRANSMISSION LINE
- NEW CIRCUIT / EXISTING STRUCTURES
- NEW CIRCUIT / NEW STRUCTURES
- COUNTY BOUNDARY
- CITY LIMITS
- WATERBODY
- STREAM
- MINOR ROADWAY
- MAJOR ROADWAY
- AIRPORT

NOTES:

1. SOME LEGEND SYMBOLS ARE ENLARGED FOR EASIER IDENTIFICATION.
2. DATA IS FOR DISPLAY PURPOSES ONLY. ALL FEATURES AND BOUNDARIES HAVE BEEN APPROXIMATED BASED ON INFORMATION GATHERED FROM REVIEW OF PUBLIC RESOURCES AND FROM FIELD RECONNAISSANCE.

DATE CREATED: 07/22/2024



0 8,000 16,000
FEET

PROPOSED CONSTRUCTION OF A NEW TRANSMISSION LINE

CPS Energy will host a public meeting regarding the construction of a new transmission line in Northwest Bexar County.

Monday, August 12, 2024
5:30pm – 7:30pm

Los Reyes Elementary School Cafeteria
10785 Triana Pkwy.
Helotes, TX 78023

CPS Energy representatives will be available to receive comments and answer questions from area residents. This event will have an informal "come and go" type format consisting of information stations addressing specific areas of the project. Attendees are encouraged to review each station and ask questions.

This event is free and open to the public.

For more information, please contact
Antonio DeMendonca, Project Manager, CPS Energy at 210-353-6673

cps ENERGY

Ad Number:	3434556-01
Insertion Number:	N/A
Size:	6 Col x 9.75 in
Color Type:	P
Advertiser:	CPS Energy
Agency:	KGB Texas
Section-Page-Zone(s):	A-6-All
Description:	RANCHTOWN-SAEN

San Antonio Express-News
Sunday, August 11, 2024

PROPOSED CONSTRUCTION OF A NEW TRANSMISSION LINE

CPS Energy will host a public meeting regarding the construction of a new transmission line in Northwest Bexar County.

Monday, August 12, 2024
5:30pm – 7:30pm

Los Reyes Elementary School Cafeteria
10785 Triana Pkwy.
Helotes, TX 78023

CPS Energy representatives will be available to receive comments and answer questions from area residents. This event will have an informal "come and go" type format consisting of information stations addressing specific areas of the project. Attendees are encouraged to review each station and ask questions.

This event is free and open to the public.

For more information, please contact
Antonio DeMendonca, Project Manager, CPS Energy at 210-353-6673

cps ENERGY

Ad Number: 34345876-01
Insertion Number: N/A
Size: 6 Col x 9.75 in
Color Type: P
Advertiser: CPS Energy
Agency: KGB Texas
Section-Page-Zone(s): CX-3-All
Description: Ranchtown-SPANISH-

San Antonio Express-News
Wednesday, August 7, 2024

Propuesta de Construcción de una Nueva Línea de Transmisión

CPS Energy organizará una feria sobre la construcción de una nueva línea de transmisión en la zona noroeste del condado de Bexar.

Lunes 12 de agosto del 2024
5:30pm – 7:30pm

Cafetería de Los Reyes Elementary
10785 Triana Pkwy.
Helotes, TX 78023

Los representantes de CPS Energy estarán disponibles para recibir comentarios y responder a las preguntas de los residentes del área. Este evento tendrá un formato informal tipo "entrada y salida" y consistirá en estaciones informativas que abordarán áreas específicas del proyecto. Se alienta a los participantes a visitar cada estación y hacer preguntas.

Este evento es gratuito y está abierto al público.

Para más información, póngase en contacto con
Antonio DeMendonca, Director de Proyectos de CPS Energy, por teléfono 210-353-6673

CPS ENERGY

INTRODUCTION
CPS ENERGY

CPS ENERGY

Established in 1860, CPS Energy is the nation's largest community-owned, natural gas and electric company, providing safe, reliable, and competitively priced service to 907,520 electric and 373,990 natural gas customers in San Antonio and portions of seven adjoining counties. We are among the top public power wind energy buyers in the nation and number one in Texas for solar generation.

For more information, visit cpsenergy.com.

PURPOSE, NEED & SCOPE

The Electric Reliability Council of Texas (ERCOT) endorsed this project as a needed transmission system improvement on the CPS Energy system on February 16, 2024.

PURPOSE & NEED:

The proposed project is needed to increase the load-serving capability of the far western portion of the CPS Energy transmission system to accommodate increasing customer load growth in the area, including new large customer loads.

SCOPE:

CPS Energy is proposing to construct approximately 12.1 miles of new 138 kV transmission infrastructure connecting the existing Ranchtown and Talley Road substations in Northwest Bexar County. Approximately 10.8 miles of the new transmission line will be located on existing transmission line structures and approximately 1.3 miles of the new transmission line will be located along an existing CPS Energy transmission line corridor. Additional right-of-way is needed for the 1.3 miles of the project for the existing and new circuit to be safely constructed and operated within the existing corridor.

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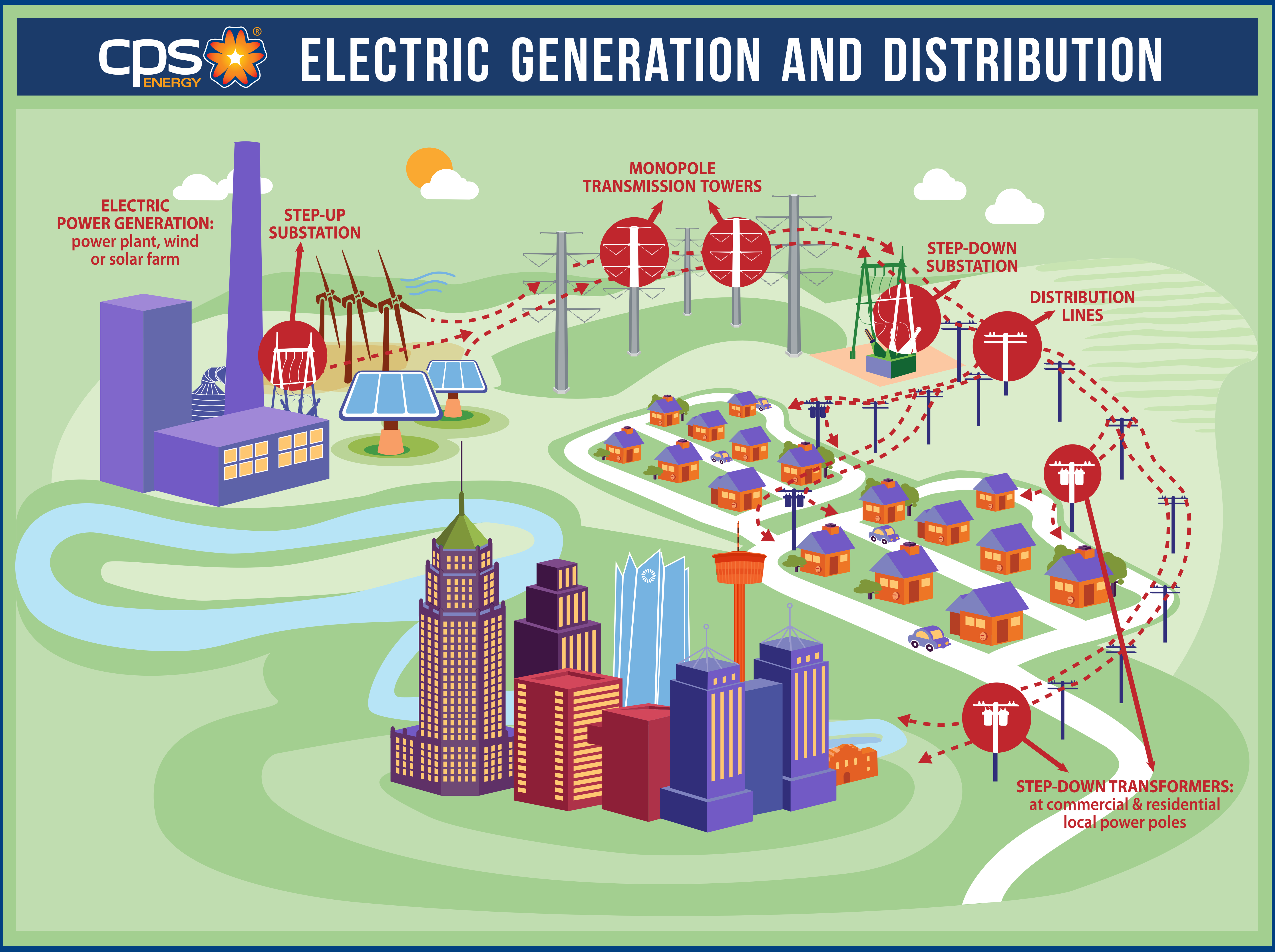
GENERATION TO CUSTOMER DIAGRAM



CCN PROCESS

Licensing Process for New Transmission Facilities

Planning/Need for the Project

Environmental Assessment and Routing Study
Typically 9 – 12 months

- Delineate Study Area
- Collect/Review Environmental/Historical/Archeological Data
- Identify Constraints
- Public Information Meetings
- Prepare Environmental Assessment Report

You are here

Submit Final Report

Certificate of Convenience and Necessity (CCN) Application
Typically 2 months to prepare

Public Utility Commission (PUC) Processing

CCN Filing

Provide Notice
Direct Mail/Public/City and County Government Agencies/Other Utilities

Intervention Period
30 Days

Intervention ?

Yes

Contested CCN
180 Day Process

- Referred to State Office of Administrative Hearings
- Pre-hearing Conference(s)
- Discovery
- Pre-filed Testimony
- Hearing on the Merits
- Briefing
- Proposal for Decision

NO

Uncontested CCN
Administrative Processing = 80 Days

- PUC Review/Recommendation
- Staff Recommendation
- Notice of Approval or Proposal for Decision

Administrative Law Judge Prepares Proposed Final Order
Exceptions/Responses to Proposed Order

PUC Decision
Whole/Partial Grant/Denial

Approval

Surveying
Right of Way Acquisition
Permitting

Project Design
Material Acquisition

Construction

- Clearing
- Soil investigation
- Structures
- Conductor Installation
- Cleanup

Project Completion

Denial

Motion for Rehearing
Appeal of PUC Decision
Travis County District Court

Green	Planning Phase
Light green	Environmental Assessment and routing phase
Orange	Application phase
Light blue	Regulatory phase
Yellow	Construction phase

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ROUTING AND SITING PROCESS HIGHLIGHTS

DETERMINE A NEED FOR THE PROJECT

- By utility planners and engineers

DEFINE THE STUDY AREA

GATHER DATA & DEVELOP LAND USE & CONSTRAINTS MAP

- Obtain aerial photos of the study area
- Gather property boundary information
- Identify environmental/land-use constraints and opportunities
- Agency input from federal, state and local agencies about the study area
- Gather information regarding natural, cultural and human resources
- Assess easement/right-of-way features/concerns

CONDUCT PUBLIC INVOLVEMENT

- Notify landowners and interested parties
- Advertise open house
- Hold open house to explain the project and solicit input
- Respond to inquiries
- Evaluate public and agency input

DEVELOP ENVIRONMENTAL ASSESSMENT REPORT

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ANTICIPATED TIMELINE

Gather information and land use data
In progress

Send open house notice of the project to landowners
July 2024

Hold Open House
August 2024

Complete Environmental Analysis
Estimated December 2024

Submit CCN application to The Public Utility Commission of Texas (PUC) and notify directly affected landowners and required entities
Estimated October 2024

Receive Ruling from the PUC regarding project need and routing outside of San Antonio
Estimated April 2025

Receive CPS Energy Board of Trustees approval
Estimated July 2025

Start construction
Estimated August 2026

Complete construction
Estimated May 2027

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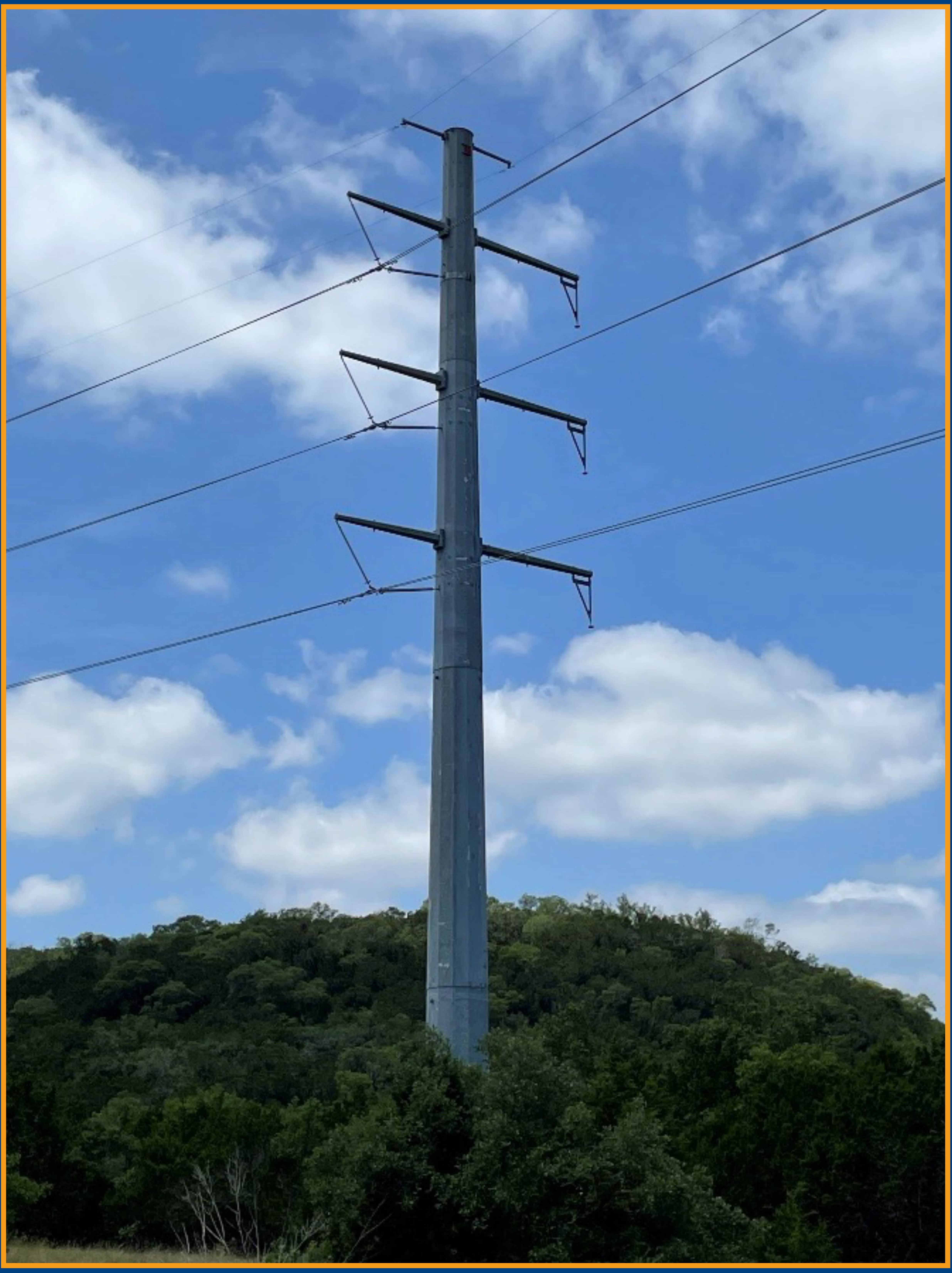
TRANSMISSION FACTS

- Typical double-circuit 138kV monopole heights are 100'-125', but could be as high as 150' depending on terrain and span length
- Typical double-circuit 138kV span lengths are 600'-800' depending on route variables
- Typical double-circuit 138kV pole foundation diameter is 6'-10'

CPS ENERGY

EXISTING 138KV TRANSMISSION STRUCTURES (TO BE REPLACED WITH DOUBLE-CIRCUIT POLES)

EXISTING 345KV TRANSMISSION POLES (NEW CIRCUIT PROPOSED IN VACANT POSITION)



TYPICAL TRANSMISSION EASEMENTS

Clearing around transmission poles

Clearing along route

ACQUISITION ELEMENTS

- Mail "Bill of Rights" letter to affected landowners
- Contact property owner
- Obtain permission to conduct survey(s)
- Survey establishes boundaries of easement (Simultaneously perform environmental/ cultural surveys)
- Easement area is defined/described by a Registered Professional Land Surveyor
- Value of easement established by an independent appraiser
- Negotiate with property owner for easement or right-of-way for utility use

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RIGHT-OF-WAY TERMS TO KNOW

EASEMENT:

A right created by grant, reservation, agreement, or implication, which one party has in another party's land.

SURVEY:

The measurement of the boundaries of a parcel of land, its area, and sometimes its topography.

APPRAISAL:

The act or process of developing an opinion of value; an opinion of value.

NEGOTIATION:

The process by which two or more parties resolve differences to reach a mutually acceptable agreement.

EMINENT DOMAIN:

A governmental right to acquire private property for public use by condemnation, and the payment of just compensation.

FAIR MARKET VALUE:

The price that would be negotiated between a willing seller and a willing buyer in a reasonable time, usually arrived at by comparable sales in the same area.

STATE OF TEXAS LANDOWNER BILL OF RIGHTS:

Property owner rights that apply to any attempt by the government or a private entity to take your property, as prescribed in Texas Government Code Sec. 402.031 and Chapter 21 of the Texas Property Code.

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LAND USE & ENVIRONMENTAL EVALUATION CRITERIA

LAND USE AND ENVIRONMENTAL EVALUATION CRITERIA

EVALUATION CRITERIA

Land Use

1 Length of alternative route (miles)
2 Number of habitable structures[1] within 300 feet of the route centerline
3 Length of ROW using existing transmission line ROW
4 Length of ROW parallel and adjacent to existing transmission line ROW
5 Length of ROW parallel and adjacent to other existing ROW (roadways)
6 Length of ROW parallel and adjacent to apparent property lines[2] (or other natural or cultural features, etc.)
7 Sum of evaluation criteria 4, 5, and 6
8 Percent of evaluation criteria 4, 5, and 6
9 Length of ROW across parks/recreational areas[3]
10 Number of additional parks/recreational areas[3] within 1,000 feet of ROW centerline
11 Length of ROW across cropland
12 Length of ROW across pasture/rangeland
13 Length of ROW across land irrigated by traveling systems (rolling or pivot type)
14 Length of route across conservation easements and/or mitigation banks (Special Management Area)
15 Length of route across gravel pits, mines, or quarries
16 Length of ROW parallel and adjacent to pipelines[4]
17 Number of pipeline crossings[4]
18 Number of transmission line crossings
19 Number of IH, US and state highway crossings
20 Number of FM or RM road crossings
21 Number of FAA registered public/military airports[5] with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline
22 Number of FAA registered public/military airports[5] having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline
23 Number of private airstrips within 10,000 feet of the ROW centerline
24 Number of heliports within 5,000 feet of the ROW centerline
25 Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline
26 Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline
27 Number of identifiable existing water wells within 200 feet of the ROW centerline
28 Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)

Aesthetics

29 Estimated length of ROW within foreground visual zone[6] of IH, US and state highways
30 Estimated length of ROW within foreground visual zone[6] of FM/RM roads
31 Estimated length of ROW within foreground visual zone[[6]][[7]] of parks/recreational areas[3]

Ecology

32 Length of ROW through upland woodlands/brushlands
33 Length of ROW through bottomland/riparian woodlands
34 Length of ROW across National Wetlands Institute (NWI) mapped wetlands
35 Length of ROW across critical habitat of federally listed endangered or threatened species
36 Length of ROW across open water (lakes, ponds)
37 Number of stream and river crossings
38 Length of ROW parallel (within 100 feet) to streams or rivers
39 Length of ROW across Edwards Aquifer Contributing Zone
40 Length of ROW across FEMA mapped 100-year floodplain

Cultural Resources

41 Number of cemeteries within 1,000 feet of the ROW centerline
42 Number of recorded cultural resource sites crossed by ROW
43 Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline
44 Number of National Register of Historic Properties (NRHP) listed properties crossed by ROW
45 Number of additional NRHP listed properties within 1,000 feet of ROW centerline
46 Length of ROW across areas of high archeological site potential

Notes: All length measurements are shown in miles unless noted otherwise.

[1] Single-family and multi-family dwellings, and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230 kV or more.
[2] Apparent property boundaries created by existing roads, highways, or railroad ROWs are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria.
[3] Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project.
[4] Only steel pipelines six inches and greater in diameter carrying petrochemicals were quantified in the pipeline crossing and paralleling calculations.
[5] As listed in the Chart Supplement South Central US (FAA 2023b formerly known as the Airport/Facility Directory South Central US) and FAA 2023a.
[6] One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of interstates, US and state highway criteria are not "double-counted" in the length of ROW within the visual foreground zone of FM roads criteria.
[7] One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone of interstates, US and state highway criteria and/or with the total length of ROW within the visual foreground zone of FM roads criteria.

CPS ENERGY

LOCAL, STATE & FEDERAL AGENCIES CONTACTED/NOTIFIED

FEDERAL

U.S. Congressman
Federal Aviation Administration
Federal Emergency Management Agency
National Parks Service
U.S. Department of Agriculture – National Resources Conservation Services
U.S. Army Corps of Engineers
U. S. Department of Defense Military Aviation and Installation Assurance Siting Clearinghouse
U.S. Environmental Protection Agency
U.S. Fish Wildlife Service

STATE

Texas State Senators
Texas House Representatives
Railroad Commission of Texas
Texas Commission on Environmental Quality
Texas Department of Transportation
Texas General Land Office
Texas Historical Commission
Texas Parks and Wildlife Department
Texas Water Development Board
Texas State Soil and Water Conservation Board

LOCAL

City of San Antonio - Economic Development Department
City of San Antonio - Department of Planning
City of San Antonio - Public Works Department
City of San Antonio - Transportation
City of San Antonio office of Historic Preservation Development and Business Services Center
City of San Antonio - Mayor
City of San Antonio - Council
Alamo Area Council of Governments
Alamo Soil and Water Conservation District
San Antonio World Heritage Office
San Antonio Water System
Edwards Aquifer Authority
San Antonio River Authority
Bexar County Judge
Bexar County Commissioners
Bexar County Economic Development
Bexar County Floodplain Development Services
Bexar County Historical Commission
Bexar County Manager
Northside ISD
Medina County Judge
Medina County Commissioner
Medina County Historical Commission
Medina County Floodplain Administrator
Medina Valley ISD

SUBURBAN CITIES

City of Helotes - Mayor
City of Helotes - Council

NON-GOVERNMENTAL ORGANIZATION

The Nature Conservancy
Texas Land Trust Council
Texas Land Conservancy
Texas Agricultural Land Trust
Texas Cave Management Association

CPS ENERGY

ENVIRONMENTAL ASSESSMENT

- An Environmental Assessment is prepared to address land use, visual resources, socioeconomic elements, biological/ ecological resources, geology and soils, hydrology, and cultural resources within the regional study area and along the routes.

- Halff professionals with expertise in different environmental disciplines (wildlife biology, plant ecology, land use/planning, and archaeology) evaluate the routes based upon environmental and land use conditions present along the route, augmented by aerial photograph interpretation and field surveys from public rights-of-way, where possible, and the general routing methodology used by Halff and other environmental criteria.

CPS ENERGY

Who is CPS Energy?

Established in 1860, CPS Energy is the nation's largest community-owned provider of electric and natural gas services. We provide safe, reliable, and competitively priced services to **930,114** electric and **381,379** natural gas customers in San Antonio and portions of seven adjoining counties. Our customers' combined energy bills rank among the lowest of the nation's 20 largest cities while generating $9 billion in revenue for the City of San Antonio over the last 80 years.

Our Vision 2027 strategic plan is designed to guide CPS Energy through rapid transformational change in our city. As a trusted and reliable community partner, we continuously focus on job creation, economic development, and educational investment. We are powered by our skilled workforce, whose commitment to the community is demonstrated through our employees' volunteerism, our community engagement efforts and programs aimed at bringing value and assistance to our customers.

For more information, visit **cpsenergy.com**.

How can you follow the progress of this project?

The CPS Energy project team will post project information on the CPS Energy website at cpsenergy.com/infrastructure.

Who can answer your questions?

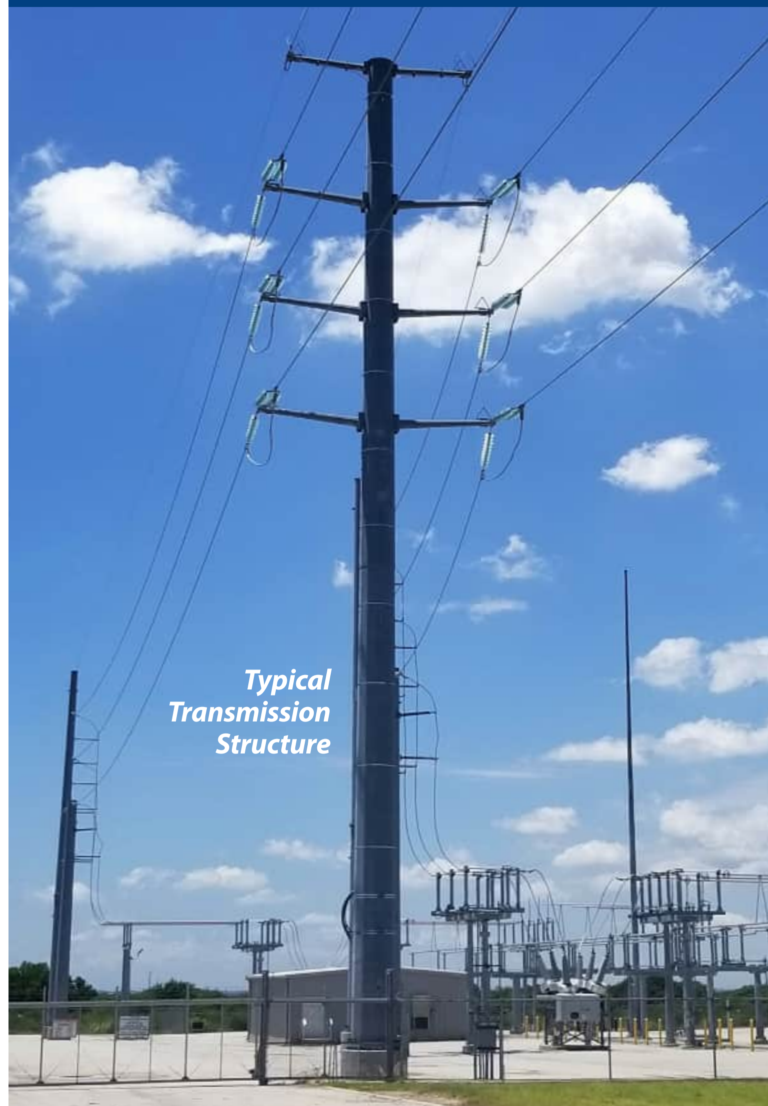
The website will include regular updates on the project as steps are completed.

Also, you may write, call or email to:

CPS Energy
Antonio Demendonca, Project Manager
Ranchtown to Talley Road
Transmission Line Project
Mail Code RT0801
500 McCullough Ave.
San Antonio, Texas 78215
(210) 353-6673
Ranchtown-TalleyProject@CPSEnergy.com

RANCHTOWN TO TALLEY ROAD

TRANSMISSION LINE PROJECT



INFORMATION ABOUT THE RANCHTOWN TO TALLEY ROAD TRANSMISSION PROJECT

What is the Ranchtown to Talley Road Transmission Project?

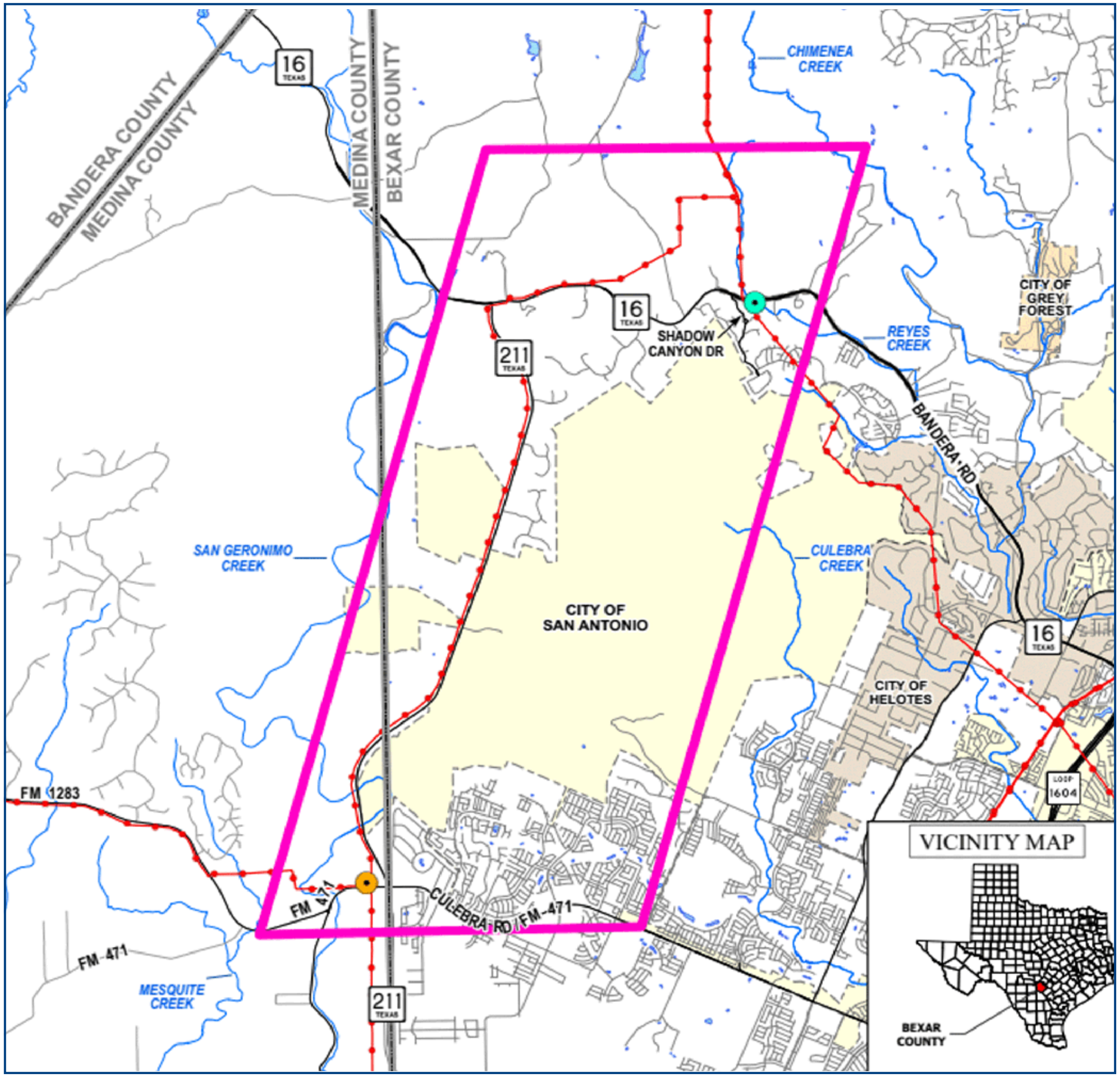
The project involves the proposed installation of a new 138 kilovolt (kV) transmission line. A significant portion of the project (10.8 miles) will involve installation of the new line on a vacant position on existing structures. A portion of the project (1.3 miles) will involve the rebuilding of existing single circuit transmission facilities for double circuit operation for the new line. In total, the project will consist of 12.1 miles of new transmission line connecting the existing Ranchtown and Talley Road substations.

How might this project affect you?

For 10.8 miles of the project, CPS Energy will install the new transmission line on a vacant position of the existing CPS Energy transmission line structures. No additional new permanent right of way will be needed in this portion of the project. For the remaining 1.3 miles of the project, CPS Energy anticipates purchasing additional property rights from property owners to expand the current right of way for the existing single circuit towers that is necessary to safely construct and operate double circuit poles along the same corridor to accommodate the project facilities.

Why is this project needed?

The new transmission line is necessary to support the accelerating growth in San Antonio. It will also increase the reliability of Texas' electric grid by adding another path for electric transmission.



Study Area Map

¿Quién es CPS Energy?

Fundada en 1860, CPS Energy es el proveedor comunitario de servicios de electricidad y gas natural más grande del país. Brindamos servicios seguros, fiables y a precios competitivos a **930,114** clientes de electricidad y **381,379** de gas natural en San Antonio y partes de siete condados adyacentes. Las facturas de energía combinadas de nuestros clientes se encuentran entre las más bajas de las 20 ciudades más grandes del país y generaron $9 mil millones en ingresos para la Ciudad de San Antonio durante los últimos 80 años.

Nuestro plan estratégico Visión 2027 está diseñado para guiar a CPS Energy a través de un rápido cambio transformacional en nuestra ciudad. Como socio comunitario fiable y de confianza nos centramos continuamente en la creación de empleo, el desarrollo económico y la inversión en educación. Somos impulsados por nuestra fuerza laboral calificada, cuyo compromiso con la comunidad se demuestra a través del voluntariado de nuestros empleados, nuestros esfuerzos y programas de participación comunitaria destinados a aportar valor y asistencia a nuestros clientes.

Para más información, visite **cpsenergy.com**.

¿Cómo puede seguir el progreso de este proyecto?

El equipo del proyecto de CPS Energy publicará información sobre el proyecto en el sitio web de CPS Energy

cpsenergy.com/infrastructure.

¿Quién puede responder sus preguntas?

El sitio web incluirá actualizaciones periódicas del proyecto a medida que se vayan completando los pasos.

También puede escribir, llamar o enviar un correo electrónico a:

CPS Energy

Antonio Demendonca, Director de Proyectos
Ranchtown to Talley Road
Proyecto de Línea de Transmisión
Código postal RT0801
500 McCullough Ave.
San Antonio, Texas 78215
(210) 353-6673
Ranchtown-TalleyProject@CPSEnergy.com

CPS ENERGY

RANCHTOWN A TALLEY ROAD

PROYECTO DE LÍNEA DE TRANSMISIÓN

Estructura de Transmisión Típica

INFORMACIÓN SOBRE EL PROYECTO DE TRANSMISIÓN DE RANCHTOWN A TALLEY ROAD

¿Qué es el Proyecto de Transmisión de Ranchtown a Talley Road?

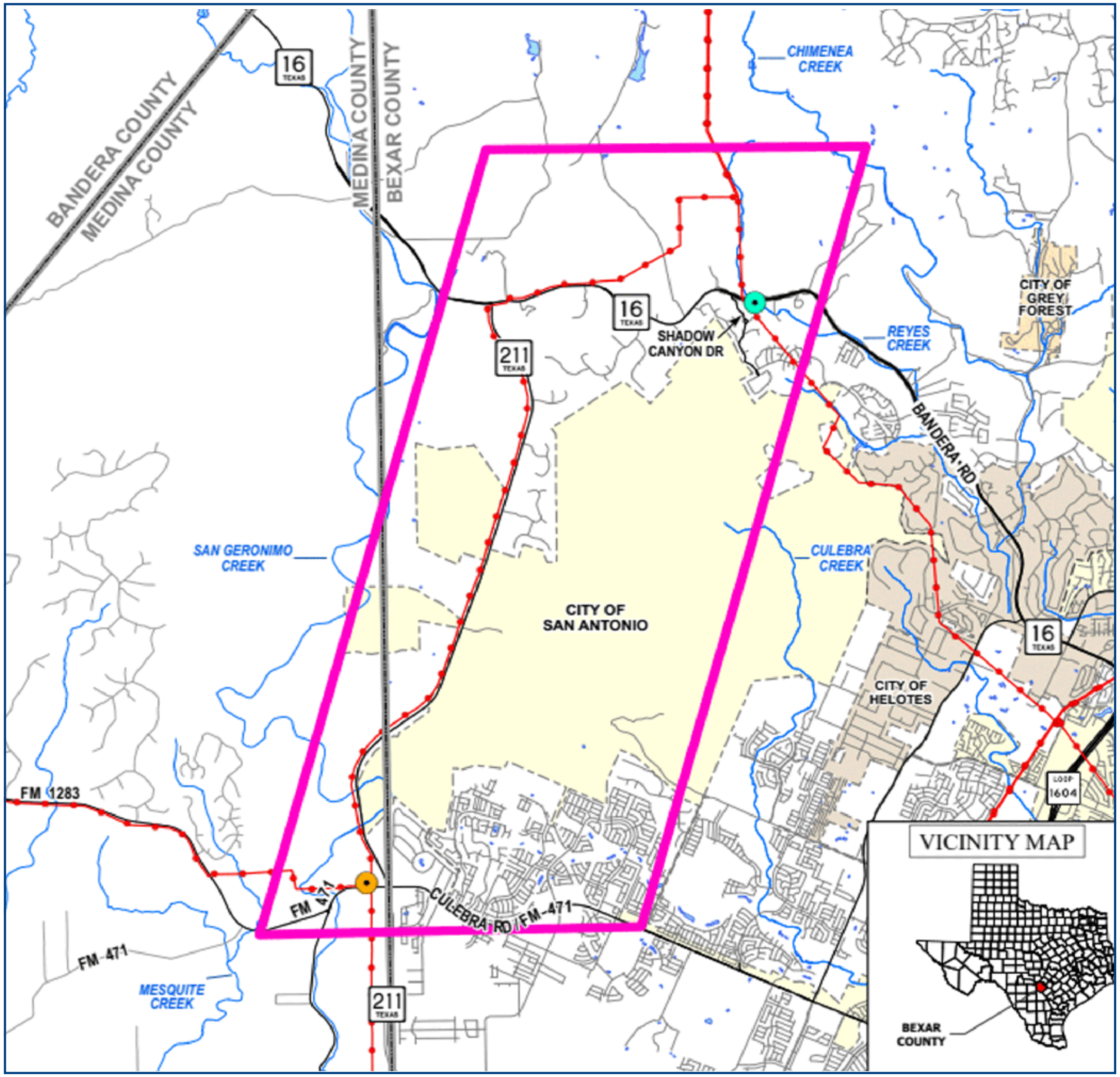
El proyecto consiste en la instalación de una nueva línea de transmisión de 138 kilovoltios (kV). Una parte importante del proyecto (10.8 millas) implicará la instalación de la nueva línea en una posición vacante en las estructuras existentes. Una porcion del proyecto (1.3 millas) implicará la reconstrucción de instalaciones de transmisión de circuito único existentes para doble funcionamiento del circuito de la nueva línea. En total, el proyecto consiste de 12.1 millas de nueva línea de transmisión que conecta las subestaciones existentes de Ranchtown y Talley Road.

¿Cómo puede afectarle este proyecto?

Durante 10.8 millas del proyecto, CPS Energy instalará la nueva línea de transmisión en una posición vacante de las estructuras de la línea de transmisión de CPS Energy. No se necesitará derecho de paso permanente en esta parte del proyecto. Para las 1.3 millas restantes de proyecto, CPS Energy prevé adquirir derechos de propiedad adicionales de propietarios para derecho de paso actual para las torres de circuito único existentes para construir y operar con seguridad postes de doble circuito a lo largo del mismo corredor para acomodar las instalaciones del proyecto.

¿Por qué es necesario este proyecto?

La nueva línea de transmisión es necesaria para apoyar el crecimiento acelerado de San Antonio. También aumentará la fiabilidad de la red eléctrica de Texas añadiendo otra vía de transmisión eléctrica.



Mapa del Área de Estudio

Ranchtown to Talley Transmission Line Project

Questionnaire

Your feedback is important to us.

Please take a moment to respond to the following questions so we may evaluate public comments.

1. Did you attend the Ranchtown to Talley Open House Event on August 12, 2024?
   Yes No

2. Do you understand the need for the Ranchtown to Talley Transmission Line Project?
   Strongly Agree Agree Neutral Disagree Strongly Disagree

3. If you attended the Open House or have reviewed the project information from the website, have your questions about the Ranchtown to Talley Transmission Line Project been answered?
   Strongly Agree Agree Neutral Disagree Strongly Disagree

4. If you answered "Disagree" or "Strongly Disagree" to Question 3, and you still have questions about the project that have not been answered to your satisfaction, would you like for someone from the project team to contact you to discuss the project with you further?
   Yes No

5. Were the exhibits at the Open House helpful to you? If not, do you have suggestions for improvements?
   Strongly Agree Agree Neutral Disagree Strongly Disagree

Suggestions for Improvement:

____

____

6. Below is a list of factors that CPS Energy and its consultants consider when identifying and evaluating proposed transmission line projects. Please rank your top five factors below from most important (1) to least important (5).

_____ Impact to residences

_____ Proximity to schools, churches, cemeteries

_____ Proximity to parks/recreational areas

_____ Proximity to archaeological/historical site

_____ Impact to woodlands/grasslands/wetland

_____Parallel existing roadways/highways

_____ Parallel existing transmission lines

_____ Impact to businesses

_____ Impact to streams/floodplains

_____ Impact to trees and other vegetation

_____ Visibility of structures

_____ Parallel property lines

_____ Total project cost

7. Are there any other factors that you feel should be considered when evaluating a proposed transmission line project? _____

____

____

8. Following your review of the Land Use and Environmental Constraints map at the Open House or from the project website, please indicate any features that should be added which were not identified in the appropriate location or that were not included on the map. ____

____

9. Please check all that apply:

☐ The transmission line project is near my home/business.

☐ The transmission line project crosses my property.

☐ Other. Please specify

10. Is there any other information you would like the Project Team to know, or take into consideration, when evaluating the project? ____

____

____

____

You may submit this form to the welcome table at the Open House, via mail or email to the following:

CPS Energy
Antonio DeMendonca
Mail Drop RT0801
500 McCullough
San Antonio, TX 78215

Email:
Ranchtown-TalleyProject@cpsenergy.com

Please provide your name and contact information below. (Optional)

Name:____

Address:____

City____________________State___________Zip__________

Telephone:____

Email:____

Proyecto de Línea de Transmisión de Ranchtown a Talley

Cuestionario

Sus comentarios son importantes para nosotros.

Por favor, tome un momento para responder las siguientes preguntas para que podamos evaluar los comentarios del público.

1. ¿Asistió a la Feria en la Sede de CPS Energy de Ranchtown a Talley el 12 de agosto de 2024?
   Sí No

2. ¿Comprende la necesidad del Proyecto de Línea de Transmisión de Ranchtown a Talley?
   Totalmente de Acuerdo De Acuerdo Neutral En Desacuerdo Totalmente en Desacuerdo

3. Si asistió a la Feria en la Sede de CPS Energy o ha consultado la información sobre el proyecto en la página web, ¿han sido respondidas sus preguntas sobre el proyecto de línea de transmisión de Ranchtown a Talley?
   Totalmente de Acuerdo De Acuerdo Neutral En Desacuerdo Totalmente en Desacuerdo

4. Si ha respondido "en desacuerdo" o "totalmente en desacuerdo" a la pregunta 3, y aún tiene preguntas sobre el proyecto que no han sido respondidas a su satisfacción, ¿le gustaría que alguien del equipo del proyecto se pusiera en contacto con usted para discutir el proyecto con usted?
   Sí No

5. ¿Le resultaron útiles las exposiciones de la Feria en la Sede de CPS Energy? Si no, ¿tiene alguna sugerencia de mejora?
   Totalmente de Acuerdo De Acuerdo Neutral En Desacuerdo Totalmente en Desacuerdo

Sugerencias de Mejora:

____

____

6. Abajo hay una lista de factores que CPS Energy y sus consultores consideran cuando identifican y evalúan proyectos propuestos de línea de transmisión. Por favor, clasifique sus cinco factores principales desde el más importante (1) al menos importante (5).

______ Impacto sobre las residencias

______ Proximidad a escuelas, iglesias y cementerios

______ Proximidad a parques/áreas recreativas

______ Proximidad al sitio arqueológico/histórico

______ Impacto en los bosques/pastizales/humedales

______Carreteras/autopistas paralelas existentes

______ Líneas de transmisión paralelas existentes

______Impacto a los negocios

______ Impacto en los ríos/llanuras inundables

______ Impacto a los árboles y otra vegetación

______ Visibilidad de las estructuras

______ Líneas de propiedad paralelas

______ Costo total del proyecto

Continúa →

7. ¿Existen otros factores que, en su opinión, deban tenerse en cuenta a la hora de evaluar un proyecto propuesto de línea de transmisión? ____

____

8. Una vez revisado el Mapa de Uso del Terreno y Limitaciones Medioambientales en la Feria en la Sede de CPS Energy o en el sitio web del proyecto, indique cualquier característica que deba añadirse que no se haya identificado en el lugar adecuado o que no se haya incluido en el mapa.. ____

____

9. Por favor, indique todo lo que corresponda:

☐ El proyecto de línea de transmisión está cerca de mi casa/negocio.

☐ El proyecto de línea de transmisión atraviesa mi propiedad.

☐ Otros. Por favor, especifique.

10. ¿Hay alguna otra información que le gustaría que el Equipo del Proyecto conociera o tuviera en cuenta a la hora de evaluar el proyecto? ____

____

____

____

Puede presentar este formulario en la mesa de bienvenida en la Feria en la Sede de CPS Energy, por correo postal o electrónico a la siguiente

CPS Energy
Antonio DeMendonca
Buzón de Correo RT0801
500 McCullough
San Antonio, TX 78215

Correo Electrónico:
Ranchtown-TalleyProject@cpsenergy.com

Indique a continuación su nombre e información de contacto. (Opcional)

Nombre:____

Dirección:____

Ciudad___________________Estado________Código Postal_________

Teléfono:____

Correo Electrónico____

Ranchtown to Talley Road Transmission Line Project

Frequently Asked Questions

Project Overview

What is the Ranchtown to Talley Road Transmission Line Project? CPS Energy is planning to construct approximately 12.1 miles of new 138 kilovolt (kV) transmission infrastructure connecting the existing CPS Energy Ranchtown Substation to the existing CPS Energy Talley Road Substation in Northwest Bexar County. A significant portion of the proposed new line (10.8 miles) will be located on existing CPS Energy transmission structures. A portion of the new line (1.3 miles) will require the rebuilding of existing single-circuit transmission infrastructure for double circuit operation.

Why is a new transmission line needed in this area?
The new transmission line is necessary to support the accelerating growth in San Antonio. It will also increase the reliability of Texas' electric grid by adding another path for electric transmission.

What is a transmission line?
A transmission line consists of specially designed steel structures and wires that move electricity long distances at high voltages.

How does electricity get delivered to homes and businesses?
Typically, electricity is generated from remotely located electric power plants (including wind and solar farms) and then travels from those remote generating sources to substations closer to population centers through a system of high-voltage transmission lines. Once at a substation, the electricity is reduced to a voltage level that is appropriate for distribution to customers. Electricity then travels from the substation through the network of distribution lines, supplying electricity to homes and businesses.

When does construction begin?
Construction of the Ranchtown to Talley Road Transmission Line Project is anticipated to begin August 2026.

When will crews be working on this project?
Under normal circumstances, work will be performed Monday through Friday, 7 A.M.-5 P.M. Weekend work will be performed as needed. Please note that the work will be done within existing or new easements. In some instances, temporary work easements may be obtained from landowners for construction activity.

Transmission Line Routes

Who selects the final transmission line route?
After determining the project is needed, the Public Utility Commission of Texas (PUC) utilizes an established regulatory process to evaluate and approve which route is to be constructed following its review of the data presented by the applicants in their application; recommendations from the PUC staff of experts; and the views and concerns of affected landowners and other interested parties.
After completion of the PUC process, the CPS Board of Trustees will review and approve the portion of the route inside the city of San Antonio.

Will landowners receive notice of the PUC proceeding?
Yes. All landowners who are crossed by a potential transmission line route, or who own a habitable structure within at least 300 feet of the centerline of a potential transmission line route, will be mailed a notice from CPS Energy that an application has been filed at the PUC requesting approval to construct and operate the project. CPS Energy will also publish notice of the application filing in the newspaper and update the project website (see the end of this FAQ sheet for the website address for this project) announcing the filing of the application. The notice will include forms for interested persons to provide public comment on the project or to participate in the PUC proceeding.

Can landowners or other interested persons participate in the PUC proceeding?
Yes. Landowners or other persons impacted by the project may file a public comment regarding the project or request to participate in the PUC proceeding. A person participating in the PUC proceeding is generally referred to as an "intervenor" during the proceeding.

What will the PUC decide regarding the project?
The PUC will independently evaluate CPS Energy's application and consider input from landowners and other interested parties, including the recommendation of the PUC's own staff of experts, and independently determine if the project is needed and, if so, approve the route for the project. In this instance, CPS Energy is proposing a single route (on the existing transmission line corridor) for the project.

Environmental

Will it be necessary to remove trees and other vegetation to construct the project?
Yes, some removal of trees and other vegetation is often required to safely and reliably construct and operate transmission lines. CPS Energy will work with landowners and communities to responsibly comply with tree preservation requirements and minimize the impact to trees and other vegetation, clearing trees and other vegetation only where necessary to operate the transmission line infrastructure safely and reliably.

Will the project impact endangered species in the area?
CPS Energy will conduct studies to identify endangered wildlife and plant species in the vicinity of the project and is committed to making the required efforts to ensure endangered wildlife and plant species are not adversely affected as a result of the construction and operation of the project facilities.

Continued

Infrastructure

What will the transmission line pole look like?
CPS Energy generally use galvanized steel tubular structures, such as monopoles, although other types of structures may be used when the circumstances warrant.

Will the transmission lines create electric and magnetic fields (EMF) for people living nearby?
CPS Energy designs substations and transmission lines to operate safely for people living, working, and recreating nearby. Accordingly, the project facilities are not anticipated to result in any adverse EMF effects for people near them.
For more information on EMF, please visit: https://www.niehs.nih.gov/health/topics/agents/emf

Real Property

Will this new transmission line affect my property value?
Appraisal studies tend to show that the presence of electric infrastructure does not substantially affect property values in an adverse way.
For this project, CPS Energy is proposing to locate a significant portion of the project in a vacant position on existing transmission structures for 10.8 miles and to rebuild existing single circuit structures for double circuit operation for 1.3 miles of the project.

What rights do landowners have when a utility acquires the necessary transmission line right of way?
Landowners whose property will be crossed by the approved transmission line route, or from whom the land for the substation site will be acquired, have very specific rights which are generally set out in The Texas Landowner Bill of Rights, published by the Attorney General of Texas. A copy may be found at https://www.texasattorneygeneral.gov/sites/default/files/files/divisions/general-oag/landowners-bill-of-rights-2022.pdf. Interested landowners are encouraged to review that document to become more familiar with their rights under the law. Affected landowners will receive a copy of The Texas Landowner Bill of Rights from CPS Energy by US Mail before an easement is negotiated.
As proposed, CPS Energy currently anticipates installing 10.8 miles of the project on existing transmission structures within existing CPS Energy easement areas. No additional permanent right of way is anticipated in these areas, although some temporary construction easements may be necessary for a limited time during construction. For 1.3 miles of the project CPS Energy anticipates acquiring additional right of way to rebuild the existing single circuit structures for double circuit operation.

What is "eminent domain?"
It is the right of a government, or its agent, to acquire private property for public use, with payment of compensation for property acquired.

How will landowners along the chosen transmission route be affected?
For 10.8 miles of the project, CPS Energy will install the new transmission line on a vacant position of the existing CPS Energy transmission line structures. No additional new permanent right of way will be needed in this portion of the project. Temporary construction easements may be necessary and some short-term impacts may be experienced by landowners during construction. CPS Energy currently anticipates that most or all construction activities will take place within the existing transmission line right of way. For 1.3 miles of the project, CPS Energy anticipates purchasing additional property rights (an easement) from property owners to expand the current right of way for the existing single circuit towers that is necessary to safely construct and operate double circuit poles along the same corridor to accommodate the project facilities. In accordance with the terms of the existing and new easements, vegetation growing under the transmission line will be trimmed, and in some cases cleared to allow for the line construction. The easement document will also address issues such as roadways, fencing, access and notice rights, and other matters regarding CPS Energy's construction, operation, and maintenance of the transmission line facilities.

How much does CPS Energy pay for acquiring property rights from landowners?
CPS Energy will evaluate property value using industry standard practices and offer landowners fair market value for property rights to be acquired.

Next Steps

What happens after the Open House?
CPS Energy's project team will evaluate all project information, including public input received. Following the evaluation, the project team will prepare an application that will be filed at the PUC that addresses community values, recreational and park areas, historical and aesthetic values, and environmental integrity.

When will CPS Energy file the CCN Application?
The anticipated date to file the CCN application is October 2024. Updates will be posted on the project webpage at www.cpsenergy.com/infrastructure (scroll down to the "Ranchtown to Talley Project"). Affected landowners will be notified when the application is filed.

Proyecto de Línea de Transmisión de Ranchtown a Talley Road

Preguntas Más Frecuentes

Resumen del Proyecto

¿Qué es el proyecto de línea de transmisión de Ranchtown a Talley Road? CPS Energy planea construir aproximadamente 12.1 millas de nueva infraestructura de transmisión de 138 kilovoltios (kV) que conectará la subestación Ranchtown de CPS Energy a la subestación Talley Road de CPS Energy en el noroeste del condado de Bexar. Una parte significativa de la nueva línea propuesta (10.8 millas) se ubicará en las estructuras de transmisión existentes de CPS Energy. Una porción de la nueva línea (1.3 millas) requerirá la reconstrucción de la infraestructura de transmisión de circuito único existente para el funcionamiento de doble circuito.

¿Por qué es necesaria esta nueva línea de transmisión en esta área?
La nueva línea de transmisión es necesaria para apoyar el crecimiento acelerado de San Antonio. También aumentará la fiabilidad de la red eléctrica de Texas al añadir otra vía de transmisión eléctrica.

¿Qué es una línea de transmisión?
Una línea de transmisión consiste de estructuras de acero especialmente diseñadas y cables que mueven la electricidad largas distancias a altos voltajes.

¿Cómo llega la electricidad a los hogares y los negocios?
Normalmente, la electricidad se genera en plantas eléctricas situadas en lugares remotos (incluyendo parques eólicos y solares) y luego viaja desde esas fuentes de generación remotas hasta las subestaciones situadas más cerca de los centros de población a través de un sistema de alta tensión. Una vez en la subestación, la electricidad se reduce a un nivel de tensión adecuado para su distribución a los clientes. Luego, la electricidad viaja desde la subestación a través de la red de líneas de distribución, suministrando electricidad a hogares y negocios.

¿Cuándo comienza la construcción?
Se prevé que la construcción del proyecto de línea de transmisión de Ranchtown a Talley Road comience en agosto de 2026.

¿Cuándo trabajarán los equipos en este proyecto?
En circunstancias normales, el trabajo se realizará de lunes a viernes, de 7 a.m. a 5 p.m. El trabajo de fin de semana se realizará según sea necesario. Tenga en cuenta que el trabajo se realizará dentro de las servidumbres de transmisión.

Rutas de Líneas de Transmisión

¿Quién selecciona la ruta definitiva de la línea de transmisión?
Tras determinar que el proyecto es necesario, la Comisión de Servicios Públicos de Texas (PUC) utiliza un proceso regulatorio establecido para evaluar y aprobar qué ruta debe construirse tras su revisión de los datos presentados por los solicitantes en su solicitud; las recomendaciones del personal de expertos de la PUC; y las opiniones y preocupaciones de los propietarios afectados y otras partes interesadas.
Una vez finalizado el proceso de la PUC, la Junta Directiva de CPS revisará y aprobará la parte del trazado dentro de la ciudad de San Antonio.

¿Recibirán los propietarios notificación del procedimiento de la PUC?
Sí. CPS Energy enviará por correo una notificación a todos los propietarios de terrenos atravesados por el trazado de una posible línea de transmisión, o que posean una estructura habitable a una distancia mínima de 300 pies de la línea central del trazado de una posible línea de transmisión, informándoles de que se ha presentado una solicitud ante la PUC solicitando la aprobación para construir y operar el proyecto. CPS Energy también publicará un aviso de la presentación de la solicitud en el periódico y actualizará el sitio web del proyecto (consulte al final de esta hoja de preguntas frecuentes la dirección del sitio web de este proyecto) anunciando la presentación de la solicitud.
El anuncio incluirá formularios para que las personas interesadas puedan hacer comentarios públicos sobre el proyecto o participar en el procedimiento de la PUC.

¿Pueden los propietarios u otras personas interesadas participar en el procedimiento de la PUC?
Sí. Los propietarios de tierras u otras personas afectadas por el proyecto pueden presentar un comentario público sobre el proyecto o solicitar participar en el procedimiento de la PUC. A una persona que participa en el procedimiento de la PUC generalmente se le denomina "interventor" durante el procedimiento.

Qué decidirá PUC con respecto al proyecto?
PUC evaluará de forma independiente la solicitud de CPS Energy y tendrá en cuenta las aportaciones de los propietarios de tierras y otras partes interesadas, incluyendo la recomendación del propio personal de expertos de la PUC, y determinará de forma independiente si el proyecto es necesario y, en tal caso, aprobará la ruta para el proyecto. Así, CPS Energy propone una única ruta (en el corredor de la línea de transmisión existente) para el proyecto.

Medio Ambiente

¿Será necesario eliminar árboles y otra vegetación para construir el proyecto?
Sí, a menudo es necesario eliminar algunos árboles y otra vegetación para construir y operar las líneas de transmisión de forma segura y fiable. CPS Energy trabajará con los propietarios de tierras y las comunidades para cumplir de forma responsable con los requisitos de preservación de árboles y minimizar el impacto en los árboles y otra vegetación, retirando árboles y otra vegetación solo cuando sea necesario para operar la infraestructura de la línea de transmisión de forma segura y fiable.

Continuación →

¿Impactará el proyecto a las especies en peligro de extinción en el área?
CPS Energy realizará estudios para identificar las especies de plantas y vida silvestre en peligro de extinción en las proximidades del proyecto y se compromete a realizar los esfuerzos necesarios para garantizar que las especies de plantas y vida silvestre en peligro de extinción no se vean afectadas negativamente como resultado de la construcción y operación de las instalaciones del proyecto.

Infraestructura

¿Qué aspecto tendrá el poste de la línea de transmisión?
CPS Energy utiliza generalmente estructuras tubulares de acero galvanizado, como monopostes, aunque pueden usarse otros tipos de estructuras cuando las circunstancias lo justifiquen.

¿Las líneas de transmisión crearán campos eléctricos y magnéticos (EMF) para las personas que viven cerca?
CPS Energy diseña subestaciones y líneas de transmisión para que funcionen de forma segura para las personas que viven, trabajan y se divierten en las proximidades. Por lo tanto, no se prevé que las que las instalaciones del proyecto provoquen ningún efecto EMF adverso para las personas que se encuentren cerca de ellas. Para más información sobre los EMF, visite: https://www.niehs.nih.gov/health/topics/agents/emf

Bienes Inmuebles

¿Afectará esta nueva línea de transmisión al valor de mi propiedad?
Los estudios de tasación suelen demostrar que la presencia de infraestructuras eléctricas no afecta sustancialmente al valor de la propiedad de forma adversa. Para este proyecto, CPS Energy propone ubicar una parte significativa del proyecto en una posición vacante en las estructuras de transmisión existentes para 10.8 millas y reconstruir las estructuras de circuito único existentes para el funcionamiento de doble circuito para 1.3 millas del proyecto.

¿Qué derechos tienen los propietarios de terrenos cuando una compañía de servicios públicos adquiere el derecho de paso necesario para la línea de transmisión?
Los propietarios cuya propiedad será atravesada por la ruta aprobada de la línea de transmisión, o de quienes se adquirirá el terreno para el sitio de la subestación, tienen derechos muy específicos que generalmente se establecen en la Declaración de Derechos de los Propietarios de Texas (The Texas Landowner Bill of Rights), publicada por el Procurador General de Texas. Se puede encontrar una copia en https://www.texasattorneygeneral.gov/sites/default/files/files/divisions/general-oag/landowners-bill-of-rights-2022.pdf. Se recomienda a los propietarios interesados que consulten este documento para conocer mejor los derechos que les otorga la ley. Los propietarios afectados recibirán una copia de la Declaración de Derechos de los Propietarios de Texas de CPS Energy por correo postal antes de que se negocie una servidumbre. Tal como se propone, CPS Energy prevé actualmente la instalación de 10.8 millas del proyecto en las estructuras de transmisión existentes dentro de las zonas de servidumbre existentes de CPS Energy. No se prevé ningún derecho de paso permanente adicional en estas zonas, aunque pueden ser necesarias algunas servidumbres de construcción temporales por un tiempo limitado durante la construcción. Para 1.3 millas del proyecto, CPS Energy prevé adquirir derechos de paso adicionales para reconstruir las estructuras de circuito único existentes para el funcionamiento de doble circuito.

¿Qué es el "dominio eminente"?
Es el derecho de un gobierno, o de su agente, a adquirir propiedad privada para uso público, mediante el pago de una compensación por la propiedad adquirida.

¿Cómo se verán afectados los propietarios de tierras a lo largo de la ruta de transmisión elegida?
En 10.8 millas del proyecto, CPS Energy instalará la nueva línea de transmisión en una posición vacante de las estructuras existentes de la línea de transmisión de CPS Energy. No se necesitarán nuevos derechos de paso permanentes adicionales en esta parte del proyecto. Es posible que se necesiten servidumbres de construcción temporales y que los propietarios de tierras sufran algunos impactos a corto plazo durante la construcción. CPS Energy prevé actualmente que la mayor parte o la totalidad de las actividades de construcción tendrán lugar dentro de la servidumbre de paso de la línea de transmisión existente. Para 1.3 millas del proyecto, CPS Energy prevé la compra de derechos de propiedad adicionales (una servidumbre) de los propietarios para ampliar el derecho de paso actual para las torres de circuito único existentes que es necesario para construir y operar con seguridad postes de doble circuito a lo largo del mismo corredor para acomodar las instalaciones del proyecto. De acuerdo con los términos de las servidumbres existentes y nuevas, se podará la vegetación que crezca bajo la línea de transmisión y, en algunos casos, se despejará para permitir la construcción de la línea. El documento de servidumbre también abordará cuestiones como carreteras, cercas, derechos de acceso y notificación, y otros asuntos relacionados con la construcción, operación y mantenimiento de las instalaciones de la línea de transmisión por parte de CPS Energy.

¿Cuánto paga CPS Energy por adquirir los derechos de propiedad de los terratenientes?
CPS Energy evaluará el valor de la propiedad utilizando las prácticas estándar del sector y ofrecerá a los propietarios un valor justo de mercado por los derechos de propiedad que se adquieran.

Siguientes Pasos

¿Qué sucede después de la Feria en la Sede de CPS Energy?
El equipo del proyecto de CPS Energy evaluará toda la información del proyecto, incluyendo las aportaciones públicas recibidas. Después de la evaluación, el equipo del proyecto preparará una solicitud que se presentará ante la PUC que abordará los valores de la comunidad, las áreas recreativas y de parques, los valores históricos y estéticos y la integridad medioambiental.

¿Cuándo presentará CPS Energy la solicitud de CCN?
La fecha prevista para la presentación de la solicitud CCN es octubre de 2024. Las actualizaciones se publicarán en la página web del proyecto en www.cpsenergy.com/infrastructure (baje hasta "Proyecto de Ranchtown a Talley"). Se notificará a los propietarios afectados cuando se presente la solicitud.

Appendix C

Environmental and Land Use Constraints Map

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