

**APPLICATION OF  
LONE STAR TRANSMISSION, LLC  
TO AMEND ITS CERTIFICATE OF CONVENIENCE  
AND NECESSITY FOR THE  
PHANTOM HILL STATION TO TIGER SOLAR  
345-KV TRANSMISSION LINE  
IN JONES COUNTY**



**DOCKET NO. 58405**

*Submit seven (7) copies of the application and all attachments supporting the application. If the application is being filed pursuant to 16 Tex. Admin. Code § 25.101(b)(3)(D) (TAC) or 16 TAC § 25.174, include in the application all direct testimony. The application and other necessary documents shall be submitted to:*

**Public Utility Commission of Texas  
Attn: Filing Clerk  
1701 N. Congress Ave.  
Austin, Texas 78711-3326**

**Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the  
Phantom Hill to Tiger Solar 345-kV Transmission Line in Jones County**

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1.     **Applicant (Utility) Name:**       Lone Star Transmission, LLC
- Certificate Number:**           30196
- Street Address:**               5920 W. William Cannon Dr., Bldg. 2  
  Austin, TX 78749
- Mailing Address:**               5920 W. William Cannon Dr., Bldg. 2  
  Austin, TX 78749

2.     **Please identify all entities that will hold an ownership interest or an investment interest in the proposed project but which are not subject to the Commission's jurisdiction.**

Not applicable. Lone Star Transmission, LLC (Lone Star) will construct and hold the sole ownership interest in the facilities associated with the proposed Bullock Station to Aquilla Lake III Wind 345-kilovolt (kV) Transmission Line in Hill County (the Project).

3.     **Person to Contact:**

**Primary Contact:**               Robert Orr  
          Title/Position:               Director, Regulatory Affairs  
          Phone Number:               (512) 236-3135  
          Mailing Address:               5920 W. William Cannon Dr., Bldg. 2  
  Austin, TX 78749  
          Email Address:               [robert.orr@lonestar-transmission.com](mailto:robert.orr@lonestar-transmission.com)

**Alternate Contact:**           Tracy Wieczorek  
          Title/Position:               Director, Land Strategy and Community Relations  
          Phone Number:               (512) 236-3151  
          Mailing Address:               5920 W. William Cannon Dr., Bldg. 2  
  Austin, TX 78749  
          Email Address:               [tracy.wieczorek@lonestar-transmission.com](mailto:tracy.wieczorek@lonestar-transmission.com)

**Legal Counsel:**               Tracy Davis, Managing Attorney  
          Phone Number:               (512) 236-3141  
          Mailing Address:               5920 W. William Cannon Dr., Bldg. 2  
  Austin, TX 78749  
          Email Address:               [tracy.davis@lonestar-transmission.com](mailto:tracy.davis@lonestar-transmission.com)

4.     **Project Description:**

*Name or Designation of Project:*

Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County (Project)

*Provide a general description of the project, including the design voltage rating (kV), the operating voltage (kV), the CREZ Zone(s) (if any) where the project is located (all or in part), any substations and/or substation reactive compensation constructed as part of the project, and any series elements such as sectionalizing switching devices, series line compensation, etc. For HVDC transmission lines, the converter stations should be considered to be project components and should be addressed in the project description.*

Design Voltage Rating (kV):       345-kV

Operating Voltage (kV):           345-kV

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CREZ Zone(s): Not applicable

Substation(s) Included: None

Series Element(s) Included: None

Lone Star is proposing to design and construct the Project, which will consist of a new, approximately 4.55-mile, single-circuit 345-kV transmission line to interconnect a new, approximately 255-megawatt (MW) photovoltaic generation facility, the Tiger Solar Project, being constructed by Vaca del Sol, LLC (Vaca del Sol), to Lone Star's existing 345-kV Phantom Hill Station, located in Jones County, Texas. Vaca del Sol is an indirect, wholly owned subsidiary of NextEra Energy Resources, LLC.

Lone Star proposes to construct the Project as a single-circuit 345-kV transmission line that will begin at the existing Phantom Hill Station, which is located at the northwest corner of the intersection of County Road (CR) 185 and CR 186. The Project will extend to the Tiger Solar Point of Interconnection (POI) located east of CR 195, approximately 2.25 miles north of the intersection of CR 195 and U.S. Highway 277. The total length of the proposed Project will be approximately 4.55 miles in length and will require a 150- to 200-foot right of way (ROW).

Lone Star is proposing one route (Consensus Route) for the Project because all landowners directly affected by the Project have granted written consent to Lone Star for the construction of the new transmission line. In addition, the Consensus Route is a forward-progressing and relatively direct path from Lone Star's Phantom Hill Station to the Tiger Solar Collector Station and meets the applicable criteria of the Public Utility Regulatory Act (PURA)<sup>1</sup> and the Commission's rules. Therefore, this Application sets forth a single proposed route for the Project.

For a more detailed description of the proposed Project, please see the *Phantom Hill Station to Tiger Solar 345-kV Transmission Line Project Environmental Assessment* (EA), prepared by Lone Star's routing consultant, Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell), which is included as Attachment 1 to this Application and incorporated herein by reference.

*If the project will be owned by more than one party, briefly explain the ownership arrangements between the parties and provide a description of the portion(s) that will be owned by each party. Provide a description of the responsibilities of each party for implementing the project (design, Right-of-Way acquisition, material procurement, construction, etc.).*

Not applicable. Lone Star will own 100 percent of the Project described in this Application.

*If applicable, identify and explain any deviation in transmission project components from the original transmission specifications as previously approved by the Commission or recommended by a PURA §39.151 organization.*

Not applicable. The Commission has not previously approved, and ERCOT (a PURA § 39.151 organization) has not previously recommended, any transmission specifications applicable to this project. ERCOT Nodal Protocol Section 3.11 (relating to Transmission Planning) and the ERCOT RPG Charter and Procedures define a project that interconnects new generation as a "neutral project" that does not require ERCOT Regional Planning Group (RPG) review. Therefore, the proposed Project was not submitted for RPG review, and ERCOT did not provide any transmission specifications for the Project. Thus, there are no deviations from the original transmission specifications previously recommended by ERCOT.

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<sup>1</sup> Public Utility Regulatory Act, Tex. Util. Code §§ 11.001–66.016 (PURA).

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**5. Conductor and Structures:**

*Conductor Size and Type*

The conductor used for the Project will be a twin-bundled 795 kcmil ACSR “Drake” conductor with a single 0.571 Optical Ground Wire and 7#7 overhead shield wire.

*Number of Conductors Per Phase*

The Project will be constructed with two conductors per phase.

*Continuous Summer Static Current Rating (A)*

The nominal Continuous Summer Static Current Rating for the Project is 1,814 Amps (A).

*Continuous Summer Static Line Capacity at Operating Value (MVA)*

The nominal Continuous Summer Static Line Capacity at Operating Voltage for the Project is approximately 255 Megavolt Amps (MVA).

*Continuous Summer Static Line Capacity at Design Voltage (MVA)*

The nominal Continuous Summer Static Line Capacity at Design Voltage for the Project is approximately 1,029 MVA.

*Type and Composition of Structures*

Lone Star proposes to construct the Project using self-supporting and guyed concrete monopole structures. Alternative structure types, such as guyed dead-end monopole structures or single self-supported monopoles, may be used due to engineering constraints, such as crossing obstructions, turning large angles, or other constraints.

*Height of Typical Structures*

The typical structure height for the Project will be approximately 90 to 120 feet. However, the height may vary depending on the clearance requirements at a particular location due to the terrain, span lengths, overhead obstructions, and various other constraints.

*Estimated Maximum Height of Structures*

The estimated maximum height of structures is expected to be approximately 120 feet above ground.

*Explain why these structures were selected; include such factors as landowner preference, engineering considerations, and costs comparisons to alternate structures that were considered. Provide dimensional drawings of the typical structures to be used in the project.*

Lone Star selected pre-stressed concrete monopoles as the typical structure type for the Project for a number of reasons. In Lone Star’s experience, pre-stressed concrete monopoles have shorter fabrication lead times and will be manufactured at a facility located in Texas, which minimizes shipping times and costs. In addition, in Lone Star’s experience, construction using concrete monopoles has been efficient and cost-effective. Also, Lone Star’s spare inventory includes pre-stressed concrete monopoles.

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Further, based on Lone Star's general experience, many landowners prefer monopoles because they have a reduced structure footprint, which generally results in fewer impacts on land and reduces interference with current land uses, e.g., ranching and farming. Consent was obtained from landowners based upon a design primarily utilizing monopoles.

Dimensional drawings of the concrete monopole structures are included as Figures 1-2 and 1-3 of the EA included as Attachment 1 to this Application.

*For joint applications, provide and separately identify the above-required information regarding structures for the portion(s) of the project owned by each applicant.*

Not applicable. This is not a joint application.

**6. Right-of-Way:**

*Miles of Right-of-Way*

The total length of the ROW in miles for the Consensus Route is approximately 4.55 miles.

*Miles of Circuit*

The Project will be a single-circuit transmission line, and the number of circuit miles is approximately 4.55 miles.

*Width of Right-of-Way*

The typical ROW width for the Project will be 150 to 200 feet.

*Percent of Right-of-Way Acquired*

Lone Star has acquired consent agreements and easement options from all directly affected landowners or 100% of the Project. Lone Star will exercise the easement options following CCN approval. Copies of the consent agreements are provided in Attachment 2 to the Application.

*For joint applications, provide and separately identify the above-required information for each route for the portion(s) of the project owned by each applicant.*

Not applicable. This is not a joint application.

*Provide a brief description of the area traversed by the transmission line. Include a description of the general land uses in the area and the type of terrain crossed by the line.*

The Study Area is primarily rural with some single-family residences and farmsteads scattered throughout. The predominant land use is cropland, followed by rangeland/pastureland. The Study Area is located within the North-Central Plains Physiographic Province. Study Area elevations range from a high of approximately 1,711 feet above mean sea level in the south-central portion of the Study Area to a low of 1,624 feet above msl where Redmud Creek exits the eastern boundary of the Study Area. Specific discussion regarding natural, human, and cultural resources in the Study Area is presented in Section 3 of the EA (Attachment 1 to this Application).

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**7. Substations or Switching Stations:**

List the name of all existing HVDC converter stations, substations or switching stations that will be associated with the new transmission line. Provide documentation showing that the owner(s) of the existing HVDC converter stations, substations and/or switching stations have agreed to the installation of the required project facilities.

The proposed Project will connect to Lone Star's existing Phantom Hill Station.

List the name of all new HVDC converter stations, substations or switching stations that will be associated with the new transmission line. Provide documentation showing that the owner(s) of the new HVDC converter stations, substations and/or switching stations have agreed to the installation of the required project facilities.

The proposed transmission line will extend between Lone Star's Phantom Hill Station and the new Tiger Solar Collector Station. The generator, Vaca del Sol, will own the Tiger Solar Collector Station. The point of interconnection for the Project will be located at a new Lone Star-owned dead-end structure located outside of the Tiger Collector Station.

**8. Estimated Schedule:**

<b><u>Estimated Dates of:</u></b>	<b><u>Start</u></b>	<b><u>Completion*</u></b>
<i>Right-of-way and Land Acquisition</i>	April 2025	Following CCN Approval
<i>Engineering and Design</i>	July 2025	April 2026
<i>Material and Equipment Procurement</i>	October 2025	June 2026
<i>Construction of Facilities</i>	May 2026	October 2026
<i>Energize Facilities</i>	October 2026	December 2026

\*With the Consensus Route and necessary consents obtained for the Project, this estimated schedule is based upon administrative approval of this Application pursuant to 16 Texas Administrative Code (TAC) § 25.101(b)(3)(C).

**9. Counties:**

For each route, list all counties in which the route is to be constructed.

The Consensus Route for the Project is located within Jones County.

**10. Municipalities:**

For each route, list all municipalities in which the route is to be constructed.

The Consensus Route for the Project is not located within the incorporated boundaries of any municipality.

For each applicant, attach a copy of the franchise, permit or other evidence of the city's consent held by the utility, if necessary or applicable. If franchise, permit, or other evidence of the city's consent has been previously filed, provide only the docket number of the application in which the consent was filed. Each applicant should provide this information only for the portion(s) of the project which will be owned by the applicant.

Not applicable.

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**11. Affected Utilities:**

Identify any other electric utility served by or connected to facilities in this application.

No other electric utility is served by or directly connected to this Project.

Describe how any other electric utility will be affected and the extent of the other utilities' involvement in the construction of this project. Include any other utilities whose existing facilities will be utilized for the project (vacant circuit positions, ROW, substation sites and/or equipment, etc.) and provide documentation showing that the owner(s) of the existing facilities have agreed to the installation of the required project facilities.

Not applicable.

**12. Financing:**

Describe the method of financing this project. For each applicant that is to be reimbursed for all or a portion of this project, identify the source and amount of the reimbursement (actual amount if known, estimated amount otherwise) and the portion(s) of the project for which the reimbursement will be made.

Funds for the Project will come from Lone Star's existing cash on hand, existing debt facility, and owner equity.

**13. Estimated Costs:**

Provide cost estimates for each route of the proposed project using the following table. Provide a breakdown of "Other" costs by major cost category and amount. Provide the information for each route in an attachment to this application.

The estimated costs for the Consensus Route for the transmission line facilities and for the termination costs at the Phantom Hill Station associated with this Project are provided in the table below. Because Lone Star is proposing only one Consensus Route, Lone Star is providing the required cost information in a table in this CCN Application. Lone Star also is providing a native version of this estimated cost table electronically with this Application package.

<b><u>Consensus Route Costs</u></b>	<b>Transmission Facilities</b>	<b>Substation Facilities</b>
<i>Right-of-way and Land Acquisition</i>	\$ 903,000	\$ 0
<i>Engineering and Design (Utility)</i>	\$ 0	\$ 0
<i>Engineering and Design (Contract)</i>	\$ 814,000	\$ 1,143,600
<i>Procurement of Material and Equipment (including stores)</i>	\$ 5,654,000	\$ 8,863,300
<i>Construction of Facilities (Utility)</i>	\$ 0	\$ 0
<i>Construction of Facilities (Contract)</i>	\$ 7,602,000	\$ 5,743,100
<i>Other (all costs not included in the above categories)</i>	\$ 877,000	\$ 1,200,000
<b>Estimated Total Cost</b>	<b>\$ 15,850,000</b>	<b>\$ 16,950,000</b>

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For joint applications, provide and separately identify the above-required information for the portion(s) of the project owned by each applicant.

Not applicable. This is not a joint application.

**14. Need for the Proposed Project:**

For a standard application, describe the need for the construction and state how the proposed project will address the need. Describe the existing transmission system and conditions addressed by this application. For projects that are planned to accommodate load growth, provide historical load data and load projections for at least five years. For projects to accommodate load growth or to address reliability issues, provide a description of the steady state load flow analysis that justifies the project. For interconnection projects, provide any documentation from a transmission service customer, generator, transmission service provider, or other entity to establish that the proposed facilities are needed. For projects related to a Competitive Renewable Energy Zone, the foregoing requirements are not necessary; the applicant need only provide a specific reference to the pertinent portion(s) of an appropriate commission order specifying that the facilities are needed. For all projects, provide any documentation of the review and recommendation of a PURA §39.151 organization.

The proposed Project is necessary to interconnect and provide transmission service to a new transmission service customer, Vaca del Sol. Pursuant to 16 TAC §§ 25.191(d)(3) and 25.198(b), a TSP is required to provide service to a transmission service customer when certain conditions are met, including execution of an interconnection agreement. Vaca del Sol requested interconnection to Lone Star's existing 345-kV transmission system in Jones County. As a power generation company, Vaca del Sol will be a transmission service customer under 16 TAC § 25.5(140). Lone Star and Vaca del Sol executed the ERCOT Standard Generation Interconnection Agreement on October 30, 2024 (the Interconnection Agreement), with an agreed upon in-service date for the transmission facilities of November 6, 2026 and an agreed upon commercial operation date for the Vaca del Sol Project of June 30, 2027. The Interconnection Agreement was filed with the Commission in Project No. 35077 and is included in this Application as Attachment 3.

Additionally, 16 TAC § 25.195(c)(1) provides as follows: "When an eligible transmission service customer requests transmission service for a new generation source that is planned to be interconnected with a TSP's transmission network, the transmission service customer shall be responsible for the cost of installing step-up transformers to transform the output of the generator to a transmission voltage level and protective devices at the point of interconnection capable of electrically isolating the generation source owned by the transmission service customer. The TSP shall be responsible, pursuant to paragraph (2) of this subsection, for the cost of installing any other interconnection facilities that are designed to operate at a transmission voltage level and any other upgrades on its transmission system that may be necessary to accommodate the requested transmission service." The Interconnection Agreement provided as Attachment 3 specifies and assigns these responsibilities pursuant to 16 TAC § 25.195(c)(1).

The ERCOT Nodal Protocols and ERCOT RPG Charter and Procedures define a project that is directly associated with the interconnection of new generation as a "neutral project," which is not required to be submitted for RPG review. Therefore, the Project was not submitted for RPG review.

In accordance with the Nodal Protocols, ERCOT performed a Generation Interconnect Screening Study, which concluded that the proposed generation facility could be interconnected to Lone Star's system through the new Phantom Hill Station. Additionally, Lone Star completed the Full Interconnection Study process required by ERCOT for all generation interconnection requests, which included a Facility Study. The Facility Study describes the transmission facilities and associated costs required to interconnect the new generation project. The Facility Study was available to ERCOT and other TSPs for review and comment for ten days, and Lone Star received no comments. In addition, because the expected interconnection costs for the Project exceed \$25 million, ERCOT performed an independent economic analysis of the Project pursuant to ERCOT Nodal Protocol § 3.11.6 and determined an annual production

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cost savings and annual generator revenue reduction resulting from including the facilities in the economic study were approximately \$2.26 million and \$17.26 million respectively for the year 2028. ERCOT's economic analysis confirmed that the addition of the Vaca del Sol Solar Wind Project had no significant impact on congestion in the study. A copy of ERCOT's economic analysis is provided as Attachment 4.

**15. Alternatives to Project:**

For a standard application, describe alternatives to the construction of this project (not routing options). Include an analysis of distribution alternatives, upgrading voltage or bundling of conductors of existing facilities, adding transformers, and for utilities that have not unbundled, distributed generation as alternatives to the project. Explain how the project overcomes the insufficiencies of the other options that were considered.

Lone Star is proposing this Project in order to provide service to a transmission service customer, Vaca del Sol, which has requested to interconnect its approximately 255-MW photovoltaic generating facility to Lone Star's 345-kV transmission system in Jones County. Other alternatives to the proposed Project would not provide a feasible or cost-effective solution to this identified project need.

First, using distribution facilities to transfer approximately 255 MW from the photovoltaic generation facility to the existing 345-kV transmission system is not practical from an engineering or cost perspective. ERCOT typically requires generators larger than 10 MW to interconnect at transmission-level voltages (i.e., above 60 kV). Second, there is no need for Lone Star to upgrade the voltage on its transmission facilities or add transformers. Vaca del Sol requested to interconnect at 345-kV, which is the voltage level of Lone Star's existing transmission system in Jones County. Third, there are no existing transmission lines that could be bundled to interconnect the Tiger Solar Project. Lone Star's transmission facilities already utilize bundled conductor. Finally, Lone Star is an unbundled, transmission-only utility, and therefore, distributed generation is not an alternative to the proposed Project.

**16. Schematic or Diagram:**

For a standard application, provide a schematic or diagram of the applicant's transmission system in the proximate area of the project. Show the location and voltage of existing transmission lines and substations, and the location of the construction. Locate any taps, ties, meter points, or other facilities involving other utilities on the system schematic.

A schematic of Lone Star's transmission system in the proximate area of the Project is included as Attachment 5 to this Application.

**17. Routing Study:**

Provide a brief summary of the routing study that includes a description of the process of selecting the study area, identifying routing constraints, selecting potential line segments, and the selection of the routes. Provide a copy of the complete routing study conducted by the utility or consultant. State which route the applicant believes best addresses the requirements of PURA and P.U.C. Substantive Rules.

Lone Star retained Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) to prepare the EA for the proposed Project. A copy of the EA is included as Attachment 1 to this Application. The EA presents the analysis that was conducted by Burns & McDonnell, as well as the land use and environmental data for the Consensus Route that was considered for this Project. The following summary is based on information provided in Section 2 of the EA.

The objective of the EA was to evaluate the proposed 345-kV transmission line location for compliance with PURA § 37.056(c)(4)(A)-(D), 16 TAC § 25.101(b)(3)(B), and 16 TAC § 22.52(a)(4), including the Commission's policy of prudent avoidance. Burns & McDonnell used a comprehensive transmission line

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evaluation methodology to evaluate the proposed route of the transmission line location. Methods used were governed by factors set forth in PURA § 37.056(c)(4) and 16 TAC § 25.101(b)(3).

*Process of Selecting the Study Area:* The first step in the assessment of the Project was to delineate a Study Area. The Study Area needed to encompass the endpoints for the proposed Project (the Phantom Hill Station and the Tiger Solar POI) and include an area large enough to adequately evaluate the proposed transmission line Project to support Lone Star's Application. The purpose of delineating a Study Area for the Project was to establish boundaries and limits in which to identify environmental and land use constraints during the information gathering process to properly identify and map various items included within the Commission's CCN requirements and standard CCN application. The Study Area delineated was rectangular, measuring 3.0 miles east to west and 3.25 miles north to south, encompassing an area of approximately 9.75 square miles in Jones County.

*Identification of Routing Constraints:* Data used in the evaluation of the Project were drawn from a variety of sources, including published literature, information from local, state, and federal agencies, recent aerial photography, and ground reconnaissance of the Study Area. In identifying constraints, Burns & McDonnell considered numerous land use, ecological, and cultural resources within the Study Area.

To quantify potential impacts on sensitive environmental and land use features, a constraints mapping process was used in evaluating the Project. The geographic locations of environmentally sensitive and other restrictive areas within the Study Area were identified and considered during the evaluation process. These constraints were mapped onto an aerial base map (Figure 2-2 of the EA) created using 2023 ESRI World Imagery. Section 2 of the EA describes Burns & McDonnell's process for identifying routing constraints in more detail.

*Identification of the Consensus Route:* The Consensus Route was developed by Vaca del Sol in coordination with landowners crossed by the transmission line and Lone Star's land, engineering, and environmental teams. Lone Star has determined that the Consensus Route complies with the requirements of PURA and the Commission's Substantive Rules.

**18. Public Meeting or Public Open House:**

*Provide the date and location for each public meeting or public open house that was held in accordance with 16 TAC § 22.52. Provide a summary of each public meeting or public open house including the approximate number of attendants, and a copy of any survey provided to attendants and a summary of the responses received. For each public meeting or public open house provide a description of the method of notice, a copy of any notices, and the number of notices that were mailed and/or published.*

Lone Star, with the assistance of Burns & McDonnell, held a public open-house meeting for the proposed Project to solicit comments, concerns, and input from residents, landowners, and other interested parties. The meeting was held on April 8, 2025, from 5:30 to 7:30 pm at the Anson Opera House, 1120 11th Street, Anson, Texas.

Direct mail notice of the open-house meeting was sent by first class mail on March 25, 2025, to landowners who may be directly affected by the Project, and the Jones County Judge and County Commissioners. In accordance with 16 TAC § 22.52(a)(4), notice of the open-house meeting was also sent to the DoD Military Aviation and Installation Siting Clearinghouse. Additionally, public notice of the open house meeting was published in the *Western Observer* on April 2, 2025. Copies of these notices are included in Appendix B of the EA (Attachment 1 to this Application). A summary of the open-house meeting and additional information concerning the open-house meeting is provided in Section 5.2 and Appendix B of the EA.

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**19. Routing Maps:**

Base maps should be a full scale (one inch = not more than one mile) highway map of the county or counties involved, or other maps of comparable scale denoting sufficient cultural and natural features to permit location of all routes in the field. Provide a map (or maps) showing the study area, routing constraints, and all routes or line segments that were considered prior to the selection of the routes. Identify the routes and any existing facilities to be interconnected or coordinated with the project. Identify any taps, ties, meter points, or other facilities involving other utilities on the routing map. Show all existing transmission facilities located in the study area. Include the locations of radio transmitters and other electronic installations, airstrips, irrigated pasture or cropland, parks and recreational areas, historical and archeological sites (subject to the instructions in Question 27), and any environmentally sensitive areas (subject to the instructions in Question 29).

Routing maps are provided in the EA (Attachment 1 to this Application). Figure 2-2 in the EA is an aerial-photograph-based map with a scale of 1 inch = 600 feet that shows the Study Area, the Consensus Route, existing transmission lines, and other environmental and land use features. For their protection, locations of archeological sites are not shown on Figure 2-2.

Provide aerial photographs of the study area displaying the date that the photographs were taken or maps that show (1) the location of each route with each route segment identified, (2) the locations of all major public roads including, as a minimum, all federal and state roadways, (3) the locations of all known habitable structures or groups of habitable structures (see Question 19 below) on properties directly affected by any route, and (4) the boundaries (approximate or estimated according to best available information if required) of all properties directly affected by any route.

An aerial-photograph-based property ownership map with a scale of 1 inch = 1,600 feet is included in this Application as Attachment 6. It shows the approximate boundaries of all properties that are directly affected by the proposed 345-kV transmission line (Consensus Route), according to the best information available from Jones County tax appraisal district records.

For each route, cross-reference each habitable structure (or group of habitable structures) and directly affected property identified on the maps or photographs with a list of corresponding landowner names and addresses and indicate which route segment affects each structure/group or property.

No habitable structures are located within 500 feet of the Consensus Route. Landowner names, property identification, and map locations are included in a cross-reference table provided as Attachment 7 to this Application.

**20. Permits:**

List any and all permits and/or approvals required by other governmental agencies for the construction of the proposed project. Indicate whether each permit has been obtained.

Lone Star will coordinate with appropriate local, state, and federal agencies with jurisdiction regarding the construction of the transmission facilities associated with the Project. Lone Star and/or Burns & McDonnell have initiated contact with and provided information about the Project to various agencies. Input from these agencies has been incorporated in the Application and EA; however, requests for permits and/or approvals will not be submitted to the appropriate agencies until the alignment of the Consensus Route has been approved by the Commission. The following potential permits, approvals, requirements, easements, or clearances could be required, but have not been obtained at this time.

- While no mapped 100-year floodplains occur in the Study Area, Lone Star will coordinate with the local floodplain administrator as necessary.

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- Lone Star will obtain clearance as necessary from the Texas Historical Commission (THC) regarding requirements concerning historic and prehistoric cultural resources, prior to initiating any ground disturbance.
- The Consensus Route does not cross state-maintained roads/highways. Therefore, permits and approvals will not be necessary from the Texas Department of Transportation (TxDOT) for any crossing of, or access from, a state-maintained roadway.
- A Storm Water Pollution Prevention Plan (SWPPP) may be required by the Texas Commission on Environmental Quality (TCEQ). Lone Star or its contractor will submit a Notice of Intent to the TCEQ at least 48 hours prior to the beginning of construction and will maintain the SWPPP on site at the initiation of clearing and construction activities.
- After alignments and structure locations/heights are adjusted and set, Lone Star will make a final determination of the need for Federal Aviation Administration (FAA) notification, based on structure locations and structure designs. In some areas, if necessary, Lone Star could use lower-than-typical structure heights or add marking and/or lighting to certain structures.
- Permits or other requirements associated with possible impacts on endangered/threatened species will be coordinated with the United States Fish and Wildlife Service (USFWS) as necessary.
- Coordination with Texas Parks & Wildlife Department (TPWD) might be necessary to determine the need for any surveys, and to avoid or minimize any potential adverse impacts on sensitive habitats, threatened or endangered species, and other fish and wildlife resources along the approved route.
- Permits or other requirements associated with possible impacts on waters of the U.S. under the jurisdiction of the U.S. Army Corps of Engineers (USACE) will be coordinated with the USACE as necessary.
- Lone Star will coordinate with Jones County and will obtain county road agreements as needed.
- Lone Star will provide a notice of the filing of the application to the DoD Military Aviation and Installation Assurance Siting Clearinghouse when the CCN application is filed with the PUC.

No permits for the Project have been obtained at this time. Further discussion of permits that may be required for the Project is included in Section 1.6 of the EA (Attachment 1 to this Application).

**21. Habitable Structures:**

For each route list all 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 if the proposed project will be constructed for operation at 230kV or less, or within 500 feet of the centerline if the proposed project will be constructed for operation at greater than 230kV. Provide a general description of each habitable structure and its distance from the centerline of the route. In cities, towns or rural subdivisions, houses can be identified in groups. Provide the number of habitable structures in each group and list the distance from the centerline of the route to the closest and the farthest habitable structure in the group. Locate all listed habitable structures or groups of structures on the routing map.

No habitable structures are located within 500 feet of the centerline of the proposed Consensus Route. See Section 4.3.1 and Table 6-1 of the EA (Attachment 1 to this Application).

**Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the  
Phantom Hill to Tiger Solar 345-kV Transmission Line in Jones County**

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**22. Electronic Installations:**

For each route, list all commercial AM radio transmitters located within 10,000 feet of the center line of the route, and all FM radio transmitters, microwave relay stations, or other similar electronic installations located within 2,000 of the center line of the route. Provide a general description of each installation and its distance from the center line of the route. Locate all listed installations on a routing map.

As indicated in Table 6-1 of the EA (Attachment 1 to this Application), no AM radio transmitter was determined to be located within 10,000 feet of the Consensus Route. One known communication tower (FM radio transmitter, microwave tower, or other electronic installations) is located within 2,000 feet of the centerline of the Consensus Route.

**23. Airstrips:**

For each route, list all known private airstrips within 10,000 feet of the center line of the project. List all airports registered with the Federal Aviation Administration (FAA) with at least one runway more than 3,200 feet in length that are located within 20,000 feet of the center line of any route. For each such airport, indicate whether any transmission structures will exceed a 100:1 horizontal slope (one foot in height for each 100 feet in distance) from the closest point of the closest runway. List all listed airports registered with the FAA having no runway more than 3,200 feet in length that are located within 10,000 feet of the center line of any route. For each such airport, indicate whether any transmission structures will exceed a 50:1 horizontal slope from the closest point of the closest runway. List all heliports located within 5,000 feet of the center line of any route. For each such heliport, indicate whether any transmission structures will exceed a 25:1 horizontal slope from the closest point of the closest landing and takeoff area of the heliport. Provide a general description of each listed private airstrip, registered airport, and heliport; and state the distance of each from the center line of each route. Locate and identify all listed airstrips, airports, and heliports on a routing map.

As indicated in Table 6-1 of the EA (Attachment 1 to this Application):

- No known private airstrips are located within 10,000 feet of the centerline of the Consensus Route
- No airports registered with the FAA with at least one runway more than 3,200 feet in length are located within 20,000 feet of the centerline of the Consensus Route
- No airports registered with the FAA having no runway more than 3,200 feet in length are located within 10,000 feet of the centerline of the Consensus Route
- No heliports are located within 5,000 feet of the centerline of the Consensus Route

**24. Irrigation Systems:**

For each route identify any pasture or cropland irrigated by traveling irrigation systems (rolling or pivot type) that will be traversed by the route. Provide a description of the irrigated land and state how it will be affected by each route (number and type of structures, etc.). Locate any such irrigated pasture or cropland on a routing map.

No pasture or cropland irrigated by traveling irrigation systems (rolling or pivot type) will be traversed by the Consensus Route.

**25. Notice:**

Notice is to be provided in accordance with 16 TAC § 22.52.

- A. Provide a copy of the written direct notice to owners of directly affected land. Attach a list of the names and addresses of the owners of directly affected land receiving notice.

Sample copies of the written direct notice and enclosures that were mailed to the owners of directly affected land are provided in Attachments 8A through 8F. The list of the names and addresses of the

**Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the  
Phantom Hill to Tiger Solar 345-kV Transmission Line in Jones County**

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owners of directly affected land receiving notice is provided in Attachment 8G.

*B. Provide a copy of the written notice to utilities that are located within five miles of the routes.*

A sample copy of the written notice to utilities that are located within five miles of the proposed Project is provided in Attachment 9A. The list of the names and addresses of these utilities is provided in Attachment 9B.

*C. Provide a copy of the written notice to county and municipal authorities, and the Department of Defense Siting Clearinghouse. Notice to the DoD Siting Clearinghouse should be provided at the email address found at <http://www.acq.osd.mil/dodsc/>.*

A sample copy of the written notice sent to Jones County officials and to the DoD Siting Clearinghouse is included in Attachment 10A.

In addition to the notices above, 16 TAC § 22.52 requires Lone Star to provide notice of this Application to the Office of Public Utility Counsel. The sample notice included in Attachment 10A was also sent to the Office of Public Utility Counsel.

The names of public officials to whom notice was sent is included in Attachment 10B.

*D. Provide a copy of the notice that is to be published in newspapers of general circulation in the counties in which the facilities are to be constructed. Attach a list of the newspapers that will publish the notice for this application. After the notice is published, provide the publisher's affidavits and tear sheets.*

A sample copy of the notice to be published in the newspaper of general circulation in the county in which the proposed facilities are to be constructed is provided in Attachment 11A. The notice for this Application will be published in *The Anson Western Observer* in Anson, Texas, which is a newspaper of general circulation in Jones County, as shown in Attachment 11B.

For a CREZ application, in addition to the requirements of 16 TAC § 22.52, the applicant shall, not less than twenty-one (21) days before the filing of the application, submit to the Commission staff a "generic" copy of each type of alternative published and written notice for review. Staff's comments, if any, regarding the alternative notices will be provided to the applicant not later than seven days after receipt by Staff of the alternative notices. Applicant may take into consideration any comments made by Commission staff before the notices are published or sent by mail.

Not applicable. This is not a CREZ application.

**26. Parks and Recreation Areas:**

For each route, list all parks and recreational areas owned by a governmental body or an organized group, club, or church and located within 1,000 feet of the center line of the route. Provide a general description of each area and its distance from the center line. Identify the owner of the park or recreational area (public agency, church, club, etc.). List the sources used to identify the parks and recreational areas. Locate the listed sites on a routing map.

Burns & McDonnell performed a review of federal and state databases, county and local maps, recent aerial imagery, and field reconnaissance surveys to identify parks and/or recreational areas within the Study Area or within 1,000 feet of the Study Area. No park or recreational area is crossed by the Consensus Route centerline and no park or recreational area is located within 1,000 feet of the Consensus Route centerline.

**Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the  
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**27. Historical and Archeological Sites:**

For each route, list all historical and archeological sites known to be within 1,000 feet of the center line of the route. Include a description of each site and its distance from the center line. List the sources (national, state or local commission or societies) used to identify the sites. Locate all historical sites on a routing map. For the protection of the sites, archeological sites need not be shown on maps.

Burns & McDonnell conducted a review of the Texas Historical Commission (THC) Texas Archeological Sites Atlas (Atlas) to identify previously conducted cultural resources investigations and previously recorded archeological sites and other designated historic resources, including National Register of Historical Places (NRHP)-listed properties and districts, State Antiquities Landmarks (SALs), historic-age cemeteries, and Official Texas Historical Markers (OTHMs), including Recorded Texas Historic Landmarks (RTHLs), within the Study Area. To identify areas with a high probability for the occurrence of cultural resources, Burns & McDonnell used 7.5-minute topographic maps, aerial photography, and TxDOT's Potential Archeological Liability Maps (PALM). For more information regarding site descriptions and the evaluation of the historical and archeological sites located within the Study Area, see Section 3.12.6 and Section 4.4.4 of the EA (Attachment 1 to this Application).

Based on Burns & McDonnell's review, three recorded archeological sites are crossed by the Consensus Route (sites 41JS120, 41JS139, and 41JS1460) and an additional three sites are within 1,000 feet of the centerline (sites 41JS140, 41JS141, and 41JS142). Table 3-9 in the EA describes each site, while Table 6-2 in the EA provides the distance of each site from the centerline. No cemetery or NRHP-listed or determined-eligible site is crossed by or within 1,000 feet of the Consensus Route centerline. For the protection of the archeological sites in the Study Area, they are not shown on Figure 2-2 in the EA. The length of right-of-way across high probability areas for potential archeological sites or other prehistoric cultural resources for the Consensus Route is approximately 3.13 miles. The proposed Project is not anticipated to have any significant impacts on the archeological sites crossed or identified within 1,000 feet.

**28. Coastal Management Program:**

For each route, indicate whether the route is located, either in whole or in part, within the coastal management program boundary as defined in 31 TAC §503.1. If any route is, either in whole or in part, within the coastal management program boundary, indicate whether any part of the route is seaward of the Coastal Facilities Designation Line as defined in 31 TAC §19.2(a)(21). Using the designations in 31 TAC §501.3(b), identify the type(s) of Coastal Natural Resource Area(s) impacted by any part of the route and/or facilities.

No part of the Consensus Route occurs within the coastal management program boundary as defined in 31 TAC § 503.1.

**Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the  
Phantom Hill to Tiger Solar 345-kV Transmission Line in Jones County**

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**29. Environmental Impact:**

Provide copies of any and all environmental impact studies and/or assessments of the project. If no formal study was conducted for this project, explain how the routing and construction of this project will impact the environment. List the sources used to identify the existence or absence of sensitive environmental areas. Locate any environmentally sensitive areas on a routing map. In some instances, the location of the environmentally sensitive areas or the location of protected or endangered species should not be included on maps to ensure preservation of the areas or species. Within seven days after filing the application for the project, provide a copy of each environmental impact study and/or assessment to the Texas Parks and Wildlife Department (TPWD) for its review at the address below. Include with this application a copy of the letter of transmittal with which the studies/assessments were or will be sent to the TPWD.

Wildlife Habitat Assessment Program  
Wildlife Division  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, Texas 78744

The EA is included with this Application as Attachment 1. Data used by Burns & McDonnell in the evaluation of the proposed Consensus Route were drawn from a variety of sources, including, published literature (e.g., documents, reports, maps, and aerial photography) and information from local, state, and federal agencies. An extensive list of resources is provided in Section 8 of the EA. Ground reconnaissance of the Study Area and computer-based evaluation of digital aerial imagery were used for the evaluation of the proposed Consensus Route. Environmentally sensitive areas are shown in Figure 2-2 (map pocket of the EA).

The applicant shall file an affidavit confirming that the letter of transmittal and studies/assessments were sent to TPWD.

A copy of the letter of transmittal providing a copy of the Application and the EA for this Project to the TPWD is included in this Application as Attachment 12. An affidavit verifying that the Application and the EA was sent to TPWD will be filed with the Commission.

**30. Affidavit**

Attach a sworn affidavit from a qualified individual authorized by the applicant to verify and affirm that, to the best of their knowledge, all information provided, statements made, and matters set forth in this application and attachments are true and correct.

The sworn affidavit of Robert Orr is included with this Application as Attachment 13.

**Lone Star Transmission, LLC  
CCN Application – List of Attachments**

<b>Attachment Number</b>	<b>Attachment Description</b>
Attachment 1	Environmental Assessment of the Proposed Phantom Hill to Tiger Solar 345-kV Transmission Line in Jones County, prepared by Burns & McDonnell, Inc.
Attachment 2	Consent Agreements for Proposed Consensus Route
Attachment 3	Interconnection Agreement between Lone Star Transmission, LLC and Vaca del Sol, LLC for the Tiger Solar Project, dated October 30, 2024
Attachment 4	ERCOT Tiger Solar Interconnection Project (23INR0244) – Economic Study, dated December 23, 2024
Attachment 5	Schematic of the Lone Star Transmission, LLC System in the Proximate Area of the Proposed Project
Attachment 6	Aerial Photograph-Based Property Ownership Map
Attachment 7	Table Providing Landowner Names, Property Identification, and Map Locations
Attachment 8	Landowner Notice Materials: Attachment 8A Sample Notice Letter to Landowners Attachment 8B Map of Consensus Route Attachment 8C Consensus Route Description Attachment 8D Landowner Brochure Attachment 8E Comment/Protest Form Attachment 8F Intervenor Form Attachment 8G List of Landowners Receiving Notice
Attachment 9	Utility Notice Materials: Attachment 9A Sample Notice Letter to Utilities <sup>1</sup> Attachment 9B List of Utilities Receiving Notice

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<sup>1</sup> Excluding attachments provided in Attachment No. 8.

<b>Attachment Number</b>	<b>Attachment Description</b>
Attachment 10	Public Agency Materials: Attachment 10A Sample Notice Letter to Public Officials <sup>1</sup> Attachment 10B List of County Officials, the Department of Defense Siting Clearinghouse, and the Office of Public Utility Counsel Contacts Receiving Notice
Attachment 11	Newspaper Notice Materials: Attachment 11A Sample Newspaper Notice Attachment 11B List of Newspapers of General Circulation
Attachment 12	Letter of Transmittal to the Texas Parks & Wildlife Department
Attachment 13	Sworn Affidavit of Robert Orr

# Environmental Assessment



## Proposed Phantom Hill to Tiger Solar 345-kV Transmission Line Project

**Docket No. 58405**

**July 2025**



# **Environmental Assessment**

prepared for

**Lone Star Transmission, LLC**

**Proposed Phantom Hill to Tiger Solar  
345-kV Transmission Line Project in  
Jones County, Texas**

**Docket No. 58405**

**July 2025**

prepared by

**Burns & McDonnell Engineering Company, Inc.  
Austin, Texas**

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## LIST OF ACRONYMS AND ABBREVIATIONS

<b><u>Abbreviation</u></b>	<b><u>Term/Phrase/Name</u></b>
ACS	American Community Survey
ACSR	Aluminum Conductor Steel Reinforced
ANSI	American National Standards Institute
APLIC	Avian Power Line Interaction Committee
Atlas	Texas Archeological Sites Atlas
AWBP	Aransas-Wood Buffalo population
BEG	Bureau of Economic Geology
BGEPA	Bald and Golden Eagle Protection Act
BLS	U.S. Bureau of Labor Statistics
BMP	best management practice
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
CCN	Certificate of Convenience and Necessity
CFR	Code of Federal Regulations
cm	centimeter
Consensus Route	proposed transmission line route
CR	County Road
CROS	Collaborative Research Outcomes System
CWA	Clean Water Act
DoD	Department of Defense
EA	Environmental Assessment
EMST	Ecological Mapping Systems of Texas
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FAQ	Frequently Asked Questions

<b><u>Abbreviation</u></b>	<b><u>Term/Phrase/Name</u></b>
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FM	Farm-to-Market Road
FRA	Federal Railroad Administration
FSA	Farm Service Agency
Ft	foot/feet
FVZ	foreground visual zone
GIS	geographic information system
GLO	General Land Office
GWh	gigawatt-hour
HIFLD	Homeland Infrastructure Foundation-Level Data
HPA	high probability area
IPaC	Information for Planning and Consultation
ISD	Independent School District
kV	kilovolt
Lone Star	Lone Star Transmission, LLC
MBTA	Migratory Bird Treaty Act
ME	Miscellaneous Easement
msl	mean sea level
MW	megawatt
NAIP	National Agriculture Imagery Program
NASS	National Agricultural Statistics Service
NCED	National Conservation Easement Database
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NOI	Notice of Intent

<b><u>Abbreviation</u></b>	<b><u>Term/Phrase/Name</u></b>
NOT	Notice of Termination
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit
NWR	National Wildlife Refuge
OHGW	overhead ground wire
OPGW	optical ground wire
OTHM	Official Texas Historical Marker
PALM	Potential Archeological Liability Map
Project	Phantom Hill to Tiger Solar 345-kV Transmission Line
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
SCS	Soil Conservation Service
SH	State Highway
SWCD	Soil & Water Conservation District
SWPPP	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TARC	Texas Association of Regional Councils
TARL	Texas Archeological Research Laboratory
TCEQ	Texas Commission on Environmental Quality
TDC	Texas Demographic Center

<b><u>Abbreviation</u></b>	<b><u>Term/Phrase/Name</u></b>
TEA	Texas Education Agency
TEAM	Texas Ecological Analytical Mapper
THC	Texas Historical Commission
TLC	Texas Land Conservancy
TNC	The Nature Conservancy
TPDES	Texas Pollution Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
TXNDD	Texas Natural Diversity Database
U.S.	United States
US	U.S. Highway
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Vaca Del Sol	Vaca Del Sol, LLC
WCTCOG	West Central Texas Council of Governments
WOTUS	waters of the U.S.
3DHP	USGS 3D National Hydrography Program

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## 1.0 DESCRIPTION OF THE PROPOSED PROJECT

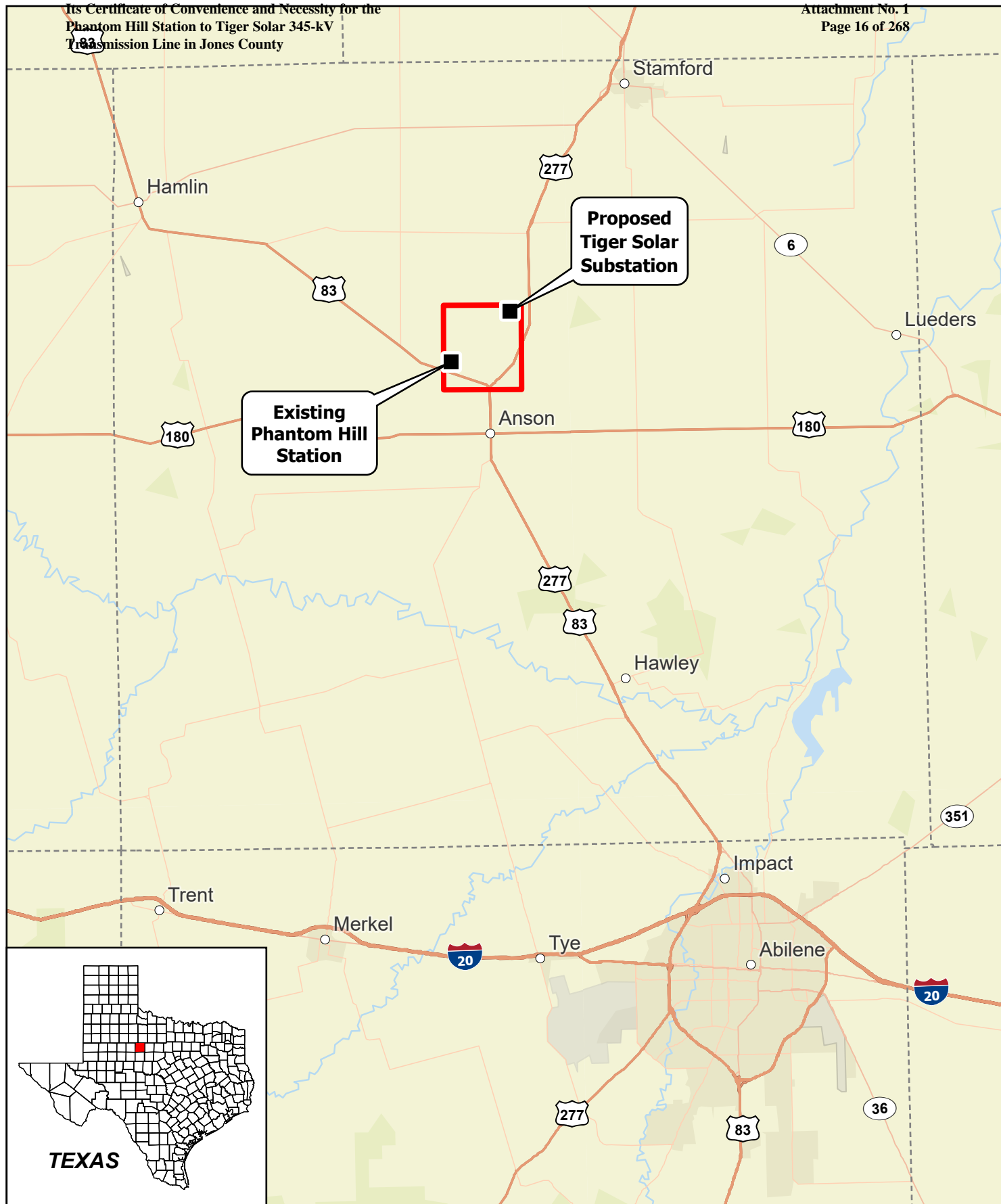
### 1.1 Scope of Project

Lone Star Transmission, LLC (Lone Star) is proposing to design and construct a new 345-kilovolt (kV) electric transmission line in north-central Jones County, Texas, to interconnect the proposed Tiger Solar generation facility. The Phantom Hill to Tiger Solar 345 kV Transmission Line (Project) is proposed to be constructed between Lone Star's existing Phantom Hill Station, located along Lone Star's existing Claytonville to West Shackleford 345-kV transmission line and northwest of the County Road (CR) 185 and CR 186 intersection, and the proposed Tiger Solar collection substation, located on the east side of CR 195, approximately 2 miles north of Lone Star's existing Claytonville to West Shackleford 345-kV transmission line. The new transmission line will be approximately 4.56 miles long and will require a right-of-way (ROW) between 150 and 200 feet in width. **Figure 1-1** shows the Project location. The Study Area is described in **Section 2.2** and shown on **Figure 2-1**.

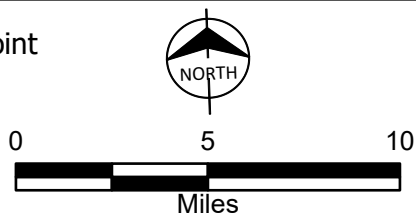
Lone Star contracted with Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) to prepare this Environmental Assessment (EA) to support its application to amend its Certificate of Convenience and Necessity (CCN) to be submitted to the Public Utility Commission of Texas (PUC) for the Project. The EA has been prepared to provide information and address requirements of § 37.056(c)(4)(A-D) of the Public Utility Regulatory Act (PURA), the PUC's CCN application form, the PUC's rules in 16 Texas Administrative Code (TAC) § 25.101, and the PUC's policy of "prudent avoidance." This EA may also be used in support of any additional local, state, or federal permitting activities that may be required for Lone Star's proposed Project.

### 1.2 Purpose and Need

The proposed Project is necessary to directly interconnect a new transmission customer, Vaca Del Sol, LLC (Vaca Del Sol), to Lone Star's 345-kV transmission system. Vaca Del Sol has requested that Lone Star interconnect its proposed approximately 255 megawatt (MW) Tiger Solar generation facility to Lone Star's existing Phantom Hill Station. PUC Electric Substantive Rule 25.191(d) requires a transmission service provider to interconnect a transmission service customer once the other conditions are completed for transmission service as defined in 16 Texas Administrative Code (TAC) § 25.195(c).



■ Project Endpoint  
□ Study Area



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Figure 1-1  
Project Location  
Phantom Hill to Tiger Solar  
345-kV Transmission Line Project  
Lone Star Transmission  
Jones County, Texas

### 1.3 Description of Proposed Design and Construction

The following information presents the proposed design and construction of facilities for the 345-kV transmission line.

#### 1.3.1 Loading, Weather Data, and Design Criteria

Lone Star's proposed 345-kV single-circuit transmission line is in the American National Standards Institute (ANSI) National Electrical Safety Code (NESC) Heavy Loading Zone and will be designed to meet or exceed NESC 2023 loading criteria (ANSI C2-2023) and Lone Star's *Transmission Line Design Criteria and Design Philosophy for Projects Requiring Compliance to the NESC (Rev 0)*. Depending on the type of structure used, various combinations of vertical, transverse (wind), and longitudinal loadings (with and without ice) will be analyzed as to the effects on the structures. The new 345-kV transmission line will be capable of supporting a double bundled 795 kcmil aluminum conductor steel reinforced (ACSR) cable, identified as "Drake," and two shield wires: one optical ground wire (OPGW) and one overhead ground wire (OHGW).

All structure components, conductors, and overhead ground wires will be designed using the appropriate overload capacity factors, strength reduction factors, and tension limits as given in the NESC and the manufacturer's recommended strength ratings for hardware. In addition to the NESC requirements, additional loading cases that exceed the NESC will also be used per Lone Star standards. These load cases include an unbalanced loading case as well as a case to limit structure deflection under normal, everyday loads. The NESC Heavy-Loading Zone design criteria, extreme wind, and concurrent wind and ice-loading conditions will be used to determine tension sags for all wires.

#### 1.3.2 Structural and Geotechnical

This project will mainly consist of concrete monopole tangent structures and some steel self-supporting dead-end structures. Dead-end structures may be used where running angles are required, with guying installed on dead-end and running angle structures as necessary. The typical structure heights will be approximately 90 to 120 feet but will vary depending on the terrain and clearance requirements.

All structures will be designed to support conductors and shield wires as specified above. The configuration of the conductor and shield wires will provide adequate lightning protection and the appropriate clearances for operation of a 345-kV single-circuit transmission line. The geometry of a typical monopole single-circuit tangent structure and a monopole single-circuit dead-end structure are shown on **Figure 1-2** and **Figure 1-3**, respectively. Geotechnical considerations will include soil borings

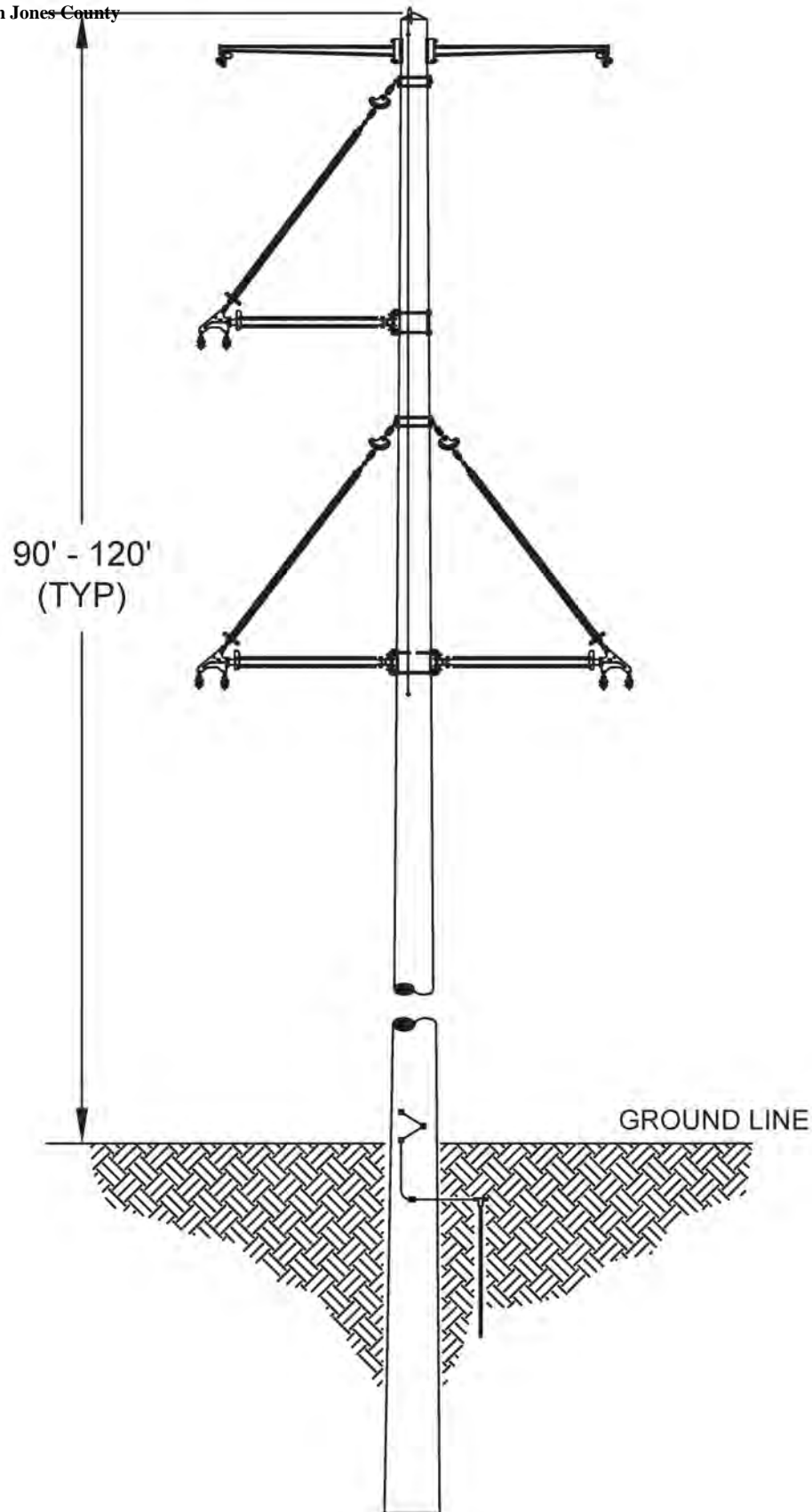
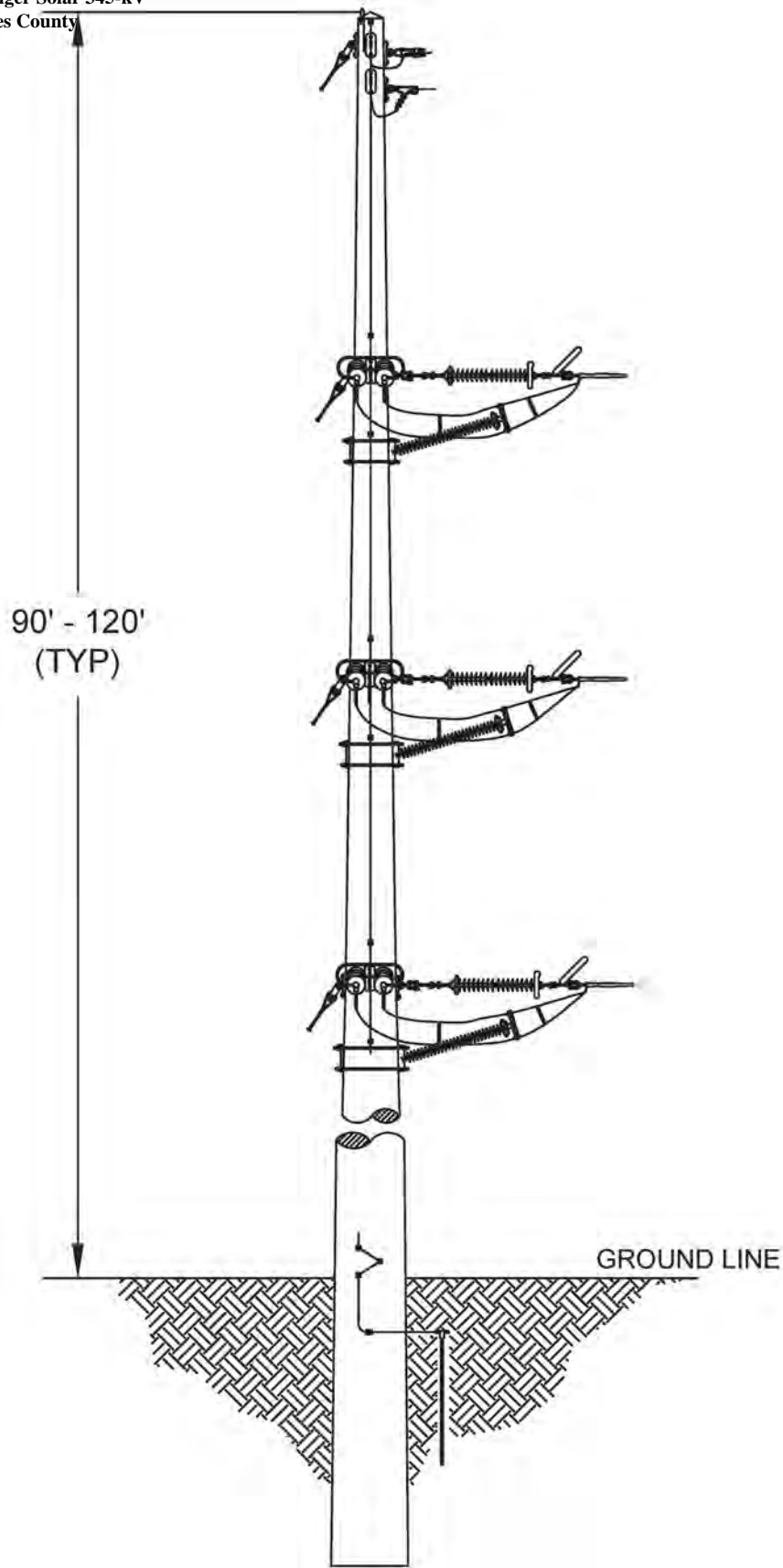


Figure 1-2  
Single-Circuit Monopole Tangent Structure  
Phantom Hill to Tiger Solar  
345-kV Transmission Line Project  
Lone Star Transmission,  
Jones County, Texas



**LONESTAR**

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Figure 1-3  
Single-Circuit Monopole Dead-end Structure  
Phantom Hill to Tiger Solar  
345-kV Transmission Line Project  
Lone Star Transmission,  
Jones County, Texas

and in-situ soils testing to provide the parameters for foundation design and embedment depths required for new structures.

### **1.3.3 Right-of-Way Requirements**

Lone Star has obtained consent from all landowners directly affected by the proposed Project and its location. The proposed ROW width for this Project will be approximately 150 to 200 feet. The proposed transmission line will generally be located along the centerline of the ROW. In some areas, the transmission line may be located slightly off-center but will remain within the ROW. Additional ROW may be required at turning structures to accommodate guy wires where utilized. Temporary ROW may be required to facilitate construction.

### **1.4 Construction Considerations**

Projects of this type require surveying, ROW clearing and access improvements, foundation installation, structure assembly and erection, conductor and shield wire installation, and cleanup and reclamation when the Project is completed.

#### **1.4.1 Clearing**

After regulatory approval and design of the transmission line are final, ROW acquisition will be completed and vegetation within the ROW cleared. Any required clearing of the ROW will be performed by the contractor in accordance with Lone Star clearing specifications and any other requirements. Available methods of vegetation clearing include mulching and brush piling and leaving the material onsite and/or salvaging or disposing by hauling material offsite.

The ROW will be used for access during construction operations. To access the ROW, Lone Star may have to cross private property that adjoins the ROW. In general, however, Lone Star will access the ROW from public roads. Gates may be installed to facilitate linear access as required. Culverts or low water crossings will be installed to cross creeks and tributaries, where necessary, for purposes of construction and future operations and maintenance.

Clearing plans, methods, and practices are extremely important for success in any program designed to minimize the adverse effects of electric transmission line construction on the natural environment. The following measures, thoughtfully implemented and applied to this Project, will help meet this goal:

1. Clearing will be performed in a manner that will maximize the preservation of natural habitat and the conservation of natural resources.

2. Clearing will be performed in a manner that will minimize adverse effects to waters in the area of activity.
3. The time and method of clearing ROW will take into account soil stability, the protection of natural vegetation, sensitive habitats, the protection of adjacent resources such as natural habitat for plants and wildlife, and the prevention of silt deposition in watercourses.
4. Lone Star will use the most efficient and effective methods to remove undesirable plant species. Hydro-axes and flail mowers may be used in clearing operations where such use will preserve the cover crop of grass and similar vegetation. If deemed appropriate, United States (U.S.) Environmental Protection Agency (EPA)-approved herbicides will be applied and handled in accordance with the product manufacturers' published recommendations and specifications and as directed by appropriate qualified staff.

#### **1.4.2 Construction**

The following is a description of typical construction methods for transmission line projects. Survey crews will stake the boundaries of the ROW and mark structure locations. Depending on soil type, crews will typically direct-embed structures or construct foundations using augured circular holes, rebar cages, concrete, and anchor bolts.

Crews will transport and assemble structures and related hardware. Where direct-embedded structures are used, crews will install them by boring appropriately sized holes, lifting and setting the structure, and backfilling with select fill, depending on soil conditions at the site (based on soils testing). Where foundations are constructed, holes are augured, rebar cages with anchor bolts are lowered into the ground, and concrete is poured. Once the concrete has cured sufficiently, crews will set the structure and affix bolts to secure the structure to the foundation. Regardless of structure type, the usual procedure is to assemble each structure on its side, then lift the structure and set it into its hole or onto its base.

Construction crews will take care to minimize damage to the ROW from vehicular traffic.

Guard structures (temporary wood-framed structures) will be installed near crossings, such as distribution power lines, overhead telephone lines, roadways, and any other areas where a safety hazard may be present during wire installation. The conductors and shield wires are installed via a tensioning system. Using a helicopter or a bucket truck, a rope is first threaded through the stringing blocks or dollies. The back end of the rope is secured to a steel cable, so that when the rope is pulled through the blocks or dollies, it then pulls through the steel cable. Conductors and shield wires are then pulled by the steel cables in the same manner and held tight by a tensioner, which keeps the wires from touching the ground and other objects that could be damaging to the wires. When each wire is tensioned to the required sag,

the wire is taken out of the blocks or dollies and placed in the suspension and dead-end clamps for permanent attachment.

Construction operations will be conducted with attention to the preservation of the natural habitat and the conservation of natural resources. The following criteria will be used to attain this goal. These criteria are subject to adjustment according to the rules and judgments of any public agencies whose lands may be crossed by the proposed line.

1. Clearing and grading of construction areas, such as storage areas and setup sites, will be minimized. 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 spread near the excavated area or onto an adjacent cleared area. If soil is spread, it will be sloped gradually to conform to the terrain and the adjacent land. If natural seeding will not provide ground cover in a reasonable length of time, appropriate reseeding may be performed.
3. Erosion control devices will be constructed where necessary to reduce soil erosion in the ROW.
4. Clearing and construction activities near streambeds and water bodies (*e.g.*, ponds) will be performed in a manner to minimize damage to the natural condition of the area. Streambanks will be restored as necessary to minimize erosion.
5. Efforts will be made to prevent accidental oil spills and other types of pollution, particularly while performing work near streams, lakes, and reservoirs.
6. Precautions will be taken to prevent the possibility of accidentally starting range fires.
7. Precautions will be taken to protect natural features and cultural resources (identified by site-specific review of the Project) along the ROW.
8. If endangered or threatened species habitat is present, guidance from the U.S. Fish and Wildlife Service (USFWS) will be obtained prior to all clearing and construction activities.
9. Soil disturbance during construction will be kept to a minimum, and restorative measures will be implemented after construction completion and in a reasonable length of time.
10. Lone Star will comply with any applicable permit or regulatory approval.

### **1.4.3 Cleanup**

The cleanup and reclamation operation involves the leveling and smoothing of all disturbed areas, the removal of all construction debris, and the restoration of, or compensation for, any items damaged by the construction of the Project. The following criteria generally apply to the cleanup of construction debris and the restoration of the area's natural setting.

1. If site factors make it unusually difficult to reestablish a protective vegetative cover, other restoration procedures will be used, such as the installation of gravel, rocks, or concrete to stabilize and restore areas disturbed during construction.
2. Sears, cuts, fill, or other aesthetically degraded areas will be allowed to seed naturally or may be reseeded with native species to reduce erosion, restore a natural appearance, and to provide food and cover for wildlife.
3. If access roads are removed after construction, the original slopes will be restored where possible.
4. Construction equipment and supplies will be dismantled and removed from the ROW when construction is completed.
5. Construction waste will be removed prior to completion of the Project.
6. Replacement of soil adjacent to water crossings for access roads will be at slopes less than the normal angle of repose for the soil type involved and will be stabilized/revegetated to avoid erosion.
7. Lone Star will comply with applicable permits and regulatory approvals.

## 1.5 Maintenance Considerations

Following construction of the transmission line, Lone Star will periodically access the ROW for inspection of the line and repair of damaged infrastructure due to equipment failures, accidents, or natural phenomena, such as wind or lightning damage. In areas where treatment of vegetation within the ROW is required, mowing, pruning and cutting of trees, and application of EPA-approved herbicides will be conducted as required. While maintenance patrols will vary, aerial and foot patrols will be performed periodically. In cropland areas and properly managed grazing lands, little or no vegetation control will be required, due to existing land-use practices. In other areas, the major maintenance item will be the application of EPA-approved herbicides, although mowing, trimming or cutting of any woody brush and trees that pose a potential danger to the conductors or transmission structures to provide safe and reliable operation will also occur.

## 1.6 Agency Actions

Numerous federal, state, and local regulatory agencies and organizations have promulgated rules and regulations regarding the routing and potential impacts associated with the proposed transmission line Project. This section lists the major regulatory agencies that are involved in project planning and permitting of transmission lines in Texas, and describes the permits or approvals required. Burns & McDonnell solicited comments from various regulatory agencies and officials during the development of this document. A summary of agency responses is provided in **Section 5.1** (Correspondence with Agencies and Officials) and copies of the responses received are included in **Appendix A** (Agency

Correspondence). Construction documents and specifications will indicate special construction measures needed to comply with the regulatory requirements listed below.

### **1.6.1 Public Utility Commission of Texas**

The PUC regulates the routing of transmission lines in Texas under Section 37.056(c)(4)(A)-(D) of the Public Utility Regulatory Act (PURA). The PUC regulatory guidelines for routing transmission lines in Texas include:

- 16 TAC § 25.101(b)(3)(B)
- 16 TAC § 22.52(a)(4)
- Policy of prudent avoidance as defined in 16 TAC § 25.101(a)(6)
- CCN application requirements

The Project EA has been prepared by Burns & McDonnell in support of Lone Star's CCN application for this Project to be filed at the PUC for its consideration.

### **1.6.2 Federal Aviation Administration**

According to Federal Aviation Administration (FAA) regulations, Title 14 Code of Federal Regulations (CFR) Part 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 (FAA, 2011):

- 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 Part 77.9 having at least one runway longer than 3,200 feet
- A 50:1 slope for a horizontal distance of 10,000 feet from the nearest runway of each airport described in paragraph (d) of 14 CFR Part 77.9 where no runway is longer than 3,200 feet in length
- A 25:1 slope for a horizontal distance of 5,000 feet for heliports described in paragraph (d) of 14 CFR Part 77.9

Paragraph (d) of 14 CFR Part 77.9 includes public-use airports listed in the Chart Supplement (formerly the Airport/Facility Directory), 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.

The PUC CCN application also requires listing private airports within 10,000 feet of the proposed transmission line route (Consensus Route) centerline. Following PUC approval of the proposed route for the transmission line, Lone Star 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 45 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.

### **1.6.3 U.S. Army Corps of Engineers**

Under Section 404 of the Clean Water Act (CWA), activities in waters of the U.S. (WOTUS), including wetlands, are regulated by the U.S. Army Corps of Engineers (USACE), in conjunction with the EPA. Certain construction activities that potentially impact waters of the U.S. may be authorized by one of the USACE's Nationwide Permits (NWP). Permits that may apply to placement of support structures and associated activities are NWP 25 (Structural Discharges) and NWP 57 (Electric Utility Line and Telecommunications Activities). NWP 25 generally authorizes the discharge of concrete, sand, rock, etc., into tightly sealed forms or cells where the material is used as a structural member for standard pile-supported structures (linear projects, not buildings or other structures).

NWP 57 generally authorizes discharges associated with the construction of utility lines and substations within WOTUS and additional activities affecting WOTUS, such as those associated with the construction and maintenance of utility line substations; foundations for overhead utility line towers, poles, and anchors; and access roads for the construction and maintenance of utility lines. Construction of this transmission line Project will likely meet the criteria for NWP 57. If necessary, Lone Star will coordinate with the USACE prior to clearing and construction to ensure compliance with the appropriate regulations associated with construction-related impacts on waterbodies and wetland features.

Under Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403, the USACE is directed by Congress to regulate all work and structures in, or affecting the course, condition, or capacity of navigable

WOTUS, including tidal waters. No navigable waters occur within the Study Area that would require permitting under this Act.

#### **1.6.4 U.S. Fish and Wildlife Service**

The USFWS enforces federal wildlife laws and provides comments on proposed projects under the jurisdiction of the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA). Additionally, USFWS oversight includes review of projects with a federal nexus under the National Environmental Policy Act (NEPA).

Upon PUC approval of the proposed Project, a survey may be necessary to identify any potential suitable habitat for federally protected species. If suitable habitat is noted, then informal consultation with the USFWS may be conducted to determine if permitting or other requirements associated with possible impacts on protected species under the ESA, MBTA, or BGEPA is necessary. However, no impacts are expected to any federally listed or proposed federally listed species, and consultation with USFWS is not expected to be necessary.

#### **1.6.5 Federal Emergency Management Agency**

Burns & McDonnell reviewed the Flood Insurance Rate Map (FIRM), published by the Federal Emergency Management Agency (FEMA), for Jones County. No mapped 100-year floodplains occur within the Study Area. Therefore, the Project would have no impact on the function of the existing floodplains.

#### **1.6.6 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 electric transmission towers, may degrade military testing and training operations. Electromagnetic interference from electric transmission lines can impact critical DoD testing activities. 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. Furthermore, the utility is required to provide written notice of the public meeting or, if no public meeting is held, to provide written notice to the DoD of the planned filing of an application prior to completion of the routing study. Burns & McDonnell contacted the DoD regarding the proposed Project to provide notification and to solicit input on January 28, 2025. The DoD responded with a letter dated February 25, 2025, noting that the proposed Project will have minimal impact on military operations conducted in the area. In addition, and in accordance with 16 TAC

§ 22.52(a)(4), Lone Star provided notice to the DoD Military Aviation and Installation Assurance Siting Clearinghouse regarding the public open-house meeting held on April 8, 2025, in Anson, Texas. Lone Star will send notice of the filing of the application to the DoD Military Aviation and Installation Assurance Siting Clearinghouse when the CCN application is filed with the PUC.

#### **1.6.7 Texas Parks and Wildlife Department**

The Texas Parks and Wildlife Department (TPWD) is the State agency with the primary responsibility of protecting the State's fish and wildlife resources in accordance with the Texas Parks and Wildlife Code Section 12.0011(b). Burns & McDonnell solicited comments from the TPWD during the Project scoping phase and a copy of this EA will be submitted to TPWD when the CCN application is filed with the PUC.

Once the PUC approves a route, Lone Star will complete a field review of the associated ROW if it is determined to be necessary to identify potential suitable habitat for state-listed species. If suitable habitat is identified, additional coordination with TPWD may be necessary to determine avoidance or impact minimization measures to state-listed threatened or endangered species, and other state-regulated fish and wildlife resources.

#### **1.6.8 Texas Commission on Environmental Quality**

The Texas Commission on Environmental Quality (TCEQ) is the state agency with the primary responsibility for protecting the state's water quality. The construction of the Project may require a Texas Pollution Discharge Elimination System (TPDES) General Construction Permit (TX150000) as implemented by the TCEQ under the provisions of Section 402 of the CWA and Chapter 26 of the Texas Water Code. The TCEQ has developed a three-tiered approach for implementing this permit that is dependent on the acreage of disturbance. No permit is required for land disturbances of less than 1 acre (Tier I). Disturbance of more than 1 acre, but less than 5 acres, would require implementation of a Storm Water Pollution Prevention Plan (SWPPP) (Tier II). If more than 5 acres of land are disturbed, the requirements mentioned above for Tier II are necessary and the submittal of a Notice of Intent (NOI) and Notice of Termination (NOT) to the TCEQ is also required (Tier III). Once a route is approved by the PUC, Lone Star will determine the amount of ground disturbance and the appropriate tier and conditions of the TX150000 permit.

#### **1.6.9 Texas Department of Transportation**

Permits and approvals will be obtained from the Texas Department of Transportation (TxDOT) for any crossing of, or access from, a State-maintained roadway. Best management practices (BMPs) will be used, as required, to minimize erosion and sedimentation resulting from the construction within TxDOT

ROW. Revegetation within TxDOT ROW will occur as required under the “Revegetation Special Provisions” and contained in TxDOT form 1023 (Rev. 9-93). The Consensus Route crosses no state-maintained roadway.

#### **1.6.10 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 Part 60) or under state guidance (TAC, Title 13, Part 2, Chapter 26.7-8). Lone Star will obtain clearance as necessary from the Texas Historical Commission (THC) regarding requirements concerning historic and prehistoric cultural resources, if present, prior to initiating any ground disturbance.

#### **1.6.11 Texas General Land Office**

The Texas General Land Office (GLO) requires a Miscellaneous Easement (ME) for any ROW crossing of a state-owned riverbed, navigable stream, tidally influenced waters, or state-owned land. Once the PUC approves a route, Lone Star will coordinate with the GLO as needed to determine if an ME is required.

## **2.0 ROUTE EVALUATION METHODOLOGY**

### **2.1 Objective of Study**

The objective of this study was to evaluate the potential environmental and land use impacts for Lone Star's proposed 345-kV transmission line Project to ensure that it complies with PURA § 37.056(c)(4)(A)-(D), 16 TAC § 22.52(a)(4), and 16 TAC § 25.101(b)(3)(B), including the PUC's policy of prudent avoidance. Lone Star and Burns & McDonnell utilized a comprehensive and well-established evaluation methodology to evaluate potential impacts of the proposed transmission line route. Methods used to evaluate the route were governed by Burns & McDonnell's transmission line routing criteria, the PUC Substantive Rules, and PURA. The following sections provide a description of the process used in the development and evaluation of the Consensus Route.

The study methodology used by Burns & McDonnell for this EA included Study Area delineation based on the Project endpoints, identification and characterization of existing land use and environmental constraints, and identification of areas of potential routing opportunity located within the Project Study Area. Burns & McDonnell developed Preliminary Alternative Links taking into consideration potentially affected resources and input from regulatory agencies and local officials. Lone Star hosted an in-person public open house meeting for the Project to solicit comments from the community. Subsequent Preliminary Alternative Link modifications were completed after considering potentially affected resources and public comments. After the open house meeting and before the multi-route analysis was completed, though, Vaca Del Sol and a group of directly affected landowners reached an agreement on where the proposed transmission line would be routed. This route was called the Consensus Route. Lone Star will describe this Consensus Route in the CCN application.

### **2.2 Study Area Delineation**

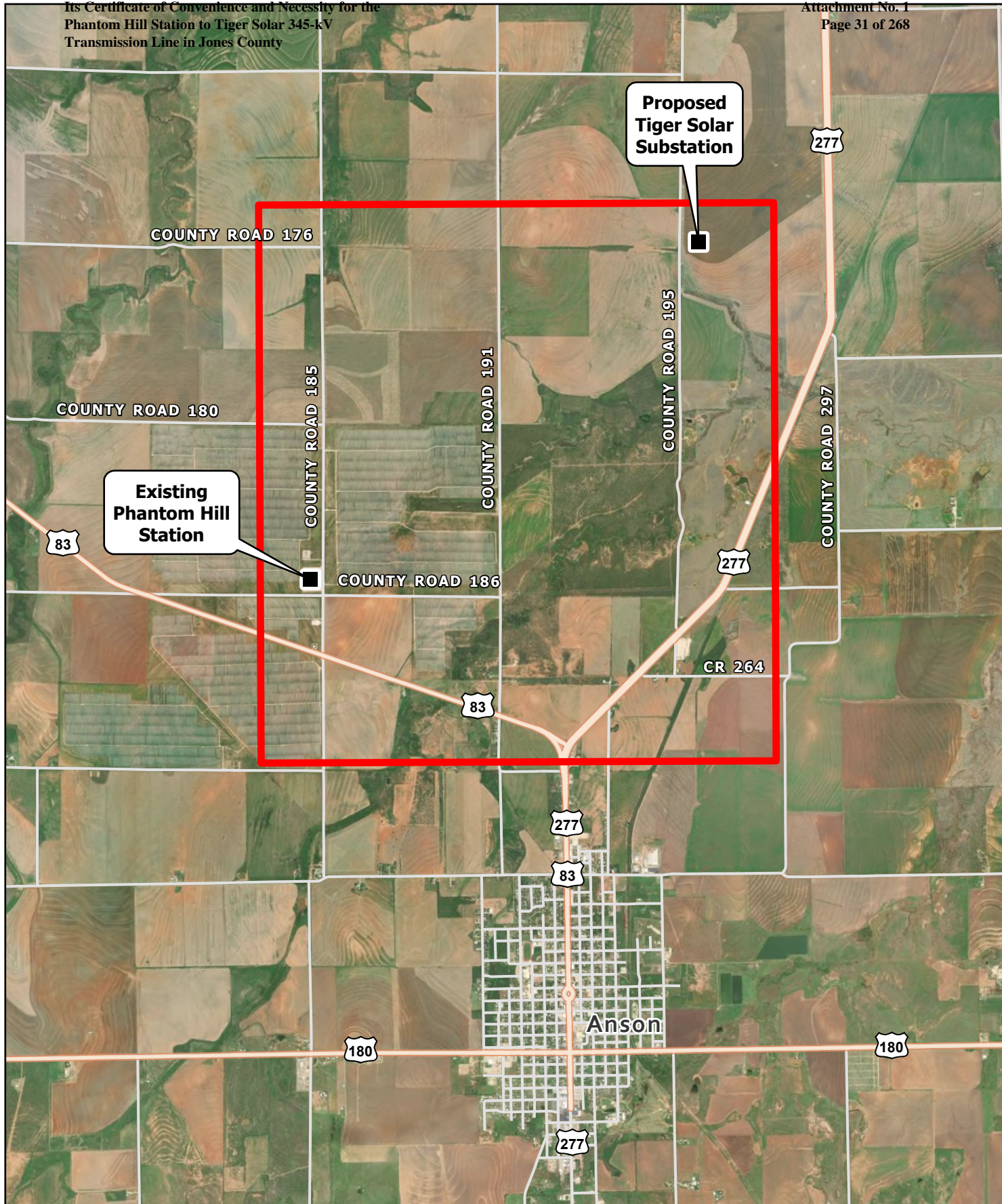
The first step in the development of Alternative Routes was to delineate a Study Area. The Study Area needed to encompass the endpoints for the proposed Project (Lone Star's existing Phantom Hill Station and the proposed Tiger Solar Substation) and include an area in which an adequate number of geographically diverse, forward-progressing Alternative Routes could be located while considering opportunity and constraint features in the Study Area. The purpose of delineating a Study Area for the Project was to establish boundaries and limits in which to identify environmental and land use constraints during the information gathering process to properly identify and map various items included within the PUC's CCN application form. The boundaries of this area were dictated by the location of existing facilities and other physical and cultural features. Numerous constraints were considered as the Study Area boundaries were developed. This resulted in the establishment of a rectangular Study Area 3.0 miles

east to west and 3.25 miles north to south, encompassing an area of approximately 9.75 square miles (6,240 acres) in Jones County (**Figure 2-1**).

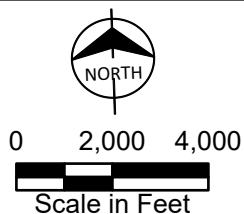
## 2.3 Data Collection

Data used by Burns & McDonnell in the evaluation of the Project was drawn from a variety of sources, including:

- Published literature (documents, reports, maps, aerial photography, etc.) (see **Section 7.0**, References)
- Information from local, state, and federal agencies
- Site-specific studies or investigations performed by others
- Recent aerial imagery
  - ESRI World Imagery, December 2022 and July 2023
  - U.S. Department of Agriculture [USDA] National Agriculture Imagery Program (NAIP), November 2024
  - Bing Maps, January 2022
  - Google Earth, 1995 through April 2024
- 7.5-minute U.S. Geological Survey (USGS) topographic maps
  - Anson (Traditional 1965, Modern 2010–2022)
- USGS 3D National Hydrography Program (3DHP)
- FEMA maps
- USFWS National Wetlands Inventory (NWI) maps
- USFWS Information for Planning and Consultation (IPaC)
- TPWD Texas Natural Diversity Database (TXNDD)
- TPWD Ecological Mapping Systems of Texas (EMST)
- Texas Archeological Sites Atlas (Atlas) through the Texas Archeological Research Laboratory (TARL) and THC



- Project Endpoint
- ▭ Study Area



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Figure 2-1  
Study Area  
Phantom Hill to Tiger Solar  
345-kV Transmission Line Project  
Lone Star Transmission  
Jones County, Texas

## 2.4 Constraints Mapping

To quantify potential impacts on sensitive environmental and land use features, a constraints mapping process was used in evaluating the Project. The geographic locations of environmentally sensitive and other restrictive areas within the Study Area were identified and considered during the evaluation process. These constraints were mapped onto an aerial base map (**Figure 2-2**, map pocket) created using USDA NAIP (2024). The data collection effort, although concentrated in the early stages of the Project, was an ongoing process. Data typically displayed on the base map include:

- Major land jurisdictions and uses
- Cities and towns
- Major roads (including CRs, Farm-to-Market (FM) roads, US Highways, and State Highways (SHs))
- Existing transmission lines and pipelines
- Airports, private airstrips, and communication facilities
- Recreational and wildlife management areas
- Major political subdivision boundaries
- Lakes, reservoirs, rivers, streams, and ponds
- Wetlands, floodplains, and water wells
- Parcel boundaries
- Conservation easements
- Cemeteries

## 2.5 Correspondence with Agencies and Officials

Burns & McDonnell contacted federal, state, county, and local agencies and officials by letter on January 28, 2025, to solicit comments, concerns, and information regarding potential environmental impacts, permits, or approvals for the construction of the proposed 345-kV transmission line within the Study Area. A map of the Study Area was included with each letter. An example of the letters and copies of the responses received are included in **Appendix A** (Agency Correspondence). A list of agencies contacted, and a summary of responses are included in **Section 5.1**.

**Figure 2-2: Consensus Route in Relation to Environmental and Land Use Constraints,  
Habitable Structures, and Directly Affected Properties**

This oversized map is located in map pocket in the back of this document.

## 2.6 Field Reconnaissance

Burns & McDonnell conducted reconnaissance surveys of the Study Area in March 2025 to confirm the findings of the previously mentioned research and data collection activities and to identify existing conditions or constraints that may not have been previously noted. Ground reconnaissance surveys were conducted from public roads and public ROW located within the Study Area. Reconnaissance survey information was noted in the field and geographically referenced to digital aerial imagery base maps. Ground reconnaissance of the Study Area and computer-based evaluation of digital aerial imagery were utilized for refinement of the Preliminary Alternative Links. The data collection effort, although concentrated in the early stages of the Project, was an ongoing process.

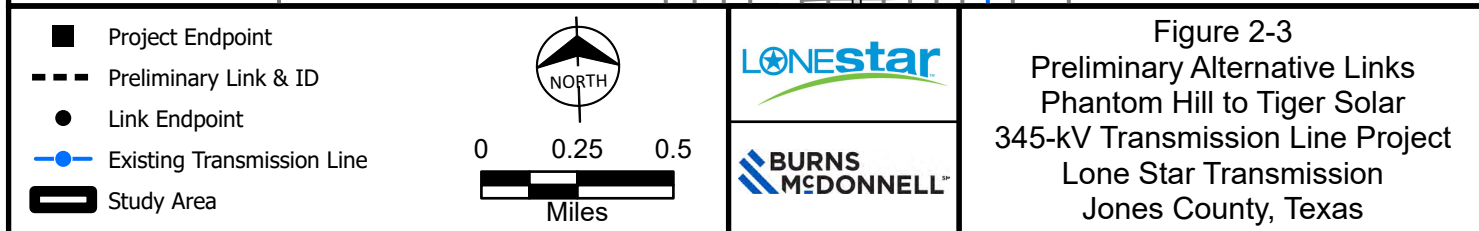
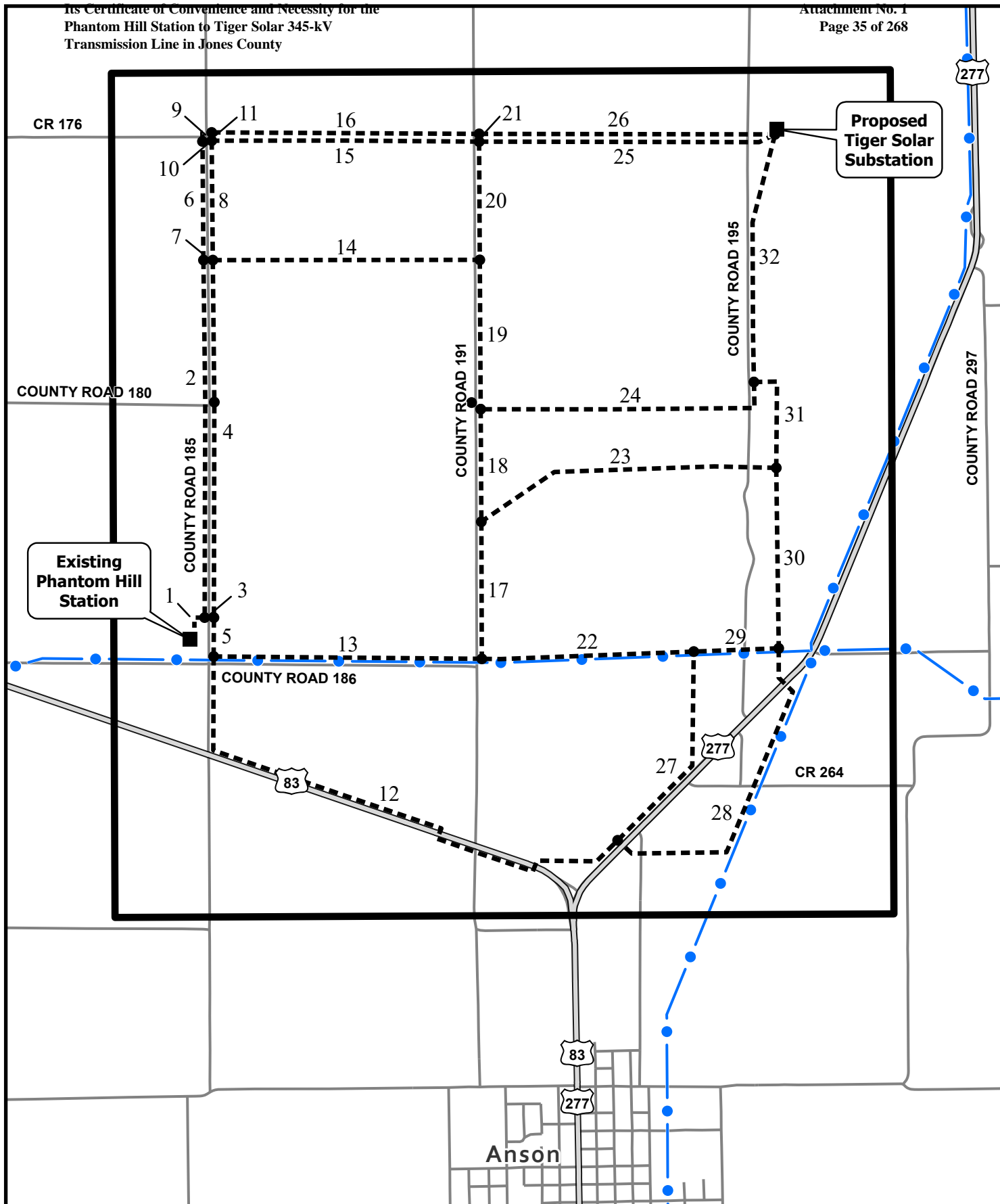
## 2.7 Preliminary Alternative Links

Upon completion of initial data collection activities and the constraint mapping process, the next step was to identify Preliminary Alternative Links to connect the Proposed Project endpoints. Utilizing the information described above, Burns & McDonnell identified numerous Preliminary Alternative Links, which were examined in the field in March 2025 and presented to Lone Star for review and comment. As noted previously, Preliminary Alternative Links were identified in accordance with PURA § 37.056 (c)(4)(A)-(D), 16 TAC § 25.101, including the PUC's policy of prudent avoidance. The Project team made modifications to the Preliminary Alternative Links based on the results of the field evaluations and review of high-resolution aerial imagery. Ultimately, 32 Preliminary Alternative Links were identified. These 32 links, which are shown on **Figure 2-3**, were presented to the public at an in-person open-house meeting.

## 2.8 Public Open-House Meeting

The 32 Preliminary Alternative Links shown on **Figure 2-3** were presented to the public at an open-house meeting held on April 8, 2025, in Anson, Texas. Lone Star and Burns & McDonnell collected questionnaires completed at the public meeting. Thereafter, Lone Star continued to accept feedback from emails, phone calls, and landowner-requested meetings.

Lone Star and Burns & McDonnell reviewed and analyzed the public input received to identify and evaluate the comments and additional information received at and following the public open-house meeting. This information was considered in determining the potential for modifications to the Preliminary Alternative Links. A summary of the questionnaire responses obtained at and following the public open-house meeting is presented in **Section 5.2**. Copies of the public open-house newspaper publication, notice letter with map, questionnaire, and frequently asked questions (FAQs) are located in **Appendix B**.

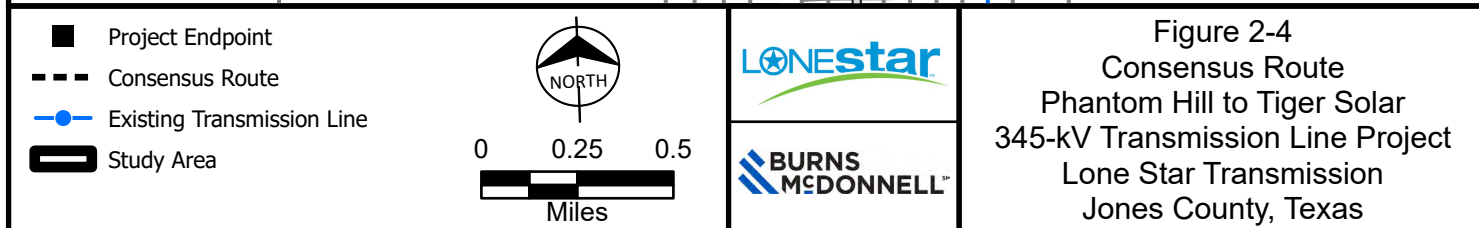
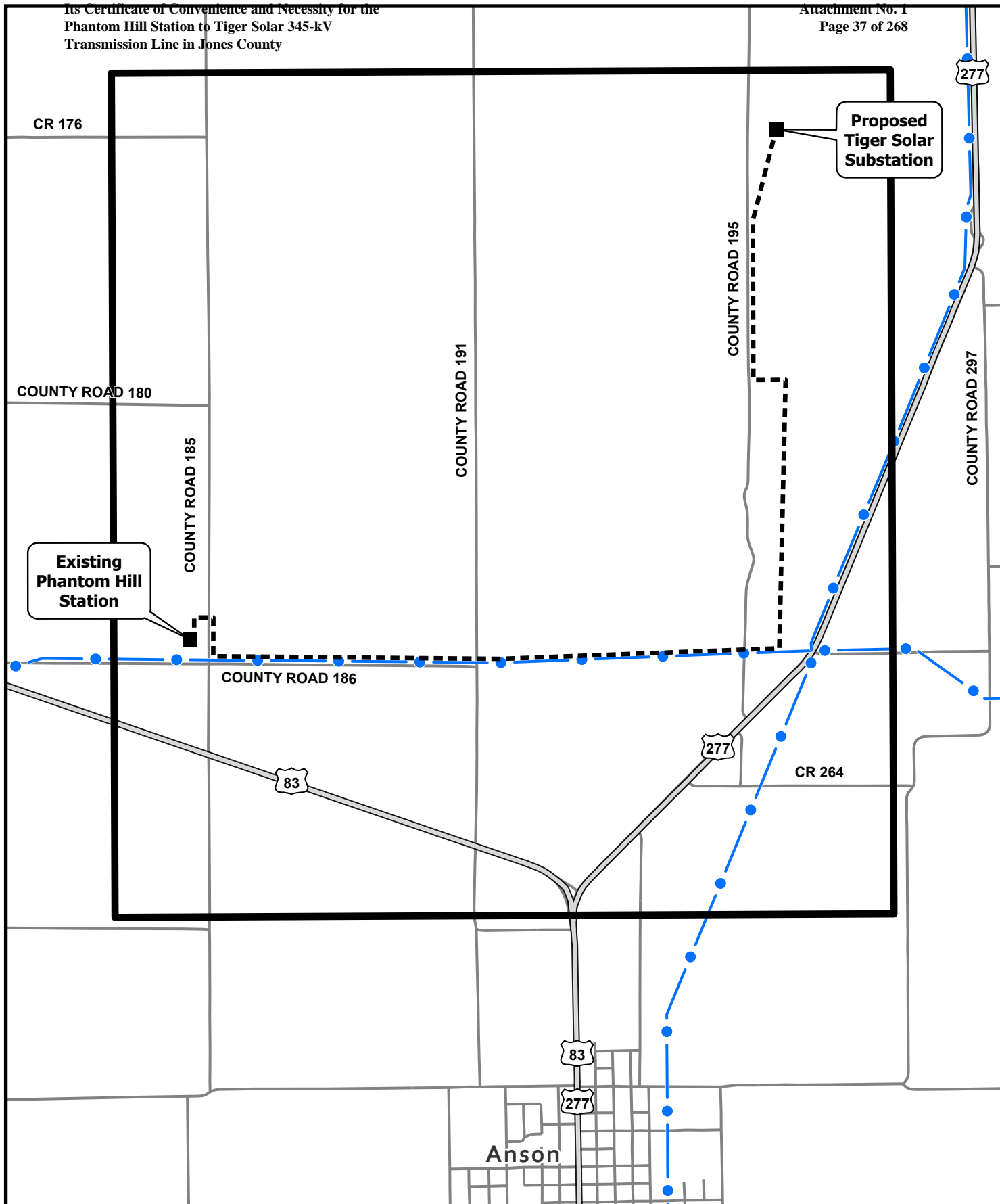


## 2.9 Modifications to Preliminary Alternative Links

Following the public open-house meeting, Burns & McDonnell and Lone Star conducted additional reviews to look at areas of concern discussed during the public meeting; communicated with individual landowners, agencies and officials; evaluated public comments; and considered revisions to the Preliminary Alternative Links. Prior to completion of this process, however, Vaca Del Sol and a group of directly affected landowners reached an agreement on where the proposed transmission line would be routed. This route was called the Consensus Route, which is shown on **Figure 2-4**.

## 2.10 Evaluation of the Consensus Route

In evaluating the Consensus Route, 37 environmental criteria were considered, which are presented in **Table 2-1**. An evaluation of the criteria is presented in **Table 6-1** in **Section 6.0** of this document. The analysis of the Project involved the inventory and tabulation of the number or quantity of each environmental criterion located along the Consensus Route (*e.g.*, number of habitable structures within 500 feet, length parallel to compatible ROW, amount of upland woodland/brushland crossed, etc.). The number or amount of each criterion was determined by reviewing various maps and recent color aerial imagery and by field verification. Potential environmental impacts of the Consensus Route are addressed in **Section 4.0** of this document.



**Table 2-1: Environmental Criteria for Phantom Hill to Tiger Solar  
 345-kV Transmission Line Project**

No.	Environmental Criterion
<b>Land Use</b>	
1	Length of Route
2	Number of habitable structures <sup>a</sup> within 500 feet <sup>b</sup> of ROW centerline
3	Length of ROW utilizing existing transmission line ROW
4	Length of ROW parallel to existing transmission line ROW
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railroads, etc.—excluding oil and gas pipelines)
6	Length of ROW parallel to approximate property lines (not following existing ROW) <sup>c</sup>
7	Length of ROW across parks/recreational areas <sup>d</sup>
8	Number of additional parks/recreational areas <sup>d</sup> within 1,000 feet of ROW centerline
9	Length of ROW across cropland
10	Length of ROW across pastureland/rangeland
11	Length of ROW across cropland or pastureland with mobile irrigation systems
12	Length of ROW across solar leases
13	Number of pipeline crossings
14	Number of transmission line crossings
15	Number of U.S. and State highway crossings
16	Number of Farm-to-Market (FM)/Ranch-to-Market (RM) road crossings
17	Number of FAA-registered public/military airfields <sup>e</sup> within 20,000 feet of ROW centerline (with runway >3,200 feet)
18	Number of FAA-registered public/military airfields <sup>e</sup> within 10,000 feet of ROW centerline (with runway <3,200 feet)
19	Number of private airstrips within 10,000 feet of ROW centerline
20	Number of heliports within 5,000 feet of ROW centerline
21	Number of commercial AM radio transmitters within 10,000 feet of ROW centerline
22	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline
<b>Aesthetics</b>	
23	Estimated length of ROW within foreground visual zone <sup>f</sup> of U.S. and State highways
24	Estimated length of ROW within foreground visual zone <sup>f</sup> of FM/RM roads
25	Estimated length of ROW within foreground visual zone <sup>f</sup> of parks/recreational areas <sup>d</sup>
<b>Ecology</b>	
26	Length of ROW across upland woodland/brushland
27	Length of ROW across bottomland/riparian woodland/brushland
28	Length of ROW across known occupied habitat of federally endangered or threatened species
29	Length of ROW across potential wetlands <sup>g</sup>

30	Number of stream crossings
31	Length of ROW parallel (within 100 feet) to streams
32	Length of ROW across open water (ponds, lakes, etc.)
33	Length of ROW across FEMA-mapped 100-year floodplains
<b>Cultural Resources</b>	
34	Number of recorded cultural resource sites within 1,000 feet of ROW centerline
35	Number of cemeteries within 1,000 feet of ROW centerline
36	Number of NRHP-listed or determined-eligible sites within 1,000 feet of ROW centerline
37	Length of ROW crossing areas of high archeological/historical site potential

(a) Single-family and multifamily 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.

(b) Due to the potential inaccuracies of the aerial photography and data utilized, all habitable structures within 520 feet have been identified.

(c) Property lines created by an existing road, highway, or railroad ROW are not double-counted in the “Length of ROW parallel to property lines” criterion.

(d) Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church.

(e) As listed in the Chart Supplement South Central U.S. (formerly known as the Airport/Facility Directory South Central U.S.).

(f) 0.5 mile, unobstructed.

(g) As mapped by the USFWS NWI.

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## 3.0 EXISTING ENVIRONMENT

### 3.1 Physiography

As shown on **Figure 3-1**, Jones County (including the Study Area) is located within the North-Central Plains Physiographic Province (Bureau of Economic Geology [BEG], 1996), which occurs in the north-central portion of the state east to the High Plains, north to Oklahoma and the Canadian Breaks of the Central High Plains, east to the Grand Prairie, and south to the Edwards Plateau and Central Texas Uplift provinces.

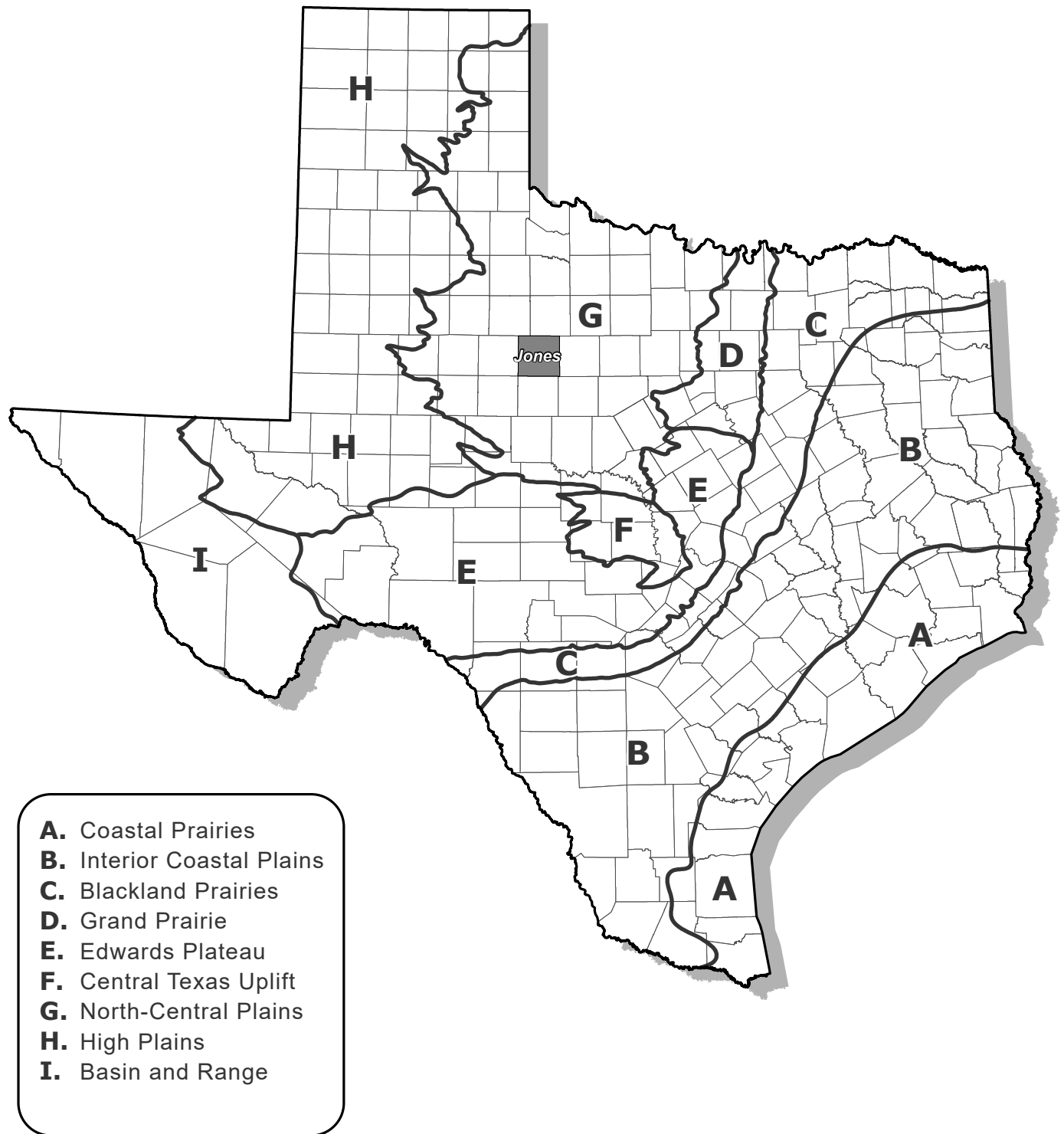
The North-Central Plains of Texas form low north-south ridges (questas) ranging from 900 to 3,000 feet in elevation above mean sea level (msl). This area has an erosional surface that developed on upper Paleozoic formations, and where shale bedrock prevails, meandering rivers traverse stretches of local prairie. In areas of harder bedrock, hills and rolling plains dominate, and local areas of hard sandstones and limestone cap steep slopes severely dissected near rivers. Western rocks and soils are oxidized red or gray where gypsum dominates, whereas eastern rocks and soils weather tan to buff (BEG, 1996). Study Area elevations range from a high of approximately 1,711 feet above msl in the south-central portion of the Study Area to a low of 1,624 feet above msl where Redmud Creek exits the eastern boundary of the Study Area.

### 3.2 Geology

According to BEG (1972), the Study Area includes the following geologic units (from youngest to oldest): Quaternary-aged alluvium and Seymour Formation; and Permian-aged Clear Fork Group.

Alluvium is associated with Redmud Creek within the Study Area and consists of floodplain deposits, which include low terrace deposits near floodplain level and bedrock locally in stream channels, with a thickness up to 25 feet. The Seymour Formation occurs in a small area of the southeastern portion of the Study Area and consists of sand, gravel, and clay, with thin deposits separately mapped.

The Permian-aged Clear Fork Group is present throughout the majority of the Study Area and consists of mudstone, limestone, dolomite, and siltstone. It is mostly mudstone, commonly silty, with some blue-gray shale near the base, is thin to very thin bedded and red with a few plant fossil fragments. The limestone consists of commonly thin discontinuous beds, mostly occurring in the lower part. Siltstone units are 1 to 3 feet thick and distributed throughout, are red, and on the bedding surfaces contain mud cracks, raindrop impressions, and tracks of amphibians and arthropods. Thin dolomite beds are scarce, and topography is mostly flat to gently sloping with some low hills and benches. No reported geologic faults occur in the Study Area or in the immediate vicinity of the Study Area.



### **3.3 Soils**

The Study Area occurs within north-central Jones County. The general soil map of Jones County, published by the Soil Conservation Service (SCS) (now renamed as the Natural Resources Conservation Service [NRCS]) in 1972, was referenced for the following descriptions of the soil associations within the Study Area.

#### **3.3.1 Soil Associations**

The NRCS defines a soil association as “a group of soils geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.” A soil association typically consists of one or more major soils, for which it is named, and some minor soils. Soils making up one unit can also occur in other units in a different pattern. According to the Jones County General Soil Map (SCS, 1972), only one soil association occurs within the Study Area, the Rowena-Olton association.

The Rowena-Olton association is characterized by deep, well drained, nearly level to gently sloping, dark grayish-brown and reddish-brown clay loams. This association occupies 51 percent of the county or approximately 310,000 acres. Rowena soils are nearly level, dark grayish-brown, and calcareous. Olton soils are nearly level and gently sloping and have a reddish-brown surface layer underlain by reddish, calcareous sandy clay. Permeability is moderately slow in both soils. It contains approximately 33 percent Rowena soils, 32 percent Olton soils, and 35 percent minor soils. Minor soils of this association are in the Abilene, Miles, Roscoe, Spur, and Tillman series. The soils of this association are suited to large-scale farming, and all areas are cultivated (SCS, 1972).

#### **3.3.2 Prime Farmland Soils**

The Secretary of Agriculture, in 7 USC § 4201(c)(1)(A), defines prime farmland soils as those soils that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. They have the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. Additional potential prime farmlands are those soils that meet most of the requirements of prime farmland but fail because they lack sufficient natural moisture, or they lack the installation of water management facilities. Such soils would be considered prime farmland if these practices were installed.

According to the NRCS (2024), prime farmland soils comprise approximately 91 percent (5,655 acres) of the Study Area, with an additional 1 percent (66 acres) included if irrigated.

For comparison, Jones County encompasses a total of 598,948 acres, of which approximately 60 percent (360,442 acres) is considered prime farmland soils, with an additional 6 percent (34,782 acres) included if irrigated. Additionally, 6 percent (38,246 acres) is included as farmland of statewide importance, if irrigated (NRCS, 2024).

### **3.4 Mineral and Energy Resources**

According to the USGS Mineral Data Resource System reports (USGS, 2011), no active mineral quarries or mines appear to occur in the Study Area, and none were observed during field reconnaissance or while reviewing USGS topographic maps. Additionally, no major mineral resources and no energy resources are mapped as occurring within the Study Area (BEG, 1979, 1976). According to the Railroad Commission of Texas (RRC), however, 10 active oil wells are located within the Study Area (RRC, 2025).

### **3.5 Water Resources**

#### **3.5.1 Surface Water**

For surface water planning purposes, the Study Area lies within the Brazos River Basin, which is the second largest by area in Texas, draining a total area of approximately 45,573 square miles of which 42,865 square miles are within Texas. The headwaters of the Brazos flow from the confluence of its Salt and Double Mountain forks in Stonewall County to the Gulf of Mexico. It is the third-longest river and has the largest average annual flow volume of any river in Texas. One of the main issues in this basin is the increasing demand on surface water resources in the upper basin as groundwater supplies decline, particularly in the Ogallala Aquifer, which has historically supplied most of the water there (Texas Water Development Board [TWDB], 2021).

According to USGS topographic maps and the National Hydrography Dataset, Redmud Creek is the only named surface water feature (*e.g.*, streams, ponds, canals, lakes) mapped within the Study Area. Average rainfall within the Study Area is approximately 25 inches annually (TWDB, 2012).

To assist regional water planning groups in identifying sensitive stream segments under 31 TAC § 357.8, TPWD has identified ecologically significant stream segments throughout the state based on criteria pertaining to biological function, hydrological function, riparian conservation areas, water quality, aquatic life, aesthetic value, and the presence of threatened or endangered species or unique communities. No stream segments within the Study Area are designated as ecologically significant streams (TPWD, 2025a).

### 3.5.2 Floodplains

FEMA has conducted detailed floodplain analyses for Jones County (FEMA, 2011); however, no mapped 100-year floodplains occur within the Study Area (see **Figure 2-2**, map pocket).

### 3.5.3 Groundwater

According to the TWDB, 9 major aquifers (aquifers that produce large amounts of water over large areas) and 21 minor aquifers (aquifers that produce minor amounts of water over large areas or large amounts of water over small areas) are recognized within Texas. These major and minor aquifers produce groundwater for household, municipal, industrial, and agricultural uses, and supply over 59 percent of the water used in Texas (TWDB, 2007).

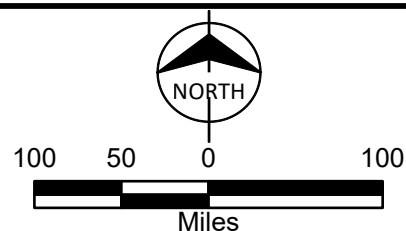
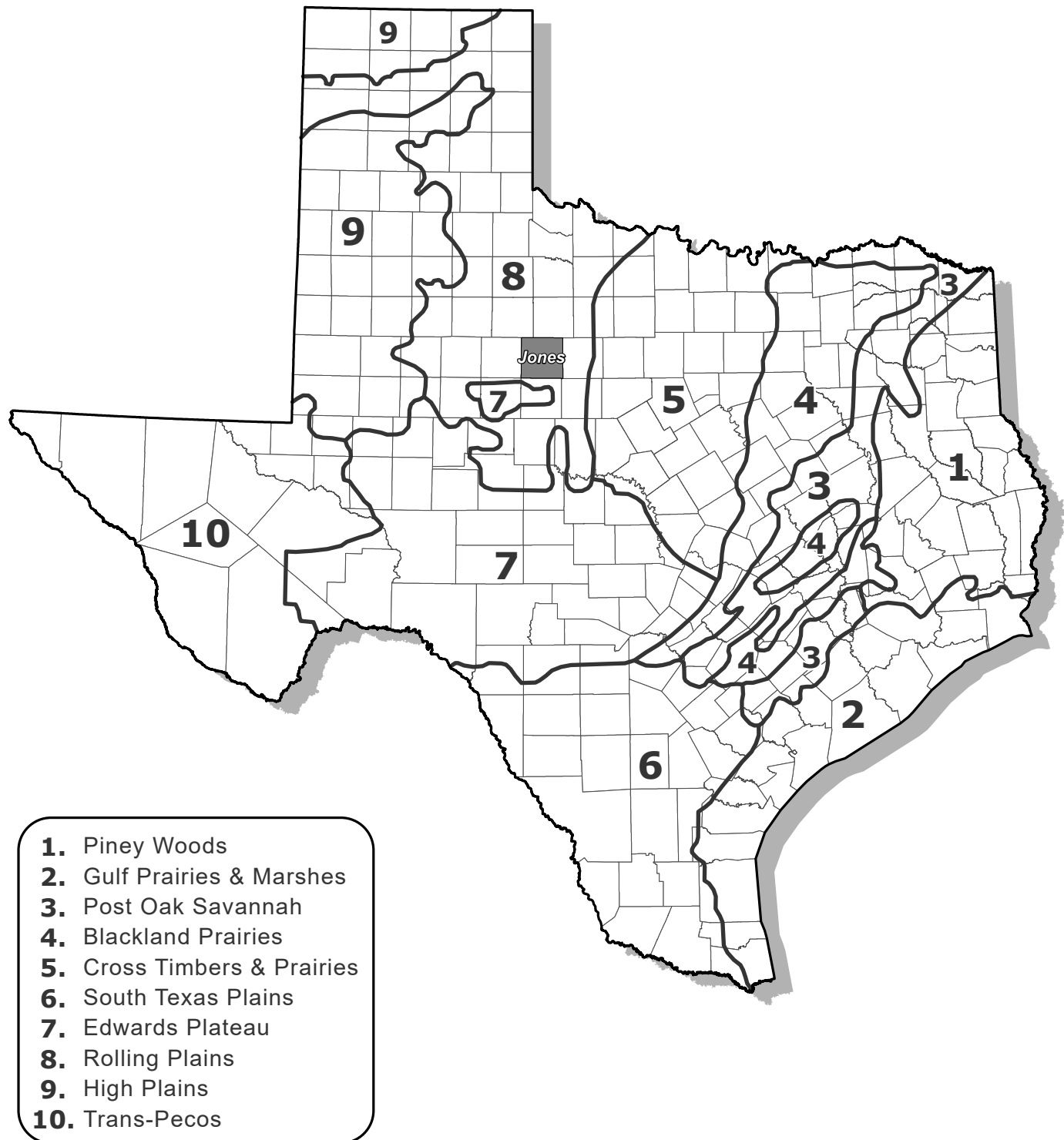
Portions of the Seymour Aquifer, a major aquifer in Texas, lie just outside the northern and southern border of the Study Area; however, no major or minor aquifers occur in the Study Area. The Seymour Aquifer consists of Quaternary-age, alluvial sediments overlying Permian-age rocks. Water is contained in isolated patches of alluvium as much as 360 feet thick composed of discontinuous beds of poorly sorted gravel, conglomerate, sand, and silty clay. Throughout its extent, the aquifer is affected by nitrate in excess of primary drinking water standards. Excess chloride also occurs throughout the aquifer. Almost all the groundwater pumped from the aquifer—90 percent—is used for irrigation, with the remainder used primarily for municipal supply (TWDB, 2011).

## 3.6 Vegetation

### 3.6.1 Regional Vegetation

As shown on **Figure 3-2**, Jones County (including the Study Area) is located within the Rolling Plains vegetational area, which was delineated by Gould et al. (1960) and characterized by Hatch et al. (1990).

The Rolling Plains is between the High Plains and the Cross Timbers and Prairies in the northern part of Texas and is characterized by a near level to rolling plain having moderate to rapid surface drainage. The original prairie vegetation included tallgrasses and mid-grasses such as little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), sand bluestem (*Andropogon hallii*), sideoats grama (*Bouteloua curtipendula*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), hairy grama (*Bouteloua hirsuta*), blue grama (*Bouteloua gracilis*), Canada wildrye (*Elymus canadensis*), and western wheatgrass (*Pascopyrum smithii*) on the moister sites. Buffalograss (*Bouteloua dactyloides*), curly mesquite (*Hilaria belangeri*), tobosagrass (*Pleuraphis mutica*), threeawns (*Aristida* spp.), sand dropseed (*Sporobolus cryptandrus*), and windmillgrass (*Chloris texensis*) are more common on the xeric



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**Figure 3-2**  
 Location of Jones County  
 in Relation to the  
 Vegetational Areas of Texas  
 Phantom Hill to Tiger Solar  
 345-kV Transmission Line Project

or overgrazed sites. More than 75 percent of the area is rangeland, but dryland and irrigated sorghum, small grain, cotton, and forages are important crops (Hatch et al., 1990).

### 3.6.2 Vegetation Community Types in the Study Area

According to TPWD's Ecological Mapping Systems of Texas (EMST) vegetation cover types, approximately 71.3 percent of the Study Area consists of Row Crops, 12.6 percent as Native Invasive: Mesquite Shrubland, 7.1 percent as Rolling Plains: Mixedgrass Prairie, 5.3 percent as High Plains: Mesquite Shrubland, 1.3 percent as High Plains: Floodplain Herbaceous Vegetation, and 3.4 percent as Urban High Intensity. The remaining 1.2 percent consists of an additional 9 vegetation cover types (TPWD, 2025b).

The Row Crops vegetation 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 and tame hay fields are generally mapped as grassland.

Native Invasive: Mesquite Shrubland contains honey mesquite (*Prosopis glandulosa*), which is often the dominant species of this broadly defined type, although other common species include lotebush (*Ziziphus obtusifolia*), huisache (*Acacia farnesiana*), sugar hackberry (*Celtis laevigata*), Ashe juniper (*Juniperus ashei*), agarito (*Mahonia trifoliolata*), winged elm (*Ulmus alata*), sumacs (*Rhus* spp.), brasil (*Condalia hookeri*), Texas persimmon (*Diospyros texana*), and Engelmann pricklypear (*Opuntia engelmannii*). Trees such as plateau live oak (*Quercus fusiformis*), coastal live oak (*Quercus virginiana*), or post oak (*Quercus stellata*) may form a sparse canopy. Prairie broomweed (*Amphiachyris dracunculoides*), Texas wintergrass (*Nassella leucotricha*), and tobosagrass are common herbaceous species. The type is mapped on soils that are classically considered to have supported grasslands or open shrublands in pre-European settlement times.

The Rolling Plains: Mixedgrass Prairie is a grassland dominated by species such as little bluestem, Texas wintergrass, sideoats grama, and silver bluestem (*Bothriochloa laguroides* ssp. *torreyana*). This type typically occupies loam, clay loams, or sandy loams. Honey mesquite is often an important woody component. Dry sites to the west often contain short grasses such as tobosagrass, purple threeawn (*Aristida purpurea*), and buffalograss together with honey mesquite and succulents such as Engelmann pricklypear and Arkansas yucca (*Yucca arkansana*). Wetter sites to the east may contain midgrasses such as little bluestem, sideoats grama, Texas wintergrass, and tall grasses such as Indiangrass and big bluestem in well-watered areas.

High Plains: Mesquite Shrubland. Shrub-dominated occurrences with a scattered overstory component, if any. This type is mapped only in bottomlands or other lower landscape positions and is dominated by honey mesquite together with shrubs and small trees such as netleaf hackberry (*Celtis laevigata* var. *reticulata*), western soapberry (*Sapindus saponaria* var. *drummondii*), lotebush, redberry juniper (*Juniperus pinchotii*), and Chickasaw plum (*Prunus angustifolia*). A variety of herbaceous species may be important, including tobosagrass, prairie broomweed, rescuegrass (*Bromus catharticus*), Texas wintergrass, threeawns, *Tridens* spp., blue grama, and buffalograss. Some areas may be salty and include saltcedar (*Tamarix* spp.) as a woody component.

The High Plains: Floodplain Herbaceous Vegetation is often dominated by grasses such as King Ranch bluestem (*Bothriochloa ischaemum* var. *songarica*), bermudagrass (*Cynodon dactylon*), curly-mesquite, threeawns, buffalograss, and hairy grama in the modern landscape. Patches of tallgrass prairie or marsh may also be included.

The Urban High Intensity mapped type consists of built-up areas and wide transportation corridors that are dominated by impervious cover.

### **3.6.3 Waters of the U.S., Including Wetlands**

Waters of the U.S. (WOTUS) include, but are not limited to, territorial seas, lakes, rivers, streams, oceans, bays, ponds, and other special aquatic features, including wetlands. The USACE regulates waters of the U.S., including wetlands, under Section 404 of the CWA. The USACE and EPA jointly define wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include bogs, seeps, marshes, swamps, forested bottomland wetlands, and other similar areas (40 CFR 230.3[t]). Wetlands are defined in a broad sense as transitional areas (ecotones) between terrestrial and aquatic systems where the water table is usually at or near the ground surface, or where shallow water covers the land (Cowardin et al., 1979).

The USFWS NWI maps encompassing the Study Area indicate the presence of wetland and open-water habitat features within the Study Area. Features in the Study Area are classified as palustrine and riverine. Palustrine systems include vegetated, freshwater wetlands and small (less than 20 acres), nonvegetated freshwater wetlands that are both shallow (deepest point less than 6.6 feet at low water) and lack an active wave-formed or bedrock shoreline (Cowardin et al., 1979). Within the Study Area are mapped freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds. Riverine systems include all wetlands and deepwater habitats contained within a channel, except wetlands dominated by trees,

shrubs, persistent emergents, emergent mosses, or lichens, and habitats with water containing ocean-derived salts exceeding 0.5 percent (Cowardin et al., 1979).

Hydric and aquatic habitats may be considered wetlands regulated by the USACE. Construction activities resulting in the discharge of dredged or fill materials within waters of the U.S. are subject to the regulations and restrictions outlined in Section 404 of the CWA and may require coordination with the USACE to ensure compliance.

### **3.7 Fish and Wildlife**

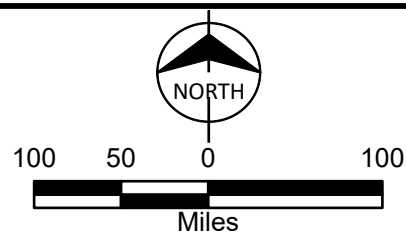
#### **3.7.1 Fish and Wildlife Habitats and Species**

Blair (1950) delineated seven biotic provinces within Texas. As shown on **Figure 3-3**, Jones County occurs within the Kansan Biotic Province. The Kansan Biotic Province in Texas extends south and east from the Oklahoma and New Mexico borders, eventually transitioning to the Chihuahuan, Balconian, and Texan Biotic Provinces. The Kansan Biotic Province includes three distinct biotic districts: the Mixedgrass Plains, Shortgrass Plains, and Mesquite Plains Districts. The Study Area lies within the Shortgrass Plains District. Within the Shortgrass Plains District, buffalograss is the principal vegetational constituent and is the most important plant association. Various species of grama grasses are also important to this area (Blair, 1950). Characteristic faunal species of the area are discussed below. The extensive agricultural development in the area has significantly reduced native grassland habitats. Wildlife species that occur include species that have historically occurred in the area, as well as others that are particularly adapted to this agricultural environment.

Permanent aquatic habitats within the Study Area are minimal and include Redmud Creek, unnamed streams, wetlands, and ponds. Aquatic vegetation is limited by the ephemeral nature of many of these features.

#### **3.7.2 Fish**

Fish species are likely constrained in the Study Area due to the limited number of permanent waterbodies. Species that may occur in streams or ponds in the region include the American gizzard shad (*Dorosoma cepedianum*), common carp (*Cyprinus carpio*), black bullhead (*Ameiurus melas*), green sunfish (*Lepomis cyanellus*), orangespotted sunfish (*Lepomis humilis*), bluegill (*Lepomis macrochirus*), white crappie (*Pomoxis annularis*), channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictis olivaris*), and largemouth bass (*Micropterus salmoides*) (Thomas et al., 2007).



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Figure 3-3  
Location of Jones County  
in Relation to the  
Biotic Provinces of Texas  
Phantom Hill to Tiger Solar  
345-kV Transmission Line Project

### 3.7.3 Amphibians and Reptiles

A representative list of amphibian and reptile species of potential occurrence in the Study Area is included as **Table 3-1**.

**Table 3-1: Representative List of Reptile and Amphibian Species of Potential Occurrence<sup>a</sup> in the Study Area**

Common Name <sup>b</sup>	Scientific Name <sup>b</sup>
<b>Frogs and Toads</b>	
American bullfrog	<i>Lithobates catesbeianus</i>
Blanchard's cricket frog	<i>Acris blanchardi</i>
Couch's spadefoot	<i>Scaphiopus couchii</i>
Plains leopard frog	<i>Lithobates blairi</i>
Texas toad	<i>Anaxyrus speciosus</i>
<b>Lizards</b>	
Eastern collared lizard	<i>Crotaphytus collaris</i>
Prairie lizard	<i>Sceloporus consobrinus</i>
Prairie racerunner	<i>Aspidoscelis sexlineata viridis</i>
Short-lined skink	<i>Plestiodon tetragrammus brevilineatus</i>
Texas greater earless lizard	<i>Cophosaurus texanus texanus</i>
Texas horned lizard	<i>Phrynosoma cornutum</i>
Texas spiny lizard	<i>Sceloporus olivaceus</i>
<b>Snakes</b>	
Bullsnake	<i>Pituophis catenifer sayi</i>
Checkered gartersnake	<i>Thamnophis marcianus</i>
Chihuahuan nightsnake	<i>Hypsiglena jani</i>
Desert kingsnake	<i>Lampropeltis splendida</i>
Diamond-backed watersnake	<i>Nerodia rhombifer</i>
Eastern yellow-bellied racer	<i>Coluber constrictor flaviventris</i>
Great Plains ratsnake	<i>Pantherophis emoryi</i>
Kansas glossy snake	<i>Arizona elegans elegans</i>
Long-nosed snake	<i>Rhinocheilus lecontei</i>
Plain-bellied watersnake	<i>Nerodia erythrogaster</i>
Plains black-headed snake	<i>Tantilla nigriceps</i>
Prairie rattlesnake	<i>Crotalus viridis</i>
Variable groundsnake	<i>Sonora semiannulata semiannulata</i>
Western coachwhip	<i>Coluber flagellum testaceus</i>
Western diamond-backed rattlesnake	<i>Crotalus atrox</i>

Texas threadsnake	<i>Rena dulcis</i>
<b>Turtles</b>	
Plains box turtle	<i>Terrapene ornata ornata</i>
Red-eared slider	<i>Trachemys scripta elegans</i>
Yellow mud turtle	<i>Kinosternon flavescens</i>

(a) According to Werler and Dixon (2000) and Dixon (2013)

(b) Nomenclature follows Crother et al. (2017)

### 3.7.4 Birds

Avian species of potential occurrence in the Study Area include many year-round residents, migrants/summer residents, and migrants/winter residents. A representative list of bird species of potential occurrence in the Study Area is included as **Table 3-2**.

**Table 3-2: Representative List of Avian Species of Potential Occurrence<sup>a</sup> in the Study Area**

Common Name	Scientific Name <sup>b</sup>	Likely Seasonal Occurrence <sup>a, c</sup>
American avocet	<i>Recurvirostra americana</i>	M
American coot	<i>Fulica americana</i>	R
American crow	<i>Corvus brachyrhynchos</i>	R
American goldfinch	<i>Spinus tristis</i>	M, WR
American robin	<i>Turdus migratorius</i>	M, WR
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	M, SR
Barn swallow	<i>Hirundo rustica</i>	M, SR
Black-chinned hummingbird	<i>Archilochus alexandri</i>	M, SR
Black-crested titmouse	<i>Baeolophus atricristatus</i>	R
Black-necked stilt	<i>Himantopus mexicanus</i>	M, SR
Blue jay	<i>Cyanocitta cristata</i>	R
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	M, WR
Brown-headed cowbird	<i>Molothrus ater</i>	R
Bufflehead	<i>Bucephala albeola</i>	M, WR
Bullock's oriole	<i>Icterus bullockii</i>	M, SR
Canada goose	<i>Branta canadensis</i>	M, WR
Cedar waxwing	<i>Bombycilla cedrorum</i>	M, WR
Common nighthawk	<i>Chordeiles minor</i>	M, SR
Cooper's hawk	<i>Accipiter cooperii</i>	M, WR
Curve-billed thrasher	<i>Toxostoma curvirostre</i>	R
European starling	<i>Sturnus vulgaris</i>	R
Franklin's gull	<i>Leucophaeus pipixcan</i>	M
Golden-fronted woodpecker	<i>Melanerpes aurifrons</i>	R

Great blue heron	<i>Ardea herodias</i>	R
Great horned owl	<i>Bubo virginianus</i>	R
Greater roadrunner	<i>Geococcyx californianus</i>	R
Great-tailed grackle	<i>Quiscalus mexicanus</i>	R
Green heron	<i>Butorides virescens</i>	M, SR
Green-winged teal	<i>Anas crecca</i>	M, WR
Horned lark	<i>Eremophila alpestris</i>	R
House finch	<i>Haemorhous mexicanus</i>	R
House sparrow	<i>Passer domesticus</i>	R
Killdeer	<i>Charadrius vociferus</i>	R
Ladder-backed woodpecker	<i>Dryobates scalaris</i>	R
Lark bunting	<i>Calamospiza melanocorys</i>	M, WR
Least sandpiper	<i>Calidris minutilla</i>	M, WR
Lesser yellowlegs	<i>Tringa flavipes</i>	M
Loggerhead shrike	<i>Lanius ludovicianus</i>	R
Mississippi kite	<i>Ictinia mississippiensis</i>	M, SR
Mourning dove	<i>Zenaida macroura</i>	R
Northern bobwhite	<i>Colinus virginianus</i>	R
Northern cardinal	<i>Cardinalis cardinalis</i>	R
Northern flicker	<i>Colaptes auratus</i>	M, WR
Northern harrier	<i>Circus cyaneus</i>	M, WR
Northern mockingbird	<i>Mimus polyglottos</i>	R
Northern pintail	<i>Anas acuta</i>	M, WR
Northern shoveler	<i>Anas clypeata</i>	M, WR
Painted bunting	<i>Passerina ciris</i>	M, SR
Pied-billed grebe	<i>Podilymbus podiceps</i>	M, WR
Red-tailed hawk	<i>Buteo jamaicensis</i>	R
Red-winged blackbird	<i>Agelaius phoeniceus</i>	R
Rock pigeon	<i>Columba livia</i>	R
Rock wren	<i>Salpinctes obsoletus</i>	R
Ruby-crowned kinglet	<i>Corthylio calendula</i>	M, WR
Rufous-crowned sparrow	<i>Aimophila ruficeps</i>	R
Sandhill crane	<i>Antigone canadensis</i>	M, WR
Savannah sparrow	<i>Passerculus sandwichensis</i>	M, WR
Scissor-tailed flycatcher	<i>Tyrannus forficatus</i>	M, SR
Short-eared owl	<i>Asio flammeus</i>	M, WR
Swainson's hawk	<i>Buteo swainsoni</i>	M, SR

Turkey vulture	<i>Cathartes aura</i>	M, SR
Upland sandpiper	<i>Bartramia longicauda</i>	M
Verdin	<i>Auriparus flaviceps</i>	R
Vesper sparrow	<i>Pooecetes gramineus</i>	M, WR
Western kingbird	<i>Tyrannus verticalis</i>	M, SR
Western meadowlark	<i>Sturnella neglecta</i>	R
White-eyed vireo	<i>Vireo griseus</i>	M, SR
White-winged dove	<i>Zenaida asiatica</i>	R
Wild turkey	<i>Meleagris gallopavo</i>	R
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	M, SR
Yellow-rumped warbler	<i>Setophaga coronata</i>	M, WR

(a) According to Lockwood and Freeman (2014)

(b) Nomenclature follows Chesser et al. (2024)

(c) R – Resident: Occurring regularly in the same general area throughout the year-implies breeding

SR – Summer Resident: Implies breeding but may include nonbreeders

WR – Winter Resident: Occurring during winter season

M – Migrant: Occurs as a transient passing through the area either in spring or fall or both

### 3.7.5 Mammals

A representative list of mammals that may occur in the Study Area is included as **Table 3-3**.

**Table 3-3: Representative List of Mammalian Species of Potential Occurrence<sup>a</sup> in the Study Area**

Common Name <sup>b</sup>	Scientific Name <sup>b</sup>
<b>Xenarthrans</b>	
Nine-banded armadillo	<i>Dasypus novemcinctus</i>
<b>Chiroptera</b>	
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>
Cave myotis	<i>Myotis velifer</i>
Eastern red bat	<i>Lasiurus borealis</i>
<b>Carnivores</b>	
American badger	<i>Taxidea taxus</i>
Bobcat	<i>Lynx rufus</i>
Common gray fox	<i>Urocyon cinereoargenteus</i>
Coyote	<i>Canis latrans</i>
Northern raccoon	<i>Procyon lotor</i>
Ringtail	<i>Bassariscus astutus</i>
Striped skunk	<i>Mephitis mephitis</i>
<b>Artiodactyls</b>	
White-tailed deer	<i>Odocoileus virginianus</i>
<b>Rodents</b>	
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>
Eastern fox squirrel	<i>Sciurus niger</i>

Fulvous harvest mouse	<i>Reithrodontomys fulvescens</i>
Hispid cotton rat	<i>Sigmodon hispidus</i>
Hispid pocket mouse	<i>Chaetodipus hispidus</i>
Merriam's pocket mouse	<i>Perognathus merriami</i>
North American deer mouse	<i>Peromyscus maniculatus</i>
Northern grasshopper mouse	<i>Onychomys leucogaster</i>
Northern pygmy mouse	<i>Baiomys taylori</i>
Ord's kangaroo rat	<i>Dipodomys ordii</i>
Plains pocket gopher	<i>Geomys bursarius</i>
Rio Grande ground squirrel	<i>Ictidomys parvidens</i>
Southern plains woodrat	<i>Neotoma micropus</i>
Texas deer mouse	<i>Peromyscus attwateri</i>
White-footed deer mouse	<i>Peromyscus leucopus</i>
White-toothed woodrat	<i>Neotoma leucodon</i>
<b>Lagomorphs</b>	
Black-tailed jackrabbit	<i>Lepus californicus</i>
Eastern cottontail	<i>Sylvilagus floridanus</i>

(a) According to Schmidly and Bradley (2016)

(b) Nomenclature follows Bradley et al. (2014)

### 3.8 Recreationally and Commercially Important Species

A species is considered important if one or more of the following criteria applies:

- The species is recreationally or commercially valuable
- The species is endangered or threatened
- The species affects the well-being of some important species within criterion (a) or (b)
- The species is critical to the structure and function of the ecological system
- The species is a biological indicator

Wildlife resources within the Study Area provide human benefits resulting from both consumptive and nonconsumptive uses. Nonconsumptive uses include observing and photographing wildlife, bird watching, and other similar activities. These uses, although difficult to quantify, deserve consideration in the evaluation of the wildlife resources of the Study Area. Consumptive uses, such as fishing, hunting, and trapping, are more easily quantifiable. Consumptive and nonconsumptive uses of wildlife are often enjoyed contemporaneously and are generally compatible. Many species occurring in the Study Area provide consumptive uses, and all provide the potential for nonconsumptive benefits.

The white-tailed deer (*Odocoileus virginianus*) is the most economically important big game mammal in Texas (Schmidly and Bradley, 2016); however, the mule deer (*Odocoileus hemionus*) is also desired in the region that contains the Study Area. The TPWD divides the State into ecological regions for deer

management. Jones County falls within the Rolling Plains Ecological Region, which is further divided into the Eastern Rolling Plains and the Western Rolling Plains for the white-tailed deer. During the 2023–2024 hunting season, an estimated 50,370 white-tailed deer were harvested in the Eastern Rolling Plains and 22,316 white-tailed deer were harvested in the Western Rolling Plains. In addition, 1,687 mule deer were harvested within the Rolling Plains Ecological Region (Purvis, 2024).

The Rolling Plains Ecological Regions also provide habitat for a variety of economically and recreationally important upland game birds, including the mourning dove (*Zenaida macroura*), white-winged dove (*Zenaida asiatica*), northern bobwhite (*Colinus virginianus*), scaled quail (*Callipepla squamata*), and wild turkey (*Meleagris gallopavo*). During the 2019–2020 hunting season, an estimated 631,423 mourning dove, 121,335 white-winged dove, 34,624 northern bobwhite, 2,514 scaled quail, and 5,807 wild turkeys were harvested within the Rolling Plains Ecological Region (Purvis, 2020).

### 3.9 Endangered and Threatened Species

An endangered species is one that is in danger of extinction throughout all or a significant portion of its natural range, while a threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. A species proposed for listing is one that USFWS has sufficient information to list as endangered or threatened, while a candidate species is one that is currently in the assessment process to determine if listing is appropriate using the listing factors in Section 4 of the ESA. However, proposed and candidate species are not provided protection under the ESA.

#### 3.9.1 Endangered and Threatened Plant Species

Available information from the USFWS (2025a), TPWD (2025c), and TPWD’s TXNDD (TPWD, 2025d) was reviewed to identify endangered or threatened plant species of potential occurrence within the Study Area. Currently, 36 plant species are listed by the USFWS as endangered or threatened species in Texas (USFWS, 2025b). No federal- or state-listed plants have been listed as potentially occurring in Jones County (USFWS, 2025a; TPWD, 2025c).

No sensitive plant communities have been specifically identified by either the USFWS or TPWD as occurring within the Study Area (USFWS, 2025a; TPWD, 2025d).

#### 3.9.2 Federally Listed Fish and Wildlife Species

The USFWS (2025a) and TPWD (2025c) county lists of endangered and threatened species indicate that nine federally listed endangered, threatened, or proposed for listing fish and wildlife species may occur in Jones County (**Table 3-4**). Protection under the ESA can also include protection of habitat designated as critical habitat for supporting a listed species. It should be noted that inclusion in this table does not

necessarily mean that a species is known to occur in the Study Area, but only acknowledges the potential for its occurrence, based on historic records, known ranges, and presence of potential habitat. Only those species that USFWS lists as endangered or threatened have federal protection under the ESA. Most avian species are protected under the MBTA, and bald and golden eagles are protected under the BGEPA.

**Table 3-4: Federally Listed Fish and Wildlife Species for Jones County<sup>a</sup>**

Common Name <sup>b</sup>	Scientific Name <sup>b</sup>	Status	Potential for Occurrence in the Study Area
		USFWS	
Birds			
Eastern black rail <sup>c</sup>	<i>Laterallus jamaicensis</i> ssp. <i>jamaicensis</i>	Threatened	Yes <sup>d</sup>
Piping plover <sup>c</sup>	<i>Charadrius melodus</i>	Threatened	Yes <sup>d</sup>
Red knot <sup>c</sup>	<i>Calidris canutus rufa</i>	Threatened	Yes <sup>d</sup>
Whooping crane	<i>Grus americana</i>	Endangered	Yes <sup>d</sup>
Fishes			
Sharpnose shiner <sup>f</sup>	<i>Notropis oxyrhynchus</i>	Endangered	No
Smalleye shiner <sup>f</sup>	<i>Notropis buccula</i>	Endangered	No
Insects			
Monarch butterfly	<i>Danaus plexippus</i>	Proposed Threatened	Yes
Mammals			
Tricolored bat <sup>c</sup>	<i>Perimyotis subflavus</i>	Proposed Endangered	Yes <sup>d</sup>
Mollusks			
Texas fawnsfoot <sup>c</sup>	<i>Truncilla macrodon</i>	Threatened	No

(a) According to USFWS (2025a) and TPWD (2025c, 2025d)

(b) Nomenclature follows Crother et al. (2017), Chesser et al. (2024), USFWS (2025a), and TPWD (2025c)

(c) Not listed by USFWS (2025a) as occurring in Jones County

(d) Only expected to occur as a migrant, transient, or rare vagrant within the Study Area

(e) Only needs to be considered for wind energy projects

(f) Only needs to be considered for reservoir, in channel, and commercial/industrial well field projects

The USFWS considers three of the taxa in **Table 3-4** as endangered, one as proposed endangered, four as threatened, and one as proposed threatened. They are the endangered whooping crane (*Grus americana*), sharpnose shiner (*Notropis oxyrhynchus*), and smalleye shiner (*Notropis buccula*); the proposed endangered tricolored bat (*Perimyotis subflavus*); the threatened eastern black rail (*Laterallus jamaicensis* ssp. *jamaicensis*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), and Texas fawnsfoot (*Truncilla macrodon*); and the proposed threatened monarch butterfly (*Danaus plexippus*).

### 3.9.2.1 Eastern Black Rail

The eastern black rail (*Laterallus jamaicensis jamaicensis*) is a subspecies of black rail that occurs in salt, brackish, and freshwater wetlands, tidally or nontidally influenced, in the eastern U.S. (east of the Rocky Mountains), Mexico, Brazil, Central America, and the Caribbean. It is the smallest rail in North America, with adults ranging from 10 to 15 centimeters (cm) in total length, with a wingspan of 22 to 28 cm (USFWS, 2019). In Texas, the eastern black rail is a rare migrant in the eastern third of the State, with migrants rarely being detected, and are rare to locally uncommon residents on the upper and central coasts (Lockwood and Freeman, 2014). This rail may traverse the Study Area during migration or as a vagrant; however, it is very unlikely that it regularly occurs within the Study Area due to a lack of suitable habitat.

### 3.9.2.2 Piping Plover

The piping plover is a small shorebird that inhabits sandy beaches and alkali flats (Cornell Lab of Ornithology, 2025). Approximately 35 percent of the known global population of the piping plover winters along the Texas Gulf Coast, where the plovers spend 60 to 70 percent of the year (Campbell, 2003). The piping plover population that winters in Texas breeds on the northern Great Plains and around the Great Lakes. The species is an uncommon to locally common winter resident along the coastal areas of Texas and can linger through the summer on very rare occasions. Piping plovers are not often observed during migration at inland locations, and most appear to pass east of the Balcones Escarpment (Lockwood and Freeman, 2014). No documented records of the piping plover exist from the Study Area (TPWD, 2025d; eBird, 2025), and it is extremely unlikely that this species would occur in the Study Area.

### 3.9.2.3 Red Knot

The red knot is a medium-sized, stocky, short-necked sandpiper with a rather short, straight bill. The *rufa* subspecies, one of three subspecies occurring in North America, has one of the longest migration distances known, travelling between its breeding grounds in the central Canadian Arctic to wintering areas that are primarily in South America (USFWS, 2011). During migration and winter in Texas, red knots may be found feeding in small groups, on sandy, shell-lined beaches, and to a lesser degree, on flats of bays and lagoons (Oberholser, 1974). It is an uncommon migrant along the coast, especially the Upper Texas coast, and very rare to casual inland, primarily in the eastern half of the State (Lockwood and Freeman, 2014). No documented records of the red knot exist from the Study Area (TPWD, 2025d; eBird, 2025), and it is extremely unlikely that this species would occur in the Study Area.

### 3.9.2.4 Whooping Crane

The whooping crane is North America's tallest wading bird. Only four wild populations of whooping crane exist. The only self-sustaining and largest wild population is the Aransas-Wood Buffalo population

(AWBP). The AWBP breeds in Wood Buffalo National Park in northern Canada and migrates annually to wintering grounds in the Aransas National Wildlife Refuge (NWR) and adjacent areas of the central Texas Coast in Aransas, Calhoun, and Refugio counties (USFWS, 1995, 2009a; Lewis, 1995; Canadian Wildlife Service and USFWS, 2007). Individuals have wintered a considerable distance from these three counties, including as far away as the Panhandle and south to Willacy County (Lockwood and Freeman, 2014). The three smaller wild populations include the nonmigratory Florida and Louisiana populations and one population that migrates between Wisconsin and Florida. These are not self-sustaining populations, and each is designated as an “experimental population, nonessential.”

During migration, whooping cranes travel during daylight hours and stop over at wetlands, fallow cropland, and pastures to roost and feed. Whooping cranes have an unpredictable pattern of stopover use and may not use the same stopover sites annually. They spend a short period of time at any one location ranging from overnight to several days during inclement weather. Federal and state efforts to record information on whooping cranes sighted in migration began in 1975 and have continued to the present day through the Cooperative Whooping Crane Tracking Project in the U.S. and Canada (USFWS, 2009a). The database incorporates records for the period of 1943 through 2009. Between the fall of 1965 and the fall of 2009, 140 confirmed sightings of migrating whooping cranes were recorded in Texas. None of these recorded occurrences are within the Study Area (USFWS, 2009b). Additionally, no confirmed sightings exist between the fall of 2009 and 2018 (Pearse et al., 2018). The Study Area lies just outside of the zone that encompasses 95 percent of known sightings, and it is unlikely that the species will occur within the Study Area other than a rare occasional stopover during migration.

### **3.9.2.5 Sharpnose Shiner**

The sharpnose shiner is a ray-finned fish belonging to the family Cyprinidae (carps and minnows), is straw-colored with silvery sides, and grows up to 3.74 inches in length (Thomas et al., 2007). The species historically occurred in the Brazos, Colorado, and Wichita River basins; however, it is currently restricted to the upper Brazos River basin in north-central Texas, which represents a greater than 70 percent range reduction. Sharpnose shiners are limited to the main channel and certain tributaries of the upper Brazos River basin where they are blocked from moving downstream by Possum Kingdom Lake. With only one isolated population remaining, this species is unable to disperse downstream and is in danger of extinction from only one adverse event, such as a lack of river flow for two consecutive years (USFWS, 2018, 2020). No documented records of the sharpnose shiner exist in the Study Area (TPWD, 2025d) and the species is not expected to occur in the Study Area due to its current restricted range and lack of suitable habitat.

### **3.9.2.6 Smalleye Shiner**

The smalleye shiner, a freshwater minnow, historically occurred along most of the Brazos River and parts of its major tributaries. It is currently restricted to the contiguous river segments of the upper Brazos River basin in north-central Texas, which represents a greater than 51 percent range reduction (USFWS, 2018, 2020). No documented records of the smalleye shiner exist in the Study Area (TPWD, 2025d) and the species is not expected to occur in the Study Area due to its currently restricted range and lack of suitable habitat.

### **3.9.2.7 Monarch Butterfly**

Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The bright coloring of a monarch serves as a warning to predators that eating them can be toxic. Texas is an important state in monarch migration because it is situated between the principal breeding grounds in the north and the overwintering areas in Mexico. Monarchs funnel through Texas both in the fall (September–November) and the spring (March). Early each March, overwintering monarchs begin arriving from their overwintering grounds in Mexico. Seeking emerging milkweeds (*Asclepias* spp.), they move through Texas laying eggs before dying. Their offspring continue heading north, leaving most of Texas behind, the first of several new generations of monarchs that re-populate the eastern half of the U.S. and southern Canada. Most adult butterflies live approximately 2 to 5 weeks; overwintering adults, however, enter into reproductive diapause (suspended reproduction) and live 6 to 9 months (USFWS 2025c; TPWD, 2025e). This species is likely to traverse the Study Area during migration; however, it is unlikely that the species regularly occurs within the Study Area outside its migration period.

### **3.9.2.8 Tricolored Bat**

The tricolored bat, one of the smallest bats in eastern North America, is a small insectivorous bat that is distinguished by its unique tricolored fur and often appears yellowish to nearly orange. The once-common species is wide ranging across the eastern and central U.S. and portions of southern Canada, Mexico, and Central America. It is found in 39 States, including Texas. During the winter, tricolored bats are often found in caves and abandoned mines, although in the southern U.S., where caves are sparse, tricolored bats are often found roosting in road-associated culverts and sometimes in tree cavities and abandoned water wells. During summer, the tricolored bat forages along forest edges and over ponds and waterways for small insects, and the sexes live separately; males are often solitary while females form small maternity colonies of 35 individuals or less in buildings, tree cavities, and rock crevices. Tricolored bats face extinction due primarily to the rangewide impacts of white-nose syndrome, a deadly disease

affecting cave-dwelling bats across the continent (USFWS, 2025d; TPWD, 2025f). TPWD (2025d) shows no documented records of the tricolored bat in the Study Area, and they would not be expected; however, they may occur as a migrant, transient, or vagrant in small numbers of appropriate habitat within the Study Area.

### 3.9.2.9 Texas Fawnsfoot

The Texas fawnsfoot, a small- to medium-sized (2.4 inches) freshwater mussel with an elongate oval shell, is endemic to central Texas. It occurs in the lower reaches of the Colorado and Brazos Rivers, and in the Trinity River in medium- to large-sized streams and rivers with flowing waters and mud, sand, and gravel substrates (USFWS, 2021). This species is now known from only seven populations, and only the lower Colorado, San Saba, and Brazos River populations are likely to be stable and recruiting (USFWS, 2015). The species would not be expected to occur in the Study Area due to the current species range lying outside of the Study Area.

### 3.9.3 Critical Habitat

The USFWS, in Section 3(5)(A) of the ESA, defines critical habitat as:

*“(i) the specific areas within the geographical area occupied by the species, at the time that it is listed in accordance with the ESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination by the Secretary of the Interior that such areas are essential for the conservation of the species.” (USFWS, 1973)*

No critical habitat has been designated in the Study Area for any species included under the ESA.

### 3.9.4 State-Listed Fish and Wildlife Species

State-listed species receive protection under State laws, such as Chapters 67, 68, and 88 of the TPWD Code, and sections 65.171–65.184 and 69.01–69.14 of Title 31 of the Texas Administrative Code. Four species are protected at the state level within Jones County (**Table 3-5**) (TPWD, 2025c).

**Table 3-5: State-Listed Fish and Wildlife Species for Jones County<sup>a</sup>**

Common Name <sup>b</sup>	Scientific Name <sup>b</sup>	Status	Potential for Occurrence in the Study Area
		TPWD	
Birds			
White-faced ibis	<i>Plegadis chihi</i>	Threatened	Yes <sup>c</sup>
Fishes			
Chub shiner	<i>Notropis potteri</i>	Threatened	No
Reptiles			
Brazos water snake	<i>Nerodia harteri</i>	Threatened	Yes
Texas horned lizard	<i>Phrynosoma cornutum</i>	Threatened	Yes

(a) According to USFWS (2025a) and TPWD (2025c, 2025d).

(b) Nomenclature follows Crother et al. (2017), Chesser et al. (2024), USFWS (2025a), and TPWD (2025c).

(c) Only expected to occur as a migrant, transient, or rare vagrant within the Study Area.

### 3.9.4.1 White-faced Ibis

The white-faced ibis is a medium-sized wading bird that inhabits freshwater marshes, sloughs, and irrigated rice fields, but also frequents brackish and saltwater habitats (Ryder and Manry, 1994). White-faced ibis are permanent residents along the Texas Gulf Coast with nesting records existing from areas away from the coast as far north as the Panhandle (Lockwood and Freeman, 2014). The species is a rare to uncommon migrant throughout the State and occasionally occurs as a post-breeding visitor north and west of its typical range. According to TPWD (2025d) and eBird (2025), no documented records of the white-faced ibis occur within the Study Area. White-faced ibis may occur in the Study Area as a rare vagrant; however, it is unlikely that this species would reside or nest within the Study Area and is unlikely that the species regularly occurs within the Study Area due to a lack of suitable habitat.

### 3.9.4.2 Chub Shiner

The chub shiner is a small freshwater fish found in flowing water with silt or sand substrates in large, turbid rivers and in smaller tributaries. They occur in the Brazos and Red River basins, as well as a portion of the San Jacinto River basin (Thomas et al., 2007). No documented records of the chub shiner exist from the Study Area (TPWD, 2025d), and the species would not be expected to occur within the Study Area due to the species current range lying outside of the Study Area.

### 3.9.4.3 Brazos Watersnake

The Brazos water snake, which averages 16 to 30 inches in length, is found only in a limited section of Central Texas. The principal habitat for the species is the riffle, a rock-filled section of shallow, fast-flowing water with a rocky or gravel substrate (Werler and Dixon, 2000). The species has been

documented within Jones County (Dixon, 2013), which is at the westernmost portion of its range (Werler and Dixon, 2000), and the species may occasionally occur within appropriate habitat in the Study Area.

### 3.9.4.4 Texas Horned Lizard

The Texas horned lizard occurs throughout the western half of the state in a variety of habitats but prefers arid and semi-arid environments in sandy loam or loamy sand soils that support patchy bunchgrasses, cacti, yucca, and various shrubs (Henke and Fair, 1998). While the species has almost vanished from the eastern half of the state over the past 30 years, it still maintains relatively stable numbers in west Texas. Although TPWD (2025d) shows no documented records for this species, iNaturalist (2025) shows a documented record within the Study Area, and the Texas horned lizard likely occurs in small numbers in suitable habitat within the Study Area.

## 3.10 Socioeconomics

This section presents a summary of economic and demographic characteristics for Jones County and provides a comparison with the socioeconomic environment of the State of Texas. Literature sources reviewed include publications of the Texas Demographic Center (TDC), the U.S. Census Bureau, and the U.S. Bureau of Labor Statistics (BLS).

### 3.10.1 Population Trends

As shown in **Table 3-6**, the population within Jones County increased by 3,173 (19 percent) between 1990 and 2020. By comparison, the state's population increased by over 12 million, or 72 percent, during the same period (U.S. Census Bureau, 2012, 2025a).

According to TDC population projections, Jones County's population is projected to decrease approximately 9 percent between 2020 and 2040. Comparatively, the TDC projects the population of Texas to grow by more than 7.6 million (approximately 26 percent) during the same period (TDC, 2025).

**Table 3-6: Population Trends and Projections for Jones County and the State of Texas**

Place	Population					
	1990	2000	2010	2020	2030	2040
<b>Jones County</b>	16,490	20,785	20,202	19,663	18,879	17,925
<b>Texas</b>	16,986,335	20,851,820	25,145,561	29,145,505	32,912,882	36,807,213

Source: U.S. Census Bureau (2012, 2025a); TDC (2025)

### 3.10.2 Employment

As shown in **Table 3-7**, below, Jones County’s labor force decreased by 2,086 (27 percent) between 2000 and 2020. By comparison, the state’s labor force increased approximately 5.3 million (61 percent) between 1990 and 2020 (BLS, 2025). Jones County’s unemployment rate was above statewide unemployment levels for several decades; however, it recorded a lower unemployment rate than the state’s in 2020 (BLS, 2025).

**Table 3-7: Labor Force and Unemployment for Jones County and the State of Texas**

Place		2000	2010	2020
<b>Jones County</b>				
	Labor Force	7,699	6,169	5,613
	Unemployment Rate (%)	5.2	8.8	7.1
<b>State of Texas</b>				
	Labor Force	10,388,337	12,260,100	13,870,874
	Unemployment Rate (%)	4.4	8.2	7.7

Source: BLS (2025)

### 3.10.3 Leading Economic Sectors

Employment data provided in this section were obtained from the U.S. Census American Community Survey (ACS) 5-Year Data Profile for civilian employed occupation industries between 2018 and 2023 and incorporates jobs that are located within Jones County and Texas. A comparison of industry sector data over the 5-year period is discussed below. As shown in **Table 3-8**, total employment increased in Jones County and in Texas from 2018 to 2023. The leading industry sector over the 5-year period for Jones County and Texas was Educational Services, and Health Care and Social Assistance sector, with the number of employees increasing for Jones County and the state.

Between 2018 and 2023 Jones County recorded the largest increases in employment within the Arts, Entertainment, and Recreation, and Accommodation and Food Services industry sector and the Construction industry sector. Overall, Texas recorded the largest increases in employment within the Transportation and Warehousing, and Utilities industry sector, and the Professional, Scientific, and Management, and Administrative and Waste Management Services industry sector between 2018 and 2023 (U.S. Census Bureau, 2025b).

**Table 3-8: Covered Employment and Major Employment Sectors 2018 and 2023 Jones County and the State of Texas**

Industry Sector	Employment			
	Jones County		State of Texas	
	2018	2023	2018	2023
Agriculture, Forestry, Fishing and Hunting, and Mining	437	469	407,019	344,777
Construction	308	729	1,088,705	1,222,119
Manufacturing	184	397	1,116,997	1,205,356
Wholesale Trade	186	215	380,277	352,755
Retail Trade	463	791	1,483,375	1,568,595
Transportation and Warehousing, and Utilities	411	455	741,256	925,629
Information	44	100	229,841	226,893
Finance and Insurance, and Real Estate and Rental and Leasing	323	571	862,041	986,535
Professional, Scientific, and Management, and Administrative and Waste Management Services	247	338	1,480,493	1,774,719

Educational Services, and Health Care and Social Assistance	1,397	1,511	2,805,186	3,055,393
Arts, Entertainment, and Recreation, and Accommodation and Food Services	151	369	1,192,224	1,200,410
Other Services, Except Public Administration	297	216	673,193	695,175
Public Administration	429	456	525,017	582,392
<b>Total Employment</b>	<b>4,877</b>	<b>6,617</b>	<b>12,985,624</b>	<b>14,140,748</b>

Source: U.S. Census Bureau (2025b)

### 3.10.4 Community Values

The term “community values” is included as a factor for consideration of transmission line certification under PURA § 37.056(c)(4). Although the term is not formally defined in the statute or PUC rules, the PUC and PUC Staff have recognized a working definition as “a shared appreciation of an area or other natural resource by a national, regional, or local community” in several CCN proceedings.

Burns & McDonnell evaluated the proposed Project for community resources that may be important to a particular community, such as parks or recreational areas, historical and archeological sites, or scenic vistas within the Study Area. Additionally, Burns & McDonnell mailed consultation letters to federal, state, and local officials (see **Section 5.1** and **Appendix A**), and participated in a public open-house meeting with Lone Star near the Study Area (See **Section 5.2** and **Appendix B**) to identify and collect information regarding community values and community resources, among other things. Input received was used in the evaluation of the proposed Project. Community values and community resources are discussed in the following sections.

## **3.11 Human Resources**

### **3.11.1 Land Use**

The Study Area is located in north-central Jones County and lies on the north side of the city of Anson and approximately 8.3 miles southwest of the city of Stamford. A small portion of the city of Anson extends into the south-central portion of the Study Area; however, no additional incorporated cities or unincorporated communities are located within the Study Area. One school district, Anson Independent School District (ISD) serves the Study Area (Texas Education Agency [TEA], 2025). However, no school district properties, campuses, or facilities are located within the Study Area.

The Study Area is in State Planning Region Number 7, represented by the West Central Texas Council of Governments (WCTCOG). Region 7 is approximately 18,000 square miles and serves 19 counties, with an estimated population of about 333,000 people (Texas Association of Regional Councils [TARC], 2025). The purpose of WCTCOG is to encourage and assist local units of governments to join and cooperate with one another to improve the health, safety, and general welfare of their citizens and to plan for the future development of the area embraced by the communities within the area; to assist member units in solving current problems and completing capital improvements; and to establish regional coordination and communication to help eliminate monetary waste from duplication and misapplication (WCTCOG, 2025).

The USDA's National Agricultural Statistics Service (NASS) Cropland Collaborative Research Outcomes System (CROS) geospatial data was referenced to quantify land cover within the Study Area. According to NASS, approximately 71 percent of the Study Area is classified as cropland, 24 percent of the Study Area is classified as rangeland, 4 percent is classified as developed, and less than 1 percent is classified as forested (USDA, 2023). However, much of the cropland and rangeland within the Study Area is being converted to solar facilities.

Residential development within the Study Area generally consists of isolated single-family residences and farmsteads. Smaller residential lots are concentrated along US 83 and US 277 in the southeast corner of the Study Area. A large-scale, commercial photovoltaic generation resource, known as Anson Solar 1, occupies most of the southwestern portion of the Study area.

### **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 varies as to the individual property owner's allowances for additional developments on the land. Land trusts facilitate the easement and ensure compliance with the specified terms and conditions.

A review of websites and databases and correspondence with several nongovernmental organizations (*e.g.*, The Nature Conservancy [TNC], Texas Land Conservancy [TLC] and the National Conservation Easement Database [NCED]) identified no conservation easements within the Study Area (TNC, 2025; TLC 2025; NCED 2025).

### **3.11.2 Recreation**

A review of federal, state, and local maps; an internet search; and field reconnaissance identified no federal, state, county, or municipal park, forest/grassland, wildlife refuge, wildlife management area, or preserve within the Study Area (TPWD, 2025h, 2025i; National Park Service [NPS], 2025; USFWS, 2025e; USGS Protected Areas Database [USGS, 2025]). Furthermore, no TxDOT Rest Area is located within the Study Area (TxDOT, 2025a).

Recreational activities such as hunting and fishing may occur on private properties within the Study Area, but these properties are not open to the public. TPWD offers Annual Public Hunting and Limited Public Use permits to hunt on over a million acres of land in the state, including not only publicly owned land in state parks and wildlife management areas, but in approximately 120 game areas leased from private landowners. A search of TPWD's database of these lands revealed that none of these publicly accessible private lands for hunting are located within the Study Area (TPWD, 2025j).

The TPWD created the Great Texas Wildlife Trails to highlight the best driving trails to observe wildlife throughout the nine regions of the state. The Study Area is located within part of the Panhandle Plains Wildlife Trail; however, no designated wildlife loops or sites occur within the Study Area (TPWD, 2025k).

### **3.11.3 Agriculture**

Agriculture continues to be a significant land use, and an important economic contributor in Jones County. According to the USDA 2022 Census of Agriculture, the total market value of agricultural products sold in Jones County was \$73,772,000 (\$57,423,000 livestock, poultry, and products and \$16,349,000 crops), which is a 78 percent increase from the county's 2017 total market value. For comparison, the total market value of agricultural products sold within Texas increased 29 percent, from approximately \$24.9 billion to \$32.1 billion, during the same period (USDA, 2022).

The number of farms in Jones County increased from 915 in 2017 to 988 in 2022, an increase of 8 percent, while the total land in farms within this county increased by 9 percent to 564,608 acres in 2022. For comparison, the number of farms statewide decreased by 7 percent between 2017 and 2022 and the amount of land in farms decreased just 1 percent (USDA, 2022).

According to USDA NASS geospatial data and interactive maps, approximately 71 percent (4,435 acres) of the Study Area is classified as cropland and approximately 14 percent (8,539 acres) as rangeland; however, these data may be no longer accurate as portions of the Study Area have been developed into the aforementioned Anson Solar I photovoltaic generation resource. Leading crop items within the Study Area include winter wheat (2,119 acres) and cotton (1,851 acres) (USDA, 2023).

### **3.11.4 Transportation and Aviation**

The major transportation corridors within the Study Area are:

- US 277, which runs northeast/southwest in the southeastern portion of the Study Area
- US 83 runs northwest/southeast in the southwestern portion of the Study Area

The transportation grid within the Study Area also includes a network of county and private roads. Review of TxDOT's "Project Tracker," an online database of TxDOT's active and proposed highway projects, identified that a major transportation project will occur on the entire portion of US 277 within the Study Area (TxDOT, 2025a). Safety improvement projects were started in 2023 and have an estimated completion date of May 2025.

The Federal Railroad Administration (FRA) did not identify any active railroads within the Study Area (FRA, 2025). An abandoned rail corridor, formerly the Fort Worth and Denver Railway, which was active until 1982, extends from the City of Anson north, paralleling US 277 in the eastern portion before exiting the Study Area.

A review of the Chart Supplement South Central U.S. (formerly known as the Airport/Facility directory) (FAA, 2025a), the Dallas-Fort Worth Sectional Aeronautical Chart (FAA, 2025b), the TxDOT Airport Directory (TxDOT, 2025b), AirNav (2025), recent aerial photography, USGS maps, field reconnaissance, and other internet sources identified no FAA-registered airports, private airports, or heliports within the Study Area.

### 3.11.5 Utilities

Utility features reviewed include existing electrical transmission lines, distribution lines, pipelines, water wells, oil/gas wells, and 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. Electric facilities within the Study Area include two existing electric transmission lines, one belonging to Lone Star (Scurry to West Shackleford 345-kV) that bisects the southcentral portion of the Study Area from west to east and one unknown transmission line that enters the southeastern corner of the Study Area and crosses the Lone Star transmission line before paralleling US 277 and exiting the eastern portion of the Study Area. According to the RRC, 10 active oil wells, but no mapped pipelines occur in the Study Area (RRC, 2025). During the field reconnaissance in March 2025, however, an Atmos gas pipeline was encountered. It was on the west side of CR 195 and crossed over US 277 in the southeast corner of the Study Area. Additionally, multiple solar arrays and supportive facilities associated with the 282.5 gigawatt-hour (GWh) Anson Solar I are located throughout the southwestern portion of the Study Area (GridInfo, 2025).

### 3.11.5 Communication Towers

A search of the Federal Communications Commission (FCC) website, online cell tower search engines, and field reconnaissance identified one communication tower within the Study Area. A communication tower owned by Lubbock SMSA Limited Partnership, is located at the intersection of US 277 and CR 195. No AM, FM, or TV towers are located within the Study Area (Antenna Search, 2025; FCC, 2025; Homeland Infrastructure Foundation-Level Data [HIFLD], 2025).

### 3.11.6 Aesthetic Values

Aesthetics is included as a factor for consideration in the evaluation of transmission facilities in PURA § 37.056(c)(4). The term aesthetics refers to the subjective perception of natural beauty in the landscape, and this section of the document attempts to define and measure the Study Area's scenic qualities. Consideration of the visual environment includes a determination of aesthetic values where the major potential effect of the Project on the resource is considered aesthetic, or where the location of a transmission line could affect the scenic enjoyment of a recreation area.

Burns & McDonnell's aesthetic evaluation considered potential visual impacts on the public. Areas visible from major roads and highways, or publicly owned or accessible lands (*e.g.*, parks or privately owned recreation areas open to the public) were analyzed. Several factors are taken into consideration when attempting to define the potential impact on a scenic resource that would result from the construction of the proposed transmission line. Among these are:

- Topographical variation (*e.g.*, hills, valleys)
- Prominence of water in the landscape
- Vegetation variety (*e.g.*, forests, pasture)
- Diversity of scenic elements
- Degree of human development or alteration
- Overall uniqueness of the scenic environment compared to the larger region.

The THC operates the Texas Heritage Trails Program, a statewide heritage tourism program based on 10 scenic driving trails originally created by TxDOT. This program operates throughout 10 regions of Texas and enables people to learn about, and be surrounded by, local customs, traditions, history, and culture of the different regions. The Study Area is located in the Texas Forts Trail region; however, no places of interest or recommended roads are located within the Study Area (THC, 2025a).

In 1998, TxDOT published a list of some of the best “Scenic Overlooks and Rest Areas” in Texas, each of which presented particularly strong aesthetic views or settings (TxDOT, 1998). A review of this list found that none of the highlighted scenic overlooks or rest areas is located within the Study Area. No other outstanding aesthetic resources, designated scenic views, or unique visual elements were identified from the literature review or from ground reconnaissance of the Study Area.

Based on these criteria, the Study Area exhibits a moderate degree of aesthetic quality for the region. The majority of the Study Area is in agricultural use, with most being cropland; however, the Study Area contains a significant amount of pastureland/rangeland. In addition, a large portion of the southwestern Study Area contains the existing Anson Solar I facilities, and current and remnant oil and gas infrastructure, existing electric transmission facilities, and road transportation corridors also occur within the Study Area.

### 3.12 Cultural Resources

As shown on **Figure 3-4**, Jones County is located in the Texas Plains Planning Region as delineated by the THC (Mercado-Allinger et al., 1996). Human occupation of the Texas Plains is divided chronologically into five cultural periods that span over 11,500 years—Paleoindian, Archaic, Ceramic, Protohistoric, and Historic (Perttula, 2004; Johnson and Holliday, 2004). These divisions are marked by shifts in subsistence strategies and technological innovations visible in the archeological record and through documented oral and written histories. The following sections present an overview of the region's cultural history and the associated archeological and historic resources that could potentially be located within the Study Area.

#### 3.12.1 Paleoindian

Archeological evidence suggests that people first lived within the Texas Plains around 12,000 years ago. This occupational phase is referred to as the Paleoindian period and extends from the end of the Pleistocene Epoch until the early Holocene. The phase can be subdivided further into Clovis (11,500 to 11,000 B.C.), Folsom (10,800 to 10,300 B.C.), and Late Paleoindian cultures, including Plainview (ca. 10,000 B.C.) and Firstview (ca. 8,600 B.C.) (Johnson and Holliday, 2004).

For decades, scholars commonly believed Paleoindian peoples traveled in highly mobile hunting and gathering bands, living a nomadic lifestyle, and exploiting, by choice, a limited number of resources. However, more recent archeological research at the Aubrey and Lubbock Lake sites outside of Dallas and Lubbock, respectively, has revealed evidence of a more diversified subsistence base that included small and medium mammals in addition to the more traditional large mammals and megafauna. The Folsom culture is well represented at Lubbock Lake, and archeological investigations focusing on this period have provided evidence of increased reliance on extinct species of bison for subsistence, as well as shifting lithic technologies (Carlson, 2005).

Following the decline of the Folsom cultural phase, around 10,300 B.C., archeologists have identified a series of varied cultural groups distinguished according to a wide range of projectile point styles. Common Late Paleoindian points include Plainview and Firstview, but other points, some of which have contracting stems, were also developed. It appears that people relied upon a diverse diet including plants and small game as well as the continued exploitation of bison. Evidence of this subsistence strategy has been documented at the Lake Theo site in Briscoe County and at Lubbock Lake (Harrison and Killen, 1978; Johnson and Holliday, 2004).

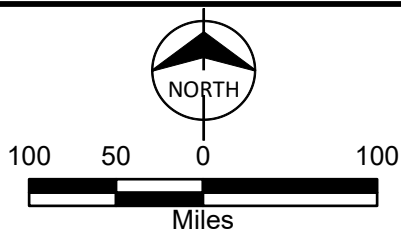
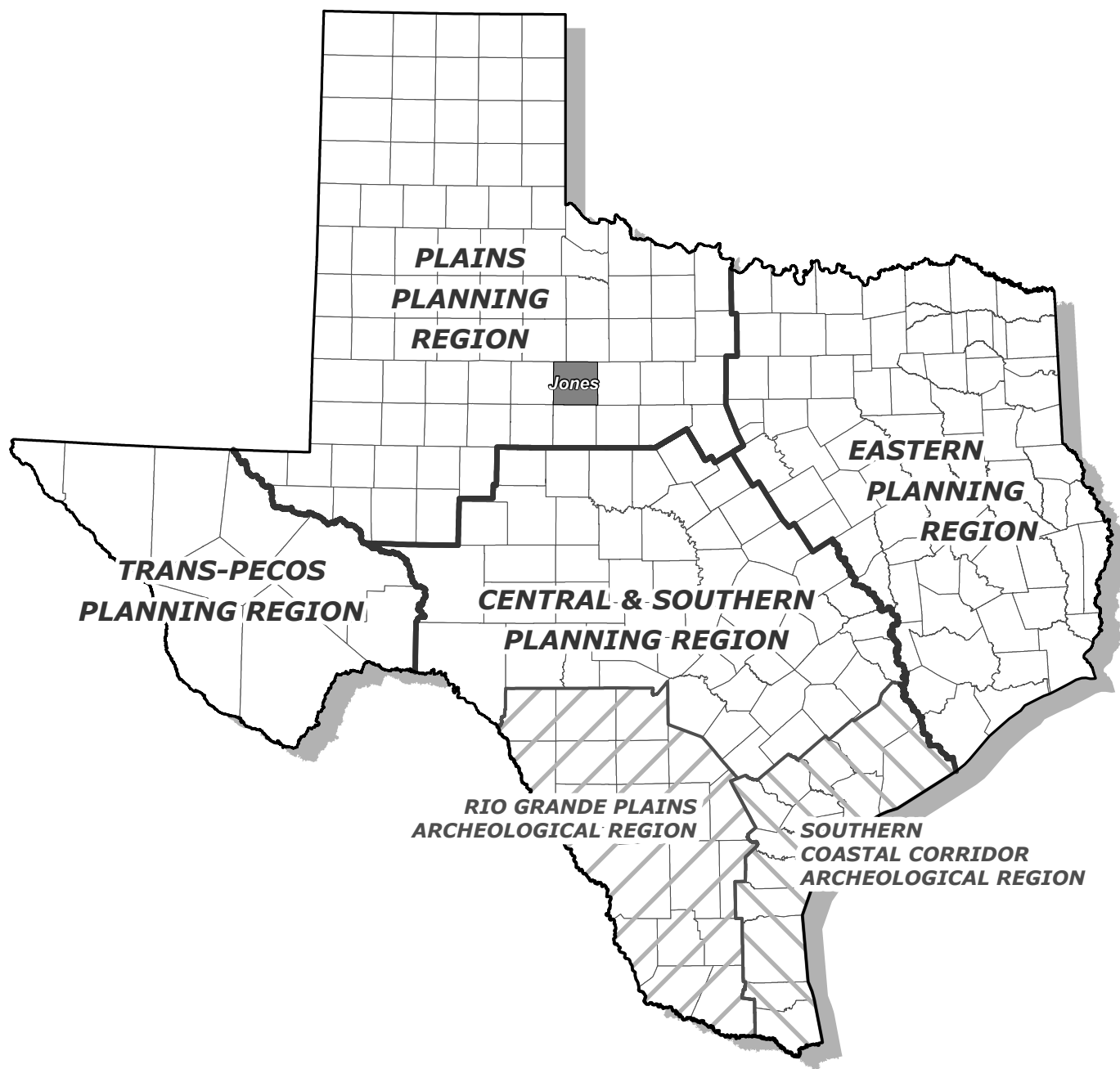


Figure 3-4  
 Location of Jones County  
 in Relation to the Cultural Resources  
 Planning Regions of Texas  
 Phantom Hill to Tiger Solar  
 345-kV Transmission Line Project

### 3.12.2 Archaic

The start of the Archaic period (8000 to 2000 B.C.) coincides roughly with the start of the Hypsithermal climatic episode that resulted in an overall warmer and drier climate (Hofman, 1989; Kay, 1998).

Consequently, a sudden extinction of megafauna populations forced peoples to exploit faunal resources in bottomland and forested areas (Johnson and Holliday, 2004). Changes in overall subsistence practices during the Archaic period appear to have led to accompanying technological shifts. Stemmed (expanding and contracting) and notched (corner and basal) projectile points began to be used, and hafting technologies changed. The lithic toolkit was also expanded to include groundstone tools for the first time, such as manos, metates, and pestles.

During the Middle and Late Archaic period, a further expansion of the lithic toolkit appears to have occurred. Varieties of stemmed, corner-notched, and shallow side-notched projectile points became increasingly popular during this period, as did scrapers, perforators, drills, knives, grooved axes, bannerstones, and plummets. Archaic culture relied heavily upon bison as an important food source, along with other smaller game. An increase in groundstone tool use, including manos and pestles, also occurred, a phenomenon that is believed to reflect further inclusion of seeds and nuts in people's diets (Blackmar and Hofman, 2006).

### 3.12.3 Ceramic

The Early Ceramic period (2000 to 1000 B.C.) appears to have been a transitional time for peoples living in the Texas Plains. Several new innovations, including pottery and the bow and arrow, were introduced. Additionally, limited evidence of horticulture and the presence of storage features suggest people continued a foraging lifestyle while moving toward a more sedentary existence (Johnson and Holliday, 2004). Typical cultural markers for this period include thick, conoidal-shaped ceramic vessels and corner- and basally notched arrow points.

Diagnostic artifacts of the Early Ceramic include corner-notched and stemmed arrow points and brownware ceramics (Boyd, 2004). Excavations at the Kent and Sam Wahl sites in the panhandle suggest a continued foraging lifestyle with seasonal habitation sites and hunting and plant-processing campsites. Excavated features include burials, hearths, pits, burned-rock features, and rectangular to oval pit houses.

During the Middle Ceramic period of the Texas Plains, people appear to have been primarily semi-sedentary horticulturists with semi-permanent to permanent residences. Artifact assemblages from this period include cord-marked pottery, diamond-shaped beveled knives, triangular projectile points, distal end scrapers, drills, bison-bone digging sticks, and scapula hoes for practicing agriculture. It was during

this period that the first widespread permanent villages appear to have been established, typically on ridges and terraces near perennial streams and arable land (Brosowske, 2005). Subsistence strategies included the harvesting of cultigens such as corn, squash, and beans, as well as hunting game and collecting edible wild plants. Bison continued to play a major role in people's diets (Brooks, 2004).

### **3.12.4 Protohistoric**

In general, scholars believe Apachean groups dominated the Texas Plains during the period of European contact, particularly the Lipan Apache, with later incursions by the Comanche, Cheyenne, Arapaho, and Kiowa (Hofman 1989). Evidence from archeological excavations suggests people were primarily nomadic bison hunters with some sedentary camp settlements and limited horticulture. The Tierra Blanca site in Deaf Smith County contains some of the best evidence for protohistoric life on the Texas Plains. Features include tipi rings, stone foundations, open hearths, and semi-subterranean, slab-lined circular structures (Hofman, 1989).

The Comanche moved into the Texas Plains region during the 18<sup>th</sup> century. Originally from the Great Basin region to the northwest, family bands and groups migrated south following the cultural incorporation of the European horse, which drastically changed the Comanche social, economic, and political structure (Wallace and Hoebel, 1952). The Comanche were highly mobile, followed the seasons, and came together to hunt bison. While groups of Lipan Apache, Kiowa, Cheyenne, Arapaho, and other surviving indigenous cultures continued to occupy the region during the 18<sup>th</sup> and 19<sup>th</sup> centuries, the Comanche dominated the Texas Plains during the Protohistoric period (Hofman, 1989).

### **3.12.5 Historic**

Non-indigenous occupation of what is now Jones County began in 1851 with the establishment of Fort Phantom Hill near the present town of Hawley (Odintz, 2020). This fort served as part of a line of frontier military outposts from the Red River to the Rio Grande. It was abandoned, however, in 1854, and later became a station for the Butterfield Overland Mail in 1858.

The frontier retreated eastward during the Civil War due to Indian raids, although in 1872 the military post was reestablished, and Ranald Mackenzie led federal troops to push back west (Odintz, 2020). This paved the way for cattle ranchers, with important ranches established in 1873. These ranches included that of Creed, John, and Emmett Roberts, and that of Mode and J.G. Johnson. The late 1870s also saw the arrival of farmers, who cultivated 1,191 acres by 1880.

In 1881, Jones County was organized, with a county seat called Jones City established at a site where John Merchant had built a mesquite corral the year before (Odintz, 2020). The county was named for

Anson Jones, the final President of the Republic of Texas, who had opposed annexation into the U.S. (Gambrell, 2022). Jones City was then renamed Anson in 1882 (Odintz, 2020).

From the 1880s through the 1930s, agriculture and population continued to increase in Jones County (Odintz, 2020). A population of 546 in 1880 had risen to 24,233 in 1930. This dramatic rise was enabled by the arrival of railroads in Jones County, including the Texas Central Railroad in 1900, the Wichita Valley Railroad in 1907, and the Abilene and Southern in 1911. Meanwhile, cotton became the county's primary crop, making up two-thirds of the land in cultivation in Jones County by 1930. As cotton grew in importance, however, the number of tenant farmers in Jones County increased. Whereas only 21 percent of Jones County farmers rented their land in 1890, by 1930 the percentage of farmers in tenant farming reached its peak of 68 percent.

The rest of the 20<sup>th</sup> century saw more diversification in the economy of Jones County, with oil production and manufacturing entering the fold (Odintz, 2020). Oil was discovered by the Phillips Petroleum Company at the Noodle Creek oilfield southwest of Anson in 1926 (Odintz, 2020; Ricci, 2023). Petroleum production helped Jones County weather the Great Depression and multiple productive fields emerged in the following decades, but no oil boom ever occurred in the county. Manufacturing took a larger part in the county's economy in the 1970s, and in the following decades included production of gypsum products (Odintz, 2020).

The vast majority of Jones County's land continued to remain in agriculture throughout the 20<sup>th</sup> century, however (Odintz, 2020). Starting in the 1940s, cultivation shifted from a focus on cotton to an increased reliance on crops such as sorghum, wheat, hay, and oats. Ranching continued in importance as well, focused on cattle, sheep, and hogs.

### **3.12.6 Literature and Records Review**

Burns & McDonnell conducted a review of the THC Texas Archeological Sites Atlas (Atlas) to identify previously conducted cultural resources investigations and previously recorded archeological sites and other designated historic resources, including NRHP-listed properties and districts, State Antiquities Landmarks (SALs), historic-age cemeteries, and Official Texas Historical Markers (OTHTMs), including Recorded Texas Historic Landmarks (RTHLs), within the Study Area.

One previous cultural resources investigation is reported within the Study Area in the Atlas (THC, 2025b). Survey #8500023658 was conducted in 2012 by Horizon Environmental Services on behalf of Lone Star Transmission for a transmission line paralleling the north side of FM 186 across the Study

Area. Additional surveys have been conducted in support of the Anson Solar I project, but the limits of those surveys are not depicted in the Atlas.

Nineteen archeological sites are reported within the Study Area in the Atlas (**Table 3-9**) (THC, 2025b). One site (41JS169) is a prehistoric lithic scatter, while the remaining 18 sites are of historic age. All the sites have unknown NRHP eligibility, except 41JS120, which was determined ineligible within the ROW in which it was recorded (THC, 2025b).

**Table 3-9: Previously Recorded Archeological Sites within the Study Area**

Site Number	Time Period of Occupation	Site Type	NRHP Eligibility
41JS120	Historic	No data	Ineligible within ROW (2011)
41JS137	Historic	Farmstead	Unevaluated
41JS138	Historic	Farmstead	Unevaluated
41JS139	Historic	Farmstead	Unevaluated
41JS140	Historic	Farmstead	Unevaluated
41JS141	Historic	Farmstead	Unevaluated
41JS142	Historic	Farmstead	Unevaluated
41JS146	Historic	Farmstead	Unevaluated
41JS147	Historic	Farmstead	Unevaluated
41JS149	Historic	Farmstead	Unevaluated
41JS150	Historic	Farmstead	Unevaluated
41JS151	Historic	Farmstead	Unevaluated
41JS153	Historic	Farmstead	Unevaluated
41JS154	Historic	Farmstead	Unevaluated
41JS155	Historic	Farmstead	Unevaluated
41JS156	Historic; Modern (1901- present)	Farmstead	Unevaluated
41JS169	Prehistoric; Unknown	Lithic Scatter	Unevaluated
41JS170	Historic	Farmstead	Unevaluated
41JS171	Historic	Farmstead	Unevaluated

Source: THC (2025b)

No NRHP-listed properties and districts, SALs, historic-age cemeteries, and OTHMs, or RTHLs were identified within the Study Area.

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## **4.0 ENVIRONMENTAL IMPACTS OF THE PROJECT**

The potential and anticipated impacts on natural, human, and cultural resources resulting from the proposed Project are discussed below by subject matter. Measurements of the environmental criteria were primarily taken from recent aerial photography and from available digital resource layers using geographic information system (GIS).

### **4.1 Impact on Natural Resources**

#### **4.1.1 Impact on Physiography and Geology**

Construction of the proposed transmission line will have no significant effect on the physiographic or geologic features and resources of the area. Erection of the structures would require the removal and minor disturbance of small amounts of near-surface materials but would have no measurable impact on the geologic resources or features along the Consensus Route. The Project will have no significant impact on mineral resources in the Study Area.

#### **4.1.2 Impact on Soils**

The construction and operation of transmission lines normally create very few long-term adverse impacts on soils. Transmission lines are not normally considered to cause a conversion of farmland because the site can still be cultivated after construction. The major potential impact upon soils from any transmission line construction would be erosion and soil compaction. The potential for soil erosion is generally greatest during the initial clearing of the ROW; however, erosion control measures during the clearing and construction process will be employed. Where existing land cover includes woody vegetation within the ROW, much of this vegetation will be cut, mulched, and spread within the ROW or cut and piled adjacent to the ROW, in accordance with landowner preferences, to provide adequate space for construction activities and to minimize corridor maintenance and operational concerns. In these areas, only a small amount of herbaceous vegetation would remain, along with the mulched or piled woody vegetation, and would be disturbed by the necessary movement of heavy equipment.

Construction of the transmission line would require minimal amounts of clearing in areas that have already been cleared for crops, pastures, and existing road ROW. The most important factor in controlling soil erosion associated with construction activity is to revegetate areas that have potential erosion problems immediately following construction. Natural succession would revegetate most of the ROW but would be accelerated by seeding efforts following construction. Impacts from soil erosion caused by construction activity would be minimized due to the implementation of BMPs designed in the SWPPP.

Areas where construction activity has occurred will be stabilized and restored or revegetated in accordance with the SWPPP and the PUC final order.

Prime farmland soils, as defined by the NRCS, are soils that are best suited for producing food, feed, forage, or fiber crops. The USDA recognizes the importance and vulnerability of prime farmlands throughout the nation and encourages the wise use and conservation of these soils where possible. However, no cropland is crossed by the Consensus Route.

### **4.1.3 Impact on Water Resources**

#### **4.1.3.1 Surface Water**

Because all surface waters will be spanned and an SWPPP will be implemented during construction, no significant impacts on surface waters are anticipated along the Consensus Route. Potential impacts from any major construction project include short-term disturbances resulting from construction activities, which would result primarily from increased siltation from erosion and decreased water quality from accidental spillage of petroleum and other chemical products. Additionally, activities such as clearing of vegetation may temporarily increase local stormwater runoff volumes and sediment loading. Potential impacts would be avoided whenever possible by spanning surface waters, diverting construction traffic around water resources via existing roads, and eliminating unnecessary clearing of vegetation.

Although impacts would be avoided to the extent practicable, some unavoidable impacts could occur. Reducing vegetation removal around surface water features and minimizing ground disturbance would minimize these impacts. The use of erosion control measures, such as silt fencing and selective clearing, and BMPs regarding the use of chemicals, would also minimize potential impacts. As such, impacts occurring from construction of the proposed transmission line would be short term and minor because of the relatively small area that would be disturbed at any one time, the short duration of the construction activities, the preservation of vegetation adjacent to surface water features where practicable, and the implementation of BMPs designed in the SWPPP to control runoff from construction areas. Contractors will also make efforts during construction for proper control and handling of any petroleum or other chemical products.

The measurements of the various criteria used in the environmental analysis of the Consensus Route for this Project are tabulated in **Table 6-1** in **Section 6.0** of this report. The Consensus Route crosses six streams and parallels streams within 100 feet for approximately 245 feet of its length. Additionally, it crosses approximately 188 feet of open water (such as ponds). The water features would be spanned.

Generally, surface water resources are not an issue for transmission line construction, unless navigable river crossings or impacts on WOTUS, including wetlands, occur that would warrant USACE permitting, or areas that would require extensive woodland clearing near streams, which would present potential erosion control problems and warrant implementation of BMPs. Some areas requiring woodland clearing near streams occur along the Consensus Route; however, navigable river crossings and extensive contiguous wetland systems do not exist within the Study Area. The Project would likely be covered under NWP 57. Once the Project is approved, a survey may be conducted to determine if USACE permitting is warranted.

#### **4.1.3.2 Floodplains**

FEMA has conducted detailed floodplain analyses for Jones County; however, no mapped 100-year floodplains occur within the Study Area. The Project should have no significant impact on the function of floodplains, nor adversely affect adjacent property or downstream property.

#### **4.1.3.3 Groundwater**

No adverse impacts on groundwater are expected to occur from the construction and operation of the proposed transmission line. The amount of recharge area that would be disturbed by construction is minimal when compared to the total amount of recharge area available for the aquifer systems in the region. Additionally, if accidental spillage of fuel, lubricants, or other petroleum products occurred from normal operation of heavy equipment during construction activities, it would be unlikely to result in any groundwater contamination given that no major or minor aquifers occur in the Study Area. Any accidental spills would be promptly handled and cleaned up in accordance with state and federal regulations. Contractors will take necessary precautions to avoid and minimize the occurrence of such spills.

#### **4.1.4 Impact on the Ecosystem**

##### **4.1.4.1 Vegetation**

Impacts on vegetation resulting from the construction and operation of transmission lines are primarily associated with the removal of existing woody vegetation within the ROW and conversion to herbaceous vegetation. The amount of vegetation cleared from the transmission line ROW would be dependent upon the type of vegetation present and whether the ROW will be completely new or involve widening existing ROW. For example, the greatest amount of vegetation clearing generally occurs in wooded areas, whereas cropland and grassland usually require little to no removal of vegetation.

Cropland and pastureland/rangeland dominate the Study Area, and brushland accounts for the majority of clearing necessary for construction. The linear extent of plant communities crossed by the Consensus Route was determined using digital aerial imagery, and the length across potential wetlands was estimated by referencing USFWS NWI maps (**Table 6-1** in **Section 6.0**). Vegetation community types within the ROW along the Consensus Route were verified in the field where possible. Regarding woody vegetation communities, the Consensus Route crosses approximately 4,198 feet of upland woodland/brushland and 482 feet of bottomland/riparian woodland that would require removal.

Construction of the facility within the ROW would be performed to minimize adverse impacts on vegetation. Lone Star will minimize damage to local vegetation and retain native ground cover wherever practicable. Clearing will occur only where necessary to provide access and working space and to protect conductors. Where necessary, soil conservation practices will be undertaken to protect local vegetation and ensure successful revegetation for areas disturbed during construction.

The Consensus Route crosses six streams and according to USFWS NWI maps, it crosses approximately 225 feet of mapped areas that potentially support wetlands. Potential wetlands will be spanned by the transmission line and, therefore, no waters of the U.S. will be impacted. Precautions would be taken throughout the construction process to avoid and minimize impacts on wetlands. Placement of approved BMPs for construction and minimization of erosion in disturbed areas would help dissipate the flow of runoff. Placement of silt fences or hay-bale dikes near disturbed areas would also help prevent siltation.

#### **4.1.4.2 Aquatic Resources**

Impacts on aquatic ecosystems from transmission line construction are generally minor. Aquatic features along the Consensus Route, such as streams, can generally be spanned. The implementation of sedimentation controls during construction, as prescribed in the Project-specific SWPPP, will help to minimize erosion and sedimentation into streams. Potential impacts include physical habitat loss or modification, increased runoff, erosion and sedimentation, turbidity, and spillage of petroleum or other chemical products. All these impacts, however, tend to result in short-term effects, which will vary with the intensity and timing of the construction along the Consensus Route. Contractors will make efforts during construction for proper control and handling of any petroleum or other chemical products.

Physical habitat loss or modification could result whenever access road crossings intercept a drainage system, through sedimentation due to erosion, increased suspended solids loading, or accidental petroleum spills directly into a creek or other aquatic feature crossed by the Consensus Route. Erosion results in siltation and increased suspended solids entering streams or wetlands, which in turn may

negatively affect many aquatic organisms at many trophic levels. Since aquatic features of the area typically exhibit relatively high turbidities during and following runoff events, small increases in suspended solids during the construction phase are unlikely to have any discernible adverse impact.

Potential impacts on aquatic resources will be minor. Typically, the main considerations regarding potential impacts on aquatic systems include the length of the transmission line across wetlands and open water, and length of ROW paralleling (within 100 feet) streams. The Consensus Route crosses six streams, parallels approximately 245 feet of streams within 100 feet, crosses approximately 225 feet of mapped potential wetlands, and crosses approximately 188 feet of open water such as ponds.

#### **4.1.4.3 Wildlife**

The impacts of transmission lines on wildlife include short-term effects resulting from physical disturbance during construction, as well as long-term effects resulting from habitat modification, fragmentation, or loss. The net effect from transmission line construction on local wildlife is typically minor. The following section provides a general discussion of the effects of transmission line construction and operation on terrestrial wildlife, followed by a discussion of the possible impact by the Consensus Route.

Any required clearing or other construction-related activities would directly or indirectly affect most animals that reside within or traverse the proposed transmission line ROW. The movement and use of heavy machinery may adversely affect smaller, low-mobility species, particularly amphibians, reptiles, and small mammals. If construction occurs during the breeding season (generally spring to fall), construction activities may also adversely affect the young of some species. The movement and use of heavy machinery may also cause soil compaction, which may adversely affect fossorial animals (i.e., those that live underground). Mobile species, such as birds and larger mammals, may avoid initial clearing and construction activities and move into adjacent areas outside the proposed ROW.

Construction activities may temporarily deprive some animals of cover and, therefore, potentially subject them to increased natural predation. Wildlife in the immediate area may experience a slight loss of browse or forage material during construction. However, the prevalence of similar habitats in adjacent areas and vegetation succession in the ROW following construction would minimize the effects of these losses.

The increased noise and activity levels during construction could potentially disturb the daily activities (e.g., breeding, foraging) of species inhabiting the areas adjacent to the proposed ROW. Dust and gaseous emissions should have only minimal effects on wildlife. Although construction activities may disrupt the

normal behavior of many wildlife species, little, if any, permanent damage to these populations should result. Periodic clearing along the ROW, while producing temporary negative impacts on wildlife, can improve the habitat for ecotonal or edge species through the increased production of small shrubs, perennial forbs, and grasses.

The transmission line (both structures and wires) could present a hazard to flying birds, particularly migrants. Collision may result in disorientation, crippling, or mortality (New York Power Authority, 2005). Mortality is directly related to an increase in structure height; number of guy wires, conductors, and ground wires; and use of solid or pulsating red lights—an FAA requirement on some structures or structures over 200 feet in height (Erickson et al., 2005). Birds are known to be attracted to non-flashing red lights and less attracted to flashing lights (FCC, 2015). In addition to lighting concerns, collision hazards are greatest near habitat “magnets” (e.g., wetlands, open water, edges, and riparian zones) and during the fall when flight altitudes of dense migrating flocks are lower in association with cold air masses, fog, and inclement weather. The greatest danger of mortality exists during periods of low ceiling, poor visibility, and drizzle when birds are flying low, perhaps commencing or terminating a flight, and when they may have difficulty seeing obstructions (Electric Power Research Institute, 1993). Most migrant species known to occur in the Study Area, including passerines, should be minimally affected during migration, since their normal flying altitudes are much greater than the heights of the proposed transmission structures (Willard, 1978; Gauthreaux, 1978).

Transmission line structures will be designed in compliance with the Avian Power Line Interaction Committee (APLIC) suggested practices, as defined in *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC, 2012). As such, the danger of electrocution to birds from this Project is anticipated to be insignificant. Some avian species may use transmission line structures or wires for perching and roosting locations; however, this is not the designed intent of those facilities. Additionally, edge-adapted species such as the blue jay (*Cyanocitta cristata*), some flycatchers, northern cardinal (*Cardinalis cardinalis*), northern bobwhite (*Colinus virginianus*), Cooper’s hawk (*Accipiter cooperii*), brown-headed cowbird (*Molothrus ater*), and northern mockingbird (*Mimus polyglottos*) may select the edge habitat created along the changed vegetation areas adjacent to the transmission ROW (Rochelle et al., 1999).

Waterfowl species are particularly vulnerable to collisions with power lines because of their low-altitude flight and high speed. Additionally, species that travel in large flocks, such as blackbirds and many shorebirds, are also vulnerable, because dense flocking makes movement around obstacles more difficult for individuals in the flock (APLIC, 1994).

In general, the greatest potential impact on wildlife typically results from the loss and fragmentation of woodland and wetland habitats. The Consensus Route crosses approximately 482 feet of bottomland/riparian woodland/brushland and 4,198 feet of upland woodland/brushland. The two ponds that are crossed by the Consensus Route ROW and all streams will be spanned, with little or no resulting impact on wildlife.

In summary, the typical net impacts of transmission lines on wildlife are minor and include short-term effects resulting from physical disturbance during construction, as well as long-term effects resulting from habitat modification, fragmentation, or loss. These typical net minor impacts are also expected with this Project.

#### **4.1.4.4 Recreationally and Commercially Important Species**

Construction of the proposed Project is not expected to have significant impacts on terrestrial recreationally and commercially important species in the Study Area. Game species such as the white-tailed deer, mourning dove, and bobwhite are very mobile and will leave the immediate vicinity during the initial construction phase. Wildlife in the immediate area may experience a temporary loss of browse or forage vegetation during construction; however, the prevalence of similar habitats in adjacent areas will minimize the effect of the loss. The proposed Project would have little or no impact on hunting and fishing within the Study Area.

#### **4.1.4.5 Endangered and Threatened Species**

No endangered or threatened plant species have been recorded from Jones County; therefore, no listed plant species will be adversely affected by the proposed Project.

According to USFWS (2025a) and TPWD (2025c), three federally/state-listed endangered/threatened fish species are of potential occurrence in Jones County: the federally endangered sharpnose shiner and smalleye shiner and the state-threatened chub shiner. All three species have very restricted ranges, however, that lie outside the Study Area. Additional aquatic species of potential occurrence in Jones County include the federally threatened Texas fawnsfoot and the state-threatened Brazos watersnake. The Texas fawnsfoot would not be expected to occur due to its current range lying outside the Study Area. If present, the Brazos watersnake could experience minor temporary disturbance during construction efforts. In many instances, potential habitat may be completely avoided. Additionally, any aquatic habitat is expected to be spanned to avoid impacts. Overall, the proposed transmission line Project should not adversely affect any endangered or threatened aquatic species.

The tricolored bat would only occur in the region as a rare vagrant and would not be expected within the Study Area. No federal/state-listed endangered/threatened mammal species would be expected to be adversely affected by the Project.

According to TPWD (2025c), the only additional reptile species of potential occurrence in Jones County is the state-threatened Texas horned lizard. This species may reside within the Study Area, and if it is present along the PUC-approved route, individuals could experience minor temporal disturbance during construction efforts.

Avian species protected under the ESA that may migrate through the Study Area include the federally threatened eastern black rail, piping plover, red knot and whooping crane; the state-threatened white-faced ibis; and other bird species that receive protection under provisions of the BGEPA and the MBTA, such as the bald eagle, may be affected by the presence of transmission lines. If these species occur in the Study Area following construction of the Project, they may be susceptible to wire strikes. Larger birds are more prone to transmission line collisions because their large wingspans and lack of maneuverability make avoiding obstacles more difficult (APLIC, 1994). However, the normal flying altitudes of most migrant species are greater than the heights of the proposed transmission structures (Gauthreaux, 1978; Willard, 1978). Additionally, the Project will be designed following APLIC suggested practices (APLIC, 2012), which will minimize the attractiveness of the structures for perching and nesting.

The monarch butterfly, a species proposed for federal listing as threatened, may occur in the Study Area as a spring breeder or during migration. However, this species would not be expected to be adversely affected by the Project and is currently not protected under the ESA.

#### **4.1.4.6 Critical habitat**

No federally designated critical habitat for any endangered or threatened species is located in the Study Area. Therefore, the proposed Project will have no impact on critical habitat.

## **4.2 Socioeconomic Impact**

### **4.2.1 Impact on Social and Economic Factors**

Lone Star will use contractors for the ROW clearing and construction of the transmission line, so some short-term local employment may be generated. A portion of the Project wages will likely be injected into the local economy through purchases such as fuel, food, lodging, and possibly construction materials. Payments for the acquisition of private ROW easements, based on fair market value, will be made to individuals whose lands are crossed by the transmission line; the affected individuals who reside locally

are likely to make purchases from local businesses. Lone Star will also pay state and local taxes on purchases, as well as property tax on the infrastructure placed in the transmission line ROW. Permitting, design, and construction costs of the transmission line will be paid via revenue generated from electric transmission service.

Potential long-term economic benefits to the region and the State resulting from construction of this Project are based on the requirement that electric utilities provide an adequate and reliable level of power throughout their service areas. Economic growth and development rely heavily on adequate public utilities, including a reliable electrical power supply. Without this basic infrastructure, an area's potential for economic growth is constrained.

#### **4.2.2 Impact on Community Values**

Adverse effects upon community values are defined as aspects of the proposed 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 identified with the location and specific characteristics of the proposed transmission line and do not include possible objections to electric transmission lines in general.

Impacts on community values can be classified into two areas: (1) direct effects, or those effects that would occur if the location and construction of a transmission line results in the removal or loss of public access to a valued resource; and (2) indirect effects, or those effects that would result from a loss in the enjoyment or use of a resource due to the characteristics (primarily aesthetic) of the proposed line, structures, or ROW. Impacts on community values, whether direct or indirect, can be more accurately gauged as they affect recreational areas or resources and the visual environment of an area (aesthetics). Impacts in these areas are discussed in detail in **Sections 4.3.2** and **4.3.7** of this report, respectively.

### **4.3 Impact on Human Resources**

#### **4.3.1 Impact on Land Use**

Land-use impacts from transmission line construction are determined by the amount of land displaced by the actual ROW and by the compatibility of electric transmission line ROW with adjacent land uses. During construction, temporary impacts on land uses within the ROW could occur due to the movement of workers and materials through the area. Construction noise and dust, as well as temporary disruption of traffic flow, may also temporarily affect residents in the area near the ROW. Coordination among Lone Star, their contractors, and landowners regarding access to the ROW and construction scheduling would minimize these disruptions.

#### **4.3.1.1 Habitable Structures**

Generally, one of the most important measures of potential land use impact is the number of habitable structures located within a specified distance of a route centerline. Habitable structures are defined by 16 TAC § 25.101(a)(3) 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 multifamily dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools (PUC, 2015).*

Burns & McDonnell staff determined the number and distance of habitable structures located within 500 feet of the centerline of the Consensus Route using aerial imagery and field reconnaissance where possible. To account for the margin of error in horizontal accuracy of aerial imagery, Burns & McDonnell identified habitable structures located within 520 feet of the Consensus Route centerline. Review of aerial imagery and field reconnaissance of the Study Area and the Consensus Route determined that no habitable structure is located within 520 feet of the Consensus Route's centerline.

#### **4.3.1.2 Utilizing/Paralleling Existing Transmission Line ROW**

The least impact on land use generally results from building within existing transmission line ROW, followed by building parallel to existing transmission line ROW. Utilizing existing transmission line ROW of sufficient width usually eliminates the need for additional clearing. Furthermore, building parallel to existing transmission line ROW, when compared to establishing a new ROW corridor, can also minimize the amount of ROW to be cleared, which generally results in the least amount of impact on landowners, the environment, and the overall aesthetic quality of that area. In fact, the factors listed by 16 TAC § 25.101(b)(3)(B) to be considered in the selection of alternative routes include:

- Whether the routes parallel or utilize existing compatible ROW for electric facilities, including the use of vacant positions on existing multiple-circuit transmission lines.
- Whether the routes parallel or utilize other existing compatible ROW, including roads, highways, railroads, or telephone utility ROW.
- Whether the routes parallel property lines or other natural or cultural features.

While the Consensus Route does not utilize any existing transmission line ROW for this Project, it does parallel approximately 11,517 feet of existing transmission line ROW.

#### **4.3.1.3 Paralleling Other Existing Compatible ROW**

Paralleling other existing compatible ROW (*e.g.*, roads, highways) is also generally considered to be a positive routing criterion, one that usually results in fewer impacts than establishing a new ROW corridor within an area and is included in the PUC's transmission line certification criteria. The Consensus Route parallels CR 185 and CR 195 for a total of approximately 4,035 feet, or 17 percent of its total length.

#### **4.3.1.4 Paralleling Property Lines**

Another important land use criterion is the length of property lines paralleled. In the absence of paralleling other existing compatible ROW, paralleling property or fence lines minimizes disruption to agricultural activities and creates less of a constraint to future development of a tract of land. The Consensus Route parallels property lines for approximately 657 feet or 3 percent of its overall length.

#### **4.3.2 Impact on Recreation**

Potential impacts on recreational land, which include the disruption or preemption of recreational activities, would not occur from the proposed Project as no park or recreation area is crossed by the Consensus Route or located within 1,000 feet of the Consensus Route.

#### **4.3.3 Impact on Agriculture**

Agricultural activities constitute a significant land use throughout the area; however, much of the Study Area is currently being, or has already been, converted to solar arrays and solar array supportive facilities. Potential impacts on agricultural land uses include the disruption or preemption of farming activities. Disruption may include the time lost going around or backing up to structures to cultivate as much area as possible, and the general loss of efficiency compared to plowing or planting unimpeded in straight rows. Preemption of agricultural activities refers to the actual amount of land lost to production directly under the structures. Structures (and routes) located along field edges (*e.g.*, property lines, roads, drainage ditches) generally present fewer problems for farming operations than structures and routes located across open fields. Construction-related activities could slightly impact agricultural production, depending upon the timing of construction related to the local planting and harvesting schedule. Impacts on agricultural land uses can generally be ranked by degree of potential impact; forested land has the highest degree of impact, followed by cultivated cropland, with the least-potential impact occurring in areas where cultivation is not the primary use (pastureland/rangeland).

In this regard, the Consensus Route crosses approximately 11,463 feet of pastureland/rangeland, but no cropland and no cropland/pastureland irrigated by center-pivot or other aboveground mechanical means. Due to the relatively small area affected (beneath the structures), and the short duration of construction

activities at any one location, such impacts on pastureland/rangeland should be temporary and minor. Since the ROW for this Project will not be fenced or otherwise separated from adjacent lands, no significant long-term displacement of grazing activities will occur and may be resumed following construction.

#### **4.3.4 Impact on Transportation and Aviation**

Potential impacts on transportation could include temporary disruption of traffic and conflicts with proposed roadway or utility improvements and may include increased traffic during construction of the proposed Project. However, the Project would generate only minor construction traffic at any given time or location. This traffic would consist of construction employees' personal vehicles, truck traffic for material deliveries, trucks for structure foundation work, and mobile cranes for structure erection. Such impacts, however, are usually temporary and short term.

The proposed transmission line should have no significant effect on aviation operations within the Study Area. According to Federal Aviation Regulations (FAR), Part 77, notification of the construction of the proposed transmission line will be required if structure heights exceed the height of an imaginary surface extending outward and upward at a slope of 100 to 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 (FAA, 2011). For a public or military airport having a runway shorter than 3,200 feet, notification would be required if structure heights exceed the height of an imaginary surface extending at a slope of 50 to 1 for 10,000 feet. Notification is also required for structure heights exceeding the height of an imaginary surface extending outward and upward at a slope of 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area for heliports.

No FAA-registered airport is located within 20,000 feet, no private landing strip is located within 10,000 feet, and no helipad is located within 5,000 feet of the Consensus Route. The proposed Project would have no effect on aviation operations in the Study Area.

#### **4.3.5 Impact on Communication Towers**

The proposed Project would not be expected to have a significant impact on electronic communications in the Study Area. Based on available data and field reconnaissance, one communication tower is located approximately 953 feet south of the Consensus Route. However, no AM radio transmitter is located within 10,000 feet of the Consensus Route and no FM tower or additional microwave, or other electronic communication tower is located within 2,000 feet of the Consensus Route.

#### **4.3.6 Impact on Utilities**

The proposed Project would not be expected to significantly impact existing utilities within the Study Area. No existing electric transmission line is crossed by the Consensus Route. In addition, based on available RRC data and field reconnaissance, only one pipeline is crossed by the Consensus Route. However, the Consensus Route does cross approximately 13,505 feet of solar leases.

#### **4.3.7 Impact on Aesthetics**

Aesthetic impacts, or impacts upon visual resources, exist when the ROW, lines, or structures of a transmission line system create an intrusion into, or substantially alter the character of, an existing scenic 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 or enjoyment of an area, in the case of valued community resources and recreational areas.

To evaluate aesthetic impacts, field reconnaissance was conducted to determine the general aesthetic character of the area and the degree to which the proposed transmission line would be visible from selected areas. Although largely lacking in the vicinity of the Project, these areas generally include those of potential community value, parks and recreational areas, particular scenic vistas that were encountered during the field survey, and U.S. and State Highways that traverse a Study Area. Measurements were made to estimate the length of the route that would fall within recreational or major highway foreground visual zone (FVZ) (0.5 mile, unobstructed). The determination of the visibility of the transmission line from various points was calculated from USGS maps and aerial imagery.

It is virtually impossible for a new transmission line not to have some visual impacts, and construction of the proposed 345-kV transmission line could have both temporary and permanent aesthetic effects.

Temporary impacts would include views of the actual construction (assembly and erection of the structures) and any clearing of the ROW. Where limited clearing is required, the brush and wood debris could have a temporary negative impact on the local visual environment. Permanent impacts from the Project would include the views of the structures and lines themselves, as well as views of cleared ROW.

A transmission line (structures and wires) is within the FVZ if it is visible (*i.e.*, not obstructed by terrain, trees, buildings) within 0.5 mile of an observer. The Consensus Route would not be within the FVZ of any park or recreational area. However, the Project is within the FVZ of US 277 and US 83 for approximately 12,018 feet.

## **4.4 Impact on Cultural Resources**

Any construction activity has the potential for adversely impacting cultural resource sites. Although this Project is currently being conducted without the need for federal funding, permitting or assistance, federal guidelines established under Section 106 of the National Historic Preservation Act of 1966, as amended, provide useful standards for considering the severity of possible direct and indirect impacts. According to the Secretary of the Interior's Guidelines for protection of cultural resources (36 CFR 800), adverse impacts may occur directly or indirectly when a project causes changes in archeological, architectural, or cultural qualities that contribute to a resource's historical or archeological significance.

### **4.4.1 Direct Impacts**

Direct impacts on cultural resource sites may occur during the construction phase of the proposed transmission line and cause physical destruction or alteration of all or part of a resource. Typically, direct impacts are caused by the actual construction of the line or through increased vehicular and pedestrian traffic during the construction phase. The increase in vehicular traffic may damage surficial or shallowly buried sites, while the increase in pedestrian traffic may result in vandalism of some sites. Additionally, construction of a transmission line may directly alter, damage, or destroy historic buildings, engineering structures, landscapes, or districts. Direct impacts may also include isolation of a historic resource from or alteration of its surrounding environment (setting).

Direct impacts on cemeteries require compliance with the Texas Health and Safety Code, as amended. These rules and regulations are available in Title 13, Part 2, Chapter 22, Rule §22.5 of the TAC. The marked boundaries of historic-age cemeteries are notorious for shifting over time due to several factors including abandonment, the removal or disintegration of headstones or other markers, and the encroachment of new developments. This boundary ambiguity can result in unmarked burials being unintentionally or intentionally excluded from current cemetery boundaries. To limit the potential for a project to impact unmarked burials, the THC recommends all construction projects that include ground disturbance within 25 feet of a known cemetery boundary, be surveyed in advance by an archeologist for evidence of possible burials within proposed construction areas. However, no cemeteries were identified within the Study Area.

### **4.4.2 Indirect Impacts**

Indirect impacts include those effects caused by the Project that are farther removed in distance, or that occur later in time but are reasonably foreseeable. These indirect impacts may include introduction of visual or audible elements that are out of character with the resource or its setting. Indirect impacts may also occur because of alterations in the pattern of land use, changes in population density, accelerated

growth rates, or increased pedestrian or vehicular traffic. Historic buildings, structures, landscapes, and districts are among the types of resources that might be adversely impacted by the indirect impact of the proposed transmission towers and lines.

#### **4.4.3 Mitigation**

The preferred form of mitigation for impacts on cultural resources is avoidance. An alternative form of mitigation of direct impacts can be developed for archeological and historical sites with the implementation of a program of detailed data retrieval. Indirect impacts on historical properties and landscapes can be lessened through careful design and landscaping considerations. Relocation may also be possible for some historic structures.

#### **4.4.4 Summary of Impact on Cultural Resources**

The Study Area contains areas with a high probability for containing cultural resources; therefore, construction of the proposed transmission line has the potential to impact previously unrecorded cultural resources. One method utilized by archeologists to assess an area for the potential occurrence of cultural resources is the identification of high probability areas (HPAs). An HPA is an area considered to have a high potential for containing previously unrecorded cultural resources. When identifying HPAs, the topography and the availability of water and subsistence resources are taken into consideration. The soils and the geological processes that have occurred within the Study Area are also considered. Certain geological processes and accompanying soil deposition can protect the integrity of an archeological site by burying it within deep sediments, or alternately, sites can be destroyed through a variety of erosional processes. Understanding the geologic processes within the Study Area is useful for predicting the location of cultural resources. Locations that are usually identified as HPAs for the occurrence of prehistoric sites include water crossings, stream confluences, drainages, alluvial terraces, wide floodplains, playa lakes, upland knolls, and areas where lithic or other subsistence resources could be found. Historic sites would be expected adjacent to historic roadways and in areas where structures appear on historic-age maps. The identification of HPAs was accomplished by examining the TxDOT Potential Archeological Liability Map (PALM). A detailed investigation of the route was not performed by an archeologist. Therefore, some of the designated HPAs (as well as the direct and indirect impacts) may change if field archeologists conduct a visual reconnaissance or survey the route.

The results of the literature and records review indicate that three cultural resource sites (41JS120, 41JS139, and 41JS146) have been recorded in the Consensus Route ROW, while sites 41JS140, 41JS141, and 41JS142 have been recorded within 1,000 feet of the Consensus Route centerline. In a letter dated February 7, 2025 (**Appendix A**), the THC requested an archeological survey because previous

investigations have identified archeological sites and because much of the route is HPA and has not been surveyed by a professional archeologist (**Appendix A**). The PALM identified areas adjacent to Redmud Creek and its tributaries as having high potential for containing previously unrecorded cultural resources. In total, 16,538 feet of the Consensus Route is designated as HPA.

## **5.0 PUBLIC INVOLVEMENT ACTIVITIES**

### **5.1 Correspondence with Agencies and Officials**

Burns & McDonnell contacted the following federal, state, county, and local agencies and officials by letter, dated January 28, 2025, to solicit comments, concerns, and information regarding potential environmental impacts, permits, or approvals for the construction of the proposed 345-kV transmission line within the Study Area. A map of the Study Area was included with each letter. An example of the letter mailed to the agencies and officials and copies of the responses received are included in **Appendix A** (Agency Correspondence).

#### **Federal**

- Federal Emergency Management Agency (FEMA)
- Natural Resources Conservation Service (NRCS)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Army Corps of Engineers (USACE), Fort Worth District
- Environmental Protection Agency (EPA)
- Federal Aviation Administration (FAA)
- Department of Defense (DoD), Siting Clearinghouse

#### **State**

- Texas Parks and Wildlife Department (TPWD)
- Texas General Land Office (GLO)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Historical Commission (THC)
- Texas Water Development Board (TWDB)
- Texas Department of Transportation (TxDOT), Abilene District
- TxDOT, Aviation Division
- TxDOT, Environmental Affairs Division
- Railroad Commission of Texas (RRC)

#### **County**

- Jones County Judge
- Jones County Commissioners (Precincts 1 through 4)
- California Creek Soil & Water Conservation District (SWCD)
- Jones County Farm Bureau

- Jones County Farm Service Agency (FSA)

#### **Local Jurisdictions**

- Superintendent, Anson Independent School District (ISD)

#### **Additional Contacts**

- West Central Texas Council of Governments (WCTCOG)
- Texas Agricultural Land Trust
- Texas Land Conservancy
- Texas Land Trust Council
- The Nature Conservancy

As of the date of this document, written replies to the letters sent on January 28, 2025, have been received from the following agencies and officials: USACE, FEMA, NRCS, DoD, FAA, RRC, GLO, TCEQ, TxDOT Abilene District, THC, and TPWD. Copies of all responses are included in **Appendix A**.

In addition to letters sent to the agencies on January 28, 2025, Burns & McDonnell reviewed the TXNDD Element Occurrence Records from the TPWD, IPaC from the USFWS, and TASA (through TARL and the THC) to verify or update cultural and natural resource records for the Study Area. All agency comments, concerns, and information received were taken into consideration by Burns & McDonnell and Lone Star in the preparation of this EA and in the evaluation of the Consensus Route. Additionally, the information received from the agencies will be taken into consideration by Lone Star before and during construction of the Project. The following is a summary of the comments provided by federal, state, county, and local officials that have responded as of this writing.

- The USACE Fort Worth District responded via email on February 3, 2025, stating that the Project had been assigned a regulatory project manager (Valerie Sewell) and Project Number SWF-2025-00067. The agency also provided contact information.
- The FEMA responded via email on February 3, 2025, requesting that the community Floodplain Administrator be contacted for the review and possible permit requirements for the Project and that if federally funded, requesting that the Project be in compliance with Executive Order (EO) 11988 and EO 11990.
- The NRCS responded with a letter dated February 14, 2025, sent via email, stating that the Study Area does not involve any USDA-NRCS easements. The agency noted that the project area has a few soil limitations such as erosion, a low to moderate potential for concrete erosion, and a

moderate to high potential for steel erosion. Few hydric soils occur in the Study Area. The water erosion potential ranges from very low to low, with some isolated areas of moderate to high. The wind erosion potential is mostly moderate to high. The agency attached a Custom Soil Resource Report for Jones County.

- The DoD responded with a letter dated February 25, 2025, sent via email, noting that the proposed Project will have minimal impact on military operations conducted in the area.
- The FAA responded via email on April 15, 2025, requesting that aeronautical studies should be filed electronically. The agency provided contact information and attached a Desk Reference Guide. Lone Star will coordinate with the FAA as necessary once a route is approved for construction.
- The RRC responded with a letter dated February 3, 2025, saying that information regarding existing oil and gas well and pipeline locations is available on the Railroad Commission's Geographic Information System, and provided links. The RRC also provided links for accessing information on oil and gas drilling permits and pipeline permitting and for information on surface mining operations.
- The GLO responded with a letter dated February 5, 2025, stating that the agency does not appear to have any environmental issues or land use constraints associated with the proposed Project and asked to be provided the final route so that the agency can assess the route and determine if the Project will cross any streambeds or Permanent School Fund land that would require a GLO easement.
- The TCEQ responded via email on February 7, 2025, advising how to file a request for Public Information.
- The TxDOT Abilene District responded via email on February 12, 2025, noting that the agency had no notable concerns for cultural, water, and land resources or threatened and endangered species of the proposed transmission line project in Jones County.
- The THC responded via email on February 27, 2025, stating that an archeological survey is required. The agency determined that multiple archeological sites have been documented within the Study Area and that the potential to affect cultural resources is considered high. An archeological survey is warranted prior to breaking ground.

- The TPWD responded with a letter dated March 27, 2025, sent via email, providing a list of regulations pertaining to the Project and recommendations on how to comply with these regulations. Regulations included the CWA, MBTA, protection of state-listed species and species of concern, and a monarch butterfly conservation plan. TPWD also provided information on an interactive vegetation mapping application, the Texas Ecological Analytical Mapper (TEAM), general construction recommendations, and conservation easements.

In addition, Burns & McDonnell accessed the IPaC system several times during 2025, the latest of which was June 19, 2025, to request an Official Species List, which also generates an official consultation response letter and tracking number. IPaC provided a species list identifying federally threatened, endangered, and proposed to be listed species; designated critical habitat; and candidate species that may occur within the Study Area counties, or may be affected by the proposed Project. A copy of the response letter generated by IPaC on June 19, 2025, is included in **Appendix A**.

## 5.2 Public Open-House Meeting

One public open-house meeting was held for the proposed Project at the Anson Opera House, 1120 11<sup>th</sup> Street, Anson, Texas, on Tuesday, April 8, 2025, from 5:30 to 7:30 pm. Direct mail notice of the open-house meeting was sent by first class mail on March 25, 2025, to landowners who may be directly affected by the Project, and the Jones County Judge and County Commissioners. In accordance with 16 TAC § 22.52(a)(4), notice of the open-house meeting was also sent to the DoD Military Aviation and Installation Siting Clearinghouse. The invitation letter also included a Study Area and Route Map, a list of Frequently Asked Questions, and a Project questionnaire. Additionally, public notice of the open-house meeting was published in the *Western Observer* on April 2, 2025. A copy of the invitation letter and enclosures and the public notice published in the *Western Observer* are included in **Appendix B**. The public meeting was intended to provide information to and solicit comments and questions from interested persons concerning the proposed Project. The meeting had the following objectives:

- Introduce Lone Star
- Provide an overview of the Project
- Describe the Commission's CCN approval process
- Provide a route map
- Describe proposed transmission structures, construction practices, and surveying and due diligence activities that will be utilized to construct the Project
- Describe Lone Star's proposed operation and maintenance of the Project following construction

Rather than a formal presentation in a speaker-audience format, the meeting was conducted in an open-house format. Lone Star representatives and Burns & McDonnell set up several information stations around the meeting room. Each station was devoted to a particular aspect of the routing study and was manned by Lone Star representatives and Burns & McDonnell staff. Large displays of maps, illustrations, and text explaining each topic were presented at the stations. Attendees were encouraged to visit each station in order so that the entire process and general Project development sequence could be explained clearly. The open-house or information-station format is advantageous because it allows attendees to process information in a more relaxed manner and allows them to focus on their areas of interest and ask specific questions. More importantly, the one-on-one discussions with Lone Star representatives and Burns & McDonnell staff encourage more interaction from those citizens who might be hesitant to participate in a speaker-audience format.

At the first station, visitors signed in and were provided with a Project map, questionnaire, and a Frequently Asked Questions (FAQ) sheet. The questionnaire solicited comments on landowner concerns as well as an evaluation of the information presented at the meeting. An example of the questionnaire provided at the open-house meeting and the FAQ sheet are included in **Appendix B**.

Thirteen attendees signed in at the public meeting, and four completed questionnaires were received by Lone Star or Burns & McDonnell either at or after the public meeting. Results from the questionnaires were reviewed and analyzed.

The first question asked respondents which of nine situations applied to them or their property. All four (100 percent) responded that their property is within the Study Area, three (75 percent) responded that a proposed route link is on their property, two (50 percent) responded that a proposed line link is near their home, one (25 percent) responded that a proposed route link is near their business, and one (25 percent) responded that their property is cultivated.

The next question asked if the need for the project had been adequately explained. While 3 (75 percent) said it had been adequately explained, 1 (25 percent) said it had not been adequately explained.

Respondents were then presented with a list of 16 factors that are taken into consideration for routing a transmission line. They were asked to rank 10 of these criteria on a scale from 1 to 10, with 1 being the greatest interest and 10 being the least interest. Of those respondents that ranked the criteria (not all factors were ranked), the greatest rating for each factor (in descending order of importance) is as follows:

- Maximize distance from residences
- Minimize visibility of the line
- Maximize distance from historic sites and archeological areas
- Maximize length along property boundary lines and/or fence lines
- Maximize distance from commercial buildings
- Minimize impacts on wildlife
- Minimize loss of trees
- Maximize distance from schools, churches, nursing homes, etc.
- Minimize length across cropland
- Maximize length across undeveloped land
- Minimize total length of line (reduces cost)
- Maximize length along existing transmission lines

The fourth question asked whether other factors or any other information should be considered. One respondent included concerns about the devaluation of their property and the long-term effect of living near the lines.

Questionnaire respondents were then asked if they had concerns with any particular proposed route links. Only 2 (50 percent) responded to the question. One had a concern with Link 23, 24, and 31, and stated they were on or near their property where they planned to build a house and where they currently lived. The second respondent stated that they used the property to hunt, and a transmission line would not affect them.

The sixth question asked respondents if after reviewing the constraints maps shown at the public meeting, if any of the features were incorrectly shown on the map. Three (75 percent) stated that they did not see any features incorrectly shown, and one stated that they were unable to attend the public meeting.

Next, respondents were asked if any other features and/or any specific characteristics about their property should be considered with respect to the proposed route links. If so, they were asked to describe the feature/characteristic and its approximate location on the attached map. Two (50 percent) provided comments that included a waterway on Jones County Parcel 15787 and one stated that their outbuildings were not included on the map.

The eighth question asked respondents to provide any additional comments they would like to be considered in the planning of the project. Two (50 percent) provided comments. One respondent stated

that they will be surrounded on three sides of their property. The other respondent stated that since they will not be building a home, feel free to put a transmission line on or adjacent to their property.

Respondents were then asked if they attended the public open house meeting. Three respondents (75 percent) stated that they had, while the fourth stated that they had not.

The next question asked respondents how they learned about the public meeting. Three (75 percent) stated that they had received an invitation letter, while the fourth stated that they were informed by another landowner about the public meeting.

The 11<sup>th</sup> question asked respondents how they obtained the questionnaire. Three (75 percent) stated that they had obtained the questionnaire with the invitation letter, and one stated that they obtained the questionnaire at the public meeting.

Respondents were then asked if they attended the public open house meeting, did they feel they were given ample opportunity to ask and receive questions. All three respondents (100 percent) that attended the public meeting stated that they were given ample opportunity. In addition, they were asked if they felt their issues and concerns were heard and understood. All three respondents (100 percent) that attended the public meeting stated that they their issues and concerns were heard and understood.

The 13<sup>th</sup> question asked respondents if they felt the public meeting was a worthwhile use of their time. All three respondents (100 percent) that attended the public meeting stated that it was worthwhile; however, one respondent checked yes and no, but didn't explain further.

Finally, respondents were asked if the felt the information provided at the public meeting was helpful in understanding the transmission line project. All three respondents (100 percent) that attended the public meeting stated that they thought the information provided was helpful.

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## 6.0 PROJECT ASSESSMENT

In assessing potential impacts of the Project, Burns & McDonnell limited its evaluation to environmental considerations. Burns & McDonnell professionals with expertise in different environmental disciplines (terrestrial and aquatic ecology, land use/planning, and cultural resources) assessed potential impacts of the Project based on research data collected for 37 separate environmental criteria; comments from local, state, and federal agencies; and field reconnaissance. The amount or number of each environmental criterion measured along the Consensus Route is presented in **Table 6-1**. The length measurements are in feet.

**Table 6-1: Environmental Data for Consensus Route Assessment  
 Phantom Hill to Tiger Solar 345-kV Transmission Line Project**

Environmental Criterion		Route Data
<b>Land Use</b>		
1	Length of Route	24,066
2	Number of habitable structures <sup>a</sup> within 500 feet <sup>b</sup> of ROW centerline	0
3	Length of ROW utilizing existing transmission line ROW	0
4	Length of ROW parallel to existing transmission line ROW	11,517
5	Length of ROW parallel to other existing compatible ROW (roads, highways, railroads, etc.—excluding oil and gas pipelines)	4,035
6	Length of ROW parallel to apparent property lines (not following existing ROW) <sup>c</sup>	657
7	Length of ROW across parks/recreational areas <sup>d</sup>	0
8	Number of additional parks/recreational areas <sup>d</sup> within 1,000 feet of ROW centerline	0
9	Length of ROW across cropland	0
10	Length of ROW across pastureland/rangeland	11,463
11	Length of ROW across cropland or pastureland with mobile irrigation systems	0
12	Length of ROW across solar leases	13,505
13	Number of pipeline crossings	1
14	Number of transmission line crossings	0
15	Number of U.S. and State highway crossings	0
16	Number of Farm-to-Market (FM)/Ranch-to-Market (RM) road crossings	0
17	Number of FAA-registered public/military airfields <sup>e</sup> within 20,000 feet of ROW centerline (with runway >3,200 feet)	0
18	Number of FAA-registered public/military airfields <sup>e</sup> within 10,000 feet of ROW centerline (with runway <3,200 feet)	0
19	Number of private airstrips within 10,000 feet of ROW centerline	0

Environmental Criterion		Route Data
20	Number of heliports within 5,000 feet of ROW centerline	0
21	Number of commercial AM radio transmitters within 10,000 feet of ROW centerline	0
22	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	1
<b>Aesthetics</b>		
23	Estimated length of ROW within foreground visual zone <sup>f</sup> of U.S. and State highways	12,018
24	Estimated length of ROW within foreground visual zone <sup>f</sup> of FM/RM roads	0
25	Estimated length of ROW within foreground visual zone <sup>f</sup> of parks/recreational areas <sup>d</sup>	0
<b>Ecology</b>		
26	Length of ROW across upland woodland/brushland	4,198
27	Length of ROW across bottomland/riparian woodland/brushland	482
28	Length of ROW across known occupied habitat of federally endangered or threatened species	0
29	Length of ROW across potential wetlands <sup>g</sup>	225
30	Number of stream crossings	6
31	Length of ROW parallel (within 100 feet) to streams	245
32	Length of ROW across open water (ponds, lakes, etc.)	188
33	Length of ROW across 100-year floodplains	0
<b>Cultural Resources</b>		
34	Number of recorded cultural resource sites within 1,000 feet of ROW centerline	6
35	Number of cemeteries within 1,000 feet of ROW centerline	0
36	Number of NRHP-listed or determined-eligible sites within 1,000 feet of ROW centerline	0
37	Length of ROW crossing areas of high archeological/historical site potential	16,538

(a) Single-family and multifamily 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.

(b) Due to the potential inaccuracies of the aerial photography and data utilized, all habitable structures within 520 feet have been identified.

(c) Property lines created by an existing road, highway, or railroad ROW are not double-counted in the “Length of ROW parallel to property lines” criterion.

(d) Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church.

(e) As listed in the Chart Supplement South Central U.S. (formerly known as the Airport/Facility Directory South Central U.S.).

(f) 0.5 mile, unobstructed.

(g) As mapped by the USFWS NWI.

The Project is located in north-central Jones County and lies on the north side of the city of Anson and approximately 8.3 miles southwest of the city of Stamford. A small portion of the city of Anson extends into the south-central portion of the Study Area; however, no additional incorporated cities or unincorporated communities are located within the Study Area, which is dominated by agricultural fields, rangeland, and shrubland. Much of the cropland and rangeland within the Study Area, however, is being converted to large-scale, commercial photovoltaic generation resources. Residential development within the Study Area generally consists of isolated single-family residences and farmsteads. Smaller residential lots are concentrated along US 83 and US 277 in the southeast corner of the Study Area. One school district, Anson ISD serves the Study Area; however, no school district properties, campuses, or facilities are located within the Study Area. A summary of the Project assessment is provided below.

- The Consensus Route is approximately 24,066 feet (4.6 miles) in length.
- No habitable structures are located within 500 feet of the Consensus Route centerline.
- The Consensus Route parallels approximately 11,517 feet of existing transmission line ROW, parallels other existing compatible ROW for approximately 4,035 feet, and parallels property lines for approximately 657 feet.
- The Consensus Route does not cross a park or recreational area, and no parks/recreational areas are within 1,000 feet.
- While the Consensus Route crosses no cropland, it crosses approximately 11,463 feet of pastureland/rangeland, none of which contains aboveground mobile irrigation systems.
- The Consensus Route crosses approximately 13,505 feet of solar leases.
- The Consensus Route crosses one pipeline.
- The Consensus Route crosses no FM roads or U.S. or State Highways.
- No FAA-registered airfield is located within 20,000 feet of the Consensus Route, no private airstrip was identified within 10,000 feet of the Consensus Route, and no heliport was identified within 5,000 feet of the Consensus Route. The proposed Project would have little or no effect on aviation operations in the Study Area.

- No commercial AM radio transmitter occurs within 10,000 feet of the Consensus Route although one communication tower is located within 2,000 feet of the Consensus Route.
- The Consensus Route will be within the foreground visual zone of US 277 for approximately 12,018 feet. The Consensus Route is not located within the foreground visual zone of a park/recreation area.
- No impacts are expected to any federally listed species or species proposed for federal listing; consultation with USFWS is not expected to be necessary. The monarch butterfly, a species proposed for federal listing as threatened, may occur in the Study Area during migration, and the Texas horned lizard, a state-listed threatened species, may also occur in the Study Area in small numbers in suitable habitat.
- No critical habitat has been designated in the Study Area for any species included under the ESA. Therefore, the proposed Project will have no impact on critical habitat.
- Three previously recorded cultural resource sites are within the ROW and three are within 1,000 feet of the Consensus Route centerline. No NRHP-listed or -eligible site is crossed by the Consensus Route or located within 1,000 feet of the centerline. The Consensus Route crosses approximately 16,538 feet (3.1 miles) of HPA.

**Table 6-2: Land Use Features in the Vicinity of the Consensus Route**

Feature ID Number <sup>a</sup>	Structure/Feature	Distance from Centerline <sup>b</sup> (feet)	Direction
1	Communication Tower (Lubbock SMSA Limited Partnership)	953	S
—	41JS146	0	—
—	41JS139	0	—
—	41JS120	46	—
—	41JS141	930	—
—	41JS142	331	—
—	41JS140	201	—

(a) The location of the communication tower has been given an ID number and shown on **Figure 2-2** (map pocket), whereas the cultural resource sites have not been given an ID number and are not shown on **Figure 2-2**.

## 7.0 LIST OF PREPARERS

This Environmental Assessment was prepared for Lone Star by Burns & McDonnell. Below is a list of Burns & McDonnell employees with primary responsibilities for the preparation of this document.

Responsibility	Name	Title
Project Manager	Derek Green	Sr. Environmental Scientist
Natural Resources	Gary Newgord	Sr. Environmental Scientist
Human Resources	Gary Newgord	Sr. Environmental Scientist
Cultural Resources	Shelly Fischbeck	Sr. Cultural Resources Specialist
GIS/Mapping	Grant Cox	Sr. GIS Specialist

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## **APPENDIX A - AGENCY CORRESPONDENCE**



January 28, 2025

Attn:  
Title:  
Agency:  
Street Address:  
City, State, Zip Code:

Re: Request for Information  
Lone Star Transmission, LLC Phantom Hill to Tiger 345-kV Transmission Line Project

Dear \_\_\_\_\_:

Lone Star Transmission, LLC (Lone Star) is proposing to design and construct a new 345-kilovolt (kV) electric transmission line in northcentral Jones County, Texas, to interconnect the proposed Tiger Solar Development. The proposed transmission line would be constructed between Lone Star's existing Phantom Hill Substation, located along Lone Star's existing Claytonville to West Shackleford 345-kV transmission line and northwest of the County Road (CR) 185 and CR 186 intersection, and the proposed Tiger collection substation, located on the east side of CR 195, approximately 2 miles north of Lone Star's existing Claytonville to West Shackleford 345-kV transmission line (Project). Please reference the locations of the Phantom Hill and Tiger Substations within the study area depicted on the attached map. The proposed transmission line will be approximately 4 to 5 miles in length, depending on the alternative selected, and will require a right-of-way between 100 and 150 feet in width.

Burns & McDonnell is preparing an Environmental Assessment (EA) for the proposed Project that will support Lone Star's application for a Certificate of Convenience and Necessity from the Public Utility Commission of Texas. Burns & McDonnell is in the process of collecting and evaluating environmental data for the study area. As part of this effort, we are asking that your agency/office tell us about any environmental or land use concerns that you may have regarding the siting and potential environmental effects from the construction of the proposed transmission line in the designated study area.

Additionally, if any permits, easements, or other approvals by your agency/office are required, or if you are aware of any major proposed development or construction in the study area, we would appreciate receiving this information as well.

Your input on any of the following resources as they relate to your agency or office will assist the Project team in evaluating the proposed Project:

- Land use (current or proposed land development projects, park/recreation areas, etc.)
- Aesthetics
- Water quality and wetlands

- Soils and geology
- Wildlife, vegetation, and fisheries (including threatened and endangered species)
- Socioeconomics (population, employment, growth, current/future development)
- Cultural resources (historic and archeological)
- Transportation and roads (airport and roadway expansions, construction, operations, and maintenance)

Burns & McDonnell would like to thank you in advance for your comments, which will be an important consideration in our assessment of potential environmental and land use impacts of the proposed transmission line. If you have any questions concerning this project or our request for information, please contact me at [djgreen@burnsmcd.com](mailto:djgreen@burnsmcd.com) or 737-236-0111. Your earliest reply will be appreciated.

Sincerely,

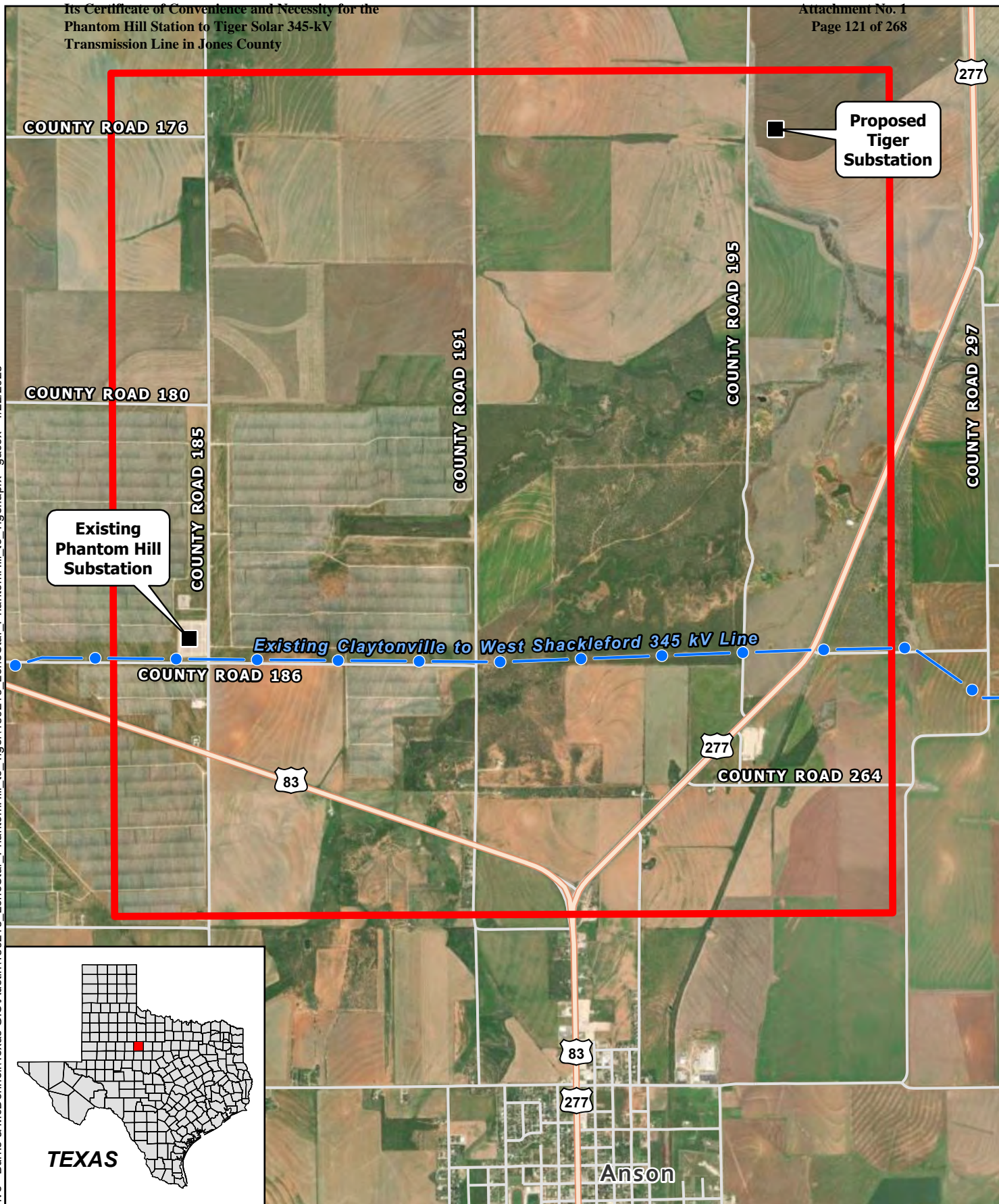
*Derek Green*

Derek Green  
Senior Environmental Scientist

Attachment

cc: Tracy Wiczorek, Lone Star Transmission, LLC  
Tracy Davis, Lone Star Transmission, LLC  
Ray Loving, NextEra Energy

Path: C:\Users\gacox\OneDrive - Burns & McDonnell\Texas GIS\Austin\180213 LoneStar\_PhantomHill to Tiger.aprx gacox 1/22/2025



<ul style="list-style-type: none"> <li> Project Endpoint</li> <li> Existing Transmission Line</li> <li> Study Area</li> </ul>	  0 0.25 0.5 Miles	 	<p>Phantom Hill to Tiger                  345 kV Transmission Line Project                  Lone Star Transmission                  Jones County, Texas</p>
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AGENCIES AND OFFICIALS CONTACT LIST

PHANTOM HILL TO TIGER 345 KV TRANSMISSION LINE PROJECT

**FEDERAL**

Tony Robinson  
Regional Administrator  
Region VI  
Federal Emergency Management Agency  
FRC 800 North Loop 288  
Denton, TX 76209-3698

Kristy Oates  
State Conservationist  
Natural Resources Conservation Service  
101 South Main St.  
Temple, TX 76501

Laura Broyles  
Assistant State Conservationist  
Administrative Zone 5 – Weatherfield Office  
Natural Resources Conservation Service  
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Weatherford, TX 76086

Chuck Ardizzone  
Field Supervisor  
Texas Coastal and Central Plains Ecological  
Services Field Office  
U.S. Fish and Wildlife Service  
3233 Curtis Drive  
Arlington, TX 76116

Colonel Calvin A. Kroeger  
Chief, Regulatory Division  
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U.S. Army Corps of Engineers  
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CESWF-Permits@usace.army.mil

Earthea Nance  
Regional Administrator  
Region 6 – South Central  
U.S. Environmental Protection Agency  
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Dallas, TX 75270

Obstruction Evaluation Group  
Federal Aviation Administration  
Southwest Region  
10101 Hillwood Parkway  
Fort Worth, TX 76117-1524

Department of Defense  
Military Aviation and Installation Assurance  
Siting Clearinghouse  
3400 Defense Pentagon, Room 5C646  
Washington, DC 20301-3400  
osd.dod-siting-clearinghouse@mail.mil

**STATE**

David Yoskowitz, Ph.D.  
Executive Director  
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Laura Zebehazy  
Program Leader  
Wildlife Habitat Assessment Program  
Texas Parks and Wildlife Department  
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Austin, TX 78744  
WHAB@tpwd.texas.gov

Dawn Buckingham, M.D.  
Texas Land Commissioner  
Texas General Land Office  
1700 North Congress Avenue  
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Austin, TX 78701-1495

Michael Taylor, P.G.  
Regional Director, Region 3  
Texas Commission on Environmental Quality  
1977 Industrial Blvd.  
Abilene, TX 79602-7833

Joseph Bell  
Executive Director  
Texas Historical Commission  
P.O. Box 12276  
Austin, TX 78711

AGENCIES AND OFFICIALS CONTACT LIST  
PHANTOM HILL TO TIGER 345 KV TRANSMISSION LINE PROJECT

Jessica Pena  
Deputy Executive Administrator  
Water Supply and Infrastructure  
Texas Water Development Board  
P.O. Box 13231  
Austin, TX 78711-3231

Greg Cedillo, P.E.  
Interim District Engineer  
Abilene District  
Texas Department of Transportation  
4250 N. Clack  
Abilene, TX 79601

Dan Harmon  
Director  
Aviation Division  
Texas Department of Transportation  
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Austin, TX 78744

Doug Booher  
Director  
Environmental Affairs Division  
Texas Department of Transportation  
6230 E. Stassney Lane  
Austin, TX 78744

Leslie Savage  
Chief Geologist  
Railroad Commission of Texas  
P.O. Box 12967  
Austin, TX 78711-2967

**JONES COUNTY**

The Honorable Dale Spurgin  
Jones County Judge  
P.O. Box 148  
Anson, TX 79501

Roy Spalding  
Jones County Precinct 1 Commissioner  
1001 Northwest Third Street  
Hamlin, TX 79520

Lonnie Vivian  
Jones County Precinct 2 Commissioner  
1202 S. Orient Street  
Stamford, Texas 79553

Ross Davis  
Jones County Precinct 3 Commissioner  
PO Box 148  
Anson, TX 79501

Joel Spraberry  
Jones County Precinct 4 Commissioner  
PO Box 148  
Anson, TX 79501

Jackie Buske  
Chairman  
California Creek SWCD  
1003 23rd St  
Anson, TX 79501-5203

Jason Bryant  
Agency Manager  
Jones County Farm Bureau  
PO Box 271  
Anson, TX 79501

Michelle Holland  
PAIC  
Jones County Farm Service Agency  
2303 Commercial Avenue  
Anson, TX 79501-5222

**LOCAL**

Troy Hinds  
Anson ISD Superintendent  
Anson Independent School District  
1431 S. Commercial  
Anson, TX 79501

**ADDITIONAL CONTACTS**

Kelly Cheek  
Executive Director – Region 7  
West Central Texas Council of Governments  
3702 Loop 322  
Abilene, TX 79602-7300

AGENCIES AND OFFICIALS CONTACT LIST

PHANTOM HILL TO TIGER 345 kV TRANSMISSION LINE PROJECT

The Nature Conservancy  
Texas Headquarters  
2632 Broadway, Suite 201S  
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Texas@TNC.ORG

Mark Steinbach  
Executive Director  
Texas Land Conservancy  
P.O. Box 162481  
Austin, TX 78716

Lori Olson  
Executive Director  
Texas Land Trust Council  
P.O. Box 2677  
Wimberly, TX 78676

Chad Ellis  
Chief Executive Officer  
Texas Agricultural Land Trust  
P.O. Box 6152  
San Antonio, TX 78209

## Green, Derek J

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**From:** Gray, Natasha A CIV USARMY CESWF (USA) <Natasha.A.Gray@usace.army.mil>  
**Sent:** Monday, February 3, 2025 1:46 PM  
**To:** Green, Derek J  
**Cc:** Sewell, Valerie A CIV USARMY CESWF (USA)  
**Subject:** SWF-2025-00067 (Phantom Hill to Tiger 345-kV Transmission Line)

Dear Mr. Green:

Thank you for your letter received January 28, 2025, concerning a proposal for the construction of 345 kilovolt electric transmission line to interconnect proposed Tiger Solar Development located in Jones County, Texas . The project has been assigned Project Number SWF-2025-00067, please include this number in all future correspondence concerning this project.

Ms. Valerie Sewell 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/enviro/regulatory/introduction/submittal.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. Valerie Sewell by telephone (817) 886-1782, or by email [valerie.sewell@usace.army.mil](mailto:valerie.sewell@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](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/>

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



**FEMA**

FEDERAL EMERGENCY MANAGEMENT AGENCY  
REGION VI  
MITIGATION DIVISION

RE: Request for Information, Lone Star Transmission, LLC Phantom Hill to Tiger  
345-kV Transmission Line Project

### **NOTICE REVIEW/ENVIRONMENTAL CONSULTATION**

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☐ 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.**

**County Contact:**

Scott Chandler, Floodplain Administrator  
(325) 676-6282  
Scott.chandler@abilenetx.com

---

REVIEWER:

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

DATE: February 3, 2025



## Natural Resources Conservation Service

U.S. DEPARTMENT OF AGRICULTURE

### Texas State Office

101 S. Main Street  
Temple, TX, 76501

2/14/2025

Burns & McDonnell  
8911 North Capital of Texas Highway  
Building 3, Suite 3100  
Austin, Texas 78759

Attention: Derek Green, Senior Environmental Scientist

Subject: Proposed Lone Star Transmission, LLC Phantom Hill to Tiger 345-kV Transmission Line Project in Jones  
County, Texas

Thank you for the opportunity to provide input on the potential environmental effects of the Proposed Lone Star Transmission, LLC Phantom Hill to Tiger 345-kV Transmission Line Project. The proposed site has been evaluated and does not involve any USDA-NRCS easements.

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. There is a low to moderate potential for concrete corrosion and a moderate to high potential for steel corrosion for the area. There are few hydric soils (1 to 32%), which can be indicators of wetlands. Although the project area contains prime farmland, installation of transmission lines is considered "minimal activity" therefore not subject to Farmland Protection Policy Act provisions. The water erosion potential ranges from very low to low with some isolated areas of moderate to high. The wind erosion potential is mostly moderate to high.

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 Proposed Lone Star Transmission, LLC Phantom Hill to Tiger 345-kV Transmission Line Project and take measures to protect the soils and water quality.

If you have further questions, please contact me at (254) 742-9951 or by email at [chris.holle@usda.gov](mailto:chris.holle@usda.gov).

Sincerely,

A handwritten signature in cursive script that reads "Chris Holle".

Chris Holle  
USDA/NRCS

Attachment: Lone Star Phantom Hill to Tiger Transmission Line Soil Report



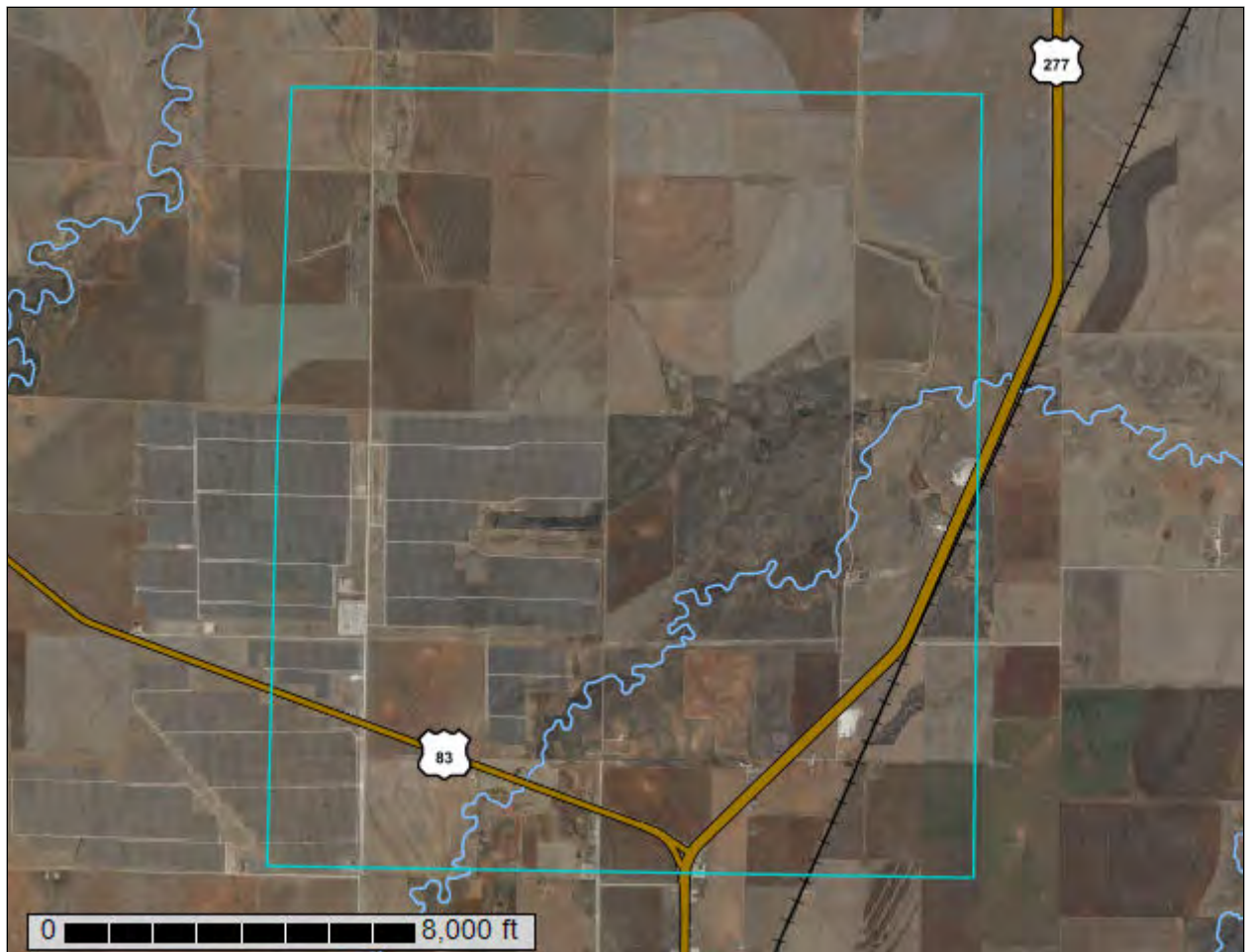
United States  
Department of  
Agriculture

**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 Jones County, Texas



# Preface

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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](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.

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## How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

## Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

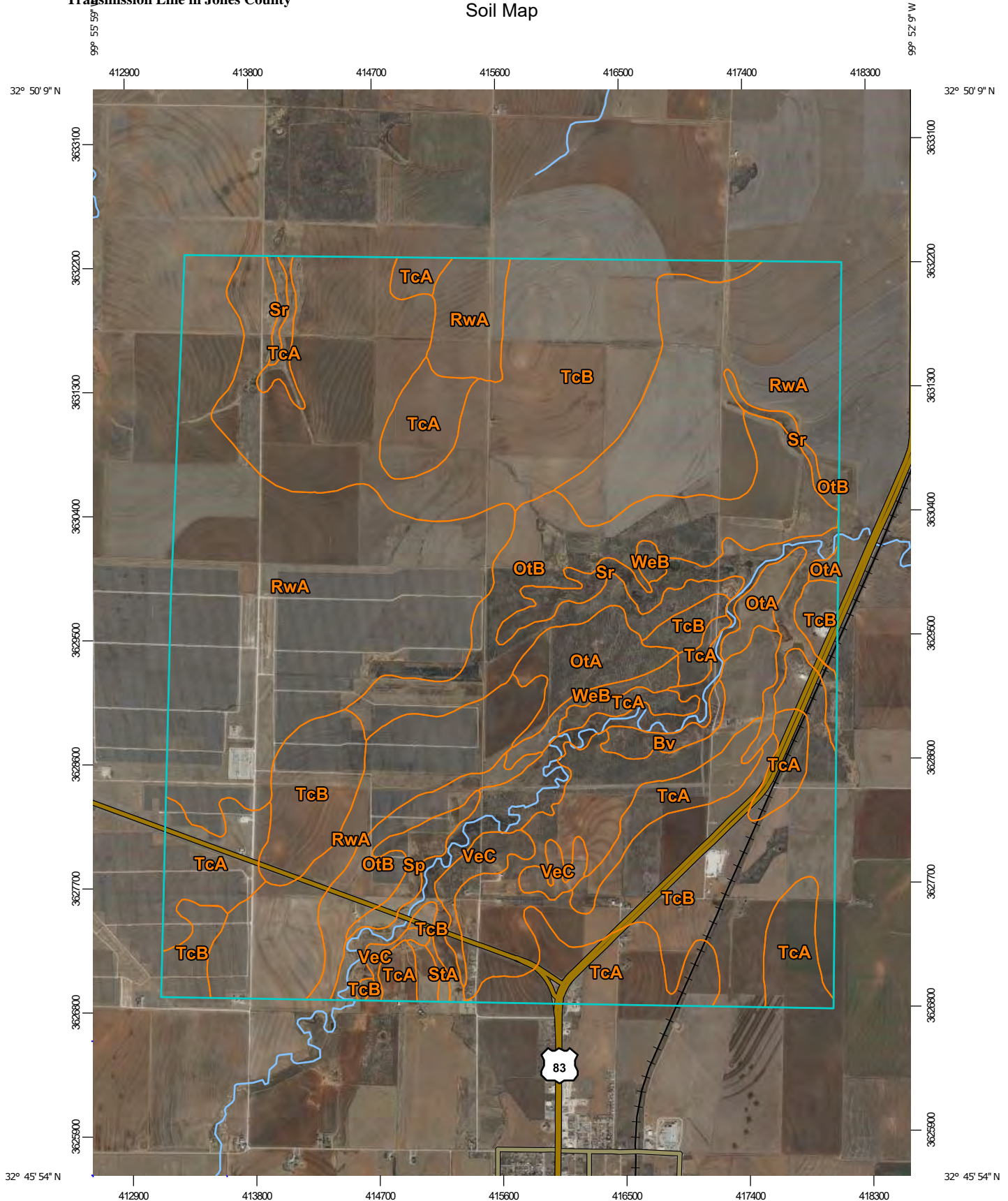
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

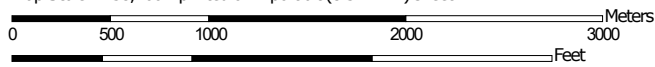
## Soil Map

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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.



Map Scale: 1:38,400 if printed on A portrait (8.5" x 11") sheet.




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

## Custom Soil Resource Report

### 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 1:20,000.

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: Jones County, Texas

Survey Area Data: Version 19, Aug 30, 2024

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

Date(s) aerial images were photographed: Jan 17, 2022—Jan 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background 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
Bv	Knoco-Vernon complex, 3 to 12 percent slopes	38.1	0.6%
OtA	Sagerton clay loam, moist, 0 to 1 percent slopes	169.8	2.6%
OtB	Sagerton clay loam, moist, 1 to 3 percent slopes	614.8	9.5%
RwA	Rowena clay loam, dry, 0 to 1 percent slopes	2,176.9	33.5%
Sp	Spur loam, moist, 0 to 1 percent slopes, occasionally flooded	56.9	0.9%
Sr	Spur soils, broken	396.5	6.1%
StA	Stamford clay, 1 to 3 percent slopes	15.4	0.2%
TcA	Tillman clay loam, 0 to 1 percent slopes	749.2	11.5%
TcB	Tillman clay loam, 1 to 3 percent slopes	2,142.6	32.9%
VeC	Vernon clay, 3 to 8 percent slopes	94.7	1.5%
WeB	Weymouth clay loam, moist, 1 to 3 percent slopes	50.5	0.8%
<b>Totals for Area of Interest</b>		<b>6,505.5</b>	<b>100.0%</b>

## 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

## Custom Soil Resource Report

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.

## Jones County, Texas

### Bv—Knoco-Vernon complex, 3 to 12 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2t028  
*Elevation:* 900 to 1,900 feet  
*Mean annual precipitation:* 25 to 32 inches  
*Mean annual air temperature:* 62 to 65 degrees F  
*Frost-free period:* 210 to 230 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Knoco and similar soils:* 55 percent  
*Vernon and similar soils:* 33 percent  
*Minor components:* 12 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Knoco

##### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Side slope, base slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Clayey residuum weathered from claystone

##### Typical profile

*A - 0 to 9 inches:* clay  
*C - 9 to 19 inches:* clay  
*Cd - 19 to 60 inches:* clay

##### Properties and qualities

*Slope:* 3 to 12 percent  
*Depth to restrictive feature:* 3 to 20 inches to densic 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:* 8 percent  
*Gypsum, maximum content:* 15 percent  
*Maximum salinity:* Nonsaline to moderately saline (1.0 to 8.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 8.0  
*Available water supply, 0 to 60 inches:* Very low (about 2.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* D  
*Ecological site:* R078CY114TX - Shallow Red Clay 23-31" PZ  
*Hydric soil rating:* No

## Description of Vernon

### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Side slope, base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Parent material:* Clayey residuum weathered from claystone

### Typical profile

*A - 0 to 5 inches:* clay  
*Bk - 5 to 25 inches:* clay  
*Cd - 25 to 80 inches:* clay

### Properties and qualities

*Slope:* 3 to 12 percent  
*Depth to restrictive feature:* 20 to 40 inches to densic 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:* 20 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to moderately saline (1.0 to 8.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 25.0  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* R078CY112TX - Red Clay (South) 23-30" PZ  
*Hydric soil rating:* No

## Minor Components

### Badland

*Percent of map unit:* 6 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Side slope, base slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

### Tillman

*Percent of map unit:* 3 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ

*Hydric soil rating:* No

**Jolly**

*Percent of map unit:* 2 percent

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Ecological site:* R080BY157TX - Sandstone Hill 26-33" PZ

*Hydric soil rating:* No

**Mangum**

*Percent of map unit:* 1 percent

*Landform:* Flood plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Concave, linear

*Ecological site:* R078CY094TX - Clayey Bottomland 23-30" PZ

*Hydric soil rating:* No

**OtA—Sagerton clay loam, moist, 0 to 1 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2t00p

*Elevation:* 1,120 to 2,320 feet

*Mean annual precipitation:* 24 to 29 inches

*Mean annual air temperature:* 62 to 65 degrees F

*Frost-free period:* 210 to 240 days

*Farmland classification:* All areas are prime farmland

**Map Unit Composition**

*Sagerton, moist, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Sagerton, Moist**

**Setting**

*Landform:* Terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Calcareous loamy alluvium

**Typical profile**

*A - 0 to 11 inches:* clay loam

*Bt1 - 11 to 22 inches:* clay

*Bt2 - 22 to 33 inches:* clay

*Btk1 - 33 to 47 inches:* clay loam

*Btk2 - 47 to 80 inches: 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: 50 percent*

*Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)*

*Sodium adsorption ratio, maximum: 12.0*

*Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)*

**Interpretive groups**

*Land capability classification (irrigated): 1*

*Land capability classification (nonirrigated): 2c*

*Hydrologic Soil Group: C*

*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*

*Hydric soil rating: No*

**Minor Components**

**Rotan**

*Percent of map unit: 7 percent*

*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*

*Hydric soil rating: No*

**Miles**

*Percent of map unit: 4 percent*

*Ecological site: R078CY110TX - Sandy Loam 23-31" PZ*

*Hydric soil rating: No*

**Tillman**

*Percent of map unit: 4 percent*

*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*

*Hydric soil rating: No*

**OtB—Sagerton clay loam, moist, 1 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol: 2t00q*

*Elevation: 1,070 to 2,370 feet*

*Mean annual precipitation: 24 to 29 inches*

*Mean annual air temperature: 62 to 65 degrees F*

*Frost-free period: 210 to 240 days*

*Farmland classification: All areas are prime farmland*

## Map Unit Composition

*Sagerton, moist, and similar soils: 85 percent*

*Minor components: 15 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Sagerton, Moist

### Setting

*Landform: Terraces*

*Landform position (three-dimensional): Tread*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Calcareous loamy alluvium*

### Typical profile

*A - 0 to 6 inches: clay loam*

*Bt1 - 6 to 15 inches: clay*

*Bt2 - 15 to 38 inches: clay loam*

*Btk1 - 38 to 62 inches: clay loam*

*Btk2 - 62 to 80 inches: 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: 50 percent*

*Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)*

*Sodium adsorption ratio, maximum: 12.0*

*Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)*

### Interpretive groups

*Land capability classification (irrigated): 2e*

*Land capability classification (nonirrigated): 2e*

*Hydrologic Soil Group: C*

*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*

*Hydric soil rating: No*

## Minor Components

### Rotan

*Percent of map unit: 7 percent*

*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*

*Hydric soil rating: No*

### Tillman

*Percent of map unit: 4 percent*

*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*

*Hydric soil rating: No*

### Miles

*Percent of map unit: 4 percent*

*Ecological site:* R078CY110TX - Sandy Loam 23-31" PZ  
*Hydric soil rating:* No

## **RwA—Rowena clay loam, dry, 0 to 1 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2t01g  
*Elevation:* 1,200 to 2,300 feet  
*Mean annual precipitation:* 24 to 27 inches  
*Mean annual air temperature:* 63 to 65 degrees F  
*Frost-free period:* 200 to 230 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

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

### **Description of Rowena, Dry**

#### **Setting**

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

#### **Typical profile**

*A - 0 to 10 inches:* clay loam  
*Bw - 10 to 36 inches:* clay  
*Bk - 36 to 64 inches:* clay  
*BCK - 64 to 80 inches:* 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:* 60 percent  
*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 3.0  
*Available water supply, 0 to 60 inches:* High (about 9.5 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 1  
*Land capability classification (nonirrigated):* 1

*Hydrologic Soil Group:* C  
*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ  
*Hydric soil rating:* No

#### **Minor Components**

##### **Abilene**

*Percent of map unit:* 4 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ  
*Hydric soil rating:* No

##### **Sagerton**

*Percent of map unit:* 3 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ  
*Hydric soil rating:* No

##### **Leeray**

*Percent of map unit:* 2 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* R078CY095TX - Clay Flat 23-30" PZ  
*Hydric soil rating:* No

##### **Unnamed, hydric**

*Percent of map unit:* 1 percent  
*Landform:* Depressions on terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Ecological site:* R078CY102TX - Lakebed 23-30" PZ  
*Hydric soil rating:* Yes

#### **Sp—Spur loam, moist, 0 to 1 percent slopes, occasionally flooded**

##### **Map Unit Setting**

*National map unit symbol:* 2wt6w  
*Elevation:* 1,450 to 2,150 feet  
*Mean annual precipitation:* 25 to 30 inches  
*Mean annual air temperature:* 59 to 65 degrees F  
*Frost-free period:* 200 to 235 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Spur and similar soils:* 92 percent

*Minor components:* 8 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Spur

#### Setting

*Landform:* Flood plains on river valleys

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loamy alluvium

#### Typical profile

*A - 0 to 11 inches:* loam

*Bk1 - 11 to 43 inches:* loam

*Bk2 - 43 to 80 inches:* loam

#### 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  
(0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* Occasional

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 15 percent

*Gypsum, maximum content:* 2 percent

*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 1.0

*Available water supply, 0 to 60 inches:* High (about 10.3 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w

*Land capability classification (nonirrigated):* 2w

*Hydrologic Soil Group:* B

*Ecological site:* R078CY099TX - Draw 23-30" PZ

*Hydric soil rating:* No

### Minor Components

#### Westola

*Percent of map unit:* 4 percent

*Landform:* Flood plains on river valleys

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear, convex

*Ecological site:* R078BY080TX - Loamy Bottomland 19-26" PZ

*Hydric soil rating:* No

#### Clairemont

*Percent of map unit:* 3 percent

*Landform:* Flood plains on river valleys

*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R078BY080TX - Loamy Bottomland 19-26" PZ  
*Hydric soil rating:* No

**Unnamed, hydric**

*Percent of map unit:* 1 percent  
*Landform:* Sloughs on flood plains on river valleys  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Ecological site:* R078BY078TX - Lakebed 19-26" PZ  
*Hydric soil rating:* Yes

**Sr—Spur soils, broken**

**Map Unit Setting**

*National map unit symbol:* dc66  
*Elevation:* 1,000 to 3,000 feet  
*Mean annual precipitation:* 18 to 30 inches  
*Mean annual air temperature:* 57 to 64 degrees F  
*Frost-free period:* 185 to 225 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

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

**Description of Spur**

**Setting**

*Landform:* Flood-plain steps on river valleys  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loamy alluvium of holocene age

**Typical profile**

*A - 0 to 18 inches:* loam  
*Bt - 18 to 60 inches:* clay loam

**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:* Frequent  
*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 10 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):* None specified  
*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* B  
*Ecological site:* R078CY099TX - Draw 23-30" PZ  
*Hydric soil rating:* No

**StA—Stamford clay, 1 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2vt8j  
*Elevation:* 1,000 to 2,200 feet  
*Mean annual precipitation:* 24 to 28 inches  
*Mean annual air temperature:* 62 to 65 degrees F  
*Frost-free period:* 210 to 230 days  
*Farmland classification:* Prime farmland if irrigated

**Map Unit Composition**

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

**Description of Stamford**

**Setting**

*Landform:* Pediments  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Calcareous clayey slope alluvium over residuum weathered from claystone and/or siltstone

**Typical profile**

*A - 0 to 9 inches:* clay  
*Bkss - 9 to 35 inches:* clay  
*Cd - 35 to 80 inches:* clay

**Properties and qualities**

*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 28 to 54 inches to densic 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:* 20 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 2.0  
*Available water supply, 0 to 60 inches:* Low (about 5.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* D  
*Ecological site:* R078CY095TX - Clay Flat 23-30" PZ  
*Hydric soil rating:* No

**Minor Components**

**Vernon**

*Percent of map unit:* 5 percent  
*Landform:* Pediments  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* R078CY112TX - Red Clay (South) 23-30" PZ  
*Hydric soil rating:* No

**Tillman**

*Percent of map unit:* 5 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ  
*Hydric soil rating:* No

**TcA—Tillman clay loam, 0 to 1 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2w5qt  
*Elevation:* 1,000 to 2,200 feet  
*Mean annual precipitation:* 22 to 28 inches  
*Mean annual air temperature:* 57 to 64 degrees F  
*Frost-free period:* 180 to 230 days  
*Farmland classification:* All areas are prime farmland

**Map Unit Composition**

*Tillman and similar soils:* 95 percent  
*Minor components:* 5 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Tillman

### Setting

*Landform:* Paleoterraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Calcareous clayey and loamy alluvium derived from claystone

### Typical profile

*Ap - 0 to 8 inches:* clay loam  
*Bt - 8 to 15 inches:* clay loam  
*Btk - 15 to 62 inches:* clay  
*2BC - 62 to 75 inches:* clay  
*2C - 75 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:* 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:* 30 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 21.0  
*Available water supply, 0 to 60 inches:* Moderate (about 8.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* 2s  
*Land capability classification (nonirrigated):* 2s  
*Hydrologic Soil Group:* C  
*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ  
*Hydric soil rating:* No

## Minor Components

### Hollister

*Percent of map unit:* 3 percent  
*Landform:* Paleoterraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ  
*Hydric soil rating:* No

### Tilvern

*Percent of map unit:* 2 percent  
*Landform:* Paleoterraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

*Ecological site:* R078BY090TX - Shallow Clay 19-26" PZ  
*Hydric soil rating:* No

## **TcB—Tillman clay loam, 1 to 3 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2w5qv  
*Elevation:* 1,000 to 2,200 feet  
*Mean annual precipitation:* 22 to 28 inches  
*Mean annual air temperature:* 57 to 64 degrees F  
*Frost-free period:* 180 to 230 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

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

### **Description of Tillman**

#### **Setting**

*Landform:* Paleoterraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Calcareous clayey and loamy alluvium derived from claystone

#### **Typical profile**

*Ap - 0 to 7 inches:* clay loam  
*Bt - 7 to 22 inches:* clay loam  
*Btk - 22 to 62 inches:* clay  
*2BC - 62 to 80 inches:* 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:* 30 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 20.0  
*Available water supply, 0 to 60 inches:* Moderate (about 8.7 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 2

*Land capability classification (nonirrigated): 2e*  
*Hydrologic Soil Group: C*  
*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*  
*Hydric soil rating: No*

### Minor Components

#### Hollister

*Percent of map unit: 6 percent*  
*Landform: Paleoterraces*  
*Landform position (three-dimensional): Tread*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*  
*Hydric soil rating: No*

#### Tilvern

*Percent of map unit: 4 percent*  
*Landform: Paleoterraces*  
*Landform position (three-dimensional): Tread*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Ecological site: R078BY090TX - Shallow Clay 19-26" PZ*  
*Hydric soil rating: No*

## **VeC—Vernon clay, 3 to 8 percent slopes**

### Map Unit Setting

*National map unit symbol: 2t01z*  
*Elevation: 900 to 2,000 feet*  
*Mean annual precipitation: 25 to 30 inches*  
*Mean annual air temperature: 62 to 67 degrees F*  
*Frost-free period: 210 to 230 days*  
*Farmland classification: Not prime farmland*

### Map Unit Composition

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

### Description of Vernon

#### Setting

*Landform: Hillslopes*  
*Landform position (two-dimensional): Backslope, footslope*  
*Landform position (three-dimensional): Side slope, base slope*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Parent material: Clayey residuum weathered from claystone*

### Typical profile

*A - 0 to 7 inches:* clay  
*Bk - 7 to 26 inches:* clay  
*Cd - 26 to 80 inches:* clay

### Properties and qualities

*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* 20 to 40 inches to densic 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:* 20 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to moderately saline (1.0 to 8.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 25.0  
*Available water supply, 0 to 60 inches:* Low (about 3.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* R078CY112TX - Red Clay (South) 23-30" PZ  
*Hydric soil rating:* No

### Minor Components

#### Knoco

*Percent of map unit:* 6 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Ecological site:* R078CY114TX - Shallow Red Clay 23-31" PZ  
*Hydric soil rating:* No

#### Burford

*Percent of map unit:* 3 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* R078CY056OK - Loamy Upland  
*Hydric soil rating:* No

#### Tillman

*Percent of map unit:* 1 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

*Ecological site:* R078CY096TX - Clay Loam 23-30" PZ  
*Hydric soil rating:* No

## **WeB—Weymouth clay loam, moist, 1 to 3 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2t01k  
*Elevation:* 1,500 to 2,150 feet  
*Mean annual precipitation:* 24 to 26 inches  
*Mean annual air temperature:* 64 to 65 degrees F  
*Frost-free period:* 200 to 235 days  
*Farmland classification:* Prime farmland if irrigated

### **Map Unit Composition**

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

### **Description of Weymouth**

#### **Setting**

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Summit, shoulder, footslope  
*Landform position (three-dimensional):* Interfluve, base slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Calcareous, loamy alluvium and/or colluvium over dense, noncemented mudstone

#### **Typical profile**

*A - 0 to 6 inches:* clay loam  
*Bk1 - 6 to 14 inches:* clay loam  
*Bk2 - 14 to 36 inches:* clay loam  
*Cd - 36 to 80 inches:* clay loam

#### **Properties and qualities**

*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to densic bedrock  
*Drainage class:* 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:* 40 percent  
*Gypsum, maximum content:* 1 percent  
*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 5.0  
*Available water supply, 0 to 60 inches:* Low (about 5.6 inches)

### **Interpretive groups**

*Land capability classification (irrigated): 3s*  
*Land capability classification (nonirrigated): 3s*  
*Hydrologic Soil Group: C*  
*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*  
*Hydric soil rating: No*

### **Minor Components**

#### **Sagerton**

*Percent of map unit: 5 percent*  
*Landform: Terraces*  
*Landform position (three-dimensional): Tread*  
*Down-slope shape: Linear*  
*Across-slope shape: Convex*  
*Ecological site: R078CY096TX - Clay Loam 23-30" PZ*  
*Hydric soil rating: No*

#### **Vernon**

*Percent of map unit: 4 percent*  
*Landform: Hillslopes*  
*Landform position (two-dimensional): Summit, shoulder, backslope*  
*Landform position (three-dimensional): Interfluve, side slope*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Ecological site: R078CY112TX - Red Clay (South) 23-30" PZ*  
*Hydric soil rating: No*

#### **Pitzer**

*Percent of map unit: 1 percent*  
*Landform: Terraces*  
*Landform position (three-dimensional): Tread*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Ecological site: R078CY111TX - Shallow 23-30" PZ*  
*Hydric soil rating: No*

# **Soil Information for All Uses**

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## **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**

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.

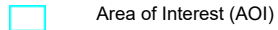
The risk of corrosion is expressed as "low," "moderate," or "high."



## Custom Soil Resource Report

### MAP LEGEND

#### Area of Interest (AOI)



Area of Interest (AOI)

#### Background



Aerial Photography

#### 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

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: Jones County, Texas

Survey Area Data: Version 19, Aug 30, 2024

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

Date(s) aerial images were photographed: Jan 17, 2022—Jan 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

**Table—Corrosion of Concrete**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bv	Knoco-Vernon complex, 3 to 12 percent slopes	Moderate	38.1	0.6%
OtA	Sagerton clay loam, moist, 0 to 1 percent slopes	Low	169.8	2.6%
OtB	Sagerton clay loam, moist, 1 to 3 percent slopes	Low	614.8	9.5%
RwA	Rowena clay loam, dry, 0 to 1 percent slopes	Moderate	2,176.9	33.5%
Sp	Spur loam, moist, 0 to 1 percent slopes, occasionally flooded	Low	56.9	0.9%
Sr	Spur soils, broken	Low	396.5	6.1%
StA	Stamford clay, 1 to 3 percent slopes	Moderate	15.4	0.2%
TcA	Tillman clay loam, 0 to 1 percent slopes	Moderate	749.2	11.5%
TcB	Tillman clay loam, 1 to 3 percent slopes	Moderate	2,142.6	32.9%
VeC	Vernon clay, 3 to 8 percent slopes	Moderate	94.7	1.5%
WeB	Weymouth clay loam, moist, 1 to 3 percent slopes	Moderate	50.5	0.8%
<b>Totals for Area of Interest</b>			<b>6,505.5</b>	<b>100.0%</b>

## Rating Options—Corrosion of Concrete

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

## Corrosion of Steel

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.

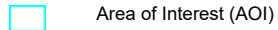
The risk of corrosion is expressed as "low," "moderate," or "high."



## Custom Soil Resource Report

### MAP LEGEND

#### Area of Interest (AOI)



Area of Interest (AOI)

#### Background



Aerial Photography

#### 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

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: Jones County, Texas

Survey Area Data: Version 19, Aug 30, 2024

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

Date(s) aerial images were photographed: Jan 17, 2022—Jan 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

**Table—Corrosion of Steel**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bv	Knoco-Vernon complex, 3 to 12 percent slopes	High	38.1	0.6%
OtA	Sagerton clay loam, moist, 0 to 1 percent slopes	Moderate	169.8	2.6%
OtB	Sagerton clay loam, moist, 1 to 3 percent slopes	Moderate	614.8	9.5%
RwA	Rowena clay loam, dry, 0 to 1 percent slopes	High	2,176.9	33.5%
Sp	Spur loam, moist, 0 to 1 percent slopes, occasionally flooded	Low	56.9	0.9%
Sr	Spur soils, broken	Moderate	396.5	6.1%
StA	Stamford clay, 1 to 3 percent slopes	High	15.4	0.2%
TcA	Tillman clay loam, 0 to 1 percent slopes	High	749.2	11.5%
TcB	Tillman clay loam, 1 to 3 percent slopes	High	2,142.6	32.9%
VeC	Vernon clay, 3 to 8 percent slopes	High	94.7	1.5%
WeB	Weymouth clay loam, moist, 1 to 3 percent slopes	Moderate	50.5	0.8%
<b>Totals for Area of Interest</b>			<b>6,505.5</b>	<b>100.0%</b>

## Rating Options—Corrosion of Steel

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

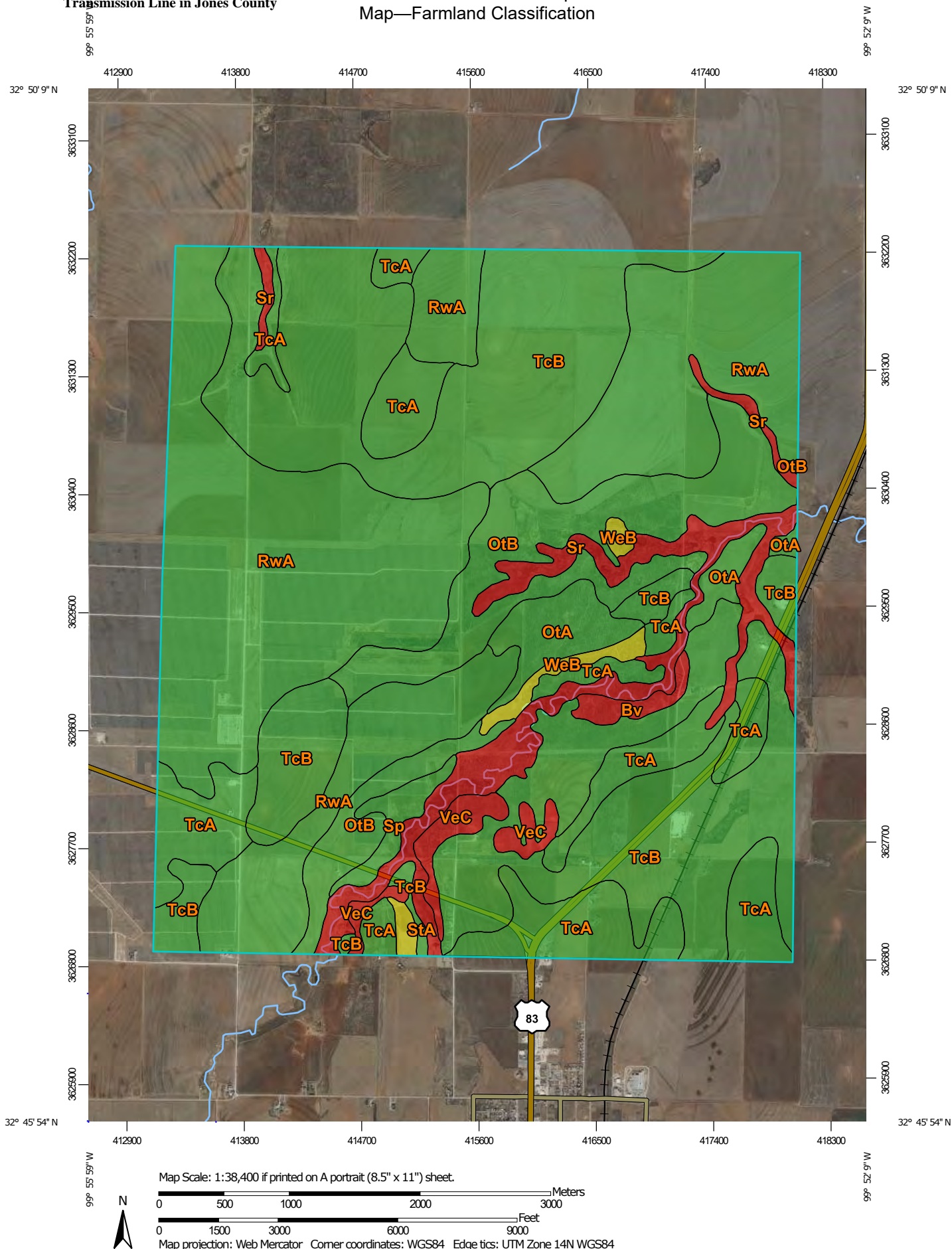
## Land Classifications

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.

## **Farmland Classification**

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.


Custom Soil Resource Report  
 Map—Farmland Classification



# Custom Soil Resource Report









## MAP LEGEND








### Area of Interest (AOI)






 Area of Interest (AOI)








### Soils



#### Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season









-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

### Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

# Custom Soil Resource Report

	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium		Farmland of unique importance		Prime farmland if subsoiled, completely removing the root inhibiting soil layer
	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season	<b>Soil Rating Points</b>			Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
	Prime farmland if irrigated and reclaimed of excess salts and sodium		Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season		Not prime farmland		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if thawed		Prime farmland if drained		Farmland of statewide importance
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of local importance		Prime farmland if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if drained
	Farmland of statewide importance, if irrigated				Farmland of local importance, if irrigated		Prime farmland if irrigated		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
							Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated
							Prime farmland if irrigated and drained		
							Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		

## Custom Soil Resource Report

<p> Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if irrigated and drained</p> <p> Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer</p> <p> Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60</p>	<p> Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium</p> <p> Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season</p> <p> Farmland of statewide importance, if warm enough</p> <p> Farmland of statewide importance, if thawed</p> <p> Farmland of local importance</p> <p> Farmland of local importance, if irrigated</p>	<p> Farmland of unique importance</p> <p> Not rated or not available</p> <p><b>Water Features</b></p> <p> Streams and Canals</p> <p><b>Transportation</b></p> <p> Rails</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p> <p><b>Background</b></p> <p> Aerial Photography</p>	<p>The soil surveys that comprise your AOI were mapped at 1:20,000.</p> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>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.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Jones County, Texas Survey Area Data: Version 19, Aug 30, 2024</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Jan 17, 2022—Jan 22, 2022</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>
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**Table—Farmland Classification**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bv	Knoco-Vernon complex, 3 to 12 percent slopes	Not prime farmland	38.1	0.6%
OtA	Sagerton clay loam, moist, 0 to 1 percent slopes	All areas are prime farmland	169.8	2.6%
OtB	Sagerton clay loam, moist, 1 to 3 percent slopes	All areas are prime farmland	614.8	9.5%
RwA	Rowena clay loam, dry, 0 to 1 percent slopes	All areas are prime farmland	2,176.9	33.5%
Sp	Spur loam, moist, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland	56.9	0.9%
Sr	Spur soils, broken	Not prime farmland	396.5	6.1%
StA	Stamford clay, 1 to 3 percent slopes	Prime farmland if irrigated	15.4	0.2%
TcA	Tillman clay loam, 0 to 1 percent slopes	All areas are prime farmland	749.2	11.5%
TcB	Tillman clay loam, 1 to 3 percent slopes	All areas are prime farmland	2,142.6	32.9%
VeC	Vernon clay, 3 to 8 percent slopes	Not prime farmland	94.7	1.5%
WeB	Weymouth clay loam, moist, 1 to 3 percent slopes	Prime farmland if irrigated	50.5	0.8%
<b>Totals for Area of Interest</b>			<b>6,505.5</b>	<b>100.0%</b>

## Rating Options—Farmland Classification

*Aggregation Method:* No Aggregation Necessary

*Tie-break Rule:* Lower

## Hydric Rating by Map Unit

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.

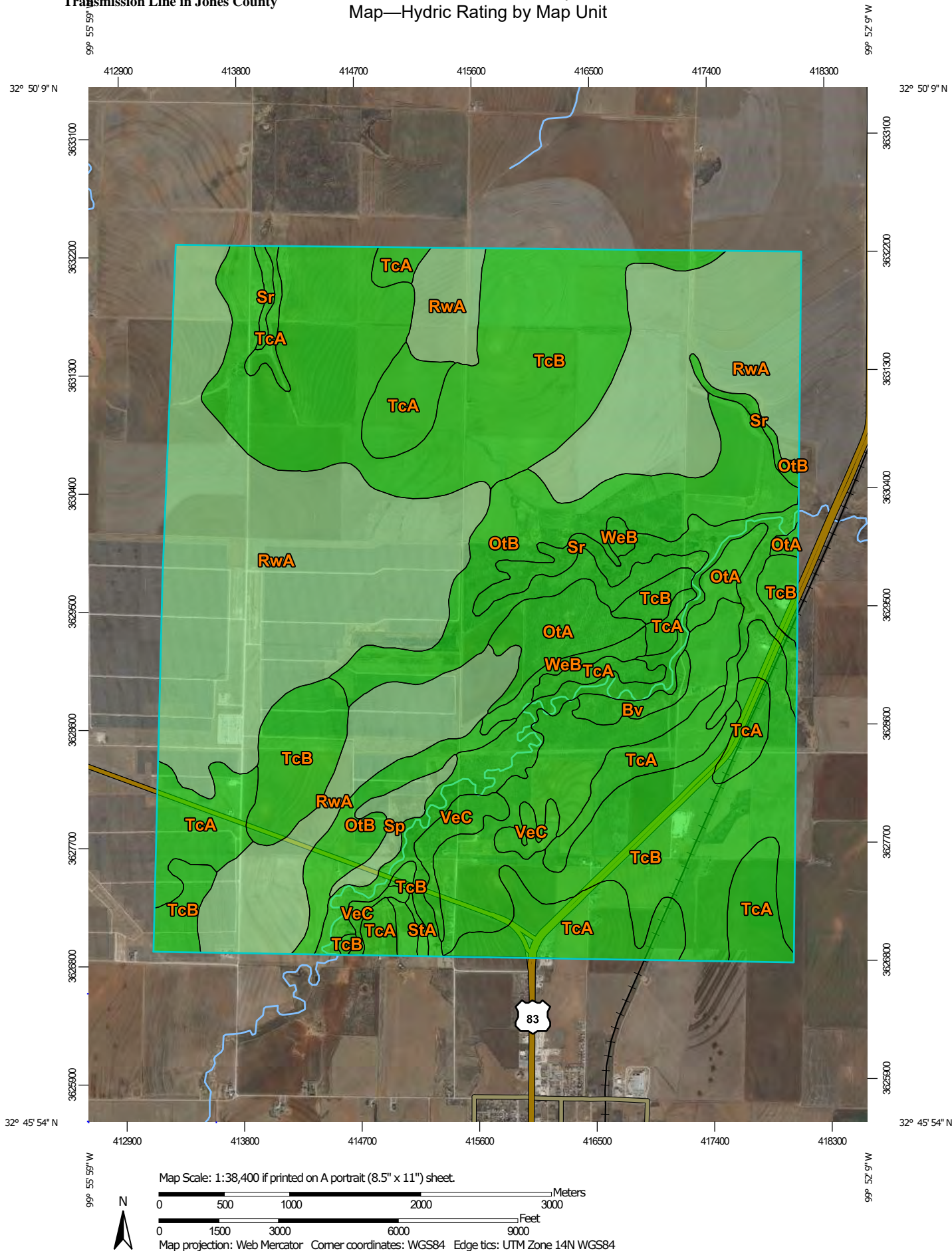
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

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



## Custom Soil Resource Report







### 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 1:20,000.

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: Jones County, Texas  
 Survey Area Data: Version 19, Aug 30, 2024

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

Date(s) aerial images were photographed: Jan 17, 2022—Jan 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

**Table—Hydric Rating by Map Unit**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bv	Knoco-Vernon complex, 3 to 12 percent slopes	0	38.1	0.6%
OtA	Sagerton clay loam, moist, 0 to 1 percent slopes	0	169.8	2.6%
OtB	Sagerton clay loam, moist, 1 to 3 percent slopes	0	614.8	9.5%
RwA	Rowena clay loam, dry, 0 to 1 percent slopes	1	2,176.9	33.5%
Sp	Spur loam, moist, 0 to 1 percent slopes, occasionally flooded	1	56.9	0.9%
Sr	Spur soils, broken	0	396.5	6.1%
StA	Stamford clay, 1 to 3 percent slopes	0	15.4	0.2%
TcA	Tillman clay loam, 0 to 1 percent slopes	0	749.2	11.5%
TcB	Tillman clay loam, 1 to 3 percent slopes	0	2,142.6	32.9%
VeC	Vernon clay, 3 to 8 percent slopes	0	94.7	1.5%
WeB	Weymouth clay loam, moist, 1 to 3 percent slopes	0	50.5	0.8%
<b>Totals for Area of Interest</b>			<b>6,505.5</b>	<b>100.0%</b>

## Rating Options—Hydric Rating by Map Unit

*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)

"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 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

The soil surveys that comprise your AOI were mapped at 1:20,000.

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)

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Survey Area Data: Version 19, Aug 30, 2024

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

Date(s) aerial images were photographed: Jan 17, 2022—Jan 22, 2022

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## Tables—Water Erosion Potential (TX)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Bv	Knoco-Vernon complex, 3 to 12 percent slopes	High water erosion potential	Knoco (55%)	LS factor (1.00)	38.1	0.6%
				Percs slowly (1.00)		
				Organic matter (0.93)		
				Silt content (0.55)		
OtA	Sagerton clay loam, moist, 0 to 1 percent slopes	Very low water erosion potential	Sagerton, moist (85%)	Percs slowly (0.99)	169.8	2.6%
				Organic matter (0.95)		
				Silt content (0.73)		
OtB	Sagerton clay loam, moist, 1 to 3 percent slopes	Low water erosion potential	Sagerton, moist (85%)	Percs slowly (0.99)	614.8	9.5%
				Organic matter (0.95)		
				Silt content (0.67)		
				LS factor (0.15)		
RwA	Rowena clay loam, dry, 0 to 1 percent slopes	Very low water erosion potential	Rowena, dry (90%)	Percs slowly (0.99)	2,176.9	33.5%
				Organic matter (0.98)		
				Silt content (0.63)		
Sp	Spur loam, moist, 0 to 1 percent slopes, occasionally flooded	Very low water erosion potential	Spur (92%)	Organic matter (0.96)	56.9	0.9%
				Percs slowly (0.91)		
				Silt content (0.73)		
Sr	Spur soils, broken	Very low water erosion potential	Spur (100%)	Organic matter (0.97)	396.5	6.1%
				Percs slowly (0.92)		
				Silt content (0.75)		
StA	Stamford clay, 1 to 3 percent slopes	Low water erosion potential	Stamford (90%)	Percs slowly (1.00)	15.4	0.2%
				Organic matter (0.94)		
				Silt content (0.60)		
				LS factor (0.15)		
TcA	Tillman clay loam, 0 to 1 percent slopes	Very low water erosion potential	Tillman (95%)	Percs slowly (0.99)	749.2	11.5%
				Silt content (0.98)		

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Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Organic matter (0.96)		
				LS factor (0.00)		
TcB	Tillman clay loam, 1 to 3 percent slopes	Very low water erosion potential	Tillman (90%)	Percs slowly (1.00)	2,142.6	32.9%
				Silt content (0.97)		
				Organic matter (0.96)		
				LS factor (0.10)		
VeC	Vernon clay, 3 to 8 percent slopes	Moderate water erosion potential	Vernon (90%)	LS factor (1.00)	94.7	1.5%
				Percs slowly (1.00)		
				Organic matter (0.94)		
				Silt content (0.48)		
WeB	Weymouth clay loam, moist, 1 to 3 percent slopes	Low water erosion potential	Weymouth (90%)	Organic matter (0.95)	50.5	0.8%
				Percs slowly (0.92)		
				Silt content (0.87)		
				LS factor (0.15)		
<b>Totals for Area of Interest</b>					<b>6,505.5</b>	<b>100.0%</b>

Rating	Acres in AOI	Percent of AOI
Very low water erosion potential	5,691.9	87.5%
Low water erosion potential	680.6	10.5%
Moderate water erosion potential	94.7	1.5%
High water erosion potential	38.1	0.6%
<b>Totals for Area of Interest</b>	<b>6,505.5</b>	<b>100.0%</b>

## Rating Options—Water Erosion Potential (TX)

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

## Wind Erosion Potential (TX)

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"

## Custom Soil Resource Report

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).

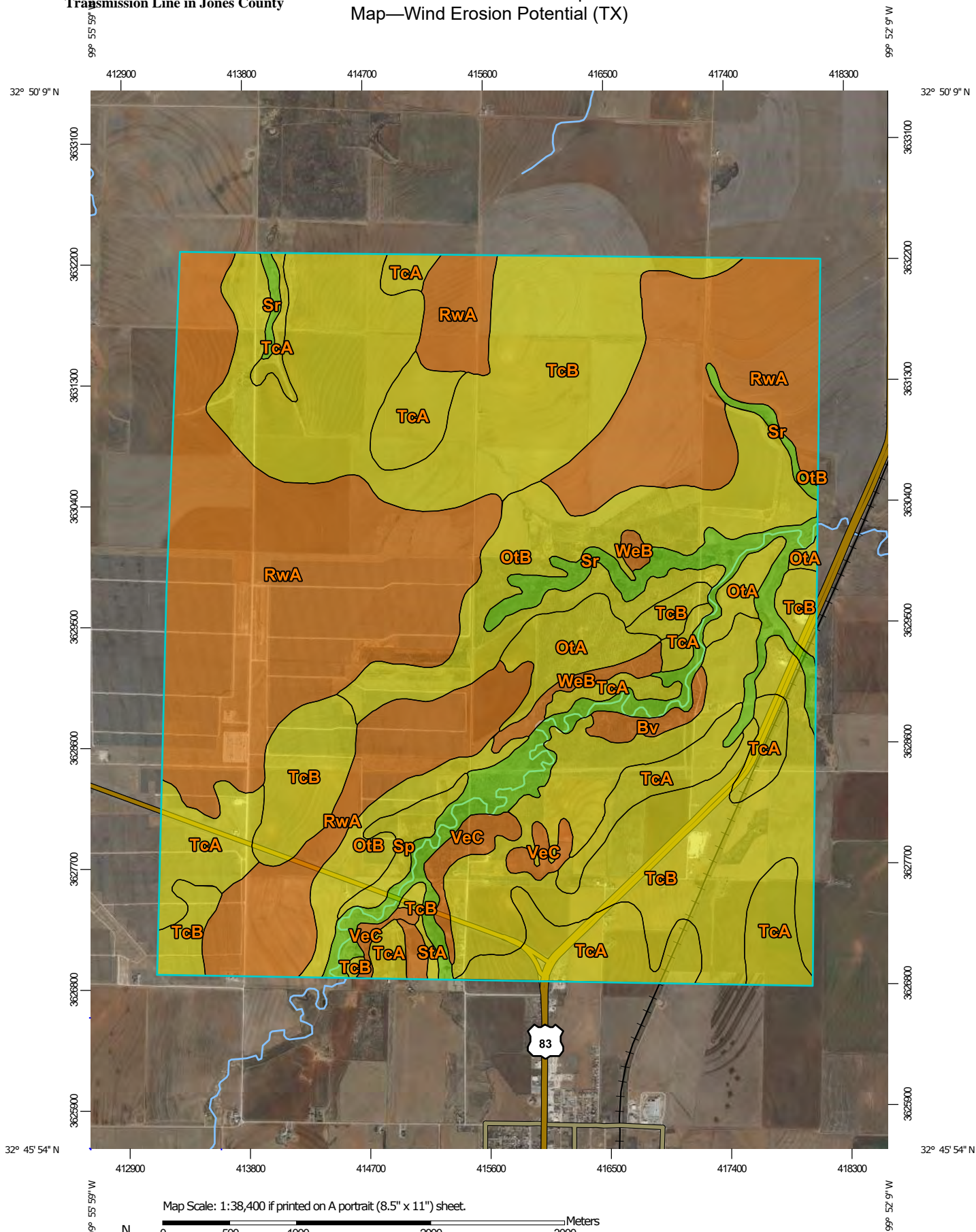
The ratings are both verbal and numerical. The potential degree to which a soil is susceptible to wind erosion will range from "very high" to "very low" (from 1.0 to 0.0). Soils that have favorable surface particle size, high organic matter content, or protective coarse fragments will have "very low" 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.

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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)



## Custom Soil Resource Report







### 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 1:20,000.

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: Jones County, Texas  
Survey Area Data: Version 19, Aug 30, 2024

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

Date(s) aerial images were photographed: Jan 17, 2022—Jan 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Tables—Wind Erosion Potential (TX)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Bv	Knoco-Vernon complex, 3 to 12 percent slopes	High wind erosion potential	Knoco (55%)	Clay content of surface (0.85)	38.1	0.6%
				Silt content of surface (0.02)		
			Vernon (33%)	Clay content of surface (0.85)		
				Carbonate content of surface (0.43)		
				Silt content of surface (0.06)		
				Rock fragment content of surface (0.00)		
			Badland (6%)	Clay content of surface (0.85)		
				Silt content of surface (0.02)		
OtA	Sagerton clay loam, moist, 0 to 1 percent slopes	Moderate wind erosion potential	Sagerton, moist (85%)	Clay content of surface (0.59)	169.8	2.6%
				Sand content of surface (0.28)		
				Silt content of surface (0.06)		
				Rock fragment content of surface (0.00)		
OtB	Sagerton clay loam, moist, 1 to 3 percent slopes	Moderate wind erosion potential	Sagerton, moist (85%)	Clay content of surface (0.59)	614.8	9.5%
				Sand content of surface (0.28)		
				Silt content of surface (0.06)		
				Rock fragment content of surface (0.00)		
RwA	Rowena clay loam, dry, 0 to 1 percent slopes	High wind erosion potential	Rowena, dry (90%)	Clay content of surface (0.84)	2,176.9	33.5%
				Sand content of surface (0.13)		
				Organic matter content of surface (0.05)		
				Silt content of surface (0.04)		

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Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Sp	Spur loam, moist, 0 to 1 percent slopes, occasionally flooded	Moderate wind erosion potential	Spur (92%)	Sand content of surface (0.51)	56.9	0.9%
				Clay content of surface (0.18)		
				Silt content of surface (0.05)		
Sr	Spur soils, broken	Low wind erosion potential	Spur (100%)	Sand content of surface (0.37)	396.5	6.1%
				Clay content of surface (0.29)		
				Silt content of surface (0.08)		
StA	Stamford clay, 1 to 3 percent slopes	High wind erosion potential	Stamford (90%)	Clay content of surface (0.85)	15.4	0.2%
				Silt content of surface (0.09)		
TcA	Tillman clay loam, 0 to 1 percent slopes	Moderate wind erosion potential	Tillman (95%)	Clay content of surface (0.54)	749.2	11.5%
				Silt content of surface (0.25)		
TcB	Tillman clay loam, 1 to 3 percent slopes	Moderate wind erosion potential	Tillman (90%)	Clay content of surface (0.54)	2,142.6	32.9%
				Silt content of surface (0.25)		
VeC	Vernon clay, 3 to 8 percent slopes	High wind erosion potential	Vernon (90%)	Clay content of surface (0.85)	94.7	1.5%
				Carbonate content of surface (0.43)		
				Silt content of surface (0.06)		
				Rock fragment content of surface (0.00)		
WeB	Weymouth clay loam, moist, 1 to 3 percent slopes	High wind erosion potential	Weymouth (90%)	Clay content of surface (0.67)	50.5	0.8%
				Sand content of surface (0.26)		
				Silt content of surface (0.05)		
				Rock fragment content of surface (0.01)		
Totals for Area of Interest					6,505.5	100.0%

Rating	Acres in AOI	Percent of AOI
Moderate wind erosion potential	3,733.3	57.4%

Rating	Acres in AOI	Percent of AOI
High wind erosion potential	2,375.5	36.5%
Low wind erosion potential	396.5	6.1%
<b>Totals for Area of Interest</b>	<b>6,505.5</b>	<b>100.0%</b>

## Rating Options—Wind Erosion Potential (TX)

*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

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.

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Soil Features—Jones 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
		<i>Low-RV-High</i>	<i>Range</i>		<i>Low-High</i>	<i>Low-High</i>			
		<i>In</i>	<i>In</i>		<i>In</i>	<i>In</i>			
Bv—Knoco-Vernon complex, 3 to 12 percent slopes									
Knoco	Densic bedrock	3- 19-20	—	noncoherent	0	0	None	High	Moderate
Vernon	Densic bedrock	20-25-40	—	noncoherent	0	0	None	High	Moderate
OtA—Sagerton clay loam, moist, 0 to 1 percent slopes									
Sagerton, moist		—	—		0	0	None	Moderate	Low
OtB—Sagerton clay loam, moist, 1 to 3 percent slopes									
Sagerton, moist		—	—		0	0	None	Moderate	Low
RwA—Rowena clay loam, dry, 0 to 1 percent slopes									
Rowena, dry		—	—		0	0	None	High	Moderate
Sp—Spur loam, moist, 0 to 1 percent slopes, occasionally flooded									
Spur		—	—		0	0	None	Low	Low
Sr—Spur soils, broken									
Spur		—	—		0	—	None	Moderate	Low

Custom Soil Resource Report

Soil Features—Jones 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
		<i>Low-RV-High</i>	<i>Range</i>		<i>Low-High</i>	<i>Low-High</i>			
StA—Stamford clay, 1 to 3 percent slopes									
Stamford	Densic bedrock	28-35-54	—	noncoherent	0	0	None	High	Moderate
TcA—Tillman clay loam, 0 to 1 percent slopes									
Tillman		—	—		0	0	None	High	Moderate
TcB—Tillman clay loam, 1 to 3 percent slopes									
Tillman		—	—		0	0	None	High	Moderate
VeC—Vernon clay, 3 to 8 percent slopes									
Vernon	Densic bedrock	20-26-40	—	noncoherent	0	0	None	High	Moderate
WeB—Weymouth clay loam, moist, 1 to 3 percent slopes									
Weymouth	Densic bedrock	20-36-40	—	noncoherent	0	0	None	Moderate	Moderate

## 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

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

## Custom Soil Resource Report

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.

Custom Soil Resource Report

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
				<i>Ft</i>	<i>Ft</i>		<i>Ft</i>				
Bv—Knoco-Vernon complex, 3 to 12 percent slopes											
Knoco	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
Vernon	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
OtA—Sagerton clay loam, moist, 0 to 1 percent slopes											
Sagerton, moist	C	Low	Jan-Dec	—	—	—	—	—	None	—	None
OtB—Sagerton clay loam, moist, 1 to 3 percent slopes											
Sagerton, moist	C	Medium	Jan-Dec	—	—	—	—	—	None	—	None
RwA—Rowena clay loam, dry, 0 to 1 percent slopes											
Rowena, dry	C	Low	Jan-Dec	—	—	—	—	—	None	—	None
Sp—Spur loam, moist, 0 to 1 percent slopes, occasionally flooded											
Spur	B	Negligible	Jan-Mar	—	—	—	—	—	None	—	
			Apr-Oct	—	—	—	—	—	None	Very brief (4 to 48 hours)	Occasional
			Nov-Dec	—	—	—	—	—	None	—	
Sr—Spur soils, broken											
Spur	B	Negligible	Jan-Mar	—	—	—	—	—	None	—	
			Apr-Oct	—	—	—	—	—	None	Very brief (4 to 48 hours)	Frequent
			Nov-Dec	—	—	—	—	—	None	—	
StA—Stamford clay, 1 to 3 percent slopes											
Stamford	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
TcA—Tillman clay loam, 0 to 1 percent slopes											
Tillman	C	Medium	Jan-Dec	—	—	—	—	—	None	—	None

Custom Soil Resource Report

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
				<i>Ft</i>	<i>Ft</i>		<i>Ft</i>				
TcB—Tillman clay loam, 1 to 3 percent slopes											
Tillman	C	High	Jan-Dec	—	—	—	—	—	None	—	None
VeC—Vernon clay, 3 to 8 percent slopes											
Vernon	D	Very high	Jan-Dec	—	—	—	—	—	None	—	None
WeB—Weymouth clay loam, moist, 1 to 3 percent slopes											
Weymouth	C	High	Jan-Dec	—	—	—	—	—	None	—	None

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ENERGY, INSTALLATIONS  
AND ENVIRONMENT

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

3400 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3400

February 25, 2025

Derek Green  
Senior Environmental Scientist  
Burns & McDonnell  
6200 Bridge Point Parkway; Suite 400  
Austin, TX 78730

Dear Mr. Green,

As requested, the Military Aviation and Installation Assurance Siting Clearinghouse coordinated within the Department of Defense (DoD) an informal review of the Phantom Hill to Tiger 345-kV Transmission Line Project. The results of our review indicated that the transmission line project, located in Jones County, TX, 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 (2025-1-T-DEV-43) in the comments section of the filing. If you have any questions, please contact me at [robbin.e.beard.civ@mail.mil](mailto:robbin.e.beard.civ@mail.mil).

Sincerely,

A handwritten signature in blue ink, reading "Robbin E. Beard".

Robbin Beard  
Deputy Director  
Military Aviation and Installation  
Assurance Siting Clearinghouse

**Green, Derek J**

---

**From:** Costanzi, Michael J-CTR (FAA) <Michael.J-CTR.Costanzi@faa.gov>  
**Sent:** Tuesday, April 15, 2025 2:12 PM  
**To:** Green, Derek J  
**Cc:** Cardenas, Debbie (FAA)  
**Subject:** USPS letter reference a transmission Line in Jones County, TX  
**Attachments:** New Off Airport Case.pdf

Hello-

I am with the Obstruction Evaluation Group of the FAA in receipt of  
**USPS letter reference a transmission Line in Jones County, TX**

The FAA requests you electronically file (E-file) at <https://oeaaa.faa.gov> . E-filing is the preferred method of submitting an aeronautical study as it is the fastest and most accurate method of submission. E-filing immediately assigns an Aeronautical Study Number (ASN) to your project and establishes an electronic communications link with the FAA that allows you to obtain project status and notifications directly from the website.

\*\*\*\*Be sure to first sign up for an OEAAA account under 'New User Registration'. \*\*\*\* It's very simple to do and your account is ready immediately after providing required information. Instructions with step-by-step guidance can be found in the attached PDF titled "New Off-Airport" case.

Debbie Cardenas is the contact for cases in this state. She will review your submissions and contact you if more information is needed.

She can be reached at [debbie.cardenas@faa.gov](mailto:debbie.cardenas@faa.gov)

R,

Michael J. Costanzi  
Obstruction Evaluation Technician MT, N-FL, WI  
FAA Obstruction Evaluation Group  
10101 Hillwood Parkway  
Fort Worth, TX 76177  
Office: 817-222-4832  
Cell: 630-742-7147  
[Michael.J-CTR.Costanzi@faa.gov](mailto:Michael.J-CTR.Costanzi@faa.gov)



1) To see if your structure is required to file with FAA, please go to:

<https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>

2) OEAAA.faa.gov Filing Instructions: <https://oeaaa.faa.gov/oeaaa/external/content/instructions.jsp>

- 3) General FAQs: <https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=generalFAQs>
- 4) DOT/FAA Obstruction Marking and Lighting Advisory Circular (AC 70/7460-1M):  
[https://www.faa.gov/regulations\\_policies/advisory\\_circulars/index.cfm/go/document.information/documentID/1038519](https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/1038519)
- 5) LIGHT OUTAGE REPORTING: <https://oeaaa.faa.gov/oeaaa/external/content/lightOutageReporting.jsp>
- 6) Helpdesk (System Issues/Support): 202-580-7500/Email: [oeaaa\\_helpdesk@cghtech.com](mailto:oeaaa_helpdesk@cghtech.com)



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# FEDERAL AVIATION ADMINISTRATION

OE/AAA®

OBSTRUCTION EVALUATION / AIRPORT AIRSPACE ANALYSIS

## DESK REFERENCE GUIDE

SUBJECT: Add a New Case (Off Airport)

*\*You are required to have a registered e-filing account*

All references to software products remain the protected trademarks of their manufacturers. The instructions in this document may reference Microsoft application(s). This is not meant in any way to express a preference for any particular product since there are many different browsers, programs, and operating systems available to the user. For simplicity only, one brand/product is used in the examples that follow.



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If you've successfully registered, you can use your OE/AAA account to file your Notice of Proposed Construction or Alteration.

**Note1:** Exit this guide if you are filing an Off Airport Notice of Proposed Construction or Alteration for Wind Turbine /Met Tower (w/WT Farm) or Wind Turbine-Barge Crane structures.

**Note2:** Use this DRG to Add a New Case (Off Airport) to include:

- E-file a crane mounted on a barge vessel for construction - Barge Crane (not associated with a wind turbine).
- E-file a Met Tower, not associated with a wind turbine farm, select structure type 'Met Tower (non-WT Farm)'.
- E-file a building with an auxiliary wind turbine mounted on a building or structure attached to a building, not associated with a wind turbine farm; select 'Building w/Wind Turbine'.
- For a wind turbine (not associated with a wind turbine farm), select "Wind Turbine."

**Note3:** To e-file **Wind Turbine /Met Tower (w/WT Farm) / Wind Turbine-Barge Crane** structure types, refer to the "Add a New Case (Off Airport) for Wind Turbine /Met Tower (w/WT Farm) /WT-Barge Crane" desk reference guide or the "Add Multiple Cases (Off Airport) for Wind Turbine /Met Tower (w/WT Farm)/ WT-Barge Crane" desk reference guide.



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**Note4:** If you're e-filing a **large Off Airport project** with the following eligible Structure Types:

- Antenna Tower
- Billboard
- Bridge
- Building
- Building w/Wind Turbine
- Catenary Wire
- Cell-On-Wheels
- Chimney
- Drilling Rig
- Feasibility Study
- Flagpole
- High Mast Illumination
- Landfill
- Light Pole
- Lighting Study
- Met Tower (non-WT Farm)
- Monopole
- Other w/Antenna
- Other w/o Antenna
- Power Line
- Sign
- Solar Panel
- Solar Tower
- Stack
- Tower
- Transmission Line
- Utility Pole
- Waste Management Facility
- Water Tank
- Workover Rig

**Review the "Add Multiple Cases (Off Airport)" desk reference guide (DRG) to consider e-filing via the OE/AAA data import feature.**



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## Add a New Case (Off Airport)

The OE/AAA electronic filing (e-file) system allows you to:

- Submit an FAA Form 7460-1 via an electronic data screen.
- Generate a map directly from your account to be submitted electronically with your filing.
- Track the status of your case as it moves through the study process.

From your OE/AAA Portal Page you have:

- Instant access to your determination, requests for additional information, etc... as they are issued by the FAA.
- The ability to attach surveys, and additional background information directly to your electronic case file(s).

## Create a New Case

To create a new case, click the **Add New Case (Off Airport)** link. This will bring up the *Notice of Proposed Construction or Alteration* Page. Complete each section according to the instructions below.

### OE/AAA Portal Page

My Account	Off Airport Construction (includes on Military Airport)
<b>Name:</b> <b>User Name:</b> <b>Login Time:</b> <b>IP Address:</b>  <b>Actions:</b>	<a href="#">My Cases (Off Airport)</a>   <a href="#">Add New Case (Off Airport)</a> <a href="#">Add Multiple Cases (Off Airport)</a> <a href="#">Add Supplemental Notice (7460-2 Form)</a> <a href="#">My Sponsors</a>   <a href="#">Add New Sponsor</a> <a href="#">Off Airport Contacts</a> <a href="#">My Circ Comments</a>

**Important:** You must complete all required fields (indicated with an asterisk \*) to successfully save your case. Missing data will result in a warning message at the top of your page identifying the required information.



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## Notice of Proposed Construction or Alteration - Off Airport

**Sponsor (person, company, etc. proposing this action)**

\* Sponsor:

---

**Construction / Alteration Information**

\* Notice Of:

\* Duration:

if Temporary: Months:  Days:

Work Schedule - Start:  (mm/dd/yyyy)

Work Schedule - End:  (mm/dd/yyyy)

\*For temporary cranes-Does the permanent structure require separate notice to the FAA?  
To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed.  
If it is not filed, please state the reason in the Description of Proposal.

State Filing:

**Structure Summary**

\* Structure Type:

\* Structure Name:

NOTAM Number:

FCC Number:

Prior ASN:  -  -  - OE

---

**Structure Details**

\* Latitude: ° ' " N

\* Longitude: ° ' " W

\* Horizontal Datum:

\* Site Elevation (SE):  (nearest foot)

\* Structure Height (AGL):  (nearest foot)

\* Current Height (AGL):  (nearest foot)

\* For notice of alteration or existing provide the current AGL height of the existing structure.  
Include details in the Description of Proposal

Minimum Operating Height (AGL):  (nearest foot)

\* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.

\* Requested Marking/Lighting:

Other:

☐ Yes

\* Current Marking/Lighting:

Other:

\* Nearest City:

\* Nearest State:

\* Description of Location:  
On the Project Summary page upload any certified survey.

\* Description of Proposal:

**Proposed Frequency Bands**

Select any combination of the applicable frequencies/powers identified in the Colo Void Clause Coalition, Antenna System Co-Location, Voluntary Best Practices, effective 21 Nov 2007, to be evaluated by the FAA with your filing. If not within one of the frequency bands listed below, manually input your proposed frequency(ies) and power using the Add Specific Frequency link.

[Add Specific Frequency](#)

	Low Freq	High Freq	Freq Unit	ERP	ERP Unit
<input type="checkbox"/>	6	7	GHz	55	dBW
<input type="checkbox"/>	6	7	GHz	42	dBW
<input type="checkbox"/>	10	11.7	GHz	55	dBW
<input type="checkbox"/>	10	11.7	GHz	42	dBW
<input type="checkbox"/>	17.7	19.7	GHz	55	dBW
<input type="checkbox"/>	17.7	19.7	GHz	42	dBW
<input type="checkbox"/>	21.2	23.6	GHz	42	dBW
<input type="checkbox"/>	21.2	23.6	GHz	55	dBW
<input type="checkbox"/>	698	806	MHz	1000	W
<input type="checkbox"/>	806	901	MHz	500	W
<input type="checkbox"/>	806	824	MHz	500	W
<input type="checkbox"/>	824	849	MHz	500	W
<input type="checkbox"/>	851	866	MHz	500	W
<input type="checkbox"/>	869	894	MHz	500	W
<input type="checkbox"/>	896	901	MHz	500	W
<input type="checkbox"/>	901	902	MHz	7	W
<input type="checkbox"/>	929	932	MHz	3500	W
<input type="checkbox"/>	930	931	MHz	3500	W
<input type="checkbox"/>	931	932	MHz	3500	W
<input type="checkbox"/>	932	932.5	MHz	17	dBW
<input type="checkbox"/>	935	940	MHz	1000	W
<input type="checkbox"/>	940	941	MHz	3500	W
<input type="checkbox"/>	1670	1675	MHz	500	W
<input type="checkbox"/>	1710	1755	MHz	500	W
<input type="checkbox"/>	1850	1910	MHz	1640	W
<input type="checkbox"/>	1850	1990	MHz	1640	W
<input type="checkbox"/>	1930	1990	MHz	1640	W
<input type="checkbox"/>	1990	2025	MHz	500	W
<input type="checkbox"/>	2110	2200	MHz	500	W
<input type="checkbox"/>	2305	2360	MHz	2000	W
<input type="checkbox"/>	2305	2310	MHz	2000	W
<input type="checkbox"/>	2345	2360	MHz	2000	W
<input type="checkbox"/>	2496	2690	MHz	500	W

---

**Additional Location(s)**

[Add New Location\(s\)](#)

☐ I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to mark and/or light the structure in accordance with established marking and lighting standards as necessary.

**Clone Prior ASN frequencies**

\*Note: Selecting this link will only add frequency (ies)/power from the prior ASN listed in Structure Summary. Additional frequency (ies)/power must be manually added before submitting to the FAA if they are to be considered with your new filing.



## Federal Aviation Administration

- A. **\*Sponsor:** Select the Sponsor from the dropdown menu. This menu is populated from your *My Sponsors* list. The registered information will automatically display in your electronic public record as the Sponsor's Representative once the case has been completed and a valid FAA Determination is issued.
- B. **\*Notice Of:** Select the type of proposal. New Construction would be a structure that has not yet been built. Alteration is a change to an existing structure such as the addition of a side mounted antenna, a change to the marking and/or lighting, a change to power and/or frequency, or a change to the height. Existing would be a correction to the latitude and/or longitude, a correction to the existing height, or if filing for an existing structure that has never been studied by the FAA.
- C. **\*Duration:** If Permanent, so indicate. If Temporary, enter the estimated length of time the temporary structure will be up in Months/Days.
- D. **Work Schedule:** *(Not a Required Field)* Using the calendar icons next to the fields select the date that construction is expected to start and the date that construction should be completed.
- E. **State Filing:** *(Not a Required Field)* Indicate if the case has been filed with the state.
- F. **\*Structure Type:** Select the type of structure from the Structure Type drop down list. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."
- G. **\*Structure Name:** Enter a name for the structure (e.g. 50 Ton Crane, Hotel, Tower, etc...)
- H. **FCC Number:** *(Not a Required Field)* If this is an existing tower that has been registered with the FCC, enter the Antenna Structure Registration number.
- I. **Prior ASN:** *(Not a Required Field)* If an FAA aeronautical study was previously conducted, enter the prior Aeronautical Study Number.



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Prior ASN data can be pre-populated into the Notice of Proposed Construction or Alteration-Off Airport form data fields. When the e-filer confirms the Prior ASN data, the following data fields are available for pre-population:

- Latitude/Longitude
- Site Elevation
- Above Ground Level Height (determined AGL from valid prior ASN)
- Marking/Lighting (Recommended Marking /Lighting from valid prior ASN to requested Marking /Lighting)

J. **\*Latitude/Longitude:** Latitude and Longitude must be precise geographic coordinates entered in Degrees, Minutes, and Seconds to the hundredth of a second (e.g. 25-47-4.75 N, 80-19-7.26 W).

K. **\*Horizontal Datum:** Select either NAD83 or NAD27. North American Datum is a reference from which latitude/longitude measurements are made.

L. **\*Site Elevation:** Enter the site elevation above mean sea level expressed in whole feet rounded to the nearest foot (e.g. 12' 3" should be entered as 12). This data should match the ground contour elevations for the site.

- **Add New Case (Off Airport) – Single e-file case entry:**  
The OE/AAA system validates the Site Elevation (SE) of e-filer's entered location; if it passes the National Elevation Data (NED) terrain elevation validation check, the System takes the e-filer to the Map verify step. E-filers are alerted if the SE does not Pass the NED check. If this occurs, you must either adjust the SE or check the "SE comments provided in Additional Info" checkbox and provide SE comments in the Additional Info text box to explain the discrepancy.

- **Add New Case (Off Airport) - Additional Location(s) - Batch e-file entry:**  
The OE/AAA system validates the SE entered on all Rows added when Save is selected; if they all pass the NED terrain elevation validation check, the system takes the e-filer back to the external e-Filing Form to certify their data entry and move to the Map verify step. The System validates all of the rows entered and alerts filers when the SE does not Pass the NED Data check for the location. If this occurs, you must either adjust the SE or check the "SE comments provided in Additional Info" checkbox and provide SE comments in the Additional Info text box to explain the discrepancy.



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- M. **\* Structure Height:** (AGL): Only for Structure Types that **ARE NOT** a **traverseway**. Your structure's height is the height above ground level in whole feet rounded to the next highest foot (e.g. 12' 3" should be entered as 13). The structure height includes anything mounted on top of the structure such as antennas, lightning rods, obstruction lights, etc.
- N. **\* Unadjusted Structure Height:** (AGL): Only for Structure Types that **ARE** a **traverseway**. Your structure's height is the unadjusted structure height. Enter the unadjusted structure height above ground level in whole feet rounded to the next highest foot (e.g. 12' 3" should be entered as 13). The unadjusted structure height includes anything mounted on top of the structure such as antennas, lightning rods, obstruction lights, etc.
- O. **\* Height Adjustment:**  
Only for Structure Types that **ARE** a **traverseway**. The Unadjusted Structure Height AGL is adjusted upward by the system to account for the expected height of vehicles (or the highest mobile object [as applicable]) using the traverseway selected from the Structure Type drop down list in the Structure Summary section of the data entry screen.
- For Structure Type "**Waterway**" and "**Other Traverseway**"  
The Unadjusted Structure Height AGL is adjusted upward one (1) foot (default) by the system. **Enter the height** of the highest mobile object or vehicle expected to use the traverseway into the Height Adjustment field.
    - For Structure Type "**Private Road**"  
The Unadjusted Structure Height AGL is adjusted upward ten (10) feet (default) by the system. **Enter the height** of the highest vehicle expected to use the traverseway into the Adjustment field.
- P. **\* Total Structure Height** (AGL): Only for Structure Types that **ARE** a **traverseway**. The total of both the Unadjusted Structure Height and the Height Adjustment above ground level in whole feet rounded to the next highest foot (e.g. 12' 3" should be entered as 13).
- Q. **\* Requested Marking and Lighting:** (Indicate the type Desired). The FAA Advisory Circular 70/7460-1 – Obstruction Marking and Lighting is recommended for determining the proper way to light and mark structures affecting navigable airspace. The AC can be accessed from the *Information*



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Resources section of the website using the *Relevant Advisory Circulars* link.

Requested Marking/Lighting options:

- None
- Red lights
- Red lights and paint
- Red lights and flags
- Paint and 24-hour med-strobes
- Paint and a med-dual system
- Spherical markers and red lights
- Flag Marker
- Spherical Markers
- Dual-red and medium intensity
- Dual-red and high intensity white
- White-medium intensity
- White-high intensity
- White Paint/Synchronized Red Lights
- White Paint Only
- Dual medium catenary
- Dual high catenary
- White-medium catenary
- White-high catenary
- Paint day, red flashing twilight & night
- Paint day, med-strobes twilight & night
- Paint day, hi-strobes twilight & night
- Other – (if selected from the dropdown, enter the marking/lighting type in the "Other" field)

R. **Aircraft Detection Lighting System" (ADLS):** *(Not a Required Field)* Control device to operate marking/lighting systems on structures.

S. **\*Current Marking/Lighting:** Indicate the current M/L on the structure; if a new structure, select N/A Proposed Structure.

T. **Current AGL:** Required for structures being e-filed as existing or alteration.



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- U. **Min Operating Height** (AGL): \* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.
- V. **\*Nearest City/State**: Enter the name of the nearest city and the actual state where the site will be located.
- W. **\*Description of Location**: Enter a brief description of the actual location of the site including the address or the relationship of the structure to roads, airports, prominent terrain, existing structures, etc.
- X. **\*Description of Proposal**: Enter a complete description that details the nature of the filing.
- Y. **Add new location**: When submitting more than one case (e.g. a crane and a building or four building points) the following required fields indicated with an asterisk (\*) must be completed to successfully save additional locations: J, K, L, M, G, Q. Additional rows may be added in increments of 1 thru 5. To remove an additional row, select the Delete link.
- Z. **Proposed Frequency Bands**: *(Not a Required Field)* Check any that apply. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."
- AA. **Specific Frequencies**: *(Not a Required Field)* any frequency band not listed in the Proposed Frequency Bands should be added here. Select the Add Specific Frequency link and enter the Low Frequency, High Frequency, Frequency Unit, Effective Radiated Power (ERP), and ERP Unit. Select [Save] or [Cancel] to be returned to the *Case Data Entry* page. If an e-filer intends to overlap protected FAA frequencies, specific coordination with the FAA Spectrum Engineering Group will be required. A textbox allows filers to submit rationale for the frequency overlap in the e-filed Notice of Proposed Construction or Alteration-Off Airport form. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."



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**BB. Clone Prior ASN frequencies** – *(Not a Required Field)* The Prior ASN field must be filled before entering frequencies. This link is displayed after the Specific Frequency Bands section. This link is only available if the e-filer adds a Prior ASN that has frequencies included in the case. When selected the applicable Proposed Frequency Bands and/or Specific Frequencies from the prior ASN auto populate and are available for edit by the e-filer prior to saving the draft. Once the e-filer saves this data, it becomes part of the current filing and is transmitted to the FAA with the new ASN. The e-filer is permitted to add additional frequencies if necessary after cloned frequencies are pre-populated but duplicate entries are not allowed. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."

Selecting the **checkbox** to accept the certify statement.

When all required fields are completed, select the **[Save] button**. This will save the case data as a draft and take you to the *Project Summary* screen.

After case data has been saved as a draft, filers are taken to the Map Verification screen that displays all cases created on the previous Add New Case(s) Off Airport screen and require Map verification before submission.

#### Map Verification

Mapping - Desk Reference Guide

**Map Verification**

Mapping - Desk Reference Guide

**Instructions:**

- To submit your project to the FAA, you must verify the coordinates of each case listed below
- Select the link labeled "View Map" to verify for each case
- Review the plotted location on the Map
- Select "Verify" once you have confirmed the location or click on the structure name link to go back to the Structure Name and review your entered coordinates
- NOTE: You may continue to the Project Summary page without verifying your map(s); however, before your case is eligible for submission to the FAA, you will be required to verify your plotted location. This function will also be available on the next screen for you to complete later

**Map**

[View Map to verify](#)

[View Map to verify](#)

[View Map to verify](#)

[View Map to verify](#)

[View Map to verify](#)

Structure Name	City, State	Lat/Long
Struc1 Draft	Text, CA	34° 12' 8.54" N 118° 29' 21.10" W
Struc2 Draft	Text, CA	34° 12' 8.54" N 118° 29' 21.10" W
Struc3 Draft	Text, CA	34° 12' 8.54" N 118° 29' 21.10" W
Struc4 Draft	Text, CA	34° 12' 8.54" N 118° 29' 21.10" W
Struc5 Draft	Text, CA	34° 12' 8.54" N 118° 29' 21.10" W

By verifying the coordinates represented on the map, you agree that the location of the case you have entered is correct to the best of your knowledge.

Aerial Photography Transparency Setting (1% increments):

[Verify Map](#)

[Continue - Map/Verify Later](#)



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## Enlarged View

Structure	City, State	Lat/Long	Map
test1 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.20" W	<a href="#">View Map to verify</a>
test2 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.19" W	<a href="#">View Map to verify</a>
test3 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.18" W	<a href="#">View Map to verify</a>
test4 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.17" W	<a href="#">View Map to verify</a>
test5 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.16" W	<a href="#">View Map to verify</a>

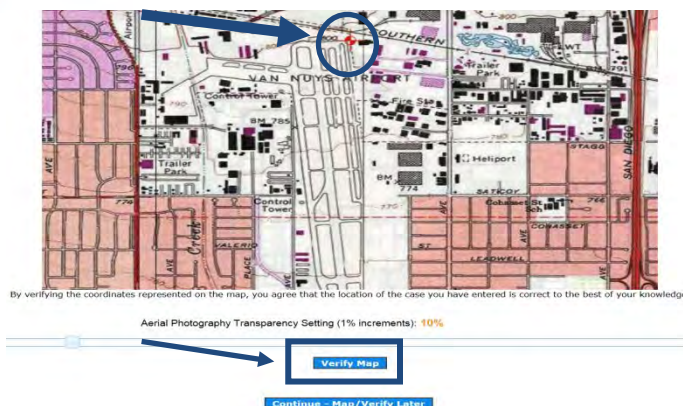
To submit this project you must verify the coordinates of each case listed above by verifying the map

Structure Name: test5  
Latitude: 34° 13' 8.54" N  
Longitude: 118° 29' 21.16" W

- Select the link labeled **View Map to Verify** (displayed above the map) when more than one map needs to be verified or click the **Verify Map** button (displayed below the map) to view a single case map.
  - Review the plotted structure location on the Map (red bullseye) to verify the crosshairs on the map match with your proposed structure location.
  - Select **"Verify Map"** (at the bottom of the map) once you have confirmed the structure location. This will save the verified map but will NOT submit the case to the FAA.



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Administration



- It will return you to the Project Summary screen, where if needed, the **“Structure”** link is/are available to display saved draft(s) of the data form if entered case coordinates need to be revised.

NOTE: Once a map is verified, if the e-filer returns to the saved Off Airport data entry form draft and re-certifies and saves the form data, the filer is required to re-verify the map location prior to submission to the FAA.

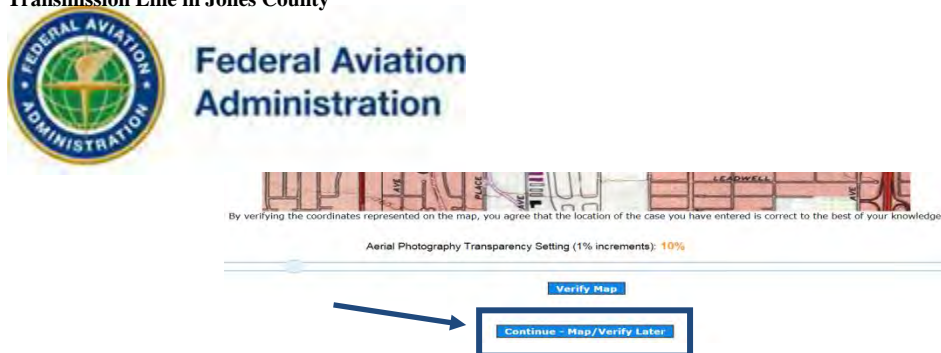
Project Name:		Sponsor:	
Structure	City, State	Lat/Long	Map
test1 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.20" W	View Map to verify
test2 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.19" W	View Map to verify
test3 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.18" W	View Map to verify
test4 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.17" W	View Map to verify
test5 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.16" W	View Map to verify

To submit this project you must

Structure Name: test5  
Latitude: 34° 13' 8.54" N  
Longitude: 118° 29' 21.16" W

If the e-filer returns to the saved Off Airport data entry form draft [view data] but cancels (does not re-certify the entered data), they won't be required to re-verify the Map.

NOTE: You may continue to the Project Summary screen without verifying your map(s), however, before your case is eligible for submission to the FAA you will be required to verify your plotted location. This function will also be available on the next screen for you to complete later.



When the only or last listed map in a project on the Map Verification screen is verified or if you continue to the Project Summary screen without verifying your map(s) the *Project Summary* screen will be displayed. Towards the right side of the page there will be a Map column and an Actions column. The Actions column contains the **Clone**, **Delete**, and **Upload a PDF** links. The Map column contains the **Verify Map** link.

Structure	City, State	Lat/Long	Map	Actions
test1 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.20" W	Show Map (Re-Verify)	Clone Delete Upload a PDF
test2 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.19" W	Verify Map	Clone Delete Upload a PDF

From the Project Summary page filers can verify or re-verify plotted location(s). To submit your project you must verify the coordinates of each case listed below by verifying the map".

To **verify** or re-verify your plotted map location from the Project Summary screen once you've confirmed the structure location; select the **"Verify Map"** or **"Re-Verify"** under the "Map" column header. On the map, click the "Verify Map" button at the bottom of the map or click on the **"Cancel"** button to return to Project Summary screen.



## Federal Aviation Administration

### Notice of Proposed Construction or Alteration - Off Airport

[Add a new Case Off Airport - Desk Reference Guide](#)

[Add a New Case Off Airport for Wind Turbines - Met Towers - Desk Reference Guide](#)

Project Name:  Sponsor:

#### Project Summary :

[Add Another Case to this Project](#) [Change the sponsor for this Project](#)

Structure	City, State	Lat/Long	Map	Actions
test1 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.20" W	Show Map (Re-Verify)	Clone Delete Upload a PDF
test2 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.19" W	Verify Map	Clone Delete Upload a PDF
test3 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.18" W	Verify Map	Clone Delete Upload a PDF
test4 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.17" W	Verify Map	Clone Delete Upload a PDF
test5 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.16" W	Verify Map	Clone Delete Upload a PDF

[Mapping - Desk Reference Guide](#)

[Attaching Documents - Desk Reference Guide](#)



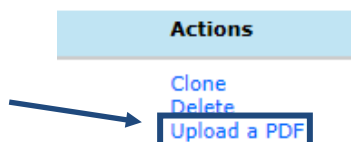
To submit this project, you must verify the coordinates for each case listed above.

[Upload a PDF to the Project](#)  
Please upload all supporting case documentation  
including the latest certified survey, if available.



Federal Aviation  
Administration

## Attach Documents to Cases



For Off Airport cases you can upload PDF documents before and after submitting your case if needed.

## Projects

One or more cases can be grouped into a Project. For example, each of the four building corner points can be a Case of a building Project. Project makes it easier to file, evaluate, manage, and approve related cases.

A screenshot of the 'Project Summary' screen. At the top, there is a 'Project Summary' header with two links: 'Add Another Case to this Project' and 'Change the sponsor for this Project'. Below this is a table with the following columns: Structure, City, State, Lat/Long, Map, and Actions. The table contains three rows of draft cases.

Structure	City, State	Lat/Long	Map	Actions
test1 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.20" W	Show Map (Re-Verify)	Clone Delete Upload a PDF
test2 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.19" W	Verify Map	Clone Delete Upload a PDF
test3 Draft	test, CA	34° 13' 8.54" N 118° 29' 21.18" W	Verify Map	Clone Delete Upload a PDF

## Add a Case

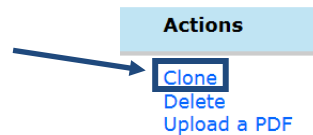


On the *Project Summary* screen you may select the **Add Another Case to this Project** link to add another case to this project. The cases entered this way will have the same project number.



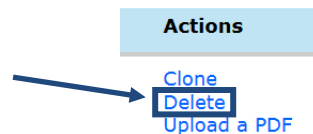
Federal Aviation  
Administration

## Clone a Case



Another way to add a case to the project is to clone a new case from an existing case. E-filers can clone cases from the Project Summary screen of cases in their account regardless of the status (i.e. Draft/Submitted). To clone a case, click the **Clone** link. The cloning feature will copy most of the information over into a new *Case Data Entry* screen and link the cases together in a project. You may add as many cloned cases to your project as necessary. Once all of the maps for the project have been verified, the **[Submit]** button will appear on the *Project Summary* screen so that the entire project can be submitted to the FAA.

## Delete a Case



You may only delete cases in Draft status. To delete a single case or a case from a project, select the **Delete** link located under the Actions header on the Project Summary screen. This will display the *Confirm Case Deletion* screen. To continue with the delete, select the **[I Confirm]** button to execute the deletion.

## Submit to FAA

*Note: Before submitting your case/project to the FAA, determine if you need to use the Clone or Delete features.*

After the case data has been saved and map(s) verified, the **[Submit]** button will appear on the *Project Summary* screen to allow you to submit the case to the FAA. If you have provided all the information about your case or project, select the **[Submit]** button. This will take you to the *Confirm Project Submission* screen.



## Federal Aviation Administration

Project Name: \_\_\_\_\_ Sponsor: \_\_\_\_\_

**Project Summary :**

[Add Another Case to this Project](#) [Change the sponsor for this Project](#)

Structure	City, State	Lat/Long	Map	Actions
Test Draft	Ashburn, PA	40° 24' 40.80" N 79° 15' 32.92" W	Show Map (Re-Verify)	Clone Delete Upload a PDF

[Mapping - Desk Reference Guide](#) [Attaching Documents - Desk Reference Guide](#)

**You may submit your Project to the FAA.**

**Submit**

[Upload a PDF to the Project](#)  
Please upload all supporting case documentation including the latest certified survey, if available.

Select the **[I Confirm]** button to submit the case or project to the FAA. When the submission is done, OE/AAA will display the *Project Submission Success* screen.

### Confirm Project Submission

Project Name: \_\_\_\_\_

Please confirm you would like to submit Project \_\_\_\_\_ and associated cases to the FAA for processing.

**I Confirm** **Back**

The Aeronautical Study Number (ASN) assigned to your filed case(s) and other submission information is displayed. The Project Submission Success screen includes a link to a **state aviation contacts** map to determine if coordination of your proposed activity is necessary with your state aviation department.

Project Submission Success

Project Name: \_\_\_\_\_

Project BRICK-00065811-18 has been submitted successfully to the FAA.

Your filing is assigned Aeronautical Study Number (ASN):

- 2025-AWP-8894-OE
- 2025-AWP-8895-OE
- 2025-AWP-8896-OE
- 2025-AWP-8897-OE
- 2025-AWP-8898-OE
- 2025-AWP-8899-OE

Please refer to the assigned ASN on all future inquiries regarding this filing.

Please return to the system at a later date for status updates.

It is the responsibility of each e-filer to exercise due diligence to determine if coordination of the proposed construction or alteration is necessary with their state aviation department. Please use the link below to contact your state aviation department to determine their requirements.

[State Aviation Contacts](#)

To ensure e-mail notifications are delivered to your inbox please add [noreply@faa.gov](mailto:noreply@faa.gov) to your address book. Notifications sent from this address are system generated FAA e-mails and replies to this address will NOT be read or forwarded for review. Each system generated e-mail will contain specific FAA contact information in the text of the message.

**Return to Portal**

**Please return to the system at a later date for status updates.**

CHRISTI CRADDICK, CHAIRMAN  
WAYNE CHRISTIAN, COMMISSIONER  
JIM WRIGHT, COMMISSIONER



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ASSISTANT EXECUTIVE DIRECTOR  
DIRECTOR, OIL AND GAS DIVISION  
LESLIE SAVAGE, P.G.  
CHIEF GEOLOGIST, OIL AND GAS DIVISION

## RAILROAD COMMISSION OF TEXAS

### OIL AND GAS DIVISION

February 3, 2025

Lone Star Transmission, LLC  
C/O Burns & McDonnell  
ATTN Mr. Derek Green, Senior Environmental Scientist (via email [djgreen@burnsmcd.com](mailto:djgreen@burnsmcd.com))

Re: Request for Information  
Lone Star Transmission, LLC  
Proposed Phantom Hill to Tiger 345-kV Transmission Line Project  
Jones County, Texas

We have received your letter dated January 8, 2025, informing us of the referenced project and requesting any information we believe should be considered regarding the siting and potential environmental effects from the construction of the proposed transmission line.

Information is available on the Railroad Commission's Geographic Information System concerning existing oil and gas well and pipeline locations. You may access this information at <http://www.rrc.state.tx.us/about-us/resource-center/research/gis-viewers/>. You may access information concerning oil and gas drilling permits and pipeline permitting at <https://rrc.texas.gov/about-us/resource-center/research/online-research-queries/>. Information regarding surface mining operations can be found at <https://rrc.texas.gov/surface-mining/>.

Please contact me at 512-658-6211 or at [Leslie.savage@rrc.texas.gov](mailto:Leslie.savage@rrc.texas.gov) if you have any questions or need additional information.

Regards,

*Leslie Savage*

Leslie Savage, P.G.  
Chief Geologist  
Oil & Gas Division



TEXAS GENERAL LAND OFFICE  
COMMISSIONER DAWN BUCKINGHAM, M.D.

February 5, 2025

Derek Green  
Burns McDonnell  
6200 Bridge Point Parkway, Building 4, Suite 400  
Austin, TX 78730-5000

Re: Request for Information  
Lone Star Transmission, LLC Proposed Phantom Hill to Tiger 345-kV Transmission Line  
Project, Jones County, Texas

Dear Mr. Green:

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](mailto: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

**Green, Derek J**

---

**From:** Cynthia Robertson <Cynthia.Robertson@tceq.texas.gov>  
**Sent:** Friday, February 7, 2025 11:14 AM  
**To:** Green, Derek J  
**Cc:** Cynthia Robertson  
**Subject:** Lone Star Transmission, LLC Phantom Hill to Tiger 345-kV Transmission Line Project  
**Attachments:** Burns & McDonnell Information Request.pdf

Good Morning Mr. Green,

The Texas Commission on Environmental Quality Region 3 office is in receipt of your request for information regarding an Environmental Assessment for Lone Star Transmission, LLC. In order for your request to be processed, please submit the request as follows:

- ▶ Submit Online, <https://www.tceq.texas.gov/goto/or-request>, or
- ▶ Email the open records mailbox, [openrecs@tceq.texas.gov](mailto:openrecs@tceq.texas.gov), or
- ▶ Faxing to 512-239-OPEN (6736), or
- ▶ Mailing to, Public Information Officer, MC 197 Texas Commission on Environmental Quality P.O. Box 13087 Austin, Texas 78711-3087

If you have any questions please let me know.

Thank you,

Cindy Robertson  
Administrative Assistant  
Abilene Region Office  
(325) 698-9674  
Fax (325) 692-5869



**Green, Derek J**

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**From:** Krishna Fahlender <Krishna.Fahlender@txdot.gov>  
**Sent:** Wednesday, February 12, 2025 10:37 AM  
**To:** Green, Derek J  
**Subject:** Request for Information-Lone Star Transmission, LLC Phantom Hill to Tiger 345-kV Transmission Line Project

Good morning Mr. Green,

At this time, there are no notable concerns for cultural, water, and land resources or threatened and endangered species in my assessment of the proposed transmission line project in Jones County.

Thank you,

**Krishna Fahlender**  
Environmental Project Planner  
**TEXAS DEPARTMENT OF TRANSPORTATION**  
Abilene District  
[krishna.fahlender@txdot.gov](mailto:krishna.fahlender@txdot.gov) | 325-676-6803 | [TxDOT.gov](https://www.txdot.gov)



**From:** [noreply@thc.state.tx.us](mailto:noreply@thc.state.tx.us)  
**To:** [Green, Derek J; reviews@thc.state.tx.us](mailto:Green, Derek J; reviews@thc.state.tx.us)  
**Subject:** Phantom Hill to Tiger 345 kV Transmission Line Project  
**Date:** Thursday, February 27, 2025 12:10:05 PM

---



**Re:** Project Review under the Antiquities Code of Texas  
**THC Tracking #202505674**

**Date:** 02/27/2025

Phantom Hill to Tiger 345 kV Transmission Line Project  
NW of CR 185 and CR 186

**Description:** Proposed transmission line will be 4-5 miles in length, will require right-of-way between 100 and 150 ft in width.

Dear Derek Green:

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 Caitlin Brashear and Drew Sitters, has completed its review and has made the following determinations based on the information submitted for review:

#### **Archeology Comments**

- An archeological survey is required. You may obtain lists of archeologists in Texas through the Council of Texas Archeologists and the Register of Professional Archaeologists. Please note that other qualified archeologists not included on these lists may be used. If this work will occur on land owned or controlled by a state agency or political subdivision of the state, a Texas Antiquities Permit must be obtained from this office prior to initiation of fieldwork. All fieldwork should meet the Archeological Survey Standards for Texas. A report of investigations is required and should meet the Council of Texas Archeologists Guidelines for Cultural Resources Management Reports and the Texas Administrative Code. In addition, any state-owned buildings 50 years old or older that are located on the tract should be documented with photographs and included in the report. Shapefiles of the area surveyed must be submitted via the tab on eTrac with submission of the draft report to facilitate review and make project information available through the Texas Archeological Sites Atlas. For questions on how to submit these please visit our video training series at:  
<https://www.youtube.com/playlist?list=PLONbbv2pt4cog5t6mCqZVaEAx3d0MkgQC>

We have the following comments: Two archeological investigations have taken place within the Study Area. This has resulted in the recording of 19 archeological sites. Despite past investigations, about half of the approximately 6,300-acre study area has never been formally surveyed for archeological resources. Furthermore, the study area is bisected by extant sources

of water, such as Redmud Creek. These sources of fresh water would have attracted indigenous and historic-age occupation. Therefore, the potential for the four to five-mile-long proposed transmission line to affect known and unknown cultural resources within the study area is high and an archeological survey is warranted prior to breaking ground. Archeological survey methods should include an inspection of the ground surface along transects spaced no greater than 10 meters apart. Shovel tests should be reserved for settings that have potential for shallowly buried cultural materials, poor surface visibility, and within the vicinity of artifacts and features. Areas excluded from shovel testing should be clearly delineated on maps, photo-documented, and discussed in the report. Regardless of surface visibility and past ground disturbance, SOME shovel tests should still be excavated to assess the project area's overall potential for buried deposits, to provide a general soil description, and to demonstrate the nature of disturbance. In the event shovel testing fails to encounter the bottom of Holocene-age deposits, deep testing may be warranted. When historical sites are encountered, the Texas Historical Commission's Guidance for Studying Late 19th-Century and Early 20th-Century Sites must be followed, which includes conducting deed research to identify the individual(s) associated with recorded historic-age resource(s). 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>. Regarding above-ground resources, should this project ultimately include Federal involvement, additional consultation with our agency would be required under Section 106 of the National Historic Preservation Office.

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 the project changes, or if new historic properties are found, please contact the review staff. 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](mailto:caitlin.brashear@thc.texas.gov), [drew.sitters@thc.texas.gov](mailto:drew.sitters@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 Joseph Bell, State Historic Preservation Officer  
Executive Director, Texas Historical Commission

**Please do not respond to this email.**



March 27, 2025

Life's better outside.®

Commissioners

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Chairman  
Houston

Oliver J. Bell  
Vice-Chairman  
Cleveland

James E. Abell  
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Wm. Leslie Doggett  
Houston

Paul L. Foster  
El Paso

Anna B. Galo  
Laredo

Robert L. "Bobby" Patton, Jr.  
Fort Worth

Travis B. "Blake" Rowling  
Dallas

Dick Scott  
Wimberley

Lee M. Bass  
Chairman-Emeritus  
Fort Worth

T. Dan Friedkin  
Chairman-Emeritus  
Houston

David Yoskowitz, Ph.D.  
Executive Director

Mr. Derek Green  
Burns & McDonnell  
6200 Bridge Point Parkway, Suite 400  
Austin, TX 78730

RE: Lone Star Transmission LLC, Phantom Hill – Tiger 345-kilovolt  
Transmission Line Project

Dear Mr. Green:

Texas Parks and Wildlife Department (TPWD) has received the preliminary information request regarding the proposed transmission line project referenced above. TPWD staff has reviewed the information provided and offers the following comments concerning this project.

Please be aware that a written response to a TPWD recommendation or informational comment received by a state governmental agency may be required by state law. For further guidance, see the Texas Parks and Wildlife Code (PWC) section 12.0011. We are providing input on this proposed project to facilitate incorporation of voluntary measures during construction, operation, and maintenance that may assist the project proponent in minimizing impacts to the state's natural resources. For tracking purposes, please refer to TPWD project number 53441 in any return correspondence regarding this project.

**Project Description**

Lone Star Transmission, LLC (Lone Star) is proposing to design and construct a new 4 to 5 mile long 345-kilovolt electric transmission line in Jones County, Texas, to interconnect the proposed Tiger Solar Development. The proposed transmission line would be constructed between Lone Star's existing Phantom Hill Substation and the proposed Tiger collection substation.

**Federal Laws**

*Clean Water Act*

Section 404 of the Clean Water Act establishes a federal program to regulate the discharge of dredged and fill material into the waters of the U.S., including wetlands. The U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency are responsible for regulating water resources under this act. Both isolated and jurisdictional wetlands provide habitat for wildlife and help protect water quality.

Mr. Derek Green  
Page 2  
March 27, 2025

**Recommendation:** If the proposed project would impact waterways or associated wetlands, TPWD recommends consulting with the USACE for potential impacts to waters of the U.S. including jurisdictional determinations, delineations, and mitigation. All waterways and associated floodplains, riparian corridors, playa lakes, springs, and wetlands provide valuable wildlife habitat and should be protected to the maximum extent possible. Natural buffers contiguous to any wetlands or aquatic systems should remain undisturbed to preserve wildlife cover, food sources, and travel corridors. Erosion control and sediment runoff control measures should be installed prior to construction and maintained until disturbed areas are permanently revegetated using site specific native vegetation. Measures should be properly installed to effectively minimize the amount of sediment and other debris from entering the waterway.

*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 U.S. Fish and Wildlife Service (USFWS) Southwest Region Migratory Bird Office can be contacted for more information on potential impacts to migratory birds.

Potential impacts to migratory birds may occur during site preparation and grading activities through the disturbance of existing vegetation (grass, trees, and shrubs) and bare ground that may be occupied by active bird nests.

**Recommendation:** TPWD recommends excluding vegetation clearing activities during the general bird nesting season, March 15 through September 15, to avoid adverse impacts to birds. If clearing vegetation during the migratory bird nesting season is unavoidable, TPWD recommends surveying the area proposed for disturbance to ensure that no nests with eggs or young will be disturbed by construction. Nest surveys should be conducted not more than five days prior to clearing activities to maximize detection of active nests. TPWD generally recommends a 100-foot radius buffer of vegetation remain around active nests until the eggs have hatched and the young have fledged; however, the size of the buffer zone depends on various factors and can be coordinated with the local or regional USFWS office.

Mr. Derek Green  
Page 3  
March 27, 2025

The potential exists for birds to collide with power lines and associated guy wires and static lines. Bird fatalities can also occur due to electrocution if perching birds simultaneously contact energized and grounded structures.

**Recommendation:** TPWD recommends routing transmission lines to avoid crossing riparian areas, wetlands, and open water habitat, to the extent feasible. TPWD recommends crossing streams in a perpendicular manner and avoiding placement of lines parallel to streams and their associated wooded corridors. Where lines cross or are located near creeks, drainages, wetlands, and lakes, TPWD recommends line markers be installed at the crossings or closest points to the drainages to reduce potential bird collisions. TPWD recommends bird collision and electrocution risks be considered during project routing and design and recommends incorporating design features that will minimize those risks.

### **State Laws**

#### *Parks and Wildlife Code – Chapter 64, Birds*

PWC Section 64.002, regarding protection of nongame birds, 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.

**Recommendation:** Please review the *Federal Law: Migratory Bird Treaty Act* section above for recommendations as they are also applicable for PWC Chapter 64 compliance.

#### *State Law: Parks and Wildlife Code, Section 68.015*

PWC Section 68.015 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 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 website. State listed species may only be handled by individuals with appropriate authorization from the TPWD Wildlife Conservation Permits Office. For more information, please visit the TPWD Wildlife Conservation Permits website.

Mr. Derek Green  
Page 4  
March 27, 2025

**Recommendation:** TPWD recommends surveying the study area for suitable habitat for state listed species and developing route alternatives that avoid state listed species habitat. If suitable habitat for state listed species occurs along the proposed transmission line route, TPWD recommends a permitted biological monitor be present during clearing and construction to relocate state listed species if found. If the presence of a biological monitor is not feasible, state listed species observed during construction should be allowed to safely leave the area.

### **Species of Concern/Special Features**

In addition to state and federally protected species, TPWD tracks species considered to be Species of Greatest Conservation Need (SGCN) that, due to limited distributions or declining populations, face threat of extirpation or extinction but currently lack the legal protections given to threatened or endangered species. Special landscape features, natural plant communities, and SGCN are rare resources for which TPWD actively promotes conservation, and TPWD considers it important to minimize impacts to such resources to reduce the likelihood of endangerment and preclude the need to list SGCN as threatened or endangered in the future.

These species and communities are tracked in the Texas Natural Diversity Database (TXNDD). The most current and accurate TXNDD data can be requested from the TXNDD website. To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of protected and rare species using the submit data instructions found on the TXNDD website.

**Recommendation:** To assist in project planning, TPWD recommends requesting and reviewing TXNDD data records for the study area.

Please note that the absence of TXNDD information in the proximity does not imply that a species is absent from the study area. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Although it is based on the best data available to TPWD regarding rare and protected species, data from the TXNDD does not provide a definitive statement as to the presence, absence or condition of special species, natural communities, or other significant features within your project area. This data is not inclusive and cannot be used as presence/absence or substituted for on-the-ground surveys.

Mr. Derek Green  
Page 5  
March 27, 2025

**Recommendation:** Please review the TPWD county list for Jones County, as rare and protected species could be present, depending upon habitat availability. These lists are available on the Rare, Threatened, and Endangered Species of Texas website. TPWD recommends including a discussion and evaluation of potential impacts to SGCN (in addition to state listed and federally listed species) in the Environmental Assessment (EA) for this project. For USFWS threatened and endangered species lists, please see the USFWS Information for Planning and Consultation website.

Determining the actual presence of a species in an area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency, and population density (both wildlife and human). The absence of a species can only be established with repeated negative observations and consideration of all factors contributing to the lack of detectable presence.

**Recommendation:** TPWD recommends providing information prior to construction to educate personnel of the potential occurrence of federally and state listed species and SGCN within the project area, and the relevant rules and regulations that protect plants, fish, and wildlife. If encountered during construction, measures should be taken to avoid impacting wildlife.

### **Monarch Conservation Plan**

Significant declines in the population of migrating monarch butterflies (*Danaus plexippus*) have led to widespread concern about this species and the long-term persistence of the North American monarch migration. Augmenting larval feeding and adult nectaring opportunities is part of an international conservation effort for the monarch.

**Recommendation:** For disturbed sites within the monarch migration corridor, TPWD recommends revegetation efforts include planting or seeding native milkweed (*Asclepias* spp) and nectar plants as funding and seed availability allow.

### **Vegetation**

The TPWD Landscape Ecology Program has developed an interactive mapping application, the Texas Ecosystem Analytical Mapper (TEAM), to assist wildlife biologists, land managers, naturalists, planners, and conservationists in understanding Texas habitats and to integrate vegetation data with land

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management and resource planning of all types. For more information on TEAM please visit the TPWD Landscape Ecology Program website.

**Recommendation:** TPWD recommends that the removal of native vegetation during construction be minimized to the extent feasible. Unavoidable removal of vegetation should be mitigated by revegetating disturbed areas with site specific plant species where feasible. The replacement of native plants will help control erosion, provide habitat for wildlife, and provide native species an opportunity to compete with undesirable, non-native, invasive plant species.

### **General Construction Recommendations**

TPWD would like to provide the following general construction recommendations to assist in project planning.

**Recommendation:** Where new construction is the only feasible option, TPWD recommends routing new transmission and distribution lines along existing roads, pipelines, transmission lines, or right-of-way (ROW) and easements to reduce habitat fragmentation. By utilizing previously disturbed, existing utility corridors, county roads and highway ROWs, adverse impacts to fish and wildlife resources would be reduced by avoiding and minimizing the impacts to undisturbed habitats.

During construction, TPWD recommends observing slow (25 miles per hour, or less) speed limits within the project area. Reduced speed limits would allow personnel to see wildlife in the vehicle path and avoid wildlife injury or death.

TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from the construction area. 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 active 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 during active construction and only be removed after the construction is completed. 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 active construction area and provide safe egress opportunities prior to initiation of daily construction activities.

Where trenching or other excavation is involved in construction, TPWD recommends that contractors keep trenching and excavation, and backfilling

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crews close together to minimize the number of trenches or excavation areas left open at any given time during construction. TPWD recommends that any open trenches or excavation areas be covered overnight and inspected every morning to ensure no wildlife species have been trapped. Trenches left open for more than two daylight hours should be inspected for the presence of trapped wildlife prior to backfilling. If trenches and excavation areas cannot be backfilled the day of initial excavation, then escape ramps should be installed at least every 90 meters (approximately 295 feet). Escape ramps can be short lateral trenches or wooden planks sloping to the surface at an angle less than 45 degrees (1:1).

For soil stabilization and revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed and 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, or hydroseeding rather than erosion control blankets or mats due to a reduced risk to wildlife. If erosion control blankets or mats are 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.

### **Conservation Easements**

A conservation easement is a legal agreement between a landowner and a land trust or governmental agency that permanently limits uses of the land (including future fragmentation) to protect and conserve the land's natural values such as fertile soils, mature trees, and wildlife habitat. Lands with conservation easements protect existing wildlife habitat from future fragmentation and therefore have greater environmental integrity than comparable lands without conservation easements. Potential fragmentation of wildlife habitat from transmission line construction on properties where conservation agreements serve to protect the state's natural resources now and in the future is of concern to TPWD.

**Recommendation:** TPWD recommends properties protected by conservation easements be identified in the constraints analysis and avoided during development of alternative routes. Data sources for the location of these properties include, but are not limited to, online databases such as the Protected Areas Database and the National Conservation Easement Database, as well as available county records. If properties protected by conservation easements

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would be affected, TPWD recommends the length of routes through these properties be included in any accounting of alternative route impacts.

TPWD strives to respond to requests for project review within a 45-day comment period. Responses may be delayed due to workload and lack of staff. Failure to meet the 45-day review timeframe does not constitute a concurrence from TPWD that the proposed project will not adversely impact fish and wildlife resources.

I appreciate the opportunity to provide preliminary input on potential impacts related to this project and I look forward to reviewing the EA. Please contact me at Richard.Hanson@tpwd.texas.gov or (806) 761-4930 ext. 4936 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Rick Hanson".

Rick Hanson  
Ecological and Environmental Planning Program  
Wildlife Division

RH: 53441



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Arlington Ecological Services Field Office  
17629 El Camino Real, Suite 211  
Houston, TX 77058-3051  
Phone: (817) 277-1100 Fax: (817) 277-1129  
Email Address: [arles@fws.gov](mailto:arles@fws.gov)



In Reply Refer To:

06/19/2025 13:20:13 UTC

Project Code: 2025-0043955

Project Name: Phantom to Tiger 345-kv Transmission Line Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, which may occur within the boundary of your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For Federal actions other than major construction activities, the Service suggests that a biological evaluation (similar to a Biological Assessment) be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and

the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service has performed up-front analysis for certain project types and species in your project area. These analyses have been compiled into *determination keys*, which allows an action agency, or its designated non-federal representative, to initiate a streamlined process for determining a proposed project's potential effects on federally listed species. The determination keys can be accessed through IPaC.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at: <https://www.fws.gov/service/section-7-consultations>

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>). Additionally, wind energy projects should follow the wind energy guidelines (<https://www.fws.gov/media/land-based-wind-energy-guidelines>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation>. The Federal Aviation Administration (FAA) released specifications for and made mandatory flashing L-810 lights on new towers 150-350 feet AGL, and the elimination of L-810 steady-burning side lights on towers above 350 feet AGL. While the FAA made these changes to reduce the number of migratory bird collisions (by as much as 70%), extinguishing steady-burning side lights also reduces maintenance costs to tower owners. For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in

the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Arlington Ecological Services Field Office**

17629 El Camino Real, Suite 211

Houston, TX 77058-3051

(817) 277-1100

## PROJECT SUMMARY

Project Code: 2025-0043955  
Project Name: Phantom to Tiger 345-kv Transmission Line Project  
Project Type: Transmission Line - New Constr - Above Ground  
Project Description: Lone Star Transmission is proposing to build a new 345-kV transmission line in Jones County, Texas.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@32.79974795,-99.90082214414213,14z>



Counties: Jones County, Texas

## ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 4 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## BIRDS

NAME	STATUS
<p>Piping Plover <i>Charadrius melodus</i></p> <p>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.</p> <p>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ Wind Energy Projects</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a></p>	Threatened
<p>Rufa Red Knot <i>Calidris canutus rufa</i></p> <p>There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ Wind Energy Projects</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a></p>	Threatened

## FISHES

NAME	STATUS
<p>Sharpnose Shiner <i>Notropis oxyrhynchus</i></p> <p>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ All reservoir projects; in-channel projects such as interbasin transfers, water diversions, small impoundments, etc. that may reduce flows of major tributaries eventually flowing into occupied habitat; commercial/industrial well field projects.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/6492">https://ecos.fws.gov/ecp/species/6492</a></p>	Endangered
<p>Smalleye Shiner <i>Notropis buccula</i></p> <p>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ All reservoir projects; in-channel projects such as interbasin transfers, water diversions, small impoundments, etc. that may reduce flows of major tributaries eventually flowing into occupied habitat; commercial/industrial well field projects.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/1774">https://ecos.fws.gov/ecp/species/1774</a></p>	Endangered

## INSECTS

NAME	STATUS
<p>Monarch Butterfly <i>Danaus plexippus</i></p> <p>There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a></p>	Proposed Threatened

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL  
ABOVE LISTED SPECIES.

## IPAC USER CONTACT INFORMATION

Agency: Burns & McDonnell  
Name: Gary Newgord  
Address: 6200 Bridgepoint Parkway  
Address Line 2: Building 4, Suite 400  
City: Austin  
State: TX  
Zip: 78730  
Email: genewgord@burnsmcd.com  
Phone: 5129231969



## **APPENDIX B - PUBLIC INVOLVEMENT**





March 25, 2025

<Landowner Name>  
<Address Line 1>  
<Address Line 2>  
<City>, <State>, <Zip Code>

Tax Appraisal District Parcel ID: <Parcel ID>

Dear Landowner,

Lone Star Transmission, LLC ("Lone Star") invites you to attend a public meeting to provide input on the Phantom Hill to Tiger Solar Transmission Line project, a proposed new 345-kilovolt transmission line in Jones County, Texas. You are receiving this letter because your property is crossed by or is in close proximity to proposed route links that are being considered for the project, and Lone Star would like to obtain your feedback on the proposed route links and the overall project.

**The public meeting will be held:**

**Tuesday, April 8, 2025  
5:30 p.m. to 7:30 p.m.  
Anson Opera House  
1120 11<sup>th</sup> Street  
Anson, Texas 79501**

All the proposed route links depicted on the enclosed map are under consideration. Your input and feedback on the various route links will help Lone Star identify and focus on any needed changes and/or adjustments to various route links and identify and focus on route links that are most preferable to you. Lone Star will prepare and present its application for the transmission line project to the Public Utility Commission of Texas (PUC) based on your input, environmental factors, and cost considerations. The PUC will consider all the information provided and select and approve the route links that will comprise the final route.

The transmission line project is needed to connect a new photovoltaic generation resource, known as Tiger Solar, to the Texas electric grid. The project would be constructed between Lone Star's existing Phantom Hill Station, located at the northwest corner of the intersection of Jones County Road (CR) 185 and CR 186, and Tiger Solar's new collection substation, located along CR 195 about 2.3 miles north of U.S. Highway 277. In addition to building and operating the new 345-kV transmission line, Lone Star is also proposing to modify infrastructure inside the Phantom Hill Station.

The public meeting will include a series of stations staffed by project representatives to provide information about the project, the routing and regulatory process set by the PUC, and the criteria

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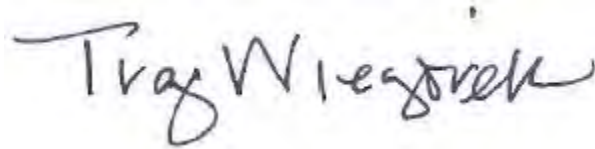
used to aid in the development and selection of the proposed route links. Large maps showing specific parcels, landowners and aerial imagery will be available for review at the public meeting.

The open-house format of the public meeting means there is no set agenda, and you can come and go as you please. Typically, attendees spend about 30 minutes walking through the stations, reviewing the information, and providing input to and interacting with project representatives. The open-house format is an informal format and is best suited for promoting and encouraging individual participation. We want to ensure attendees feel comfortable asking questions, engaging in dialogue and providing their feedback and opinions and believe the informal nature of the open-house format provides for a more personal, interactive experience for everyone.

Along with the enclosed map, a list of Frequently Asked Questions and a project questionnaire are also enclosed. The questionnaire provides an additional opportunity for you to provide input, concerns, and feedback about the project and may be dropped off during the public meeting or returned to Lone Star before or after the public meeting. If returned after the public meeting, **we would appreciate receipt by April 25, 2025.**

If you are unable to attend the public meeting or return the questionnaire and simply want to talk about the project, please feel free to contact me by telephone at (512) 236-3151 (office) or (512) 517-8798 (mobile) or by email at [tracy.wieczorek@lonestar-transmission.com](mailto:tracy.wieczorek@lonestar-transmission.com). We look forward to meeting with you and sincerely appreciate your participation.

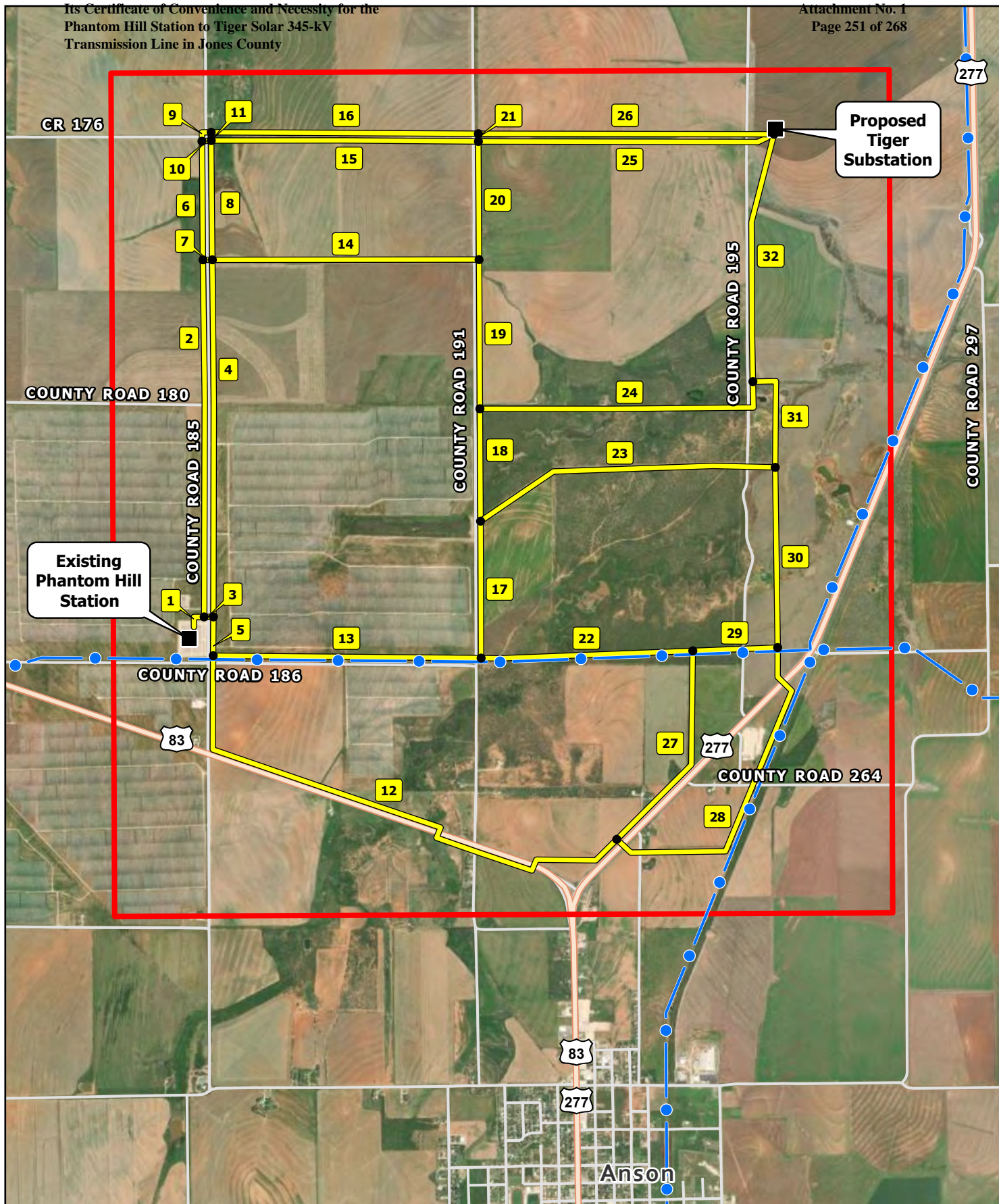
Sincerely,

A handwritten signature in black ink that reads "Tracy Wieczorek". The signature is written in a cursive, flowing style.

Tracy Wieczorek  
Director, Land Strategy and Community Relations

Enclosures:

1. Study Area and Route Map
2. Frequently Asked Questions
3. Questionnaire



<ul style="list-style-type: none"> <li>■ Project Endpoint</li> <li>— Preliminary Link</li> <li>● Link Endpoint</li> <li>— Existing Transmission Line</li> <li>▭ Study Area</li> </ul>			<p>Phantom Hill to Tiger Solar              345 kV Transmission Line Project              Lone Star Transmission              Jones County, Texas</p>
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## Frequently Asked Questions

### Phantom Hill to Tiger Solar 345-kV Transmission Line Project

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#### Who is Lone Star Transmission, LLC?

Lone Star Transmission, LLC ("Lone Star") is a regulated electric transmission utility that owns and operates approximately 355 miles of high-voltage transmission lines in 12 counties across Texas – Scurry, Fisher, Jones, Shackelford, Callahan, Eastland, Comanche, Erath, Bosque, Hill, Limestone and Navarro. Although Lone Star does not generate or sell electricity, our transmission lines receive and deliver bulk electricity to other utilities who in turn distribute the power directly to businesses and consumers.

Founded in 2009 and headquartered in Austin, Texas, Lone Star is a subsidiary of NextEra Energy Transmission, LLC, a leading competitive transmission company in North America. For more information, visit [www.LoneStarTransmission.com](http://www.LoneStarTransmission.com).

#### What are transmission lines and what do they do?

Transmission lines are made of a series of wire strands typically composed of aluminum and steel that are twisted together to form conductors. The conductors, typically arranged in groups of three, are attached to monopoles and/or lattice towers to transport large amounts of electricity over long distances. Usually part of a larger, interconnected system, transmission lines often transmit electricity from step-up substations at generation resources to switchyards to move high-voltage electricity efficiently from one region to another (switchyards or switching stations are manually or remotely controlled to allow or halt the movement of electricity along specific transmission line segments). To move electricity within a region, transmission lines oftentimes connect switchyards to local substations, where the electricity is stepped down in voltage and delivered along distribution lines to end users.

#### What is the Phantom Hill to Tiger Solar 345-kV Transmission Line Project?

The Phantom Hill to Tiger Solar project proposes to connect a new, 255-megawatt (MW) photovoltaic generation resource, known as Tiger Solar, to the Texas electric grid by way of a 345-kilovolt (kV) transmission line to be constructed, owned and operated by Lone Star. In addition to the construction of the transmission line, Lone Star would also undertake modifications to infrastructure inside the Phantom Hill Station.

The new transmission line would be constructed in Jones County between Lone Star's existing Phantom Hill Station, located at the northwest corner of the intersection of Jones County Road (CR) 185 and CR 186, and Tiger Solar's new collection substation, located along CR 195 about 2.3 miles north of U.S. Highway 277.

The Tiger Solar collection substation would be constructed, owned and operated by Tiger Solar.

## Why must the Phantom Hill to Tiger Solar 345-kV Transmission Line Project be constructed in this area?

Tiger Solar requested Lone Star to connect the solar site to the Texas electric grid. As a regulated electric transmission utility, Lone Star is required to interconnect new generation resources and provide open access to Texas' electric grid.

## What type of transmission structure will be used for the project?

Lone Star plans to use spun-concrete monopole structures but may also use steel monopole structures as needed. Typical structures will range in height from 100 to 120 feet but specific structures may be taller, as needed.

## Will Lone Star need approval to construct the project?

Yes. Lone Star will seek approval for the Phantom Hill to Tiger Solar 345-kV Transmission Line Project from the Public Utility Commission of Texas (PUC).

## What is the process for obtaining the PUC's approval for the project?

Lone Star will gather information and input from landowners through a public meeting process and from other interested parties and sources through formal requests to facilitate preparation of a routing study and environmental assessment. After preparation is complete, Lone Star will prepare and file a Certificate of Convenience and Necessity (CCN) application with the PUC.

The application will address:

- Regulatory requirements including the project's purpose and need;
- Project details, i.e., voltage, materials, existing infrastructure and estimated schedule;
- Estimated project costs, i.e., engineering and design, right-of-way acquisition, materials and construction;
- The public involvement process, including information about the public meeting, copies of notices, and feedback received from landowners and other stakeholders about the various route links developed for the proposed transmission line;
- Any environmental impacts resulting from the proposed route links and associated construction of the proposed transmission line; and
- Lone Star's solid experience and extensive capabilities in successfully owning, operating and maintaining reliable transmission facilities in Texas.

The PUC will decide whether the application should be approved. If approved, the PUC will also select specific route links for use.

## How will landowners find out information about the project and Lone Star's application?

First, Lone Star is sending invitations, publishing a notice, and hosting an open house public meeting. At the public meeting, Lone Star will provide information about the project and proposed route links as well as obtain information, comments and concerns from landowners and other interested parties in attendance. Individuals attending the public meeting and landowners receiving notice about the public meeting have an opportunity to make comments, ask questions, and express any concerns about the proposed route links. Representatives from Lone Star and its consultant, Burns & McDonnell, will be present at the public meeting, which will be held on **Tuesday, April 8, 2025, from 5:30 p.m. to 7:30 p.m. at the Anson Opera House located at 1120 11th Street, Anson, Texas 79501.**

Second and as part of its formal application for a CCN amendment, Lone Star will mail notice of its application to the landowners who may be directly affected by the requested CCN amendment and are stated on current Jones County tax records, via first-class mail service. Landowners who may be directly affected include:

- Those whose land may be crossed by the proposed project and an easement or other property interest would be obtained over all or any portion of the land, and
- Those whose land contains a habitable structure that would be within 500 feet of the centerline of the proposed project.

Third and as part of its formal application for a CCN amendment, Lone Star will publish notice of its intent to secure a CCN amendment in a newspaper having general circulation within Jones County, within the week after Lone Star files its application at the PUC.

The notice received by directly affected landowners as well as the notice published in a Jones County newspaper will include the docket number for Lone Star's CCN amendment application. The docket number, also called a control number on the PUC's website, is an important piece of information used to locate CCN proceedings and associated documents on the PUC's online Interchange. The PUC's online Interchange provides free access to documents that are officially filed with the PUC. The Interchange may be accessed by visiting the PUC's website at [www.puc.state.tx.us](http://www.puc.state.tx.us).

Lastly, if the PUC approves Lone Star's application for the project, then Lone Star will mail notice of the PUC's final decision to all landowners who were provided formal notice of Lone Star's application.

## Will new rights-of-way be required for the Phantom Hill to Tiger Solar 345-kV Transmission Line Project?

Yes, provided the PUC approves the project, Lone Star will make a bona fide offer to landowners to acquire new rights-of-way along the route links selected by the PUC. Along with a bona fide offer, Lone Star will provide landowners with a copy of the State of Texas Landowner's Bill of Rights and all efforts will follow the requirements of Texas law. If needed to reach agreement with a landowner, Lone Star will obtain an appraisal. In cases where the parties cannot reach an agreement, compensation for the right-of-way will be determined in a condemnation proceeding where Special Commissioners, three local landowners appointed by a judge, will determine the compensation due to the landowner based on a hearing.

The State of Texas Landowner's Bill of Rights is also available at:

<https://www.texasattorneygeneral.gov/sites/default/files/files/divisions/general-oag/landowners-bill-of-rights-2022.pdf>

## When will construction on the project begin?

Provided the PUC approves the Phantom Hill to Tiger Solar 345-kV Transmission Line Project, Lone Star would first need to acquire new rights-of-way, complete all needed activities to fully develop engineered design plans, i.e., surveying, geotechnical testing and permitting, and begin procuring materials. Once the engineered design plans are finalized, Lone Star would obtain any remaining permits and approvals needed for the project, e.g., wireline crossing and driveway access permits and utility crossing and road use approvals. Shortly thereafter – in late 2026 or early 2027, construction would start.

## If I have additional questions or concerns, who can I contact?

For anyone with additional questions, concerns or comments, please call Tracy Wieczorek, Lone Star's Director of Land Strategy and Community Relations, at (512) 236-3151 or send an email to [questions@lonestar-transmission.com](mailto:questions@lonestar-transmission.com).

## Phantom Hill to Tiger Solar 345 kV Transmission Line Project

### Project and Public Meeting Questionnaire

This questionnaire is designed to help Lone Star Transmission, LLC (“Lone Star”) identify and understand stakeholder interests and concerns. Responses to the questionnaire will be used in the evaluation of the proposed route links for the new transmission line. The questionnaire is also a tool to help Lone Star measure its effectiveness in providing information about the project to stakeholders.

We thank you in advance for taking the time to review and complete the questionnaire.

**1. Which of the following applies to you? (Please indicate which statements affect you or your property.)**

Statement	Yes	No	Please list your Property Address or Parcel Number or Proposed Route Link and any comments and/or concerns
A proposed route link is near my home.			
A proposed route link is near my business.			
A proposed route link is on my property.			
My property is cultivated (whether all or only some of it).			
My cultivated property is irrigated (traveling or gravity feed/indicate type).			
My property is located in the study area.			
An existing transmission line is on my property or near my home.			
Other. A proposed route link is: -on property I lease -on property I manage			
I am not affected by a proposed route link.			

2. Do you feel the need for the project has been adequately explained to you? \_\_\_\_ Yes \_\_\_\_ No

If No, please explain. \_\_\_\_\_

3. Identifying and proposing route links, selecting a route and constructing a transmission line involves many factors that must be considered. From the following list, please select up to 10 factors that are of interest to you. Please numerically rank your selections in order of importance with 1 being the consideration of greatest interest to you and 10 being the consideration of least interest to you.

\_\_\_\_ Parallel existing overhead utility lines

\_\_\_\_ Parallel existing roads and highways

\_\_\_\_ Parallel apparent property lines and/or  
fence lines

\_\_\_\_ Maximize length of line across  
undeveloped land

\_\_\_\_ Maximize distance from schools,  
churches, nursing homes, etc.

\_\_\_\_ Maximize distance from commercial  
buildings

\_\_\_\_ Maximize distance from residences

\_\_\_\_ Maximize distance from historic sites and  
archaeological areas

\_\_\_\_ Maximize distance from parks and  
recreational areas

\_\_\_\_ Minimize total length of line (reduces  
cost)

\_\_\_\_ Minimize visibility of the line

\_\_\_\_ Minimize impacts to wildlife

\_\_\_\_ Minimize loss of trees

\_\_\_\_ Minimize length of line across cropland

\_\_\_\_ Minimize length across grassland and/or  
pasture

\_\_\_\_ Minimize length across wetlands and/or  
floodplains

4. Are there any other factors or any other information you would like the project team to consider when evaluating possible and/or proposed route links for the new transmission line?

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5. Do you have a concern with any specifically proposed route link(s) shown on the attached map? If so, please note the proposed route link or links and describe your concern(s).

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**6. When identifying and proposing route links for electric transmission lines, many environmental and land use features are identified and considered, including but not limited to the following:**

Residences, businesses, cemeteries,  
schools, churches, hospitals, nursing  
homes and other nearby structures

Commercial AM and FM radio  
transmitters, microwave relay  
stations or other similar electronic  
installations

Pipeline rights-of-way

Parks and recreational areas

Historical and archaeological sites

Airports, landing strips and heliports

Agricultural areas irrigated by traveling  
irrigation systems

Areas containing threatened and/or  
endangered species and other  
environmentally sensitive areas

Canals, levees and drainage ditches

Floodplains and floodway boundaries

**After reviewing the constraints maps shown at the public meeting, are any of these features incorrectly shown on the map?** \_\_\_\_\_ Yes \_\_\_\_\_ No

**If yes, please explain and identify the feature's approximate location and/or mark the location on the attached map.**

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**7. Are there any other features in the study area and/or any specific characteristics about your property that should be considered with respect to the proposed route links? If so, please describe the feature/characteristic and its approximate location and/or mark the location(s) on the attached map.**

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**8. Please provide any additional comments you would like us to consider in planning for this project.**

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**9. Did you attend the public meeting?** \_\_\_\_\_ Yes \_\_\_\_\_ No

**10. How did you learn about the public meeting?**

\_\_\_\_\_ Newspaper Notice    \_\_\_\_\_ Invitation Letter    \_\_\_\_\_ Other, please specify.

---

**11. How did you obtain this questionnaire?**

\_\_\_\_\_ Received with Invitation Letter    \_\_\_\_\_ At Public Meeting    \_\_\_\_\_ Other, please explain.

---

**12. If you attended the public meeting... did you feel you were given ample opportunity to ask questions and receive answers?**

\_\_\_\_\_ Yes    \_\_\_\_\_ No

If No, please explain. \_\_\_\_\_

**13. ...did you feel your issues and concerns were heard and understood?**

\_\_\_\_\_ Yes    \_\_\_\_\_ No

If No, please explain. \_\_\_\_\_

**14. ...did you feel it was a worthwhile use of your time?**

\_\_\_\_\_ Yes    \_\_\_\_\_ No

If No, please explain. \_\_\_\_\_

**16. Do you feel the information provided at the public meeting was helpful in understanding the transmission line project?**

\_\_\_\_\_ Yes    \_\_\_\_\_ No

If No, please explain

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**17. If you would like us to contact you, which is completely optional, please let us know how and your preferred contact method(s).**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

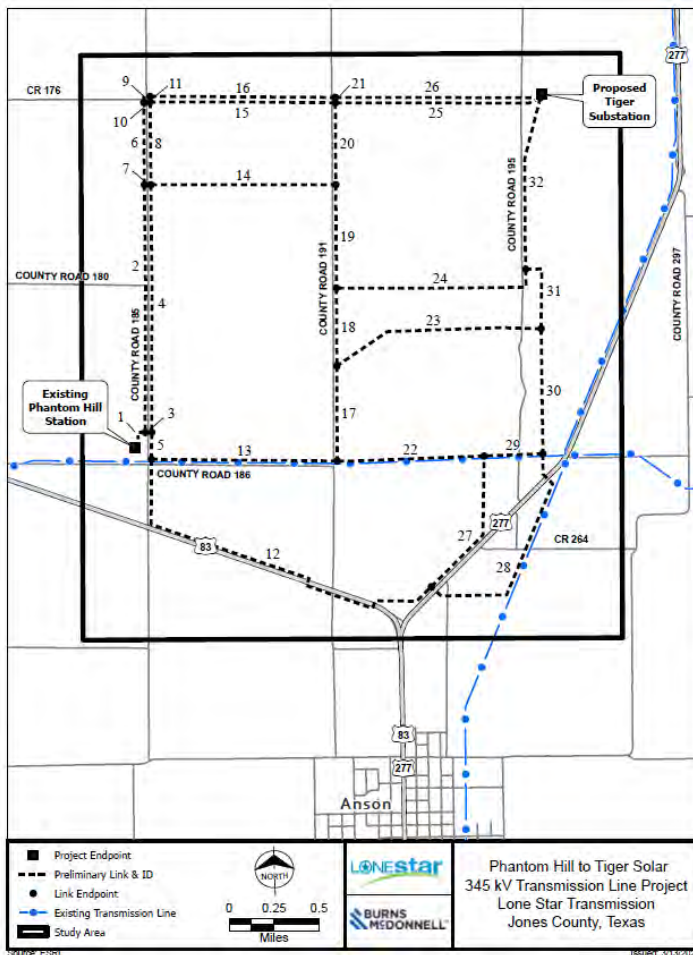
City, State, Zip: \_\_\_\_\_ Email: \_\_\_\_\_

Telephone (home): \_\_\_\_\_ Mobile: \_\_\_\_\_ Work: \_\_\_\_\_

**Thank you for providing information, comments and concerns. We truly appreciate your participation.**

Please drop off your completed questionnaire at the sign-in desk or, if you need more time, please return it by mail or email to the appropriate address below so the questionnaire is received by April 25:

Lone Star Transmission  
5920 W. William Cannon Dr., Bldg 2  
Attn: Tracy W (PH2TS)  
Austin, Texas 78749  
Email: Tracy.Wieczorek@Lonestar-Transmission.com



## NOTICE OF PUBLIC MEETING

\*\*\*

**TUESDAY, APRIL 8, 2025**

**5:30 – 7:30 pm**

**ANSON OPERA HOUSE**

**1120 11<sup>TH</sup> STREET**

**ANSON, TEXAS 79501**

### PHANTOM HILL TO TIGER SOLAR 345-KV TRANSMISSION LINE PROJECT

**LONE STAR TRANSMISSION, LLC**

Lone Star Transmission, LLC (Lone Star) is seeking input from the public on its proposal to build, own and operate a single circuit 345-kilovolt (kV) transmission line in Jones County, Texas – north of Anson. The proposed transmission line would connect Lone Star's existing Phantom Hill Station, located at the northwest corner of the County Road (CR) 185 and CR 186 intersection, and Tiger Solar's new collection substation, located along CR 195 about 2.3 miles north of U.S. Highway 277. Please see the map above for the study area, stations, and proposed route links. Maps with greater detail will be exhibited at the meeting.

The public meeting will provide ample opportunity for informal information sharing and exchanges among participants about the proposed transmission line project and the transmission line routing process. The open house format allows attendees to come and go at any time during the public meeting, view the information at their leisure, and engage with project representatives. Comments and concerns received about the project and proposed route links will be considered and evaluated for further routing refinement.

Your input and feedback are important and very much appreciated. If you have questions about the public meeting, please contact Tracy Wieczorek at 512-236-3151 or email [questions@lonestar-transmission.com](mailto:questions@lonestar-transmission.com). We look forward to seeing you soon.

WEDNESDAY, APRIL 02, 2025

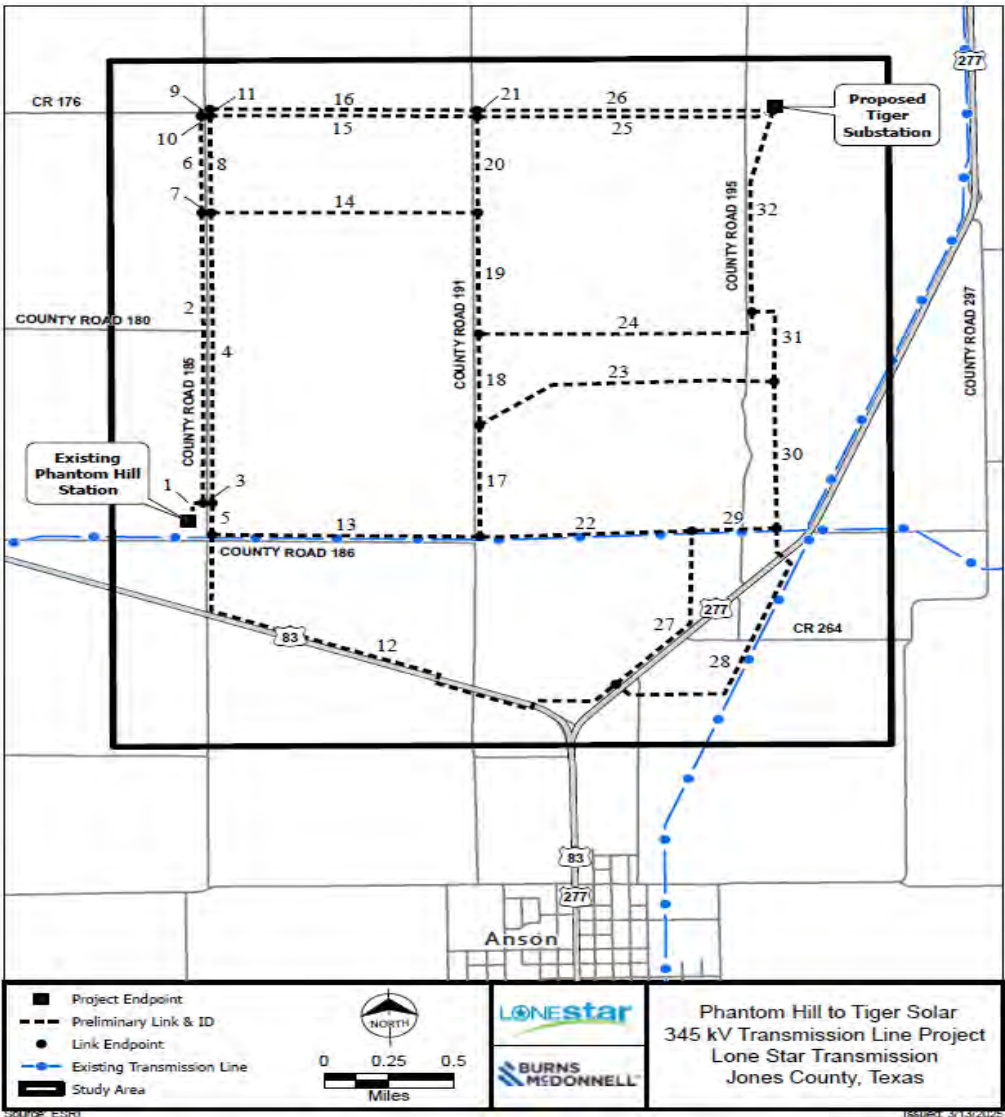
NOTICE TO BID

Jones County  
Advertisement and Invitation for Proposals and Bids  
Jones County, Texas will receive initial proposals and bids for County Road improvements until 9:00 AM on April 14, 2025 at the Jones County Courthouse, 12th and Commercial, Anson TX, 79501. Bids received after April 14, 2025 will be reviewed and considered at regularly scheduled Commissioners Court meetings.  
Bids are invited for several items and quantities of work as follows:  
1. Contracting Truck Operators for material hauling of gravel, crushed rock and /or other types of road materials.  
2. Truck Operators with 20 cubic yard belly dump trailers with capability to deliver road Materials to County Road repair locations.  
3. Truck Operators are required to provide proof of insurance and proper licenses for truck drivers.  
4. Material proposals for the purchase of gravel, crushed rock, and/or other types of road materials.  
Jones County reserves the right to award multiple vendor agreements for the benefit of Jones County. For questions regarding this notice, please contact the Jones County Judge's office at 325-823-3741.  
Attention is called to the fact that not less than, the federally determined prevailing (Davis-Bacon and Related Acts) wage rate. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, sexual identity, gender identity, or national origin.  
Jones County reserves the right to reject any or all bids or to waive any informality in the bidding.  
Bids may be held by Jones County for a period not to exceed 30 days from the date of the proposal and bid opening for the purpose of reviewing the proposals and bids and investigating the vendor's qualifications prior to the vendor approval.  
Jones County, Texas will comply with verification of each construction service contractor, material supplier and vendor through the System for Award Management (www.SAM.gov) for eligibility to participate in federal programs prior to Commissioners Court approval and award.  
All contractors/subcontractors that are debarred, suspended or otherwise excluded from or ineligible for participation on federal assistance programs may not undertake any activity in part or in full under this project.

Public Service Announcement: Fair Housing, It's the Law  
To promote fair housing practices, The City of Hawley encourages potential homeowners and renters to be aware of their rights under the National Fair Housing Law. Title VIII of the Civil Rights Act of 1968, as amended, prohibits discrimination against any person on the basis of race, color, religion, sex, disability, familial status or national origin in the sale or rental of units in the housing market. For more information on fair housing or to report possible fair housing discrimination, call the Texas Workforce Commission at (888) 452-4778 or (512) 463-2642 TTY: 512-371-7473.  
Policy of Nondiscrimination on the Basis of Disability  
The City of Hawley does not discriminate on the basis of disability in the admission or access to, or employment in, its federally assisted programs or activities. The Mayor has been designated to coordinate compliance with the nondiscrimination requirements contained in the Department of Housing and Urban Development's (HUD) regulations implementing Section 504 (24 CFR Part 8).  
Citizen Participation & Grievance Procedures Notice  
The City of Hawley has adopted complaint and grievance procedures regarding its Texas Community Development Block Grant Programs (TxCDBG). Citizens may obtain a copy of these written procedures at 783 Ave E Hawley, TX, 79525 during regular business hours. Citizens may also request the procedures be mailed to them by calling the Mayor, Civil Rights Officer at (325) 537-9528. These procedures outline the steps for a citizen to follow if s/he wishes to file a complaint or grievance about TxCDBG activities. A person who has a complaint or grievance about any services or activities with respect to the TxCDBG project, may during regular business hours submit such complaint or grievance, in writing to the , at P.O. Box 649, Hawley, TX 79525 or may call (325) 537-9528. The City of Hawley will make every effort to respond fully to such complaints within fifteen (15) working days where practicable.  
Equal Employment Opportunity Statement  
The City of Hawley does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin.

BANK BID NOTICE  
The Jones County Commissioners' Court will receive sealed bid proposals for the Jones County's Bank Depository Contract until 9:00 a.m. on Monday, April 14th, 2025, at which time the bids will be opened and established in the Commissioners' Courtroom, 3rd floor, Jones County Courthouse. Bids will be presented to the Commissioners' Court for awarding at their regularly scheduled meeting on Monday, April 14, or April 28, 2025 at 9:00 a.m. Sealed bids will be received by the Jones County Judge's Office. Bid packages may be obtained by contacting Kristian Smith, Jones County Treasurer, at 325-823-3742 or the Jones County website www.co.jones.tx.us . The Commissioners Court reserves the right to reject any and all proposals for any reason.

PUBLIC NOTICE FOR FUEL PROPOSALS  
Notice is hereby given that the Commissioners Court of Jones County, Texas, will be receiving proposals for gasoline and red diesel fuels. Bid proposals must be submitted using the Fuel Bid Form. The Fuel Bid Form is available on the Jones County website, www.co.jones.tx.us or by contacting the Jones County Judge's office at 325-823-3741. Proposals must be received no later than 9:00 am on Monday, April 14, 2025, and proposals will be opened at the Commissioners Court meeting to be held on Monday, April 14, 2025, at 9:00 am. The Commissioners Court reserves the right to reject any and all proposals for any reason.



NOTICE OF PUBLIC MEETING

\*\*\*

TUESDAY, APRIL 8, 2025  
5:30 – 7:30 pm  
ANSON OPERA HOUSE  
1120 11<sup>TH</sup> STREET  
ANSON, TEXAS 79501

PHANTOM HILL TO TIGER SOLAR  
345-KV TRANSMISSION LINE  
PROJECT

LONE STAR TRANSMISSION, LLC

Lone Star Transmission, LLC (Lone Star) is seeking input from the public on its proposal to build, own and operate a single circuit 345-kilovolt (kV) transmission line in Jones County, Texas – north of Anson. The proposed transmission line would connect Lone Star's existing Phantom Hill Station, located at the northwest corner of the County Road (CR) 185 and CR 186 intersection, and Tiger Solar's new collection substation, located along CR 195 about 2.3 miles north of U.S. Highway 277. Please see the map above for the study area, stations, and proposed route links. Maps with greater detail will be exhibited at the meeting.

The public meeting will provide ample opportunity for informal information sharing and exchanges among participants about the proposed transmission line project and the transmission line routing process. The open house format allows attendees to come and go at any time during the public meeting, view the information at their leisure, and engage with project representatives. Comments and concerns received about the project and proposed route links will be considered and evaluated for further routing refinement.

Your input and feedback are important and very much appreciated. If you have questions about the public meeting, please contact Tracy Wieczorek at 512-236-3151 or email [questions@lonestar-transmission.com](mailto:questions@lonestar-transmission.com). We look forward to seeing you soon.

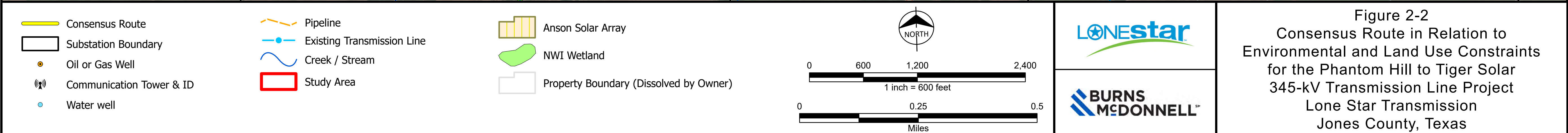
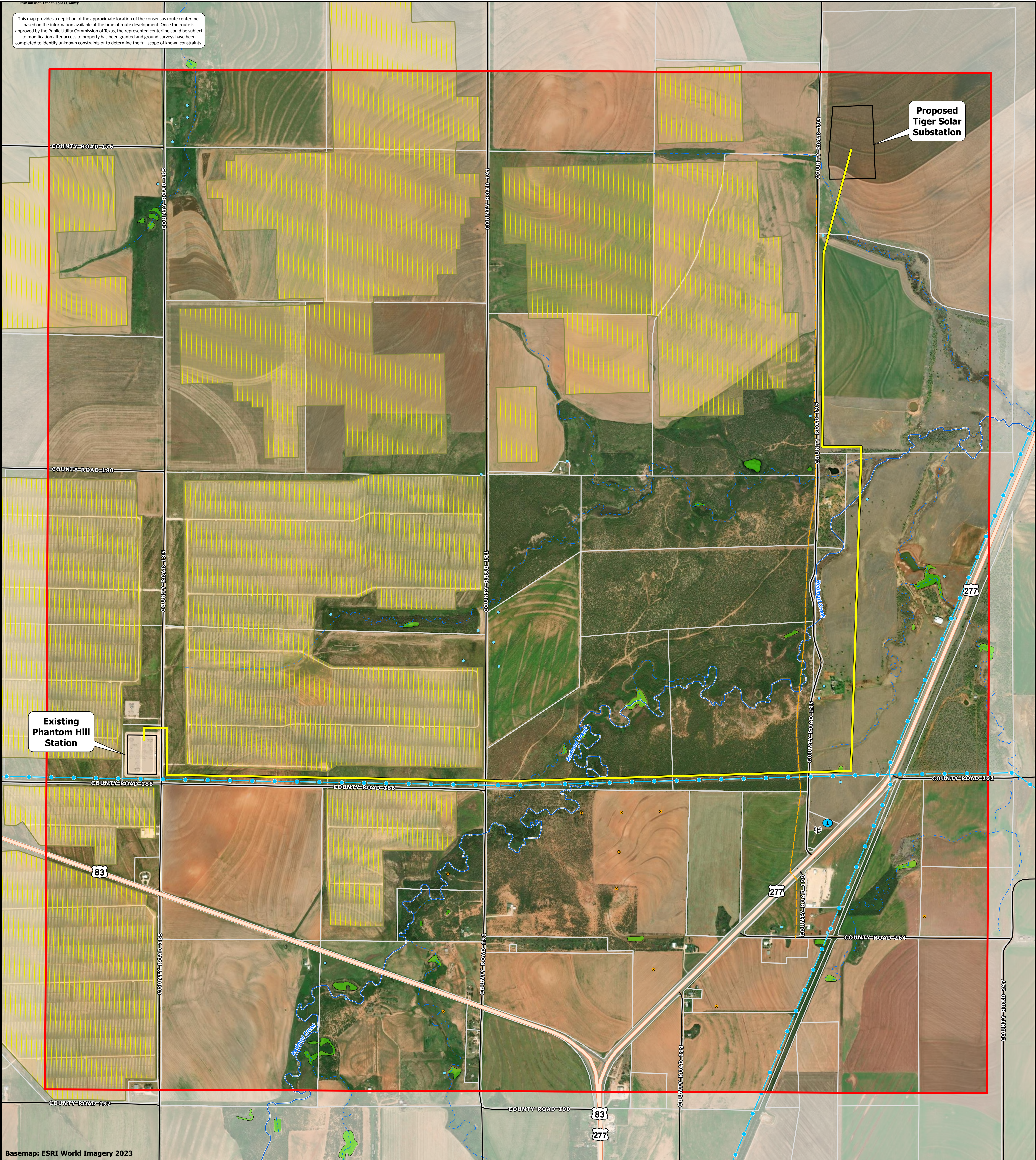
TIRES SOLD HERE!  
Franklin & Son  
1719 17th Street; Anson  
325-823-4030





**MAP POCKET (Figure 2-2)**











CREATE AMAZING.

Burns & McDonnell  
6200 Bridge Point Parkway, Suite 400  
Austin, TX 78730  
O 512-872-7130  
F 512-872-7127  
[www.burnsmcd.com](http://www.burnsmcd.com)

**LANDOWNER CONSENSUS ROUTE AGREEMENT**

THE STATE OF TEXAS                   §  
  §  
COUNTY OF JONES                   §

THIS LANDOWNER CONSENSUS ROUTE AGREEMENT ("**Agreement**") is made and entered into this 10~~th~~ day of April, 2025 by Stephanie M. Pope Trust, Stephanie M. Pope or her successor as Trustee, under Trust Agreement dated September 2, 2004, as amended, with an address of 1192 Cypress Point Way, Virginia Beach, VA 23455, and Walter Alan Pope, a married man, dealing in his sole and separate property, joined by consenting spouse Shu Chin Wu, with an address of 201 Nelson Ferry Road, Decatur, GA 30030 (collectively, "**Landowner**").

Landowner hereby acknowledges and confirms ownership of the following described property ("**Landowner's Property**"), pursuant to Partition Deed effective December 31, 1993 and recorded March 14, 1994 as Book 44, Page 260 / Instrument No. 940771, Official Public Records, Jones County, Texas, and pursuant to the probate of the Estate of Ida V. Pope, Deceased, in Cause No. 6031, County Court of Jones County, Texas:

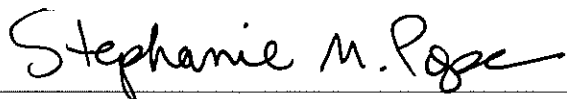
BEING 320 acres out of the South one-half (S/2) of Survey No. 43, B. B. B. & C. Ry. Co. Lands, Jones County, Texas, and being the same land conveyed to John T. Pope by C. L. Hamilton et ux by Warranty Deed dated July 11, 1907, recorded in Volume 42, at Page 414 of the Deed Records of Jones County, Texas; and being described as HOME PLACE in Partition Deed recorded in Volume 44, Page 260, Official Public Records, Jones County, Texas.

Landowner acknowledges that Lone Star Transmission, LLC, a Delaware limited liability company, ("**Lone Star**") proposes to file an Application to Amend Its Certificate of Convenience and Necessity ("**Application**") with the Public Utility Commission of Texas ("**PUCT**") to construct and operate a 345 kilovolt transmission line that will connect Lone Star's Phantom Hill Station, located at the northwest corner of the intersection of County Road (CR) 185 and CR 186 in Jones County, to the proposed Tiger

Solar collector substation, located along CR 195 approximately 2.3 miles north of its intersection with U.S. Highway 277 in Jones County ("**Transmission Line Facilities**"). Lone Star will propose the PUCT approve a route for the Transmission Line Facilities that is accepted by each property owner directly affected by the Transmission Line Facilities ("**Consensus Route**"). Lone Star will include this Agreement with its Application to demonstrate agreement on the Consensus Route by all directly affected landowners.

Landowner and Lone Star agree the PUCT should approve the Consensus Route that will be presented for PUCT consideration in Lone Star's Application. Landowner represents it is the legal and beneficial owner of fee simple title to the property as described above and has the right, without joinder of any other party, to enter into the Agreement. Landowner acknowledges that the new 345 kilovolt transmission line, if approved, will be installed on Landowner's Property as depicted on **Exhibit A**, attached hereto and made a part hereof ("**Facilities Location**"). Landowner and Lone Star further acknowledge this Agreement does not convey the land rights needed by Lone Star to construct or operate the transmission line.

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Landowner hereby accepts and provides consent for Lone Star's Application and Facilities Location.



Stephanie M. Pope  
Individually and Trustee of the Stephanie M. Pope Trust dated September 2, 2004, as amended

---

Walter Alan Pope

---

Shu Chin Wu

Solar collector substation, located along CR 195 approximately 2.3 miles north of its intersection with U.S. Highway 277 in Jones County ("**Transmission Line Facilities**"). Lone Star will propose the PUCT approve a route for the Transmission Line Facilities that is accepted by each property owner directly affected by the Transmission Line Facilities ("**Consensus Route**"). Lone Star will include this Agreement with its Application to demonstrate agreement on the Consensus Route by all directly affected landowners.

Landowner and Lone Star agree the PUCT should approve the Consensus Route that will be presented for PUCT consideration in Lone Star's Application. Landowner represents it is the legal and beneficial owner of fee simple title to the property as described above and has the right, without joinder of any other party, to enter into the Agreement. Landowner acknowledges that the new 345 kilovolt transmission line, if approved, will be installed on Landowner's Property as depicted on **Exhibit A**, attached hereto and made a part hereof ("**Facilities Location**"). Landowner and Lone Star further acknowledge this Agreement does not convey the land rights needed by Lone Star to construct or operate the transmission line.

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Landowner hereby accepts and provides consent for Lone Star's Application and Facilities Location.

---

Stephanie M. Pope  
Individually and Trustee of the Stephanie M. Pope Trust dated September 2, 2004, as amended



---

Walter Alan Pope

---

Shu Chin Wu

## EXHIBIT A

### Facilities Location



**AFFIDAVIT OF NON-HOMESTEAD**

STATE OF TEXAS                    )  
  ) ss  
COUNTY OF JONES                )

I, Walter Alan Pope, being first duly sworn on oath, deposes and says that he is over the age of majority, is fully competent to make this affidavit, has personal knowledge and is familiar with the following described real property ("Property"):

BEING 320 acres out of the South one-half (S/2) of Survey No. 43, B. B. & C. Ry. Co. Lands, Jones County, Texas, and being the same land conveyed to John T. Pope by C. L. Hamilton et ux by Warranty Deed dated July 11, 1907, recorded in Volume 42, at Page 414 of the Deed Records of Jones County, Texas; and being described as HOME PLACE in Partition Deed recorded in Volume 44, Page 260, Official Public Records, Jones County, Texas.

That the Affiant knows of his own knowledge that neither Affiant nor any member of their family has ever claimed the Property as their homestead, nor ever resided on the Property.

That this Affidavit is made for the express purpose of inducing a title company ("Title Company") and/or its duly appointed agents to issue a Policy on the Property and made under the full apprehension of the law, with the intent that full faith and credit is to be given to the contents thereof by Title Company, its agents or its attorneys.

Dated this May 16, 2025.

Walter Alan Pope  
Walter Alan Pope

STATE OF GEORGIA                )  
  ) ss  
COUNTY OF DEKALB             )

On this the 16 day of May, 2025, before me, the undersigned officer, personally appeared Walter Alan Pope, who is known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.



Pamela A. Bradley  
Notary Public

My Commission Expires: 9/17/2027

**LANDOWNER CONSENSUS ROUTE AGREEMENT**

THE STATE OF TEXAS           §  
   §  
COUNTY OF JONES           §

THIS LANDOWNER CONSENSUS ROUTE AGREEMENT ("**Agreement**") is made and entered into this 7<sup>th</sup> day of MAY, 2025 by Ricky Johnson and Jillian Johnson, a married couple, with an address of 1281 Braune Road, Abilene, Texas 79603 ("**Landowner**").

Landowner hereby acknowledges and confirms ownership of the following described property ("**Landowner's Property**"), pursuant to Warranty Deed With Vendor's Lien dated October 31, 2024 and recorded November 6, 2024 as Instrument No. 243049, Official Public Records, Jones County, Texas:

135.25 acres of land out of Section 40 B. B. B. & C. RR. Co. Lands, Jones County, Texas, and being part of a tract of land described in deed recorded in Instrument #231469 Official Public Records, Jones County, Texas.

Landowner acknowledges that Lone Star Transmission, LLC, a Delaware limited liability company, ("**Lone Star**") proposes to file an Application to Amend Its Certificate of Convenience and Necessity ("**Application**") with the Public Utility Commission of Texas ("**PUCT**") to construct and operate a 345 kilovolt transmission line that will connect Lone Star's Phantom Hill Station, located at the northwest corner of the intersection of County Road (CR) 185 and CR 186 in Jones County, to the proposed Tiger Solar collector substation, located along CR 195 approximately 2.3 miles north of its intersection with U.S. Highway 277 in Jones County ("**Transmission Line Facilities**"). Lone Star will propose the PUCT approve a route for the Transmission Line Facilities that is accepted by each property owner directly affected by the Transmission Line Facilities ("**Consensus Route**"). Lone Star will include this Agreement with its Application to demonstrate agreement on the Consensus Route by all directly affected landowners.

Landowner and Lone Star agree the PUCT should approve the Consensus Route that will be presented for PUCT consideration in Lone Star's Application. Landowner represents it is the legal and

beneficial owner of fee simple title to the property as described above and has the right, without joinder of any other party, to enter into the Agreement. Landowner acknowledges that the new 345 kilovolt transmission line, if approved, will be installed on Landowner's Property as depicted on **Exhibit A**, attached hereto and made a part hereof ("**Facilities Location**"). Landowner and Lone Star further acknowledge this Agreement does not convey the land rights needed by Lone Star to construct or operate the transmission line.

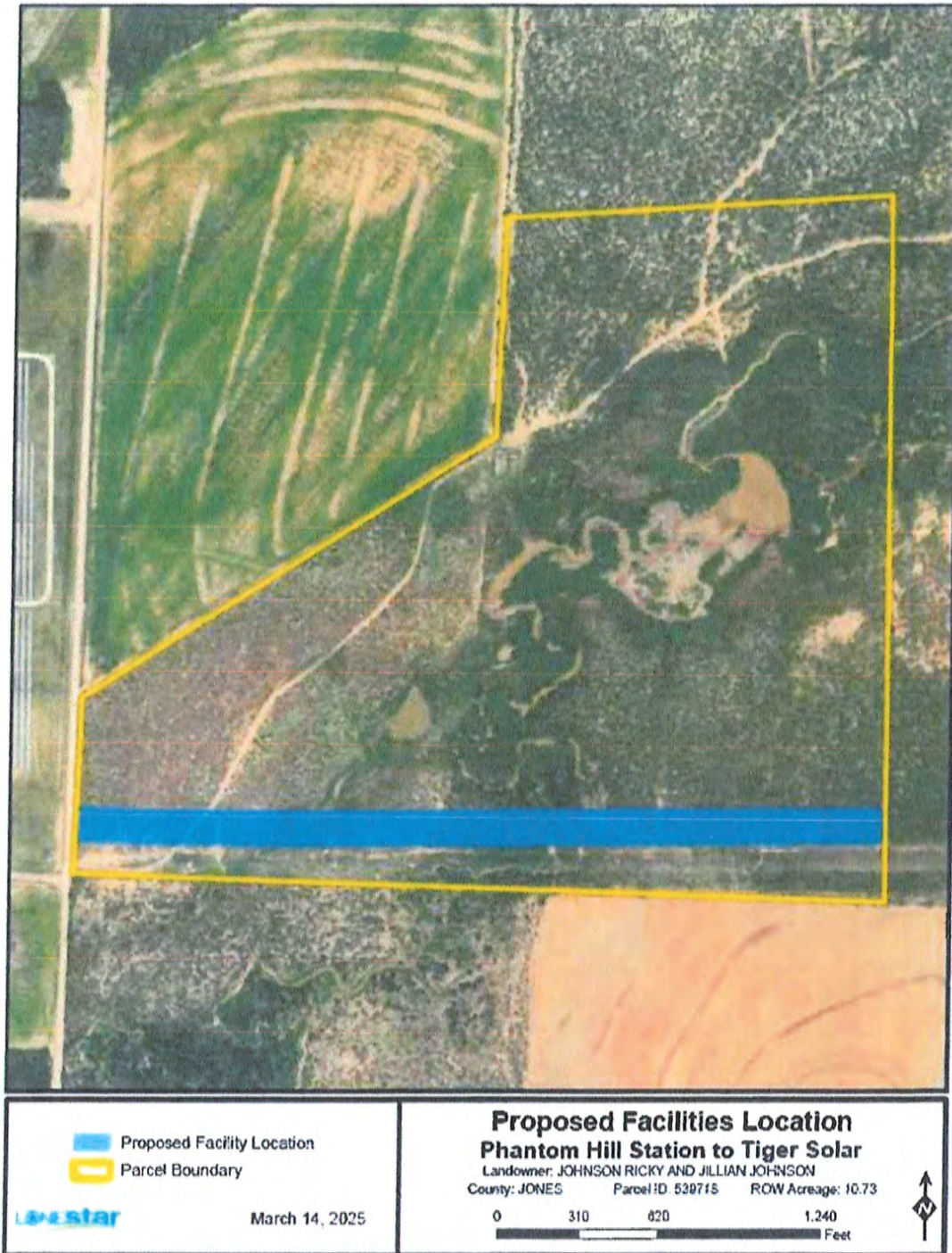
For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Landowner hereby accepts and provides consent for Lone Star's Application and Facilities Location.

  
\_\_\_\_\_  
Ricky Johnson

  
\_\_\_\_\_  
Jillian Johnson

**EXHIBIT A**

**Facilities Location**



LANDOWNER CONSENSUS ROUTE AGREEMENT

THE STATE OF TEXAS                   §  
  §  
COUNTY OF JONES                   §

THIS LANDOWNER CONSENSUS ROUTE AGREEMENT ("Agreement") is made and entered into this 9 day of April, 2025 by TPG Ranches, LLC, a Texas series limited liability company, with an address of 208 Hewitt Drive, Suite 103, #342, Waco, TX 76712 ("Landowner").

Landowner hereby acknowledges and confirms ownership of the following described property ("Landowner's Property"), pursuant to General Warranty Deed dated May 17, 2023 and recorded May 18, 2023 as Instrument No. 231469, Official Public Records, Jones County, Texas:

BEING 582.39 acres of land out of Section 40 B. B. B. & C. RR. Co. Lands, A-571, Jones County, Texas, and being the same land as described in the first tract in Instrument #205717 Official Public Records, Jones County, Texas, SAVE AND EXCEPT the following 3 tracts of land:

1. 110.52 acres of land conveyed to Patrick Vernon Watson and Melinda Harkins Watson, a married couple, Blake Patrick Watson, a single person, and Zachary Kyle Watson, a single person, by General Warranty Deed with Vendor's Lien dated December 21, 2023 effective December 22, 2023 and recorded as Instrument Number 233870, Official Public Records, Jones County, Texas, reference to which deed is here made for a complete description of said 110.52 acres.

2. 65.77 acres of land conveyed to Jeffery Scott Meador and Valerie Ray Meador, husband and wife, by Warranty Deed With Vendor's Lien dated August 29, 2024 and recorded as Instrument Number 242499, Official Public Records, Jones County, Texas, reference to which deed is here made for a complete description of said 65.77 acres.

3. 135.25 acres of land conveyed to Ricky Johnson and Jillian Johnson, a married couple, by Warranty Deed With Vendor's Lien dated October 31, 2024 and recorded as Instrument Number 243049, Official Public Records, Jones County, Texas, reference to which deed is here made for a complete description of said 135.25 acres.

Landowner acknowledges that Lone Star Transmission, LLC, a Delaware limited liability company, ("**Lone Star**") proposes to file an Application to Amend Its Certificate of Convenience and Necessity ("**Application**") with the Public Utility Commission of Texas ("**PUCT**") to construct and operate a 345 kilovolt transmission line that will connect Lone Star's Phantom Hill Station, located at the northwest corner of the intersection of County Road (CR) 185 and CR 186 in Jones County, to the proposed Tiger Solar collector substation, located along CR 195 approximately 2.3 miles north of its intersection with U.S. Highway 277 in Jones County ("**Transmission Line Facilities**"). Lone Star will propose the PUCT approve a route for the Transmission Line Facilities that is accepted by each property owner directly affected by the Transmission Line Facilities ("**Consensus Route**"). Lone Star will include this Agreement with its Application to demonstrate agreement on the Consensus Route by all directly affected landowners.

Landowner and Lone Star agree the PUCT should approve the Consensus Route that will be presented for PUCT consideration in Lone Star's Application. Landowner represents it is the legal and beneficial owner of fee simple title to the property as described above and has the right, without joinder of any other party, to enter into the Agreement. Landowner acknowledges that the new 345 kilovolt transmission line, if approved, will be installed on Landowner's Property as depicted on **Exhibit A**, attached hereto and made a part hereof ("**Facilities Location**"). Landowner and Lone Star further acknowledge this Agreement does not convey the land rights needed by Lone Star to construct or operate the transmission line.

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Landowner hereby accepts and provides consent for Lone Star's Application and Facilities Location.

TPG Ranches, LLC, a Texas series limited liability company

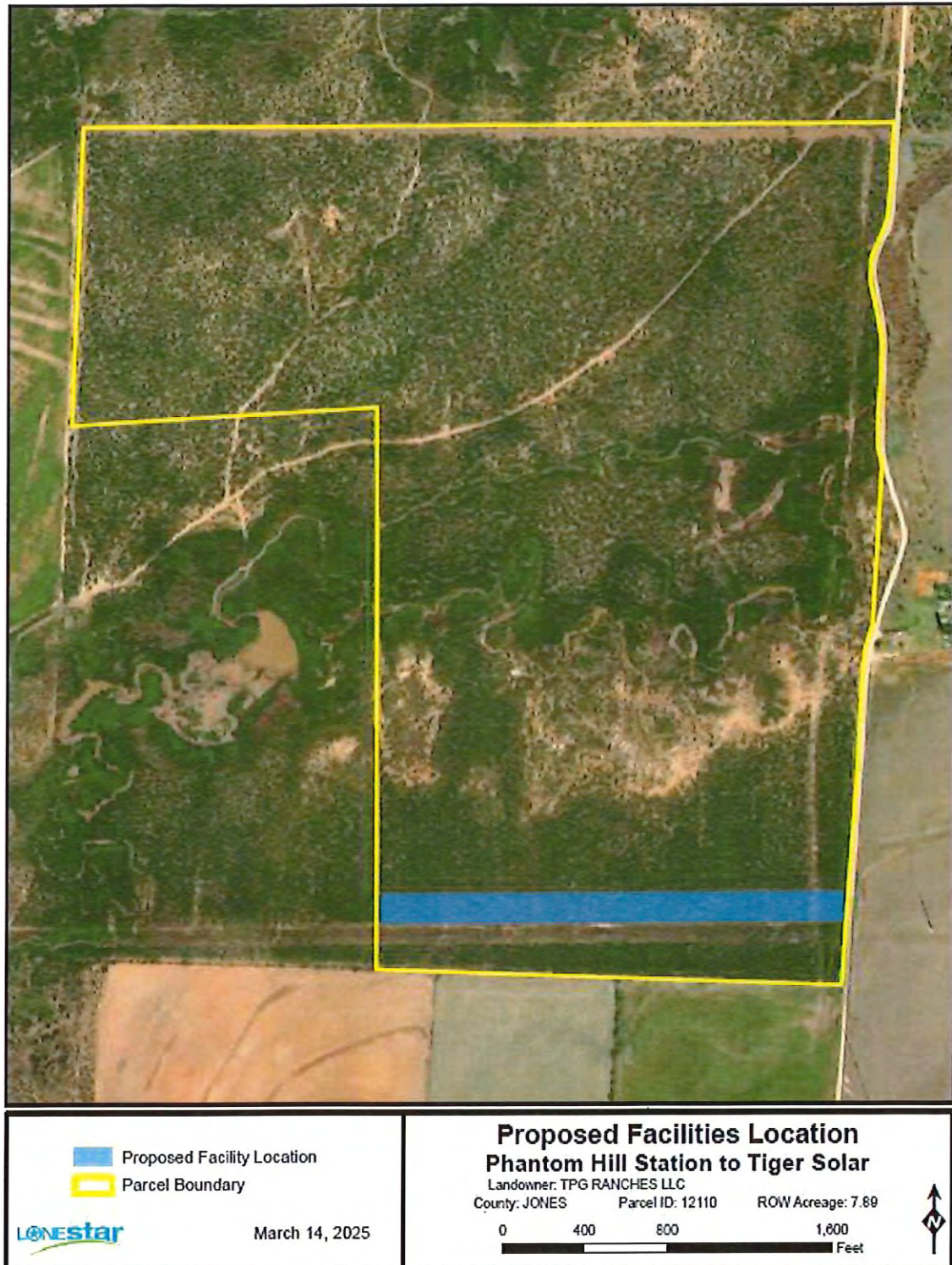
By: Tim Ellis, LLC, a Texas limited liability company, its Managing Member

By:  \_\_\_\_\_

Tim Ellis, Managing Member

**EXHIBIT A**

**Facilities Location**



**LANDOWNER CONSENSUS ROUTE AGREEMENT**

**THE STATE OF TEXAS                   §**  
**§**  
**COUNTY OF JONES                   §**

THIS LANDOWNER CONSENSUS ROUTE AGREEMENT ("**Agreement**") is made and entered into this 9th day of June, 2025 by Bobby J. Waddell and Deborah A. Waddell, husband and wife, with an address of 6957 CR 443, Anson, Texas 79501 ("**Landowner**").

Landowner hereby acknowledges and confirms ownership of the following described property ("**Landowner's Property**"), pursuant to Warranty Deed With Vendor's Lien dated April 4, 2000 and recorded April 5, 2000 as Volume 136, Page 395 / Instrument No. 200935, Official Public Records, Jones County, Texas, and Correction Warranty Deed With Vendor's Lien dated February 6, 2013, effective April 4, 2000 and recorded February 21, 2013 as Volume 369, Page 122 / Instrument No. 130532, Official Public Records, Jones County, Texas:

Being 279.2 acres consisting of 32 acres off the south end of Section 14, Block 4, H&TC RR Company Lands, and 247.2 acres in Section 16, Block 1, T&NO RR Company Lands in Jones County, Texas, situated on the Waters of the Red Mud Creek, a tributary of the Clear Fork of the Brazos River, about 3 miles Northeast from Anson, the County Seat;


Save and Except: Being a 4.46 acre tract of land out of a 279.2 acres described as Tract One and Tract Two in Volume 584, Page 656, Deed Records, Jones County, Texas, and being a part of Section 16, Block 1, T&NO RR CO. Survey, Jones County, Texas;

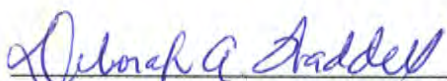
And Save and Except: Being a 7.62 acre tract of land out of a 279.2 acres described as Tract One and Tract Two in Volume 584, Page 656, Deed Records, Jones County, Texas, and being a part of Section 16, Block 1, T&NO RR CO. Survey, Jones County, Texas.

Landowner acknowledges that Lone Star Transmission, LLC, a Delaware limited liability company, ("**Lone Star**") proposes to file an Application to Amend Its Certificate of Convenience and Necessity ("**Application**") with the Public Utility Commission of Texas ("**PUCT**") to construct and operate a 345 kilovolt transmission line that will connect Lone Star's Phantom Hill Station, located at the northwest corner of the intersection of County Road (CR) 185 and CR 186 in Jones County, to the proposed Tiger Solar collector substation, located along CR 195 approximately 2.3 miles north of its intersection with U.S. Highway 277 in Jones County ("**Transmission Line Facilities**"). Lone Star will propose the PUCT approve a route for the Transmission Line Facilities that is accepted by each property owner directly affected by the Transmission Line Facilities ("**Consensus Route**"). Lone Star will include this Agreement with its Application to demonstrate agreement on the Consensus Route by all directly affected landowners.

Landowner and Lone Star agree the PUCT should approve the Consensus Route that will be presented for PUCT consideration in Lone Star's Application. Landowner represents it is the legal and beneficial owner of fee simple title to the property as described above and has the right, without joinder of any other party, to enter into the Agreement. Landowner acknowledges that the new 345 kilovolt transmission line, if approved, will be installed on Landowner's Property as depicted on **Exhibit A**, attached hereto and made a part hereof ("**Facilities Location**"). Landowner and Lone Star further acknowledge this Agreement does not convey the land rights needed by Lone Star to construct or operate the transmission line.

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Landowner hereby accepts and provides consent for Lone Star's Application and Facilities Location.

  
Bobby J. Waddell

  
Deborah A. Waddell

## EXHIBIT A

### Facilities Location



**LANDOWNER CONSENSUS ROUTE AGREEMENT**

**THE STATE OF TEXAS**

§

§

**COUNTY OF JONES**

§

THIS LANDOWNER CONSENSUS ROUTE AGREEMENT ("**Agreement**") is made and entered into this 9th day of June, 2025 by Bobby J. Waddell, Jr. aka Bobby Joe Waddell, Jr. and Jolena Waddell, husband and wife, as to an undivided 85% interest, with an address of 710 CR 513, Stephenville, TX 76401; and Bobby Joe Waddell, Sr. and Debbie A. Waddell, husband and wife, as to an undivided 15% interest, with an address of 6957 CR 443, Anson, TX 79501 (collectively, the "**Landowner**").

Landowner hereby acknowledges and confirms ownership of the following described property ("**Landowner's Property**"), pursuant to Warranty Deed With Vendor's Lien dated April 23, 2004 and recorded April 23, 2004 as Volume 205, Page 38 / Instrument No. 041368, Official Public Records, Jones County, Texas, and General Warranty Deed With Vendor's Lien dated June 30, 2004 and recorded June 20, 2004 as Volume 209, Page 307 / Instrument No. 042346, Official Public Records, Jones County, Texas, and Warranty Deed With Vendor's Lien dated September 13, 2013 and recorded September 13, 2013 as Volume 380, Page 243 / Instrument No. 132794, Official Public Records, Jones County, Texas:

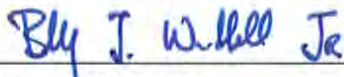
A 238.8 acre tract of land situated in Jones County, Texas, of which 228.9 acres is out of the south part of Section 14, Block 4, H&TC RR CO Survey, Abstract 911, Jones County, Texas, also containing 9.4 acres out of the JC Stedham Survey, Abstract 516, Jones County, Texas and 0.5 acres out of the northwest corner of Section 16, Block 1, T&NO RR CO Survey, Jones County, Texas, said 238.8 total acres, being a part of a total of 802.997 acres, most recently described in a deed recorded May 17, 2011, to Union Angus Farm Holdings, LLC, recorded in Volume 334, Page 861, Official Public Records of Jones County, Texas.

Landowner acknowledges that Lone Star Transmission, LLC, a Delaware limited liability company, ("**Lone Star**") proposes to file an Application to Amend Its Certificate of Convenience and

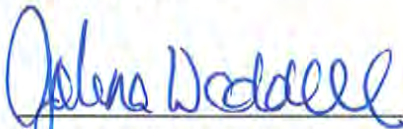
Necessity ("**Application**") with the Public Utility Commission of Texas ("**PUCT**") to construct and operate a 345 kilovolt transmission line that will connect Lone Star's Phantom Hill Station, located at the northwest corner of the intersection of County Road (CR) 185 and CR 186 in Jones County, to the proposed Tiger Solar collector substation, located along CR 195 approximately 2.3 miles north of its intersection with U.S. Highway 277 in Jones County ("**Transmission Line Facilities**"). Lone Star will propose the PUCT approve a route for the Transmission Line Facilities that is accepted by each property owner directly affected by the Transmission Line Facilities ("**Consensus Route**"). Lone Star will include this Agreement with its Application to demonstrate agreement on the Consensus Route by all directly affected landowners.

Landowner and Lone Star agree the PUCT should approve the Consensus Route that will be presented for PUCT consideration in Lone Star's Application. Landowner represents it is the legal and beneficial owner of fee simple title to the property as described above and has the right, without joinder of any other party, to enter into the Agreement. Landowner acknowledges that the new 345 kilovolt transmission line, if approved, will be installed on Landowner's Property as depicted on **Exhibit A**, attached hereto and made a part hereof ("**Facilities Location**"). Landowner and Lone Star further acknowledge this Agreement does not convey the land rights needed by Lone Star to construct or operate the transmission line.

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Landowner hereby accepts and provides consent for Lone Star's Application and Facilities Location.

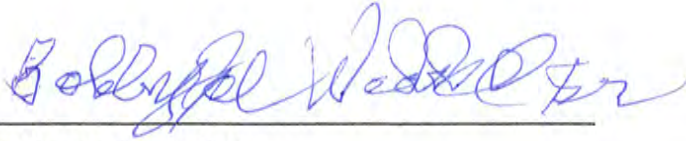


Bobby J. Waddell, Jr.



Jolena Waddell

*[Signatures continued on next page]*

A handwritten signature in blue ink, reading "Bobby Joe Waddell, Sr.", written over a horizontal line.

Bobby Joe Waddell, Sr.

A handwritten signature in blue ink, reading "Debbie A. Waddell", written over a horizontal line.

Debbie A. Waddell

**EXHIBIT A**

**Facilities Location**



**LANDOWNER CONSENSUS ROUTE AGREEMENT**

**THE STATE OF TEXAS                   §**  
**§**  
**COUNTY OF JONES                   §**

THIS LANDOWNER CONSENSUS ROUTE AGREEMENT ("**Agreement**") is made and entered into this 9<sup>th</sup> day of June, 2025 by Bobby J. Waddell, Jr., aka Bobby Joe Waddell, Jr. and Jolena Waddell, husband and wife, with an address of 710 CR 513, Stephenville, TX 76401 ("**Landowner**").

Landowner hereby acknowledges and confirms ownership of the following described property ("**Landowner's Property**"), pursuant to Warranty Deed With Vendor's Lien dated April 23, 2004 and recorded April 23, 2004 as Volume 205, Page 38 / Instrument No. 041368, Official Public Records, Jones County, Texas, and General Warranty Deed With Vendor's Lien dated June 30, 2004 and recorded June 20, 2004 as Volume 209, Page 307 / Instrument No. 042346, Official Public Records, Jones County, Texas, and General Warranty Deed dated July 15, 2015 and recorded July 14, 2015 as Volume 412, Page 695 / Instrument No. 151585, Official Public Records, Jones County, Texas:

Being 753.25 acres of land in Jones County, Texas, and being comprised of 38.20 acres out of Section 13, Block 4, H&TC RR CO., 556.56 acres out of Section 14, Block 4, H&TC RR CO., 13 acres out of Section 16, Block 1, T&NO RR CO. and 145.49 acres out of the J. C. Stribling Survey;

Save and Except: Being 18.714 acres of land in the northwest corner of Section 16, Block 1, T&NO RR CO. Survey and the southwest corner of Section 14, Block 4, H&TC RR CO. Survey, Jones County, Texas, and being all of a 13 acre tract in Volume 281, Page 84, Deed Records, and being out of and a part of a 753.25 acre tract described in Volume 121, Page 799, Official Public Records, Jones County, Texas;

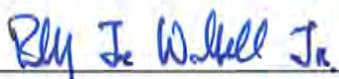
And Save and Except: A 238.8 acre tract of land situated in Jones County, Texas, of which 228.9 acres is out of the south part of Section 14, Block 4, H&TC RR CO. Survey, Abstract 911, Jones County, Texas, also containing 9.4 acres out of the JC Stedham Survey, Abstract 516, Jones County, Texas and 0.5 acres out of the northwest corner of Section 16, Block 1, T&NO RR CO. Survey, Jones County, Texas, said 238.8 total acres, being a part of a total of 802.997 acres, most

recently described in a deed recorded May 17, 2011, to Union Angus Farm Holdings, LLC,  
recorded in Volume 334, Page 861, Official Public Records of Jones County, Texas.

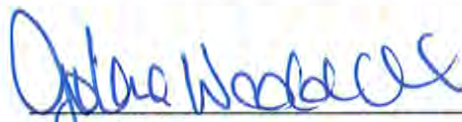
Landowner acknowledges that Lone Star Transmission, LLC, a Delaware limited liability company, ("**Lone Star**") proposes to file an Application to Amend Its Certificate of Convenience and Necessity ("**Application**") with the Public Utility Commission of Texas ("**PUCT**") to construct and operate a 345 kilovolt transmission line that will connect Lone Star's Phantom Hill Station, located at the northwest corner of the intersection of County Road (CR) 185 and CR 186 in Jones County, to the proposed Tiger Solar collector substation, located along CR 195 approximately 2.3 miles north of its intersection with U.S. Highway 277 in Jones County ("**Transmission Line Facilities**"). Lone Star will propose the PUCT approve a route for the Transmission Line Facilities that is accepted by each property owner directly affected by the Transmission Line Facilities ("**Consensus Route**"). Lone Star will include this Agreement with its Application to demonstrate agreement on the Consensus Route by all directly affected landowners.

Landowner and Lone Star agree the PUCT should approve the Consensus Route that will be presented for PUCT consideration in Lone Star's Application. Landowner represents it is the legal and beneficial owner of fee simple title to the property as described above and has the right, without joinder of any other party, to enter into the Agreement. Landowner acknowledges that the new 345 kilovolt transmission line, if approved, will be installed on Landowner's Property as depicted on **Exhibit A**, attached hereto and made a part hereof ("**Facilities Location**"). Landowner and Lone Star further acknowledge this Agreement does not convey the land rights needed by Lone Star to construct or operate the transmission line.

For good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Landowner hereby accepts and provides consent for Lone Star's Application and Facilities Location.



Bobby Joe Waddell, Jr.



Jolena Waddell

**EXHIBIT A**

**Facilities Location**



**ERCOT STANDARD GENERATION  
INTERCONNECTION AGREEMENT**

Between

Vaca Del Sol, LLC

and

Lone Star Transmission, LLC

for

Tiger Solar Project

*Date: October 30, 2024*

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## ERCOT STANDARD GENERATION INTERCONNECTION AGREEMENT

This Standard Generation Interconnection Agreement is made and entered into this 30<sup>th</sup> day of October, 2024 (“Effective Date”), between **Lone Star Transmission, LLC** (“Transmission Service Provider”) and **Vaca del Sol, LLC** (“Generator”), hereinafter individually referred to as “Party,” and collectively referred to as “Parties.” In consideration of the mutual covenants and agreements herein contained, the Parties hereto agree as follows:

Transmission Service Provider is a public utility that owns and operates facilities for the transmission and distribution of electricity. Generator will own, operate, and maintain the Plant (as defined in Exhibit “A”). Pursuant to the terms and conditions of this Agreement, Transmission Service Provider shall interconnect Generator’s Plant with Transmission Service Provider’s System consistent with the Interconnection Study Agreement executed between the Parties on June 21, 2021 and pursuant to the ERCOT generation interconnection request #23INR0244.

This Agreement applies only to the Plant and the Parties’ interconnection facilities as identified in Exhibit “C”.

This Agreement shall become effective as of the Effective Date, subject to Governmental Authority approval, if required, and shall continue in full force and effect until terminated in accordance with Exhibit “A”.

This Agreement will be subject to the following, all of which are incorporated herein:

- A. The “Terms and Conditions of the ERCOT Standard Generation Interconnection Agreement” attached hereto as Exhibit “A”;
- B. The ERCOT Requirements (unless expressly stated herein, where the ERCOT Requirements are in conflict with this Agreement, the ERCOT Requirements shall prevail);
- C. The PUCT Rules (where the PUCT Rules are in conflict with this Agreement, the PUCT Rules shall prevail);
- D. The Time Schedule attached hereto as Exhibit “B”;
- E. The Interconnection Details attached hereto as Exhibit “C”;
- F. The notice requirements attached hereto as Exhibit “D”; and
- G. The Security Arrangement Details attached hereto as Exhibit “E”.

**Application of Lone Star Transmission, LLC to Amend  
Its Certificate of Convenience and Necessity for the  
Proposed Phantom Hill to Tiger Solar 345-kV  
Transmission Line in Jones County**

**PUC Docket No. 58405  
Attachment No. 3  
Page 4 of 46**

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate originals,  
each of which shall constitute and be an original effective Agreement between the Parties.

**Lone Star Transmission, LLC**

By: Daniel Madru  
Digitally signed by Daniel Madru  
DN: cn=Daniel Madru, o=Lone Star  
Transmission, ou,  
email=daniel.madru@lonestar-  
transmission.com, c=US  
Date: 2024.10.30 13:28:04 -0500

Title: President  
Date: 10/30/2024

**Vaca del Sol, LLC**

DocuSigned by:  
By: Petter Shantze  
2F5BBE5FF6D34D9...

Title: \_\_\_\_\_  
Date: October 22, 2024

Initial  
RS

**Exhibit “A”**  
**Terms and Conditions of the ERCOT Standard Generation Interconnection**  
**Agreement**

**ARTICLE 1. DEFINITIONS**

Capitalized terms shall have the meanings as set forth below, except as otherwise specified in the Agreement:

1.1 “CCN” shall mean a Certificate of Convenience and Necessity issued by the PUCT.

1.2 “Commercial Operation” shall mean the date on which Generator declares that the construction of the Plant has been substantially completed, Trial Operation of the Plant has been completed, and the Plant is ready for dispatch.

1.3 “Control Area” shall have the meaning ascribed thereto in PUCT Rule 25.5 or its successor.

1.4 “ERCOT” shall mean the Electric Reliability Council of Texas, Inc.

1.5 “ERCOT Requirements” means the ERCOT Nodal Operating Guides, ERCOT Generation Interconnection Procedures, and ERCOT Nodal Protocols, as well as any other documents adopted by ERCOT relating to the interconnection and operation of generators and transmission systems in ERCOT as amended from time to time, and any successors thereto. Any requirement in the foregoing documents imposed upon generation entities or generation facilities shall become the responsibility of the Generator, and any requirements imposed on transmission providers or transmission facilities shall become the responsibility of the TSP.

1.6 “Facilities Study” shall have the meaning as described in PUCT Rule 25.198(d) or its successor.

1.7 “GIF” shall mean Generator’s interconnection facilities as described in Exhibit “C.”

1.8 “Good Utility Practice” shall have the meaning described in PUCT Rule 25.5 or its successor.

1.9 “Governmental Authority(ies)” shall mean any federal, state, local or municipal body having jurisdiction over a Party.

1.10 “In-Service Date” shall be the date, as reflected in Exhibit “B,” that the TIF will be ready to connect to the GIF.

1.11 “Interconnection Study Agreement” shall mean an agreement executed by the Parties relating to the performance of interconnection studies.

1.12 “Plant” shall mean the electric generation facility owned and operated by the Generator, as specified in Exhibit “C.”

1.13 “Point of Interconnection” shall mean the location(s) where the GIF connects to the TIF as negotiated and defined by the Parties and as shown on Exhibit “C” of this Agreement.

1.14 “PUCT” shall mean the Public Utility Commission of Texas.

1.15 “PUCT Rules” shall mean the Substantive Rules of the PUCT.

1.16 “Reasonable Efforts” shall mean the use of Good Utility Practice and the exercise of due diligence pursuant to PUCT Rule 25.198(e) or its successor.

1.17 “System Protection Equipment” shall mean those facilities located within the TIF and the GIF as described in Section 5.6 and Exhibit “C.”

1.18 “System Security Study” shall have the meaning as described in PUCT Rule 25.198(c) or its successor.

1.19 “TCOS” shall mean the TSP’s transmission cost of service as allowed by the applicable Governmental Authority.

1.20 “TIF” shall mean the TSP’s interconnection facilities as described in Exhibit “C” to this Agreement.

1.21 “Trial Operation” shall mean the process by which the Generator is engaged in on-site test operations and commissioning of the Plant prior to Commercial Operation.

1.22 “TSP” shall mean the Transmission Service Provider.

1.23 “TSP System” shall mean the electric transmission facilities, including the TIF, and all associated equipment and facilities owned and/or operated by the TSP.

## ARTICLE 2. TERMINATION

2.1 Termination Procedures. This Agreement may be terminated as follows:

A. the Generator may terminate this Agreement after giving the TSP thirty (30) days’ advance written notice; or

B. the TSP may terminate this Agreement (subject to Governmental Authority approval, if required) on written notice to the Generator if the Generator’s Plant has not achieved Commercial Operation within one (1) year after the scheduled Commercial Operation date reflected in Exhibit “B”; or

C. either Party may terminate this Agreement in accordance with Section 10.6.

2.2 Termination Costs. If a Party elects to terminate the Agreement pursuant to Section 2.1 above, then Generator shall promptly pay, or reimburse TSP for, all costs that are the responsibility of the Generator under this Agreement and incurred, or committed to be incurred, by TSP as of the date of the notice of termination. In the event of termination by a Party, each Party shall use Reasonable Efforts to mitigate the damages and charges that it may incur as a consequence of such termination.

2.3 Disconnection. Upon termination of this Agreement, the Parties will disconnect the GIF from the TIF. The provisions of Section 2.2 and Section 2.3 shall survive termination of the Agreement.

### ARTICLE 3. REGULATORY FILINGS

3.1 Filing. The TSP shall file this executed Agreement with the PUCT. Each Party will cooperate reasonably with each other in connection with such filings. Any portion of this Agreement asserted by Generator to contain competitively sensitive commercial or financial information shall be filed by the TSP identified as “confidential” under seal stating, for the TSP’s showing of good cause, that Generator asserts such information is confidential information and has requested such filing under seal. If requested by the TSP, Generator shall provide the TSP, in writing, with the Generator’s basis for asserting that the information referred to in this Section 3.1 is competitively sensitive information, and the TSP may disclose such writing to the appropriate Governmental Authority.

3.2 Regulatory Approvals. Unless exempt, the TSP shall timely request from ERCOT and any other Governmental Authority all regulatory approvals necessary for it to carry out its responsibilities under this Agreement. Such approvals shall include any CCN required for the construction of the TIF.

### ARTICLE 4. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

4.1 Options. The Generator shall select one of the following options (subsection A or subsection B) and include the selected option in Exhibit “B” for completion of the TIF:

A. The TSP shall design, procure, and construct the TIF, using Reasonable Efforts to complete the TIF by the In-Service Date reflected in Exhibit “B.” The TSP will utilize its own resources and will contract for additional resources, as reasonably necessary, to meet the In-Service Date. Such resources shall include, as the TSP believes is reasonable, use of other contractors, other equipment suppliers, other material suppliers, additional contract personnel, additional payments to contractors for expedited work, and premiums paid to equipment and material suppliers for expedited delivery. The TSP shall not be required to undertake any initiative which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, applicable laws and regulations, and ERCOT Requirements. In the event the TSP reasonably expects that it will not be able to complete the TIF by the In-

Service Date, the TSP will promptly provide written notice to the Generator and will undertake Reasonable Efforts to meet the earliest date thereafter.

B. (i) The TSP shall design, procure, and construct the TIF by the In-Service Date reflected in Exhibit “B”. The Parties acknowledge that the In-Service Date was either agreed upon through good faith negotiations or designated by the Generator upon failure of the Parties to agree. In the process of negotiating the In-Service Date, Generator will request a date upon which it reasonably expects it will be ready to begin use of the TIF and upon which it reasonably expects to begin doing so. Any date designated by the Generator shall in no event be less than fifteen months from the date that all conditions of Sections 4.2 and 4.3 have been satisfied. The designated In-Service Date will be extended day for day for each day that ERCOT refuses to grant clearances to install equipment. If the TSP fails to complete the TIF by the In-Service Date reflected in Exhibit “B”, the TSP shall pay the Generator liquidated damages in accordance with this Section 4.1.B.

(ii) The Parties agree that actual damages to the Generator, in the event the TIF are not completed by the In-Service Date, may include Generator’s fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. The Parties agree that, because of such uncertainty, any liquidated damages paid by the TSP to the Generator shall be an amount equal to  $\frac{1}{2}$  of 1% of the actual cost of the TIF, per day. However, in no event shall the total liquidated damages exceed 20% of the actual cost of the TIF. The Parties agree that such liquidated damages are less than the Generator’s actual damages. The Parties agree that the foregoing payments will be made by the TSP to the Generator as just compensation for the damages caused to the Generator, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this Agreement.

(iii) The TSP shall apply to have the full costs of the TIF included in TCOS. If the PUCT issues a final, appealable order excluding from TCOS any portion of the TIF costs, including higher contractor and vendor costs due to liquidated damage provisions in those contracts and insurance costs to cover liquidated damages, which costs may have been reasonably incurred but which the PUCT finds should not be recovered through TCOS, the Generator shall reimburse the TSP for such costs in an amount not to exceed the difference between the TSP’s estimate of the cost of the TIF under section 4.1.A and the TSP’s estimate of the cost of the TIF under Section 4.1.B as reflected in Exhibit “C”. Such costs shall be estimated using Good Utility Practice.

(iv) No liquidated damages shall be paid to Generator if the Generator is not ready to commence use of the TIF for the delivery of power to the Plant for Trial Operation or export of power from the Plant on the In-Service Date, unless the Generator would have been able to commence use of the TIF for the delivery of power to the Plant for Trial Operation or export of power from the Plant but for TSP’s delay.

(v) If the In-Service Date has been designated by the Generator upon a failure of the Parties to agree on the In-Service Date, the TSP may, at its option, require the Generator to subcontract with the TSP for all or part of the design, procurement and

construction of the TIF in accordance with the TSP's standard subcontractor agreements. In such event, the TSP shall be subject to the payment of liquidated damages to the Generator only if the In-Service Date is not met solely due to the TSP's failure to complete the portion of the TIF for which the TSP has retained responsibility. It is the intent of this subsection to give the TSP full control of the contents and quality of the TIF. To the extent the Generator acts as a subcontractor to the TSP, the following will apply: 1) The Generator shall engineer, procure equipment, and construct the TIF (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by the TSP; 2) In its engineering, procurement and construction of the TIF, the Generator shall comply with all requirements of law to which the TSP would be subject in the engineering, procurement or construction of the TIF; 3) The TSP shall review and approve the engineering design, acceptance tests of equipment, and the construction of the TIF; 4) The TSP shall have the right to approve, and accept for operation, the TIF in accordance with the standards and specifications provided in advance by the TSP, such approval and acceptance shall not be unreasonably withheld, conditioned, or delayed; 5) Should any phase of the engineering, equipment procurement, or construction of the TIF, including selection of subcontractors, not meet the standards and specifications provided by the TSP, and therefore be deemed unacceptable, then the Generator shall be obligated to remedy that portion of the TIF or selection of subcontractors that is deemed unacceptable, the TSP's approval of the Generator's selection of subcontractors will not be unreasonably withheld, conditioned or delayed; and 6) Once the TIF is accepted for operation by the TSP, then the TSP shall reimburse the Generator for the reasonable and necessary costs incurred by the Generator to complete the TIF, not to exceed the amount specified in the subcontract. Such reimbursement shall be made within thirty (30) days after receipt of the invoice, unless otherwise agreed to by the Parties.

4.2 Equipment Procurement. If responsibility for construction of the TIF is borne by the TSP, then the TSP shall commence design of the TIF and procure necessary equipment within a reasonable time after all of the following conditions are satisfied:

A. The TSP has completed the Facilities Study pursuant to the Interconnection Study Agreement;

B. The TSP has received written authorization to proceed with design and procurement from the Generator by the date specified in Exhibit "B"; and

C. The Generator has provided security to the TSP in accordance with Section 8.3 by the dates specified in Exhibit "B".

4.3 Construction Commencement. The TSP shall commence construction of the TIF as soon as practicable after the following additional conditions are satisfied:

A. Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

B. Necessary real property rights, if any, have been obtained;

C. The TSP has received written authorization to proceed with construction from the Generator by the date specified in Exhibit “B”; and

D. The Generator has provided security to the TSP in accordance with Section 8.3 by the dates specified in Exhibit “B.”

4.4 Work Progress. The Parties will keep each other advised periodically as to the progress of their respective design, procurement, and construction efforts. If, at any time, the Generator becomes aware that the completion of the TIF will not be required until after the specified In-Service Date, the Generator will promptly provide written notice to the TSP of a new, later In-Service Date.

4.5 Conditions Precedent Delay. To the extent this Agreement incorporates a specified In-Service Date and the Generator fails to satisfy conditions precedent under Sections 4.2 and 4.3, the Parties agree to negotiate in good faith to establish a new schedule for completion of the TIF, and the In-Service Date shall be extended accordingly.

## ARTICLE 5. FACILITIES AND EQUIPMENT

5.1 Information Exchange. The Parties shall exchange information and mutually agree upon the design and compatibility of the Parties’ interconnection facilities. The Parties shall work diligently and in good faith to make any necessary design changes to ensure compatibility of the GIF to the TSP System.

5.2 GIF Construction. Generator agrees to cause the GIF to be designed and constructed in accordance with Good Utility Practice, ERCOT Requirements, and the National Electrical Safety Code in effect at the time of construction. Within one-hundred and twenty (120) days after Commercial Operation, unless the Parties agree on another mutually acceptable deadline, the Generator shall deliver to the TSP the following “as-built” drawings, information, and documents for the GIF: a one-line diagram, a site plan showing the Plant and the GIF, plan and elevation drawings showing the layout of the GIF, a relay functional diagram, relaying AC and DC schematic wiring diagrams, and relay settings for all facilities associated with the Generator’s main-power transformers, the facilities connecting the Generator to the main power transformers and the GIF, and the impedances (determined by factory tests) for the associated main power transformers and the generators and, if applicable, the impedance of any transmission voltage lines that are part of the GIF.

5.3 TIF Construction. The TSP agrees to cause the TIF to be designed and constructed in accordance with Good Utility Practice, ERCOT Requirements, and the National Electrical Safety Code in effect at the time of construction.

5.4 Equipment Changes. For facilities not described in Exhibit “C,” if either Party makes equipment changes to the Plant, the GIF, the TIF, or the TSP System which it reasonably believes will affect the operation or performance of the other Party’s interconnection facilities, such Party agrees to notify the other Party, in writing, of such changes. Such changes shall be made in accordance with ERCOT Requirements and coordinated between the Parties.

## 5.5 Metering, Telemetry and Communications Requirements.

A. Metering and telemetry of data will be accomplished in accordance with ERCOT Requirements. The specific metering, telemetry and communications equipment to be installed and data to be telemetered are described in Exhibit “C.”

B. At the Point of Interconnection, the metering and telemetry equipment shall be owned by the TSP. However, the TSP shall provide the Generator with metering and telemetry values in accordance with ERCOT Requirements.

C. A minimum set of inputs to the telemetry equipment are specified in Exhibit “C.” Additional sets of inputs may be subsequently mutually agreed upon.

D. The TSP will notify the Generator at least five (5) business days in advance of any planned maintenance, inspection, testing, or calibration of the metering equipment, unless otherwise agreed to in writing. The Generator, or its designated representative, shall have the right to be present for these activities and to receive copies of any documents related to the procedures and results.

E. Prior to the connection of the GIF to the TIF, acceptance tests will be performed by the owning Party to ensure the proper functioning of all metering, telemetry, and communications equipment associated with the Point of Interconnection and both Parties’ interconnection facilities, and to verify the accuracy of data being received by the TSP, ERCOT, and the Generator. All acceptance tests will be performed consistent with ERCOT Requirements.

F. The TSP shall, in accordance with Good Utility Practice and ERCOT Requirements, specify communications facilities, including those necessary to transmit data from the metering equipment to the TSP, that are necessary for the effective operation of the Plant and the GIF with the TSP System. Such communication facilities shall be included in Exhibit “C.” The Generator shall make arrangements to procure and shall be responsible for the costs of such facilities.

G. Any changes to the meters, telemetry equipment, voltage transformers, current transformers, and associated panels, hardware, conduit, and cable, that will affect the data being received by a Party must be mutually agreed to by the Parties.

H. Each Party will promptly advise the other Party if it detects or is otherwise aware of any metering, telemetry, or communications equipment errors or malfunctions that require the attention and/or correction by the other Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably practical in accordance with ERCOT Requirements.

## 5.6 System Protection and Other Controls Requirements.

A. Each Party’s facilities shall be designed to isolate any fault, or to correct or isolate any abnormality, that would negatively affect the other Party’s system or other entities connected to the TSP System.

B. The Generator shall be responsible for protection of its facilities and the Plant consistent with ERCOT Requirements.

C. Each Party's protective relay design shall incorporate the necessary test switches to perform the tests required in Section 5.6.F. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and tripping the Generator's units.

D. Recording equipment shall be installed to analyze all system disturbances in accordance with ERCOT Requirements.

E. Each Party will test, operate, and maintain System Protection Equipment in accordance with ERCOT Requirements. Each Party will provide reasonable notice to the other Party of any testing of its System Protection Equipment allowing such other Party the opportunity to have representatives present during testing of its System Protection Equipment.

F. Prior to the In-Service Date, and again prior to Commercial Operation, each Party or its agent shall perform a complete calibration test and functional trip test of the System Protection Equipment. At intervals suggested by Good Utility Practice or at intervals described in the ERCOT Requirements (if so defined therein), and following any apparent malfunction of the System Protection Equipment, each Party shall perform both calibration and functional trip tests of its System Protection Equipment. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

5.7 No Annexation. Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

## ARTICLE 6. OPERATION AND MAINTENANCE

6.1 Operation and Maintenance of Interconnection Facilities. The Parties agree to operate and maintain their systems in accordance with Good Utility Practice, National Electrical Safety Code, the ERCOT Requirements, PUCT Rules, and all applicable laws and regulations. In addition, Generator agrees to operate and maintain its system in accordance with the National Electrical Safety Code. Subject to any necessary ERCOT approval, each Party shall provide necessary equipment outages to allow the other Party to perform periodic maintenance, repair, or replacement of its facilities. Such outages shall be scheduled at mutually agreeable times, unless conditions exist which a Party believes, in accordance with Good Utility Practice, may endanger persons or property. No changes will be made in the normal operation of the Point of Interconnection without the mutual agreement of the Parties, except as otherwise provided herein. All testing of the Plant that affects the operation of the Point of Interconnection shall be coordinated between the TSP,

ERCOT, and the Generator and will be conducted in accordance with ERCOT Requirements.

6.2 Control Area. The Point of Interconnection shall be located within the ERCOT Control Area. The Control Area within ERCOT is a single Control Area, with ERCOT assuming authority as the Control Area operator in accordance with ERCOT Requirements.

6.3 Land Rights and Easements. Terms and conditions addressing the rights of the TSP and the Generator regarding any facilities located on the other Party's property shall be addressed in a separate, duly executed, and recorded easement agreement between the Parties. Prior to Commercial Operation, the Parties will mutually agree upon procedures to govern access to each other's property as necessary for the Parties to fulfill their obligations hereunder.

6.4 Service Interruption. The Parties recognize that the interruption of service provisions of the PUCT Rules give TSP the right to disconnect the TSP System from the Plant under the conditions specified therein. The Generator will promptly disconnect the Plant from the TSP System when required by and in accordance with the PUCT Rules and ERCOT Requirements.

6.5 Switching and Clearance.

A. Any switching or clearances needed on the TIF or the GIF will be done in accordance with ERCOT Requirements.

B. Any switching and clearance procedure necessary to comply with Good Utility Practice or ERCOT Requirements that may have specific application to the Plant shall be addressed in Exhibit "C."

6.6 Start-Up and Synchronization. Consistent with ERCOT Requirements and the Parties' mutually acceptable procedure, the Generator is responsible for the proper synchronization of the Plant to the TSP System.

6.7 Routine Operational Communications. On a timely basis, the Parties shall exchange all information necessary to comply with ERCOT Requirements.

6.8 Blackstart Operations. If the Plant is capable of blackstart operations, Generator will coordinate individual Plant start-up procedures consistent with ERCOT Requirements. Any blackstart operations shall be conducted in accordance with the blackstart criteria included in the ERCOT Requirements and the TSP blackstart plan on file with ERCOT. Notwithstanding this section, the Generator is not required to have blackstart capability by virtue of this Agreement. If the Generator will have blackstart capability, then Generator shall provide and maintain an emergency communication system that will interface with the TSP during a blackstart condition.

6.9 Power System Stabilizers. The Generator shall procure, install, maintain, and operate power system stabilizers if required to meet ERCOT Requirements and as described in Exhibit "C."

## ARTICLE 7. DATA REQUIREMENTS

7.1 Data Acquisition. The acquisition of data to realistically simulate the electrical behavior of system components is a fundamental requirement for the development of a reliable interconnected transmission system. Therefore, the TSP and the Generator shall be required to submit specific information regarding the electrical characteristics of their respective facilities to each other as described below in accordance with ERCOT Requirements.

7.2 Initial Data Submission by TSP. The initial data submission by the TSP shall occur prior to Trial Operation and shall include transmission system data necessary to allow the Generator to select equipment and meet any system protection and stability requirements.

7.3 Initial Data Submission by Generator. The initial data submission by the Generator, including manufacturer data, shall occur no later than ninety (90) days prior to the Trial Operation and shall include a completed copy of the following forms contained in the ERCOT Generation Interconnection Procedure: (1) Plant Description/Data; and (2) Generation Stability Data. It shall also include any additional data provided to ERCOT for the System Security Study. Data in the initial submissions shall be the most current Plant design or expected performance data. Data submitted for stability models shall be compatible with ERCOT standard models. If there is no compatible model, the Generator will work with an ERCOT-designated consultant to develop and supply a standard model and associated data.

7.4 Data Supplementation. Prior to Commercial Operation, the Parties shall supplement their initial data submissions with any and all “as-built” Plant data or “as-tested” performance data which differs from the initial submissions or, alternatively, written confirmation that no such differences exist. Subsequent to Commercial Operation, the Generator shall provide the TSP any data changes due to equipment replacement, repair, or adjustment. The TSP shall provide the Generator any data changes due to equipment replacement, repair, or adjustment in the directly connected substation or any adjacent TSP-owned substation that may affect the GIF equipment ratings, protection or operating requirements. The Parties shall provide such data no later than thirty (30) days after the date of the actual change in equipment characteristics. Also, the Parties shall provide to each other a copy of any additional data later required by ERCOT concerning these facilities.

7.5 Data Exchange. Each Party shall furnish to the other Party real-time and forecasted data as required by ERCOT Requirements. The Parties will cooperate with one another in the analysis of disturbances to either the Plant or the TSP’s System by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations, and sequence of events records.

## ARTICLE 8. PERFORMANCE OBLIGATION

8.1 Generator's Cost Responsibility. The Generator will acquire, construct, operate, test, maintain, and own the Plant and the GIF at its sole expense. In addition, the Generator may be required to make a contribution in aid of construction in the amount set out in and for the facilities described in Exhibit "C," if any, in accordance with PUCT Rules.

8.2 TSP's Cost Responsibility. The TSP will acquire, own, operate, test, and maintain the TIF at its sole expense, subject to the provisions of Section 4.1.B and the contribution in aid of construction provisions of Section 8.1 of this Agreement.

8.3 Financial Security Arrangements. The TSP may require the Generator to pay a reasonable deposit or provide another means of security, to cover the costs of planning, licensing, procuring equipment and materials, and constructing the TIF. The required security arrangements are specified in Exhibit "E." Within five (5) business days after TSP has received notice from the Generator that the Plant has achieved Commercial Operation, and TSP has verified the same, the TSP shall return the deposit(s) or security to the Generator. However, the TSP may retain an amount to cover the incremental difference between the TSP's actual out of pocket costs associated with the choice of Section 4.1.B over Section 4.1.A, pending a final PUCT Order as contemplated in Section 4.1.B(iii). If the Plant has not achieved Commercial Operation within one (1) year after the scheduled Commercial Operation date identified in Exhibit "B" or if the Generator terminates this Agreement in accordance with Section 2.1 and the TIF are not required, the TSP may, subject to the provisions of Section 2.2, retain as much of the deposit or security as is required to cover the costs it incurred in planning, licensing, procuring equipment and materials, and constructing the TIF. If a cash deposit is made pursuant to Exhibit "E," any repayment of such cash deposit shall include interest at a rate applicable to customer deposits as established from time to time by the PUCT or other Governmental Authority.

## ARTICLE 9. INSURANCE

9.1 Each Party shall, at its own expense, maintain in force throughout the period of this Agreement, and until released by the other Party the following minimum insurance coverages, with insurers authorized to do business in Texas:

A. Employers Liability and Worker's Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the State of Texas. The minimum limits for the Employer's Liability insurance shall be One Million Dollars (\$1,000,000) each accident bodily injury by accident, One Million Dollars (\$1,000,000) each employee bodily injury by disease, and One Million Dollars (\$1,000,000) policy limit bodily injury by disease.

B. Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available

and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of One Million Dollars (\$1,000,000) per occurrence/One Million Dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

C. Comprehensive Automobile Liability Insurance for coverage of owned, non-owned, and hired vehicles, trailers, or semi-trailers designed for travel on public roads, with a minimum combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.

D. Excess Public Liability Insurance over and above the Employer's Liability, Commercial General Liability, and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars (\$20,000,000) per occurrence/Twenty Million Dollars (\$20,000,000) aggregate.

E. The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance, and Excess Public Liability Insurance policies shall name the other Party, its parent, associated and affiliated companies, and their respective directors, officers, agents, servants, and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this Agreement against the Other Party Group. Each Party shall provide thirty (30) days' advance written notice to Other Party Group prior to cancellation or any material change in coverage or condition.

F. The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance, and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.

G. The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance, and Excess Public Liability Insurance policies, if written on a Claims First Made basis, shall be maintained in full force and effect for two (2) years after termination of this Agreement, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.

H. The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this Agreement.

I. Within ten (10) days following execution of this Agreement, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all

insurance required in this Agreement, executed by each insurer or by an authorized representative of each insurer.

J. Notwithstanding the foregoing, each Party may self-insure to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade, or better, by Standard & Poor's. For any period of time that a Party's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Sections 9.1.A through 9.1.I. In the event that a Party is permitted to self-insure pursuant to this Section 9.1.J, it shall not be required to comply with the insurance requirements applicable to it under Sections 9.1.A through 9.1.I.

K. The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this Agreement.

## ARTICLE 10. MISCELLANEOUS

### 10.1 Governing Law and Applicable Tariffs.

A. This Agreement for all purposes shall be construed in accordance with and governed by the laws of the State of Texas, excluding conflicts of law principles that would refer to the laws of another jurisdiction. The Parties submit to the jurisdiction of the federal and state courts in the State of Texas.

B. This Agreement is subject to all valid, applicable rules, regulations and orders of, and tariffs approved by, duly constituted Governmental Authorities.

C. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

D. Representations and Restrictions on Certain Foreign Ownership and Affiliation. Generator represents and warrants that during the Term (1) Generator shall comply with the prohibitions pursuant to, including the ownership, control, or headquarters criteria set forth in, the Lone Star Infrastructure Protection Act, Chapter 113 of the Texas Business & Commerce Code, as added by the Act of June 18, 2021, 87<sup>th</sup> Leg., R.S., Ch. 975 (S.B. 2116) (as may be amended from time to time, the "LSIPA"), and (2) by entering into this Agreement (and any other agreement by and between TSP and Generator related to the interconnection service that is the subject matter of this Agreement), TSP will not be in violation of the LSIPA as a result of ownership, control, or headquarter locations of Generator or any of its Affiliates. By entering into this Agreement, Generator acknowledges that TSP is relying on the foregoing representations and warranties in order to ensure TSP's compliance with the LSIPA, Generator agrees to fully defend, indemnify, and hold harmless TSP from and against any and all demands, claims, actions, causes of action, proceedings, fines and penalties, costs and expenses (including reasonable attorney's fees and expenses) arising from or relating to any breach of the foregoing representations and warranties.

10.2 No Other Services. This Agreement is applicable only to the interconnection of the Plant to the TSP System at the Point of Interconnection and does not obligate either Party to provide, or entitle either Party to receive, any service not expressly provided for herein. Each Party is responsible for making the arrangements necessary for it to receive any other service that it may desire from the other Party or any third party. This Agreement does not address the sale or purchase of any electric energy, transmission service, or ancillary services by either Party, either before or after Commercial Operation.

10.3 Entire Agreement. This Agreement, including all Exhibits, Attachments, and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement. Notwithstanding the other provisions of this Section, the Interconnection Study Agreement, if any, is unaffected by this Agreement.

10.4 Notices. Except as otherwise provided in Exhibit "D," any formal notice, demand or request provided for in this Agreement shall be in writing and shall be deemed properly served, given or made if delivered in person, or sent by either registered or certified mail, postage prepaid, overnight mail or fax to the address or number identified on Exhibit "D" attached to this Agreement. Either Party may change the notice information on Exhibit "D" by giving five (5) business days' written notice prior to the effective date of the change.

10.5 Force Majeure.

A. The term "Force Majeure" as used herein shall mean any cause beyond the reasonable control of the Party claiming Force Majeure, and without the fault or negligence of such Party, which materially prevents or impairs the performance of such Party's obligations hereunder, including but not limited to, storm, flood, lightning, earthquake, fire, explosion, failure or imminent threat of failure of facilities, civil disturbance, strike or other labor disturbance, sabotage, war, national emergency, or restraint by any Governmental Authority.

B. Neither Party shall be considered to be in Default (as hereinafter defined) with respect to any obligation hereunder (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Section shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred, and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch,

but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

#### 10.6 Default

A. The term “Default” shall mean the failure of either Party to perform any obligation in the time or manner provided in this Agreement. No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this Agreement or the result of an act or omission of the other Party. Upon a Default, the non-defaulting Party shall give written notice of such Default to the defaulting Party. Except as provided in Section 10.6.B, the defaulting Party shall have thirty (30) days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within thirty (30) days, the defaulting Party shall commence such cure within thirty (30) days after notice and continuously and diligently complete such cure within ninety (90) days from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

B. If a Default is not cured as provided in this Section, or if a Default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Section will survive termination of this Agreement.

10.7 Intrastate Operation. The operation of the Plant by Generator shall not cause there to be a synchronous or an asynchronous interconnection between ERCOT and any other transmission facilities operated outside of ERCOT unless ordered by the Federal Energy Regulatory Commission under Section 210 of the Federal Power Act. The Parties recognize and agree that any such interconnection will constitute an adverse condition giving the TSP the right to immediately disconnect the TIF from the GIF, until such interconnection has been disconnected. The Generator will not be prohibited by this Section from interconnecting the Plant with facilities operated by the Comisión Federal de Electricidad of Mexico, unless such interconnection would cause ERCOT utilities that are not “public utilities” under the Federal Power Act to become subject to the plenary jurisdiction of the Federal Energy Regulatory Commission.

10.8 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

10.9 No Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of obligations, rights, or duties imposed upon the Parties. Termination or Default of this

Agreement for any reason by the Generator shall not constitute a waiver of the Generator's legal rights to obtain an interconnection from the TSP under a new interconnection agreement.

10.10 Headings. The descriptive headings of the various articles and sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

10.11 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

10.12 Amendment. This Agreement may be amended only upon mutual agreement of the Parties, which amendment will not be effective until reduced to writing and executed by the Parties.

10.13 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or liability upon either Party. Neither Party shall have any right, power, or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

10.14 Further Assurances. The Parties agree to (i) furnish upon request to each other such further information, (ii) execute and deliver to each other such other documents, and (iii) do such other acts and things, all as the other Party may reasonably request for the purpose of carrying out the intent of this Agreement and the documents referred to in this Agreement. Without limiting the generality of the foregoing, the TSP shall, at the Generator's expense, when reasonably requested to do so by the Generator at any time after the execution of this Agreement, prepare and provide such information in connection with this Agreement (including, if available, resolutions, certificates, opinions of counsel, or other documents relating to the TSP's corporate authorization to enter into this Agreement and to undertake the obligations set out herein) as may be reasonably required by any potential lender to the Generator under a proposed loan agreement. The TSP will use commercially reasonable efforts to obtain any opinion of counsel reasonably requested by Generator, but the TSP shall not be in Default of any obligation under this Agreement if the TSP is unable to provide an opinion of counsel that will satisfy any potential lender to the Generator. Specifically, upon the written request of one Party, the other Party shall provide the requesting Party with a letter stating whether or not, up to the date of the letter, that Party is satisfied with the performance of the requesting Party under this Agreement.

10.15 Indemnification and Liability. The indemnification and liability provisions of the PUCT Rule 25.202(b)(2) or its successor shall govern this Agreement.

10.16 Consequential Damages. OTHER THAN THE LIQUIDATED DAMAGES HERETOFORE DESCRIBED, IN NO EVENT SHALL EITHER PARTY BE LIABLE UNDER ANY PROVISION OF THIS AGREEMENT FOR ANY LOSSES, DAMAGES,

COSTS OR EXPENSES FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFIT OR REVENUE, LOSS OF THE USE OF EQUIPMENT, COST OF CAPITAL, COST OF TEMPORARY EQUIPMENT OR SERVICES, WHETHER BASED IN WHOLE OR IN PART IN CONTRACT, IN TORT, INCLUDING NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER THEORY OF LIABILITY; PROVIDED, HOWEVER, THAT DAMAGES FOR WHICH A PARTY MAY BE LIABLE TO THE OTHER PARTY UNDER ANOTHER AGREEMENT WILL NOT BE CONSIDERED TO BE SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES HEREUNDER.

10.17 Assignment. This Agreement may be assigned by either Party only with the written consent of the other; provided, that either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit quality and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Generator shall have the right to assign this Agreement, without the consent of the TSP, for collateral security purposes to aid in providing financing for the Plant; provided, that the Generator will require any secured party, trustee, or mortgagee to notify the TSP of any such assignment. Any financing arrangement entered into by the Generator pursuant to this Section will provide that prior to or upon the exercise of the secured party's, trustee's, or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee, or mortgagee will notify the TSP of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned, or delayed.

10.18 Severability. If any provision in this Agreement is finally determined to be invalid, void, or unenforceable by any court having jurisdiction, such determination shall not invalidate, void, or make unenforceable any other provision, agreement, or covenant of this Agreement; provided that if the Generator (or any third party, but only if such third party is not acting at the direction of the TSP) seeks and obtains such a final determination with respect to any provision of Section 4.1.B, then none of the provisions of Section 4.1.B. shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by Section 4.1.A.

10.19 Comparability. The Parties will comply with all applicable comparability and code of conduct laws, rules, and regulations, as amended from time to time.

10.20 Invoicing and Payment. Unless the Parties otherwise agree (in a manner permitted by applicable PUCT Rules and as specified in writing in an Exhibit "E" attached hereto), invoicing and payment rights and obligations under this Agreement shall be governed by PUCT Rules or applicable Governmental Authority. Invoices shall be rendered to the paying Party at the address specified on, and payments shall be made in accordance with the requirements of, Exhibit "D."

10.21 Confidentiality.

A. Subject to the exception in Section 10.21.B, any information that a Party claims is competitively sensitive, commercial, or financial information under this Agreement (“Confidential Information”) shall not be disclosed by the other Party to any person not employed or retained by the other Party, except to the extent disclosure is: (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this Agreement or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to ERCOT. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of the other Party’s Confidential Information under this subsection, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subsection, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

B. This provision shall not apply to any information that was or is hereafter in the public domain (except as a result of a breach of this provision).

**Exhibit “B”  
Time Schedule**

- 1) Interconnection Option chosen by Generator (check one):  
X Section 4.1.A. or \_\_\_\_ Section 4.1.B

A. If Section 4.1.B is chosen by Generator, the In-Service Date(s) was determined by (check one): (1) \_\_ good faith negotiations, or (2) \_\_ designated by Generator upon failure to agree.

- 2) November 1, 2024 is the date (“NTP Need Date”) by which Generator must provide a written Notice to Proceed with design, procurement, and construction of the TIF and provide security, as specified in Exhibit “A”, Section 4.2 and 4.3, so that TSP may maintain schedule to meet the In-Service Date identified below. The NTP date shall be the date Generator provides written Notice to Proceed to TSP:

A. If Generator does not provide a written Notice to Proceed to TSP by the above NTP Need Date, the designated TIF In-Service Date, Scheduled Generation Trial Operation Date, and Scheduled Generation Commercial Operation Date, identified below, will each be extended day for each day after the NTP Need Date that the Notice to Proceed is delayed.

B. If Generator does not provide a written Notice to Proceed and provide security in accordance with Exhibit “E” to TSP by eighteen (18) months after the NTP Need Date (“NTP Deadline”), such non-provision of the Notice to Proceed shall constitute a Default, in accordance with Section 10.6.A of Exhibit “A”, by the Generator and written notice of Default shall be deemed to have been given by TSP to Generator on the NTP Deadline. If such Default is not cured in accordance with Section 10.6 of Exhibit “A”, then TSP may terminate this Agreement in accordance with the provisions of Section 10.6.B of Exhibit “A”.

TIF In-Service Date (Backfeed): The later of:

- a) November 6, 2026; or
- b) Twenty-four (24) months and twenty-one (21) days after the NTP Date.

Scheduled Generation Trial Operation Date (Synchronization): The later of:

- a) November 14, 2026; or
- b) Two (2) weeks after the TIF In-Service Date.

Scheduled Generation Commercial Operation Date (COD): The later of:

- a) June 30, 2027; or
- b) Two (2) months after the TIF In-Service Date.

Nothing in the definitions of the dates above shall preclude either Party from taking measures or actions that allow the actual Generation Trial Operation Date or the

actual Generation Commercial Operation Date to be earlier than the scheduled dates above.

- 3) Due to the nature of the subject of this Agreement, the Parties may mutually agree to change the dates and times of this Exhibit B.

### Exhibit "C" Interconnection Details

1. Name: Tiger Solar
2. Point of Interconnection (POI) for the existing Phantom Hill 345 kV substation is depicted on attachment C-1 & C-2. Attachment C-1 shows the line of demarcation at the last LST Transmission structure. Attachment C-2 is a one line diagram of the Phantom Hill 345 kV substation interconnection facilities. The POI between the GIF and TIF will be located at a new Transmission Service Provider (TSP) owned dead-end structure at the end of the TSP's new 4.55-mile 345 kV line. The line connects the TSP's Phantom Hill 345 kV station to the GIF Step Up Station. The POI shall be the physical point where the TSP facilities (TIF) is connected to the (GIF) Generator slack span at the end of the TSP's 345kV line. Specifically, the Point of Interconnection shall be defined at the strain insulator 4-hole NEMA pads where the TSP's 345 kV transmission line and Generator 345 kV transmission line shall interconnect. If agreed by the Parties, LST shall own and install the connecting jumpers to the Generators strain insulator connection 4-hole pads. The customer shall acquire, on behalf of LST, easement or similar rights from the landowner(s) allowing for the installation of LST assets to the defined POI structure.
3. Delivery Voltage: 345 kV
4. Number and Size of Generating Units: The total capacity of the plant (Tiger Solar) is 255 MW composed of Seventy-Two (72) inverters rated at 4.105 MVA each.
5. Type of Generating Unit: PE FS4105M Inverters  
The Parties will amend this Exhibit "C" as necessary to reflect any changes Generator makes to the manufacturer, model, or type of generating units.
6. Metering and Telemetry Equipment: Metering (voltage, location, losses adjustment due to metering location and other), telemetry, and communications requirements shall be as follows:
  - 6.1 TSP shall, in accordance with ERCOT Requirements and Good Utility Practice, install, own, operate, inspect, test, calibrate, and maintain 345 kV metering accuracy potential and current transformer and associated metering and telemetry equipment (including communications and an RTU) located in the TIF. A one-line diagram showing TSP's ERCOT-pollled settlement ("EPS") metering location is attached to this Exhibit "C" as **Attachment C-2**. If requested by Generator, and if available from the TSP RTU equipment, TSP will make Primary EPS metering data available to Generator via a communication link at Generator's expense. If such metering data are not available from TSP RTU equipment, they may be available by alternate means at Generator's expense. Such data, if provided to Generator, will be for Generator's informational purposes only.

Generator shall not rely on such data, as the primary source, for the metering data addressed in Section 6.2 of this Exhibit “C” below, or for any other scheduling or operational purposes. TSP makes no guarantee of the quality or availability of such data.

- 6.2 Generator shall, in accordance with Good Utility Practice, install, own, operate, inspect, test, calibrate, and maintain the necessary metering potential and current transformers and associated metering and telemetry equipment in the GIF and/or Plant to satisfy the ERCOT Requirements for the provision of metering data by Generator's “Qualified Scheduling Entity”.
- 6.3 Generator shall, in accordance with ERCOT Requirements and Good Utility Practice, install, own, operate, inspect, test, calibrate, and maintain the metering and telemetry equipment (including an RTU or other equipment acceptable to TSP) to supply all electrical parameters of the Plant and GIF, as specified in Section 11 to this Exhibit “C”, to TSP at a location designated by TSP.
- 6.4 Prior to the In-Service Date, acceptance tests will be performed by TSP and Generator to ensure the proper functioning of all metering, telemetry, and communications equipment, and to verify the accuracy of data being received by TSP.
- 6.5 Following the Commercial Operation date, each Party shall test its metering, telemetry, and communications equipment in accordance with ERCOT Requirements and Good Utility Practice. Each Party shall give the other Party reasonable advance notice of such testing. Each Party shall have the right to observe testing performed by the other Party.
- 6.6 Any changes to Generator’s metering, telemetry, and communication equipment, including meters, voltage transformers, current transformers, and associated RTU, panels, hardware, conduit and cable, that will affect the data being received by TSP hereunder must be mutually agreed to by the Parties.
- 6.7 Each Party will promptly advise the other Party if it detects or otherwise learns of any metering, telemetry, or communications equipment or related situation that requires attention and/or correction by the other Party.

7. Generator Interconnection Facilities:

Generator will be responsible for the construction and ownership of the below:

- 7.1 Generator will be responsible for the construction and ownership of a 345 kV station and all facilities within it. Specifically, Generator's interconnection station(s) including control building(s), 345 kV step-up

transformer(s), transformer protection package(s), 345 kV circuit breaker(s), 345 kV line disconnect switch(es), and protective relaying panels for the Generator's 345 kV line(s) that will coordinate with the TSP's line panels at the TSP facility for the Generator line protection

- 7.2 345 kV line(s) with all necessary material to interconnect to TSP's point of interconnection located right adjacent to the GIF which is required to accommodate the Generator 345 kV line(s) in accordance to Exhibit "B" Section 8.1
- 7.3 Fiber optic cable (Suzhou Furukawa or equivalent 96 fiber, single-mode, fiber optic OPGW) from GIF's control building to TSP's OPGW cable splice box on the TSP's interconnecting structure(s) at the Point of Interconnection
- 7.4 Multi-ported RTU(s) and panels to provide breaker status, telemetry and energy data from the GIF to the Plant, the TSP, Generator and ERCOT
- 7.5 Associated structures, buswork, conductor, connectors, grounding, conduit, control cable, foundation work, perimeter fencing, grading/dirt work and any appurtenances necessary for construction and operation of GIF

The GIF also includes the communication facilities described in Section 9.1 below.

## 8. Transmission Service Provider Interconnection Facilities:

- 8.1 In order for TSP to provide an interconnect the Generator at the 345 kV Phantom Hill Station, the following new equipment will be required to be in place prior to energization:

### Station Physical:

- (7) – 345kV, 5000 A, 63kA GCB's
- (11) – 345kV, motor operated Line / GCB Isolation Switches
- (3) – 345 kV, Motor Operated Grounding Switches
- (15) – 345 kV, Surge Arresters
- (15) – 345 kV, Capacitive Coupling Voltage Transformers
- (3) – 345 kV, Extended Range Metering Current Transformers
- (3) – 345 kV, Metering Voltage Transformers
- (1 Lot) – Relaying Modifications including
  - Add Breaker Controls, Metering, & Breaker Failure Relays to Existing Panels
  - Add Breaker Control, Metering, & Breaker Failure Panels
  - Add New Line Relaying Panels

- Add 345kV Bus Differential Relaying Panels
- Re-zone Line Differential Relaying in Existing Panels
- (1 Lot) – Conduit and Grounding
- (1 Lot) – Aluminum Bus, Stranded Jumpers, and Connectors

**Station Civil & Structural:**

- (1 Lot) – Lot Final Surfacing (Crushed Limestone)
- (1 Lot) – Foundations
- (1 Lot) – Structural Steel
  - A-frames
  - Bus supports
  - Equipment supports

**Relay & Control:**

The study assumes that the Phantom Hill Station control house will have room to install the additional metering and relaying panels, and any other equipment as needed:

- (1) – ERCOT Polled Settlement Metering Panel additions including:
  - (1) – Primary ERCOT Polled Settlement Meter
  - (1) – Backup ERCOT Polled Settlement Meter
- (1) – 345kV Breaker Control Panel additions including:
  - Control / Sync / Reclosing Switches, Meter, Test Switch, & Mimic Bus
- (1) – 345kV Breaker Failure Panel additions including:
  - Breaker Failure Relays, Lockouts, & Test Switches
- (2) – 345kV Breaker Control Panel
- (2) – 345kV Breaker Failure Panel
- (1) – 345kV Gen Tie Line Protection Relay Panel
- (4) – 345kV Lone Star Line Protection Relay Panels
- (2) – 345kV Bus Differential Relay Panels
- (1 Lot) – Connection of new relaying and control devices and equipment to existing communications hardware.
- (1 Lot) – Control Cable Installation and Termination

**Transmission Line:**

The transmission line scope involves the cut in of the second LST 345kV CREZ Line (0.35 Miles, Line #1 Only) into LST's Phantom Hill Switchyard.

The new Gen-Tie Line will route from a POI structure at the Generator's Collector Substation approximately 4.55 miles away to LST's Phantom Hill Switchyard.

Line protection transfer trip requirements and control system requirements are as follows:

Line Protection Requirements at TSP's Phantom Hill Station:

- a) 345 kV Transmission Lines
  - a. Compatible (SEL421) Line Distance protection
  - b. Compatible (SEL311L) Line Current Differential protection
  - c. Compatible Pulsar ULPC
  - d. Compatible Multifunction Recorder (DFR – APP)
  - e. Hardwire protection relays to Current Transformers and Power Transformers (CT's and PT's)
- b) Customer 345 kV Generator Tie Lines
  - a. Compatible (SEL 411L) Primary Line Current Differential Protection
  - b. Compatible (SEL 311L) Backup Line Current Differential Protection
  - c. Hardwire protection relays to Current Transformers and Power Transformers (CT's and PT's)
  - d. Compatible Multifunction Recorder (DFR – APP)
- c) Compatible (SEL451) breaker failure protection with direct transfer trip via fiber optic communications to trip Customer 345 kV breaker
- d) In the case where both line terminal breakers are open, an anti-islanding transfer trip via fiber optic communications to trip Customer breaker(s) or Generator Step Up 345 kV breaker (should open at the synchronizing breaker)
- e) No automatic reclosing; use dead line, hot bus permissive controls for closing line breakers

Line Protection Requirements at Generator Facilities:

- a) Compatible (SEL 411L) Primary Line Current Differential Protection
  - i. Generator must coordinate with TSP on specific firmware and model
- b) Compatible (SEL 311L) Backup Line Current Differential Protection
  - i. Generator must coordinate with TSP on specific firmware and model
- c) Generator 345 kV breaker failure protection to send direct transfer trip via fiber optic communications to trip TSP's Phantom Hill Station 345 kV breakers

- 8.2 Full tension, dead-end, 345 kV line structure(s) located adjacent to the GIF (TSP shall coordinate the height of this structure(s), the arrangement of the

phases, and the exact location of the structure(s) with Generator) NOTE:  
TSP shall provide any necessary jumper post insulators for this structure(s)

9. Communications Facilities:

9.1 Generator shall, in accordance with ERCOT Requirements and Good Utility Practice, provide communications facilities that are, or may in the future be, necessary for effective interconnected operation of the Generator's Plant with the transmission system.

9.2 TSP will bear the costs of its communications facilities at Phantom Hill Station.

10. System Protection Equipment:

Protection of each Party's system shall meet the following TSP requirements in addition to ERCOT Requirements. If there is a conflict between the TSP requirements below and ERCOT Requirements, the ERCOT Requirements shall prevail.

10.1 Generator and TSP shall design, install, operate, maintain and test system protection equipment consistent with the applicable criteria as described in the ERCOT Requirements and any applicable requirements of Governmental Authorities, including NERC Reliability Standards. Generator shall, at its expense, provide modifications or additions to its control and protective equipment required to comply with changes in ERCOT Requirements or requirements of Governmental Authorities, including NERC Reliability Standards.

10.2 Generator, using Good Utility Practice, shall install sufficient digital fault recording equipment to thoroughly analyze all system disturbances occurring on the Plant and GIF to thoroughly analyze the Plant and GIF performance during system disturbances on the ERCOT system. This equipment shall monitor the voltages at major nodes, current at major branches, breaker and switch positions, and dc logic in the relay control scheme.

10.3 TSP assumes no responsibility for the protection of the Plant and GIF for any or all operating conditions. Generator is solely responsible for protecting its equipment in such a manner that faults, Sub-Synchronous Oscillations ("SSO"), or other disturbances on the TSP System or other interconnected system do no cause damage to the Plant and GIF.

10.4 It is the sole responsibility of the Generator to protect its Plant and GIF from excessive negative sequence currents.

- 10.5 The GIF shall be designed to isolate any fault, or to disconnect from or isolate any abnormality that would negatively affect the TSP's system. The Generator shall be responsible for protection of its facilities. TSP reserves the right to isolate the Plant and GIF consistent with ERCOT Requirements and NERC Reliability Standards for any of the following reasons:
- i.) The Plant or GIF, upon TSP's determination, cause objectionable interference with other customers' service or with the secure operation of the TSP System.
  - ii.) The Plant output as determined by TSP exceeds the operating boundaries outlined above.
  - iii.) Generator's control and protective equipment causes or contributes to a hazardous condition. TSP reserves the right to verify all protective equipment including, but not limited to including relays, circuit breakers, at the inter-tie location. Verification by TSP may include the tripping of the tiebreaker by the protective relays.
  - iv.) In TSP's opinion, continued parallel operation is hazardous to Generator, the TSP System or to the general public.
  - v.) To provide TSP or TSP personnel the clearances for dead line or live line maintenance.

TSP shall notify Generator before disconnection, except for an emergency situation requiring immediate action. TSP will attempt to notify Generator before upon disconnection, but notification may not be possible in emergency situations that require immediate action.

- 10.6 Prior to In-Service Date, Generator shall specify whether automatic reclosing should be applied to the Generator's transmission facilities in the GIF. Automatic reclosing is normally applied to transmission circuits. When TSP's source breakers trip and isolate the Plant and GIF, Generator shall insure the Plant and GIF are disconnected from the TSP circuit prior to automatic reclosure by TSP. Automatic reclosing out-of-phase with the Plant may cause damage to Generator's equipment. Generator is solely responsible for the protection of his equipment from automatic reclosing by TSP.
- 10.7 TSP shall specify system protection and control schemes for the Point of Interconnection. Generator shall have the right to review and comment on such schemes and TSP shall consider Generator's comments when determining such schemes. Generator will install and maintain System Protection Equipment that is compatible with TSP's System Protection Equipment. TSP will work with the Generator to coordinate the establishment of the relay settings for System Protection Equipment owned by both Generator and TSP associated with the Point of Interconnection.
- 10.8 Documentation of all protective device settings shall be provided to TSP. The setting documentation shall also include relay type, model/catalog

number, and setting range. If automatic transfer schemes or unique or special protective schemes are used, a description of their operation should be included. TSP must review and approve the settings of all protective devices and automatic control equipment which: i) serve to protect the TSP System from hazardous currents and voltages originating from the Plant; or ii) must coordinate with System Protection Equipment or control equipment located on the TSP System.

11. Inputs to Telemetry Equipment:

- 11.1 Generator shall comply with ERCOT Requirements for telemetry and will coordinate with TSP for additional points if telemetry is deemed necessary by TSP.

12. Supplemental Terms and Conditions:

- 12.1 Additional Studies – If it is necessary for TSP to perform any additional generation interconnection studies associated with the Plant in accordance with ERCOT Requirements, the Parties will enter an agreement, in form and substance reasonably acceptable to the Parties, to perform those studies and Generator shall pay TSP for the studies pursuant to that agreement.
- 12.2 Switching Procedures – Each Party will adopt formal switching procedures that govern safety related issues concerning the operation of its switches connected to these Points of Interconnection and will provide a copy of those procedures to the other Party prior to In-Service Date. Each Party will agree to comply with the aforementioned switching procedures of the other Party applicable to the Point of Interconnection and will notify the other Party in writing of any changes to its procedures relating to the Point of Interconnection.
- 12.3 Facility Connection Requirements – Generator will construct its facilities in accordance with the version of LST-FAC-001-PRO-Facility\_Connection\_Requirements that is in effect at the time the Generator gives its notice to proceed with design and procurement, as referenced in Exhibit “B”.
- 12.4 Generator shall submit drawings of the GIF to TSP for review. TSP will review only those portions of the drawings that affect the TSP System. Any changes required by TSP shall be made prior to final issue of drawings and TSP shall be provided with final copies of the revised drawings. TSP will review only those portions of the drawings which apply to protection, metering and monitoring of the TSP System. To aid Generator, TSP may make suggestions on other areas. TSP’s review of Generator’s drawings shall not be construed as confirming or endorsing the design or as any warranty of safety, durability, or reliability of the facility or equipment. Generator shall provide copies of the following:

- i.) one-line and three-line diagrams indicating the following:

1. equipment names and/or numerical designations for all circuit breakers, contactors, air switches, transformers, generators, etc., associated with the generation as required by TSP to facilitate switching
  2. power transformers – nameplate or designation, nominal kVA, nominal primary, secondary, tertiary voltages, vector diagram showing winding connections, tap setting and transformer impedances (transformer test report showing the positive sequence, zero sequence, test voltages and MVA base for each winding)
  3. station service transformers – phase(s) connected and estimated kVA load
  4. instrument transformers – voltage and current, phase connections
  5. surge arresters/gas tubes/metal oxide varistors/avalanche diode/spill gaps/surge capacitors, etc. – type and ratings
  6. capacitor banks – kVAR rating and reactive (static and dynamic) device operation capability
  7. reactive device capability (required for wind generation only) – kVAR rating and reactive device operation capability for static and dynamic devices for each generation collection feeder
  8. disconnect switches – status if normally open (N.O.), manual or motor operated including switch voltage, continuous and interrupting ratings
  9. circuit breakers and/or contactors – interrupting rating, continuous rating, operating times
  10. generator(s) – nameplate, test report, type, connection, kVA, voltage, current, rpm, power factor, impedances, time constants, etc.
  11. Point of Interconnection and phase identification
  12. fuses – manufacturer, type, size, speed, and location
  13. transmission structure geometry (phase-to-phase, phase-to-ground, and shield-to-phase), phase conductor data, shield wire data, transmission line ratings, positive and zero sequence impedances and mileage
  - 14.
- ii.) potential and current elementary drawings associated with the protection and control schemes for the Plant and GIF and control elementary drawings of the Plant and interconnection circuit breaker indicating the following:
1. terminal designation of all devices – relay coils and contacts, switches, transducers, etc.
  2. relay functional designation – per latest ANSI Standard where the same functional designation shall be used on all drawings showing the relay

3. complete relay type (such as CV-2, SEL321-1, REL-301, IJS51A, etc.)
  4. switch contact as referenced to the switch development if development is shown on a separate drawing
  5. switch developments and escutcheons where the majority of contacts are used. Where contacts of a switch are used on a separate drawing, that drawing should be referenced adjacent to the contacts in the switch development. Any contacts not used should be referenced as spare.
  6. all switch contacts shown open with each labeled to indicate the positions in which the contact will be closed with explanatory notes defining switch coordination and adjustment where misadjustment could result in equipment failure or safety hazard
  7. auxiliary relay contacts as referenced to the coil location drawing if coil is shown on a separate drawing where all contacts of auxiliary relays should be shown and the appropriate device auxiliary switches (circuit breakers, contactor) as referenced to the drawing where they are used.
  8. any interlocks – electromechanical, key, etc., associated with the generation or interconnection Substation
  9. ranges of all timers and setting if dictated by control logic
  10. all target ratings; on dual ratings note the appropriate target tap setting
  11. complete internal for electromechanical protective relays where microprocessor type relays may be shown as a “black box”, with manufacturer’s instruction book number referenced and terminal connections shown
  12. isolation points (states links, PK-2 and FT-1 blocks), etc. including terminal identification
  13. all circuit elements and components, with device designation, rating and setting where applicable and where coil voltage is shown only if different from nominal control voltage
  14. size, type, rating and designation of all fuses
  15. phase sequence designation as ABC or CBA
  16. potential transformers – nameplate ratio, polarity marks, rating, primary and secondary connections
  17. current transformers (including auxiliary CT’s) – polarity marks, rating, tap ratio and connection
- 12.5 Generator may not commence parallel operation of the Plant until consent has been given by TSP. TSP reserves the right to inspect the GIF and witness testing of any equipment or devices associated with the Point of Interconnection.

- 12.6 The Plant and GIF shall not cause objectionable interference with the electric service provided to other customers of TSP nor jeopardize the security of the ERCOT power system. In order to minimize objectionable interference of the Plant and GIF, the Plant and GIF shall meet the following criteria as described in TSP's LST-FAC-001-PRO-Facility\_Connection\_Requirements for the below:
- Voltage,
  - Flicker,
  - Frequency,
  - Harmonics, telephone interference, carrier interference,
  - Fault and line clearing,
  - Excitation system and Automatic Voltage Regulation, and
  - Governor system.
- 12.7 The dynamic MVAR capability at the current MW generation amount shall be provided in real time. If this dynamic MVAR capability is not available in real time, a dynamic capability curve plotted as a function of MW output shall be provided. The shunt static reactive available, but not in service, shall be provided in sufficient detail to determine the amount of dynamic and static reactive reserve available.
- 12.8 Generator shall provide Voltage Support Service and Reactive Power Requirements as required by ERCOT Nodal Protocols Section 3.15.
- 12.9 Certain generators are susceptible to SSO when interconnected within electrical proximity of series capacitor banks on the transmission system. Prior to the In-Service Date, the Generator will provide complete and accurate studies which analyze the potential of SSO and will coordinate with TSP and ERCOT regarding the scope of such studies. Generator is responsible for mitigation to protect itself from SSO risks. TSP will work with Generator and their selected turbine-generator manufacturer on any system data required for such studies.
- 12.10 TSP considers the energy and power that the Plant and GIF may from time to time consume from the transmission grid through the Point of Interconnection to be a retail transaction and as such, TSP does not intend to be the provider of this retail service. Generator shall make necessary arrangements with the appropriate retail supplier for the energy and power that the Plant and GIF may consume from the transmission grid through the Point of Interconnection.
- 12.11 Generator shall notify TSP in writing as to which initial ERCOT Qualified Scheduling Entity the Plant will be scheduling through and any changes made thereafter.

- 12.12 Upon written request from TSP, Generator shall supply notification to TSP identifying their retail service provider.
  - 12.13 Generator shall use commercially reasonable efforts to change the GIF as may be reasonably required by TSP to meet future changes in the TSP System. Generator shall be given reasonable notice by TSP prior to the date that any such required change in the GIF must be made.
  - 12.14 Each Party will comply with NERC Reliability Standards applicable to its facilities identified in this Exhibit "C". Each Party shall provide to the other Party all information related to its interconnection facilities that may reasonably be required by the other Party to comply with NERC Reliability Standards applicable to its interconnection facilities, if any. "NERC Reliability Standards" means the mandatory electric reliability standards established and enforced by the North American Electric Reliability Corporation or its successor electric reliability organization.
  - 12.15 Encroachment – Generator must submit a written request to TSP (using a form of request acceptable to TSP) and obtain prior written authorization from TSP prior to conducting any activities within any portion of TSP's transmission line right of way and/or substation property. Such Generator activities shall include, but are not limited to: i) constructing transmission lines, communication facilities, roads, water lines, sewer lines, gas pipelines, or any other facilities; ii) storing any equipment or materials; or iii) changing the grade, elevation, or contour of the land, for such encroachment prior to Generator installing such facilities or conducting such activities. TSP RESERVES THE RIGHT TO DELAY THE ENERGIZATION FOR THE POINT OF INTERCONNECTION UNTIL GENERATOR OBTAINS ALL REQUIRED WRITTEN AUTHORIZATIONS FROM TSP FOR SUCH ENCROACHMENTS, IF ANY. The Generator will be responsible for the cost of all modifications necessary on property or facilities owned by TSP that are affected by such encroachment. The provision of overall site plans by Generator shall not relieve Generator from the obligation to submit all encroachment requests in accordance with this subsection.
13. Special Operating Conditions, if any, attached:
- 13.1 If Generator's main power transformer(s) is equipped with a no-load tap changer, in accordance with ERCOT Requirements, Generator will work with TSP to select the tap position on the no-load tap changer of the Generator's main power transformer(s). Generator will initiate contact with TSP to select such tap position no later than the date specified in Exhibit B. notwithstanding TSP's obligations in the remainder of this Agreement, TSP shall have no obligation to establish an electrical interconnection with the GIF until Generator and TSP have selected the tap position.

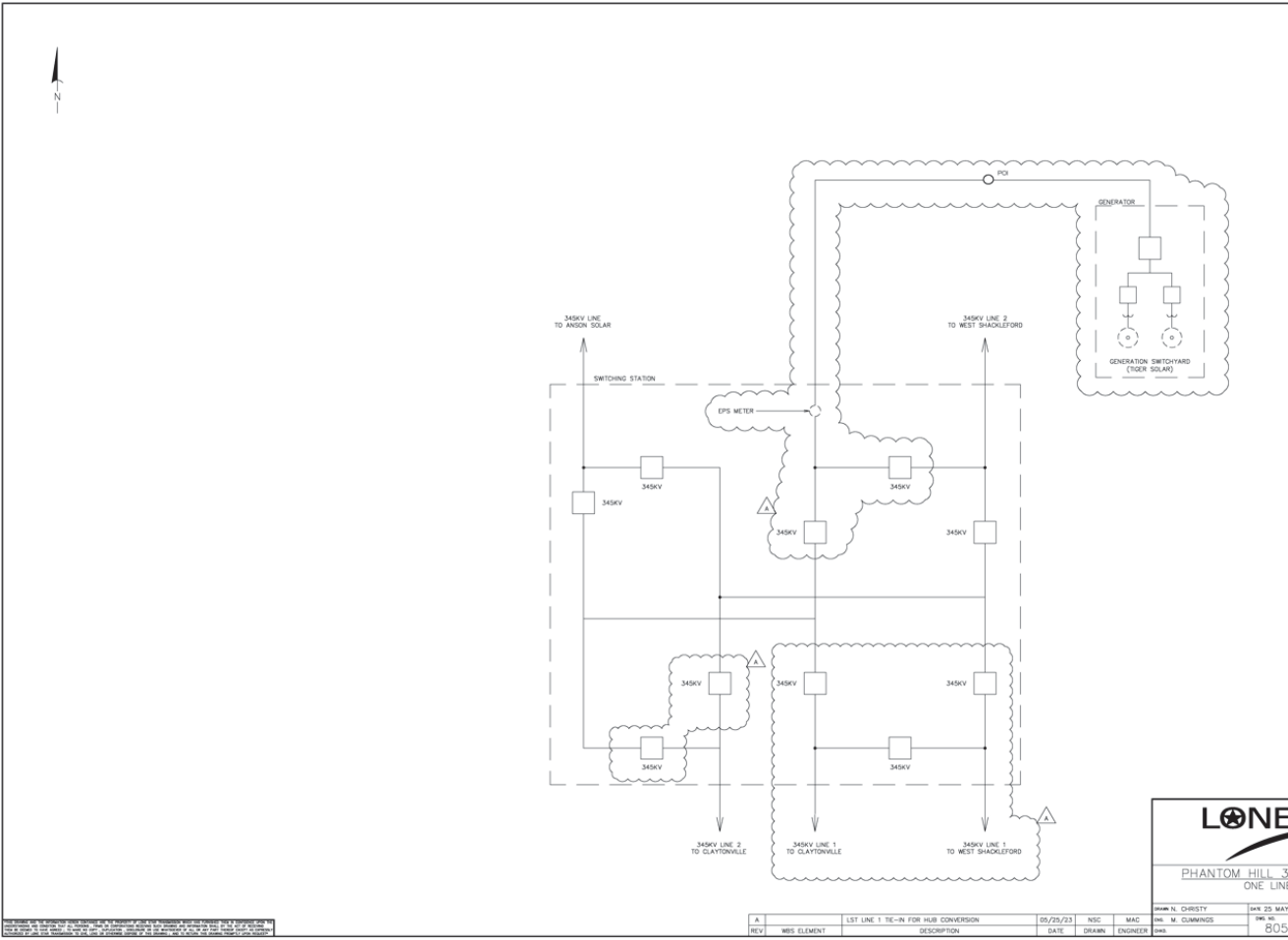
Generator shall design, construct, operate and maintain GIF with accordance with all applicable ERCOT Requirements and NERC Reliability Standards.

For thermal powered generation, Generator will provide TSP at least thirty (30) minutes' prior notice before coming on-line or off-line so TSP can adjust reactive resources.

14. The difference between the estimated cost of the TIF under 4.1.A (N/A) and the estimated cost of the TIF under 4.1.B (N/A) is: N/A, if applicable.



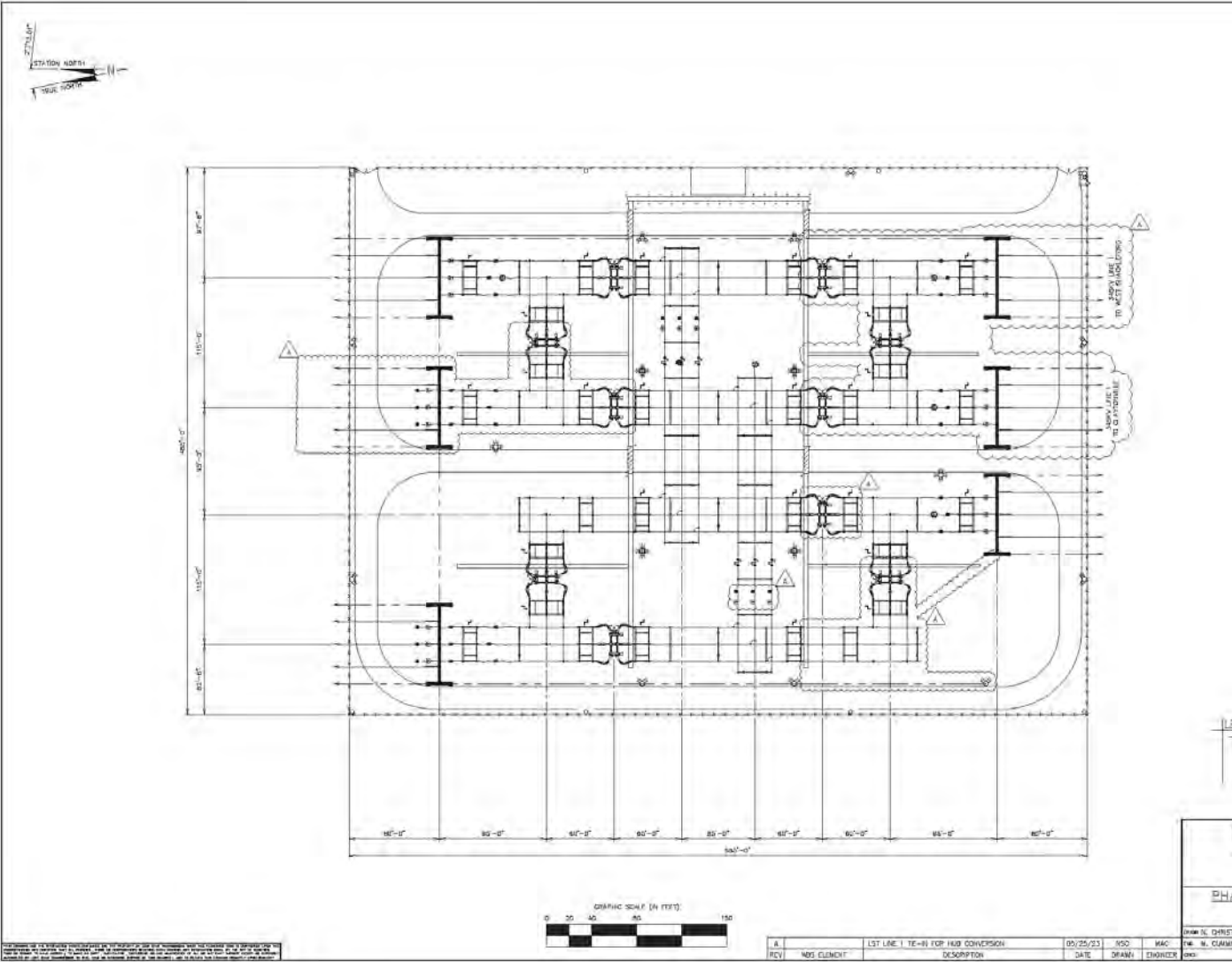
Attachment C-2Conceptual One-Line Drawing of Point of Interconnection





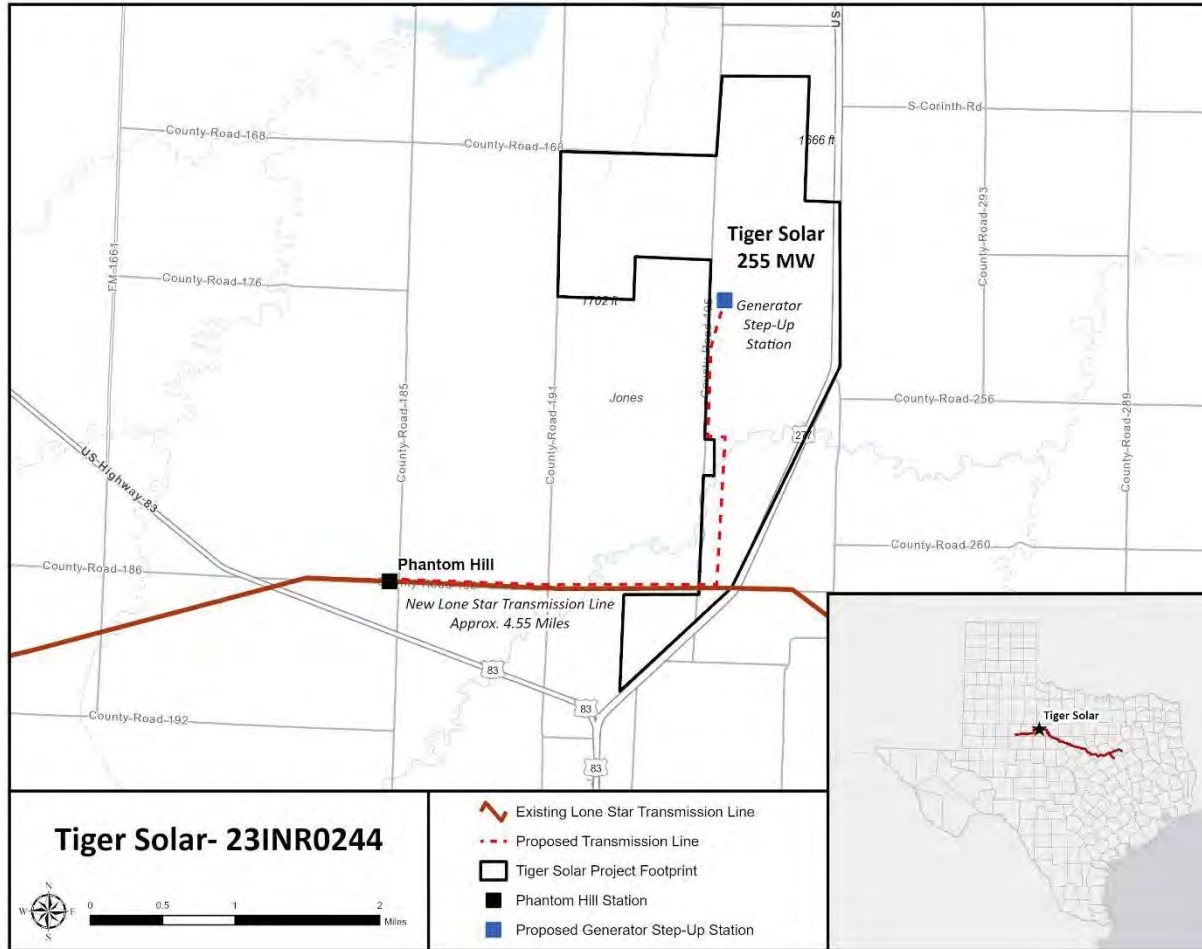
Application of Lone Star Transmission, LLC to Amend  
Its Certificate of Convenience and Necessity for the  
Proposed Phantom Hill to Tiger Solar 345-kV  
Transmission Line in Jones County

PUC Docket No. 58405  
Attachment No. 3  
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Attachment C-3

Project Overview Map



DATE: 18 October 2024

**Exhibit “D”**

Notice and EFT Information of the ERCOT Standard Generation Interconnection Agreement

(a) All notices of an operational nature shall be in writing and/or may be sent between the Parties via electronic means including facsimile as follows:	
<p>If to Generator:</p> <p><b>Off Premise Exchange Number for Generator Control Center:</b> System Operations – 24hrs Renewable Operation Control Center (ROCC) Phone: 1-888-202-6337 Email: NEER-SYSTEM-OPERATIONS.SharedMailbox@nexteraenergy.com</p> <p><b>Other Generator Control Center 24/7 Number:</b> Generator Dispatch – 24hrs Renewable Operation Control Center (ROCC) Tel: 561-694-3636 Toll Free: 866-375-3737 Email: ROCC.SharedMailbox@nexteraenergy.com</p>	<p>If to Transmission Service Provider:</p> <p>Lone Star Transmission Control Center 24 Hour Telephone: 512-949-2600 Email: DL-System-Operations@LONESTAR-TRANSMISSION.COM</p>
(b) Notices of an administrative nature:	
<p>If to Generator:</p> <p><b>Vaca Del Sol, LLC</b> NextEra Energy Resources, LLC Attn: Business Management, South 700 Universe Blvd</p>	<p>If to Transmission Service Provider:</p> <p>Company Name: Lone Star Transmission, LLC Attn: Maggie Loundy, Development Project Manager of Development</p>

**Application of Lone Star Transmission, LLC to Amend  
Its Certificate of Convenience and Necessity for the  
Proposed Phantom Hill to Tiger Solar 345-kV  
Transmission Line in Jones County**

**PUC Docket No. 58405  
Attachment No. 3  
Page 44 of 46**

<p>Juno Beach, FL, 33408 Email: <a href="mailto:dl-nextera-south-region@nexteraenergy.com">dl-nextera-south-region@nexteraenergy.com</a></p>	<p>Address: 5920 W. William Cannon Dr., Bldg. 2, Austin, TX 78749 24 Hour Telephone: Operational/Confirmation Fax: (512) 949-2626 Email: <a href="mailto:dl-lonestar-interconnection@nexteraenergy.com">dl-lonestar-interconnection@nexteraenergy.com</a></p>
<p>(c) Notice for statement and billing purposes:</p>	
<p>If to Generator:</p> <p><b>Vaca Del Sol, LLC</b> NextEra Energy Resources, LLC Attn: Business Management, South 700 Universe Blvd Juno Beach, FL, 33408 Phone: 561-304-5829 Email: <a href="mailto:dl-nextera-south-region@nexteraenergy.com">dl-nextera-south-region@nexteraenergy.com</a> Email: <a href="mailto:dl-dev-interconnect@nexteraenergy.com">dl-dev-interconnect@nexteraenergy.com</a> Email: development-finance-servicedesk-  <a href="mailto:sharedmailbox@nexteraenergy.com">sharedmailbox@nexteraenergy.com</a></p>	<p>If to Transmission Service Provider:</p> <p>Company Name: Lone Star Transmission, LLC c/o NextEra Energy Transmission, LLC Address: 700 Universe Blvd. (UST/JB), Juno Beach, FL 33408 Email: <a href="mailto:customerservice@lonestar-transmission.com">customerservice@lonestar-transmission.com</a></p>
<p>(d) Information concerning electronic funds transfers:</p>	
<p>If to Generator:</p> <p><b>Bank of America</b> Bank Address: 100 West 33rd Street New York, NY, 10001 ABA: 026-009-593 NextEra Energy Resources Development, LLC Account Number: 4451284387</p>	<p>If to Transmission Service Provider:</p> <p><u>ACH Instructions</u> Bank Name: Bank of America Global Finance City, State: Dallas, TX ABA No: 111-000-012 Swift: BOFAUS3N For credit to: Lone Star Transmission, LLC Account No.: 4426849087</p> <p><u>Wire Instructions</u> Bank Name: Bank of America City, State: New York, NY ABA No.: 0260-0959-3 Swift: BOFAUS3N For credit to: Lone Star Transmission, LLC Account No.: 4426849087</p>

## **Exhibit “E”**

### **Security Arrangement Details**

On or before the date that Generator issues the written Notice to Proceed, Generator shall cause to be established (the date of such establishment shall be the “Security Effective Date”), and shall at all times through the earlier of (i) five (5) business days after the date upon which TSP receives written notification from Generator that Commercial Operation has been achieved or (ii) ninety (90) days after the termination of the Agreement in accordance with its terms (the earlier of which shall be the “Final Expiration Date”), cause to be maintained in full force and effect a form of Security for the benefit of TSP in a commercially acceptable form consistent with this Exhibit E and otherwise acceptable to TSP and Generator, which acceptance shall not be unreasonably withheld, in the amount totaling Thirty Two Million, Seven Hundred and Ten Thousand Dollars (\$32,710,000).

Depending on the creditworthiness of the proposed guarantor, Generator may propose a Corporate Guaranty, which may or may not be acceptable Security. TSP requires that a guarantor providing any Corporate Guaranty on behalf of Generator shall maintain a senior unsecured credit rating of BBB- or the equivalent by Standard & Poor’s, Moody’s Investor Service, or Fitch Ratings, Inc. If Generator chooses to provide a Corporate Guaranty, it shall provide any financial reports requested by TSP upon execution of this Agreement and agrees to provide financial information concerning the guarantor as may be requested from time to time by TSP. If the creditworthiness of the proposed guarantor is acceptable to TSP, the Corporate Guaranty shall be in a form acceptable to TSP. If rated by one or more rating agencies and the ratings are split, the lowest rating should be the applicable standard.

Generator alternatively may provide Security through an “Irrevocable Standby Letter of Credit” shall mean an irrevocable, transferable letter of credit, issued by a Generator-selected and TSP-approved (which approval shall not be unreasonably withheld), major U.S. commercial bank, or a U.S. branch office of a major foreign commercial bank, with a credit rating of at least “A-” by Standard & Poor’s or “A3” by Moody’s Investor Services (“Bank”). The Irrevocable Standby Letter of Credit shall be transferable, more than one time, in whole but not in part, in favor of any party whom TSP certifies has succeeded to TSP’s right, title, and interest in and to this Agreement. Should TSP transfer such Irrevocable Standby Letter of Credit as stated above, Generator shall reimburse TSP for any costs it incurs from the Bank associated with such transfers.

If, at any time during the Term of this Agreement, the Bank suffers a credit rating reduction to less than “A-” by Standard & Poor’s or “A3” by Moody’s Investor Service, Generator shall replace that Irrevocable Standby Letter of Credit with another Irrevocable Standby Letter of Credit of the same amount and with the same beneficiary from another TSP-approved bank of Generator’s choice within fifteen (15) business days of the date of such event. In the event of a failure to provide a substitute Irrevocable Standby Letter of Credit within the time period specified above, TSP may draw upon the Irrevocable Standby Letter of Credit to secure a cash deposit as security under this Agreement.

The Irrevocable Standby Letter of Credit may consist of one or more consecutive terms (each, a “Term”), the first of which shall be effective on or before the Security Effective Date and the last of which shall expire no earlier than the Final Expiration Date; provided, that, the

Irrevocable Standby Letter of Credit shall automatically renew from Term to Term without amendment such that there shall be no interruption of surety provided by the Irrevocable Standby Letter of Credit from the Security Effective Date through the Final Expiration Date.

To the extent that the Bank has the unilateral right not to renew the Irrevocable Standby Letter of Credit for a successive Term, the Bank shall give notice to TSP and Generator in writing by certified mail, return receipt requested, or via a courier service, of the exercise of its right not to renew the Irrevocable Standby Letter of Credit for a successive term (an "Expiring Term") not less than ninety (90) days prior to the expiration date of any Expiring Term. Generator hereby agrees that in the event that the Bank gives such notice and Generator does not provide TSP with a substitute Irrevocable Standby Letter of Credit in substantially the same form as the expiring Irrevocable Standby Letter of Credit at least forty-five (45) days prior to the expiration date of any Expiring Term, TSP shall have the right to retain as security the full amount (as specified in the Irrevocable Standby Letter of Credit) of the expiring Irrevocable Standby Letter of Credit. The substitute Irrevocable Standby Letter of Credit shall meet the requirements of this Exhibit E and be otherwise acceptable to TSP and Generator, which acceptance shall not be unreasonably withheld. In the event of a failure to provide a substitute Irrevocable Standby Letter of Credit within the time period specified above, TSP may draw upon the Irrevocable Standby Letter of Credit to secure a cash deposit as security under this Agreement.

In the event that an Irrevocable Standby Letter of Credit is set to expire on a date prior to the Final Expiration Date and Generator has not provided to TSP a substitute Irrevocable Standby Letter of Credit at least forty-five (45) days in advance of such expiration, TSP shall have the right to retain as security the full amount (as specified in the Irrevocable Standby Letter of Credit) of the expiring Irrevocable Standby Letter of Credit. The substitute Irrevocable Standby Letter of Credit shall meet the requirements of this Exhibit E and be otherwise acceptable to TSP and Generator, which acceptance shall not be unreasonably withheld. In the event of a failure to provide a substitute Irrevocable Standby Letter of Credit within the time period specified above, TSP may draw upon the Irrevocable Standby Letter of Credit to secure a cash deposit as security under this Agreement.

Except to the extent that the Bank has the unilateral right not to renew the Irrevocable Standby Letter of Credit for a successive Term, the Irrevocable Standby Letter of Credit to be issued in connection herewith shall have no provision for termination by the Bank or Generator.

Within five (5) business days after the Final Expiration Date, TSP shall (i) mark the Irrevocable Standby Letter of Credit, if any, then held by TSP as "CANCELLED" and shall return the cancelled Irrevocable Standby Letter of Credit to the Bank with instructions to cancel the Irrevocable Standby Letter of Credit, and shall send to Generator a copy of such cancelled Irrevocable Standby Letter of Credit and instructions for cancellation, and (ii) return all cash deposit(s), if any, then held by TSP to Generator.



## **Tiger Solar Interconnection Project (23INR0244) – Economic Study**

Document Revisions

Date	Version	Description	Author(s)
12/23/2024	1.0	Final	Abishek Penti
		Reviewed by	Robert Golen, Prabhu Gnanam

Table of Contents

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2. Methodology and Assumptions ..... 1

3. Study Results ..... 3

## 1. Introduction

Lone Star Transmission, LLC provided notice to ERCOT that the generation interconnection cost for the Tiger Solar project (255 MW solar facility) studied under ERCOT Generation Interconnection or Change Request (GINR) 23INR0244, in Jones County, TX, is expected to exceed \$25 million. The Tiger Solar generation interconnection project was requested by Vaca Del Sol, LLC to connect to an existing Phantom Hill 345-kV substation as the permanent Point of Interconnection (POI). In accordance with ERCOT Protocol Section 3.11.6 Generation Interconnection Process, ERCOT performed an independent economic analysis of the transmission projects identified for interconnecting the Tiger Solar project. This economic analysis is performed only for informational purposes; as such, no ERCOT endorsement is provided. The results of the economic analysis will be included in the interconnection study posting. The anticipated commercial operation date (COD) of this generation interconnection project is June 30, 2027. Figure 1 shows the approximate location of the Tiger Solar project.

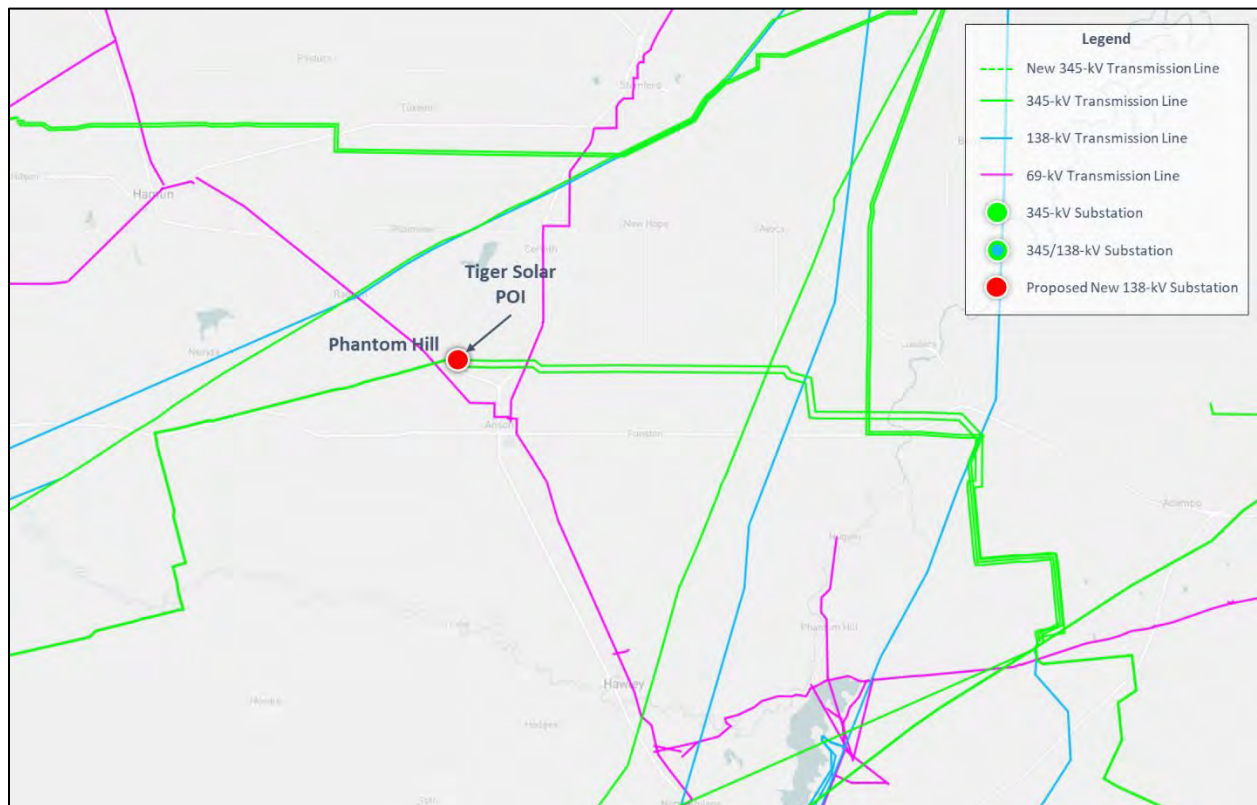


Figure 1: Approximate location of the Tiger Solar project

## 2. Methodology and Assumptions

The 2028 economic case built for the 2023 Regional Transmission Plan (RTP) was used to construct the base case. The following updates were made to the base case:

1. Loads in the 2028 study base case were maintained consistent with the 2023 RTP economic model.

2. Transmission projects that are expected to be in-service by the year 2028 have been added to the study base case. Transmission projects were identified close to the Tiger Solar project that are expected to be expected in-service by the year 2028. The ERCOT Transmission Project Information and Tracking (TPIT)<sup>1</sup> report posted in October 2024 was used as a reference.
3. New generators that are expected to be in-service by the year 2028 have been added to the study base case. Generators were identified close to the Tiger Solar project that met Planning Guide Section 6.9(1) conditions and are expected to be expected in-service by the year 2028. The ERCOT Generation Interconnection Status (GIS)<sup>2</sup> report published in September 2024 was used as a reference.
4. Resources retired or to be retired were updated based on the NSO Studies – Final Reliability Determination Analysis reports<sup>3</sup> found on MIS along with Capacity, Demand and Reserve (CDR) report<sup>4</sup> published in May 2024.

The base case was modified to create the study case by including the interconnection facilities of the 255 MW Tiger Solar project. Based on the COD, the Tiger Solar project was modeled for the entire year in the 2028 case.

Economic study was performed in UPLAN in a manner consistent with other economic planning analyses conducted by ERCOT. The production cost difference was compared between the study case and the base case (with and without the Tiger Solar project). The time frame for this study was 8760 hours for the year 2028.

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<sup>1</sup> Available at <https://www.ercot.com/gridinfo/planning>

<sup>2</sup> Available at <https://www.ercot.com/mp/data-products/data-product-details?id=PG7-200-ER>

<sup>3</sup> Available at <https://mis.ercot.com/secure/data-products/grid/generation?id=NP3-511-M>

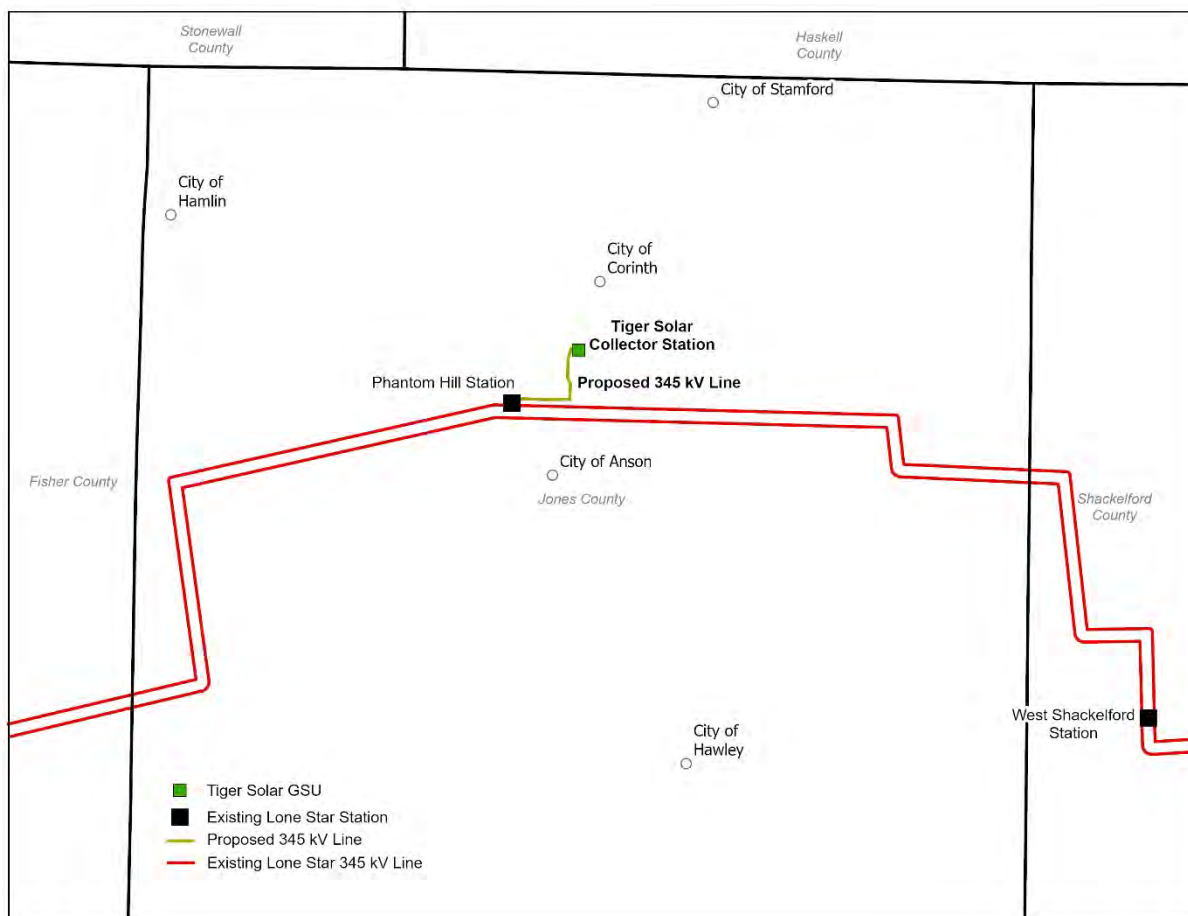
<sup>4</sup> Available at <https://www.ercot.com/gridinfo/resource/index.html>

### 3. Study Results

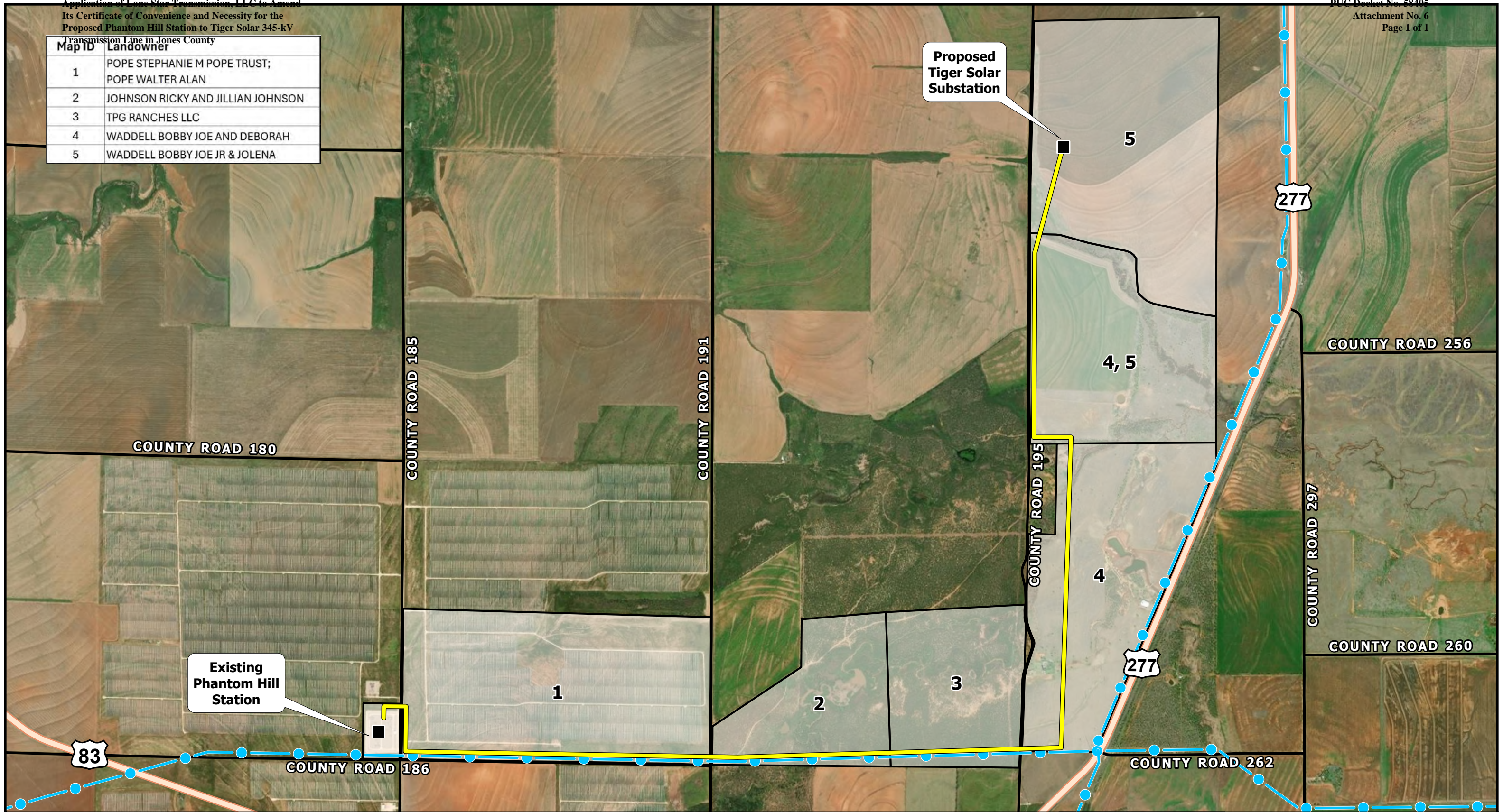
The annual production cost saving and annual generator revenue reduction, resulting from including the subject facilities in the economic study (when compared with the base case), were approximately \$2.26 million and \$17.26 million respectively for the year 2028. This represents a decrease in the annual production cost and annual generator revenue.

The addition of the Tiger Solar project had no significant impact on congestion in the study.

**Schematic of the Lone Star Transmission System in the Proximate Area of the Project**



Map ID	Landowner
1	POPE STEPHANIE M POPE TRUST; POPE WALTER ALAN
2	JOHNSON RICKY AND JILLIAN JOHNSON
3	TPG RANCHES LLC
4	WADDELL BOBBY JOE AND DEBORAH
5	WADDELL BOBBY JOE JR & JOLENA



■ Project Endpoint

—●— Existing Transmission Line

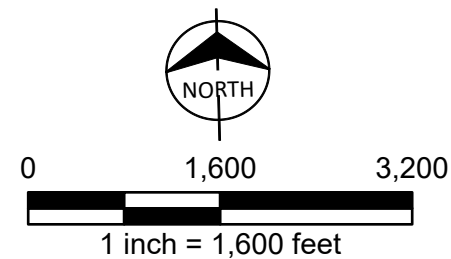
— Consensus Route

— County Road

1 Directly Affected Property  
Boundary & Map ID

— US Highway

Basemap: ESRI World Imagery 2023



LONEstar

BURNS  
MCDONNELL

Directly Affected Landowners  
Phantom Hill to Tiger Solar  
345-kV Transmission Line Project  
Lone Star Transmission  
Jones County, Texas

**Landowner Names, Property Identification, and Map Locations**  
**Cross-Reference Table**

<b>Map ID<sup>1</sup></b>	<b>Parcel ID(s)</b>	<b>Landowner Name</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>
1	23041	STEPHANIE M. POPE TRUST, STEPHANIE M. POPE OR HER SUCCESSOR AS TRUSTEE, UNDER TRUST AGREEMENT DATED SEPTEMBER 2, 2004, AS AMENDED	1192 Cypress Point Way	Virginia Beach	VA	23455
1	52449	WALTER ALAN POPE	201 Nelson Ferry Road	Decatur	GA	30030
2	539718	RICKY JOHNSON AND JILLIAN JOHNSON	1281 Braune Road	Abilene	TX	79603
3	12110	TPG RANCHES, LLC	208 Hewitt Drive, Suite 103, #342	Waco	TX	76712
4	10378 and 50% of 10376	BOBBY J. WADDELL AKA BOBBY JOE WADDELL, SR AND DEBORAH A. WADDELL AKA DEBBIE A. WADDELL	6957 CR 443	Anson	TX	79501
5	24741 and 50% of 10376	BOBBY J. WADDELL, JR. AKA BOBBY JOE WADDELL, JR. AND JOLENA WADDELL	710 CR 513	Stephenville	TX	76401

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<sup>1</sup> Map IDs refer to the numbers identified on the map in Attachment No. 6.



August 11, 2025

<Landowner Name>

<Address>

<City, State, Zip>

**RE: PUC Docket No. 58405; *Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County, Texas***

Dear [Landowner]:

Lone Star Transmission, LLC (Lone Star) gives notice of its intent to amend its Certificate of Convenience and Necessity (CCN) to construct a proposed single-circuit 345-kV transmission line in Jones County, Texas. Lone Star has filed its application to amend its CCN with the Public Utility Commission of Texas (Commission or PUC) in Docket No. 58405 – *Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County, Texas*.

Lone Star is filing a single routing option (Consensus Route) for this project. The new transmission line will be constructed between Lone Star's Phantom Hill Station, located northwest of the County Road (CR) 185 and CR 186 intersection, and the Tiger Solar Point of Interconnection (POI), located approximately 2.26 miles north of the CR195 and U.S. Highway 277 intersection. The proposed Consensus Route is approximately 4.55 miles in length. The estimated cost of the transmission line is approximately \$15.85 million, and the estimated cost of station improvements at the Phantom Hill Station is approximately \$16.95 million. The project will be constructed using primarily concrete and steel monopole structures.

Your land may be directly affected in this docket. If Lone Star's route is approved by the PUC, Lone Star will have the right to build a facility that may directly affect your land. The PUC docket will not determine the value of your land or the value of an easement if one is needed by the applicant to build the facility. If you have questions about the transmission line, you may contact Tracy Wiczorek at (512) 236-3151 (office) or (512) 517-8798 (mobile).

August 11, 2025

Page 2

A map illustrating Lone Star's Consensus Route is enclosed for your review. Also enclosed is a written description of the Consensus Route that has been filed with the Commission in the Lone Star CCN application. A detailed routing map may be downloaded from Lone Star's website at <https://www.lonestartransmission.com/regulatory/phantom-hill-to-tiger-solar.html>.

**All routes and route segments included in this notice are available for selection and approval by the Public Utility Commission of Texas. Additionally, the PUC may modify any proposed route or segment into different configurations than those proposed.**

The enclosed brochure entitled "Guide for Landowners Affected by a New Electric Transmission Line Route" provides basic information about how you may participate in this docket, and how you may contact the PUC. Please read this brochure carefully. It can also be found at [https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide\\_for\\_Landowners\\_Affected\\_by\\_a\\_New\\_Electric\\_Transmission\\_Line\\_Route.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide_for_Landowners_Affected_by_a_New_Electric_Transmission_Line_Route.pdf). The brochure includes sample forms for making comments and for making a request to intervene as a party in this docket. The PUC's brochure emphasizes: ***The only way to fully participate in the PUC's decision on where to locate the transmission line is to intervene in the docket. It is important for an affected person to intervene because Lone Star is not obligated to keep affected persons informed of the PUC's proceedings and cannot predict which route may or may not be approved by the PUC.***

In addition to the contacts listed in the brochure, you may call the PUC's Customer Assistance Hotline at (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC's Customer Assistance Hotline at (512) 936-7136 or toll free at (800) 735-2989. If you wish to participate in this proceeding by becoming an intervenor, the deadline for intervention in the proceeding is September 10, 2025, and the PUC should receive a letter from you requesting intervention by that date if you choose to intervene. The request to intervene form is included with your brochure.

The preferred method for you to file your request for intervention is electronically. If you decide to file a request for intervention, you will be required to serve the request on other parties by email. Therefore, please include your own email address on the intervention form. Instructions for electronic filing via the "PUC Filer" on the Commission's website can be found here: <https://interchange.puc.texas.gov/filer>. Instructions for using the PUC Filer are available at [https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing\\_Instructions.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing_Instructions.pdf). For assistance with your electronic filing, please contact the Commission's Help Desk at (512) 936-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>.

August 11, 2025

Page 3

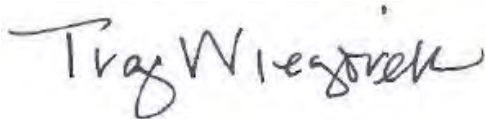
While the preferred method for submitting a request for intervention is electronically, if you are unable to file your request for intervention electronically, you may file your request by mailing a hard copy to the PUC. The PUC should receive a letter from you requesting intervention by the intervention date (September 10, 2025). If you are not filing your request to intervene electronically, mail the request for intervention to:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, Texas 78711-3326

Persons who wish to intervene in the docket must also mail a copy of their request for intervention to all parties in the docket and all persons that have pending motions to intervene, at or before the time the request for intervention is mailed to the PUC.

In addition to the intervention deadline, other important deadlines may already exist that affect your participation in this docket. You should review the orders and other filings already made in the docket. The enclosed brochure explains how you can access these filings.

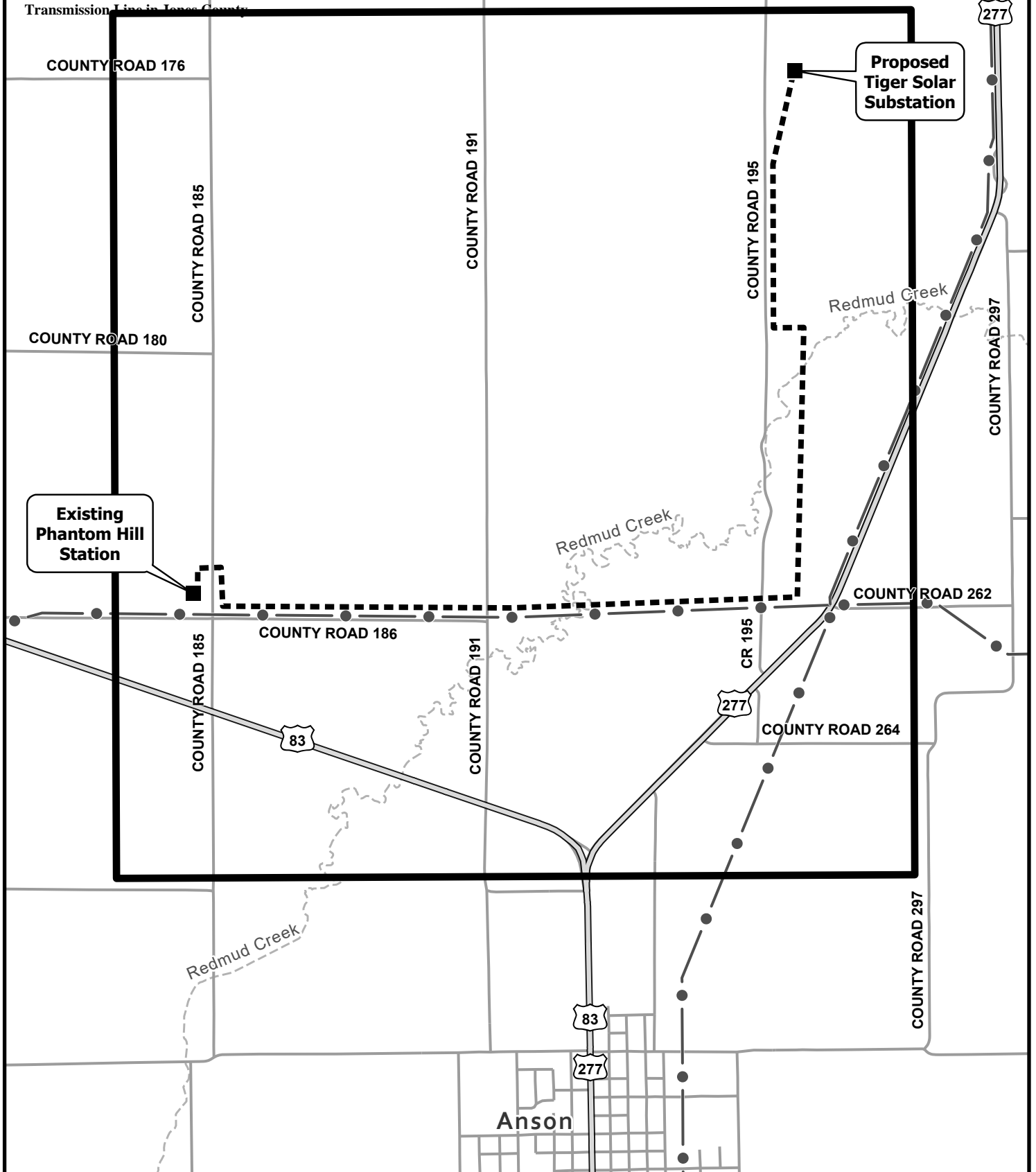
Sincerely,



Tracy Wiczorek  
Director, Land Strategy and Community Relations  
Lone Star Transmission, LLC  
Office: (512) 236-3151  
Mobile: (512) 517-8798  
Email: [Tracy.Wiczorek@lonestar-transmission.com](mailto:Tracy.Wiczorek@lonestar-transmission.com)

Enclosures:

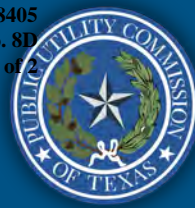
- Map of Consensus Route
- Consensus Route Description
- Landowner Brochure
- Comment/Protest Form
- Intervenor Form



<p>■ Project Endpoint</p> <p>--- Consensus Route</p> <p>● Existing Transmission Line</p> <p>--- Creek / Stream</p>	<p>▭ Study Area</p> <p>— US Highway</p> <p>— County Road</p>	<p>0 0.25 0.5</p> <p>Miles</p> <p>NORTH</p>	<p><b>LONESTAR</b></p> <p><b>BURNS MCDONNELL</b></p>	<p>Phantom Hill to Tiger Solar 345-kV Transmission Line Project Lone Star Transmission Jones County, Texas</p>
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**Lone Star Transmission, LLC  
Phantom Hill to Tiger Solar 345-kV Transmission Line Project  
Consensus Route Description**

The Consensus Route (Route) originates on the north side of Lone Star Transmission, LLC's (Lone Star) existing Phantom Hill Station, located along Lone Star's existing Claytonville to West Shackleford 345-kV transmission line and northwest of the County Road (CR) 185 and CR 186 intersection in northcentral Jones County, Texas. The Route extends to the north approximately 205 feet and turns east. Here it extends east approximately 390 feet, crossing CR 185, turns to the south and extends, while paralleling the east side of CR 185, approximately 775 feet to the north side of an existing transmission line. Here it turns to the east and extends, paralleling the north side of an existing transmission line, approximately 11,517 feet, crossing CR 191, Redmud Creek, and CR 195. Here the Route angles to the north and extends approximately 5,455 feet, crossing Redmud Creek, then turns west and continues approximately 645 feet before turning to the north. From this point the Route parallels the east side of CR 195, extending north approximately 3,260 feet, then turns slightly northeast. Here it continues 1,819 feet and connects to the proposed Tiger Solar Point of Interconnection, located south of and directly adjacent to the Tiger Solar Substation, located on the east side of CR 195, approximately 2 miles north of Lone Star's existing Claytonville to West Shackleford 345-kV transmission line or approximately 2.26 miles north of the CR 195 and US Highway 277 intersection in northwestern Jones County, Texas.



# PUBLIC UTILITY COMMISSION OF TEXAS

## Guide for Landowners Affected by a New Electric Transmission Line Route

### Why am I receiving this notice?

You are receiving this notice because your property is near one of the possible routes for a proposed electric transmission line. You can find maps of the proposed routes on the website of the company that applied to build the line.

### What does the Public Utility Commission of Texas (PUCT) do?

The PUCT is the Texas state agency that decides if a transmission line is needed and what route the line will follow. The PUCT does not build or operate electric transmission lines.

### What are transmission lines and why do we need them?

Electric transmission lines carry electricity long distances across the state. They bring electricity from power plants to cities and neighborhoods where they link to smaller wires called distribution-level wires, that carry electricity to individual customers' homes and businesses. New electric transmission lines are needed where there is growth in electricity demand or where existing transmission lines are at full capacity.

## Public Participation in the Transmission Line Siting Process

### How can I participate?

**Depending on the level of participation you choose, you can either be a protestor or an intervenor.**

- **Protestors** – If you have concerns about the transmission line, you can send us written comments about the proposed routes. These comments are filed in the public record and are available to anyone who is interested in the application. Comments help inform the PUCT Commissioners and staff of the public concerns.
- **Intervenors** – Intervening makes you an official participant in the legal case where the transmission line and the route are debated in front of a judge and the PUC Commissioners. You will be allowed to present evidence in the case and can cross-examine witnesses. You can testify in the case and may also be cross-examined by the other parties in the case. Intervenors must follow along with the process of the case, respond to requests from the Administrative Law Judge (ALJ) and other parties, and actively participate in the case. Otherwise, they may lose their status as an intervenor. Intervenors are not required to have an attorney.

## **Why should I participate?**

If you have any concerns about the proposed routes, the PUCT encourages you to participate in the siting process. As a landowner, you have detailed knowledge of the impacted area that might not be reflected in the application. Sharing your knowledge with the PUCT allows us to make better-informed decisions about the route of the line.

## **How can I follow the process?**

All the documents related to a case are filed in the PUCT public document interchange. You can search for the case by name or by the five-digit docket number. You can also sign up to receive a notification every time a new document is added related to the case. The interchange is at <https://interchange.puc.texas.gov/>

## **What is the process?**

After the company applies to build a new transmission line to the PUCT, technical staff reviews the application. The PUCT sends the application to the State Office of Administrative Hearings (SOAH) when an intervenor or technical staff requests a hearing. A SOAH judge will schedule a prehearing conference to address procedural matters, including setting a procedural schedule for the case. The procedural schedule will set a hearing date, deadlines to request information from other participants and deadlines to file written testimony prior to the hearing. SOAH conferences and hearings can be held by video conference with a call-in option. All participants in the case must attend the hearing to have their written testimony entered into evidence. After the hearing, the SOAH judge will give the PUCT a recommendation about the route.

The PUCT Commissioners are not bound by this recommendation in selecting a route for the transmission line. The PUCT Commissioners will issue a final decision at a public meeting, which the people participating in the case can attend and request to make a statement. The PUCT Commissioners can and sometimes do make alterations to the route in response to statements from landowners. The company building the transmission line will then negotiate with landowners for the easements on their property. PUCT Commissioners meet in public meetings broadcast online.

During the time the case is going through the hearing process, participants in the case also negotiate to find a route that satisfies everyone. The PUCT Commissioners are not required to approve a negotiated route.

The entire process can take up to six months.

## **Where do I go for more information?**

The company that has applied to build the line will have maps on their website. For more information about how to participate in the process please contact the PUCT Office of Public Engagement <https://www.puc.texas.gov/agency/about/ope/> or 512-936-7374.

## Comments in Docket No. \_\_\_\_\_

**If you want to be a PROTESTOR only, please complete this form.** Although public comments are not treated as evidence, they help inform the PUC and its staff of the public concerns and identify issues to be explored. The PUC welcomes such participation in its proceedings.

For USPS, send one copy to:

Public Utility Commission of Texas  
Central Records  
P.O. Box 13326  
Austin, TX 78711-3326

For all other delivery or courier services, send one copy to:

Public Utility Commission of Texas  
Central Records  
1701 N. Congress Ave.  
Austin, TX 78701

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Address, City, State: \_\_\_\_\_

**I am NOT requesting to intervene in this proceeding. As a PROTESTOR, I understand the following:**

- I am NOT a party to this case;
- My comments are not considered evidence in this case; and
- I have no further obligation to participate in the proceeding.

**Please check one of the following:**

- ☐ I own property with a habitable structure located near one or more of the utility's proposed routes for a transmission line.
- ☐ One or more of the utility's proposed routes would cross my property.
- ☐ Other. Please describe and provide comments. You may attach a separate page, if necessary. \_\_\_\_\_

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**Signature of person submitting comments:**

\_\_\_\_\_ Date: \_\_\_\_\_

## Request to Intervene in PUC Docket No.

The following information must be submitted by the person requesting to intervene in this proceeding. This completed form will be provided to all parties in this docket. **If you DO NOT want to be an intervenor, but still want to file comments, please complete the "Comments" page.**

For USPS, send one copy to:

Public Utility Commission of Texas  
Central Records  
P.O. Box 13326  
Austin, TX 78711-3326

For all other delivery or courier services, send one copy to:

Public Utility Commission of Texas  
Central Records  
1701 N. Congress Ave.  
Austin, TX 78701

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Address, City, State: \_\_\_\_\_

Email Address: \_\_\_\_\_

**I am requesting to intervene in this proceeding. As an INTERVENOR, I understand the following:**

- I am a party to the case;
- I am required to respond to all discovery requests from other parties in the case;
- If I file testimony, I may be cross-examined in the hearing;
- If I file any documents in the case, I will have to provide a copy of that document to every other party in the case; and
- I acknowledge that I am bound by the Procedural Rules of the Public Utility Commission of Texas (PUC) and the State Office of Administrative Hearings (SOAH).

**Please check one of the following:**

- ☐ I own property with a habitable structure located near one or more of the utility's proposed routes for a transmission line.
- ☐ One or more of the utility's proposed routes would cross my property.
- ☐ Other. Please describe and provide comments. You may attach a separate page, if necessary.

**Signature of person requesting intervention:**

\_\_\_\_\_ Date: \_\_\_\_\_

**List of Directly Affected Landowners Receiving Notice**

<b>Map ID(s)</b>	<b>Landowner Name</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>
1	STEPHANIE M. POPE TRUST, STEPHANIE M. POPE OR HER SUCCESSOR AS TRUSTEE, UNDER TRUST AGREEMENT DATED SEPTEMBER 2, 2004, AS AMENDED	1192 Cypress Point Way	Virginia Beach	VA	23455
1	WALTER ALAN POPE	201 Nelson Ferry Road	Decatur	GA	30030
2	RICKY JOHNSON AND JILLIAN JOHNSON	1281 Braune Road	Abilene	TX	79603
3	TPG RANCHES, LLC	208 Hewitt Drive, Suite 103, #342	Waco	TX	76712
4	BOBBY J. WADDELL AKA BOBBY JOE WADDELL, SR AND DEBORAH A. WADDELL AKA DEBBIE A. WADDELL	6957 CR 443	Anson	TX	79501
5	BOBBY J. WADDELL, JR. AKA BOBBY JOE WADDELL, JR. AND JOLENA WADDELL	710 CR 513	Stephenville	TX	76401



August 11, 2025

<Name>

Title

Utility Provider Name

<Address>

<City, State, Zip Code>

**RE: PUC Docket No. 58405; *Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County***

Dear [Contact Name],

Lone Star Transmission, LLC ("Lone Star") gives notice of its intent to amend its Certificate of Convenience and Necessity (CCN) to construct a proposed 345-kilovolt (kV) single-circuit transmission line in Hill County. Lone Star has filed its application to amend its CCN with the Public Utility Commission of Texas ("Commission" or "PUC") in Docket No. 58405 – *Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County*.

Lone Star is filing a single routing option (Consensus Route) for this project that is approximately 4.55 miles in length. The estimated cost of the transmission line is approximately \$15.85 million with approximately \$16.95 million in additional station interconnection costs. The project will be constructed using primarily concrete monopole structures.

A map illustrating Lone Star's proposed Consensus Route is enclosed for your review. Also enclosed is a written description of the Consensus Route that has been filed with the Commission in the Lone Star CCN application.

If you have questions about this transmission line project or Lone Star's CCN application, you may contact Lone Star's representative, Tracy Wiczorek at (512) 236-3151 (office) or (512) 517-8798 (mobile).

Persons who wish to intervene in the proceeding or comment upon the action must submit a request to intervene to the PUC. The deadline for intervention in the proceeding is September 10, 2025, and a letter requesting intervention should be received by the PUC by that date.

The preferred method for you to file your request for intervention is electronically, and you will be required to serve the request on other parties by email. Therefore, please include your own email address on the intervention form. Instructions for electronic filing via the "PUC Filer" on

the Commission's website can be found here: <https://interchange.puc.texas.gov/filer>. Instructions for using the PUC Filer are available at [https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing\\_Instructions.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing_Instructions.pdf). Once you obtain a tracking sheet associated with your filing from the PUC Filer, you may email the tracking sheet and the document you wish to file to: [centralrecords@puc.texas.gov](mailto:centralrecords@puc.texas.gov). For assistance with your electronic filing, please contact the Commission's Help Desk at (512) 936-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>.

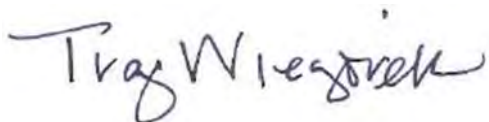
If you are unable to file your request for intervention electronically, you may file your request for intervention by mailing a hard copy of your request to the PUC. The PUC should receive your request to intervene by the intervention date (September 10, 2025). Mail the request for intervention (along with 10 copies of the request) to the following address:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, Texas 78711-3326

**All routes and routing links included in this notice are available for selection and approval by the Public Utility Commission of Texas.**

The Commission has developed a brochure titled "Guide for Landowners Affected by a New Electric Transmission Line Route". Copies of the brochure are available from Lone Star by calling Tracy Wieczorek or may be downloaded from the PUC's website at [https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide\\_for\\_Landowners\\_Affected\\_by\\_a\\_New\\_Electric\\_Transmission\\_Line\\_Route.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide_for_Landowners_Affected_by_a_New_Electric_Transmission_Line_Route.pdf). To obtain additional information about this case, contact the PUC at (512) 936-7120 or toll free at (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC at (512) 936-7136 or toll free at (800) 735-2989.

Sincerely,



Tracy Wieczorek  
Director, Land Strategy and Community Relations  
Lone Star Transmission, LLC  
Office: (512) 236-3151  
Mobile: (512) 517-8798  
Email: [Tracy.Wieczorek@Lonestar-Transmission.com](mailto:Tracy.Wieczorek@Lonestar-Transmission.com)

Enclosures:

- Map of Consensus Route
- Consensus Route Description

**List of Utilities Receiving Notice of Application**

**Big Country Electric Cooperative, Inc.**

Mark McClain  
CEO/General Manager  
Big County Electric Cooperative, Inc.  
P.O. Box 518  
Roby, Texas 79543



August 11, 2025

<Office Holder Name, County/City or DoD or OPUC>

<Address>

<City, State, Zip>

**RE: PUC Docket No. 58405; *Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County, Texas***

Dear Sir or Madam:

Lone Star Transmission, LLC (Lone Star) gives notice of its intent to amend its Certificate of Convenience and Necessity (CCN) to construct a proposed single-circuit 345-kV transmission line in Jones County, Texas. Lone Star has filed its application to amend its CCN with the Public Utility Commission of Texas (Commission or PUC) in Docket No. 58405 – *Application of Lone Star Transmission, LLC to Amend its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County, Texas*.

Lone Star is filing a single routing option (Consensus Route) for this project. The new transmission line will be constructed between Lone Star's Phantom Hill Station, located northwest of the County Road (CR) 185 and CR 186 intersection, and the Tiger Solar Point of Interconnection (POI), located approximately 2.26 miles north of the CR 195 and U.S. Highway 277 intersection. The proposed Consensus Route is approximately 4.55 miles in length. The estimated cost of the transmission line is approximately \$15.85 million, and the estimated cost of station improvements at the Phantom Hill Station is approximately \$16.95 million. The project will be constructed using primarily concrete and steel monopole structures.

A map illustrating Lone Star's proposed Consensus Route is enclosed for your review. Also enclosed is a written description of the Consensus Route that has been filed with the Commission in the Lone Star CCN application. A detailed routing map may be downloaded from Lone Star's website at <https://www.lonestartransmission.com/regulatory/phantom-hill-to-tiger-solar.html>.

**Addressee First Name Last Name**

August 11, 2025

Page 2

If you have questions about this transmission line project or Lone Star's CCN application, you may contact Lone Star's representative, Tracy Wieczorek at (512) 236-3151 (office) or (512) 517-8798 (mobile).

If you decide to file a request for intervention, you will be required to serve the request on other parties by email. Therefore, please include your own email address on the intervention form. Instructions for electronic filing via the "PUC Filer" on the Commission's website can be found here: <https://interchange.puc.texas.gov/filer>. Instructions for using the PUC Filer are available at [https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing\\_Instructions.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing_Instructions.pdf). For assistance with your electronic filing, please contact the Commission's Help Desk at (512) 936-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>. The deadline to intervene is September 10, 2025.

If you are unable to file your request for intervention electronically, you may file your request for intervention by mailing a hard copy of your request to the PUC. The PUC should receive your request to intervene by the intervention date of September 10, 2025. Mail the request for intervention to the following address:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Avenue  
P.O. Box 13326  
Austin, Texas 78711-3326

**All routes and route segments included in this notice are available for selection and approval by the Public Utility Commission of Texas.**

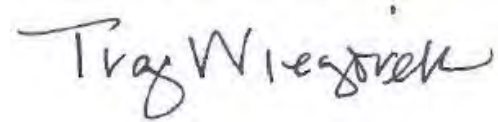
The Commission has developed a brochure titled "Guide for Landowners Affected by a New Electric Transmission Line Route". Copies of the brochure are available from Lone Star by calling Tracy Wieczorek or may be downloaded from the PUC's website at [https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide\\_for\\_Landowners\\_Affected\\_by\\_a\\_New\\_Electric\\_Transmission\\_Line\\_Route.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide_for_Landowners_Affected_by_a_New_Electric_Transmission_Line_Route.pdf). To obtain additional information about this case, contact the PUC at (512) 936-7120 or toll free at (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC's Customer Assistance Hotline at (512) 936-7136 or toll free at (800) 735-2989.

**Addressee First Name Last Name**

August 11, 2025

Page 3

Sincerely,

A handwritten signature in black ink that reads "Tracy Wieczorek". The signature is written in a cursive, slightly slanted style.

Tracy Wieczorek  
Director, Land Strategy and Community Relations  
Lone Star Transmission, LLC  
Office: (512) 236-3151  
Mobile: (512) 517-8798  
Email: [Tracy.Wieczorek@lonestar-transmission.com](mailto:Tracy.Wieczorek@lonestar-transmission.com)

Enclosures:

- Map of Consensus Route
- Consensus Route Description
- Comment/Protest Form
- Intervenor Form

**List of Public Officials Receiving Notice of Application**

**Jones County**

The Honorable Dale Spurgin  
Jones County Judge  
P.O. Box 148  
Anson, Texas 79501

Roy Spalding  
Jones County Precinct 1 Commissioner  
1001 Northwest Third Street  
Hamlin, Texas 79520

Lonnie Vivian  
Jones County Precinct 2 Commissioner  
1202 S. Orient Street  
Stamford, Texas 79553

Danny Collett  
Jones County Precinct 3 Commissioner  
P.O. Box 148  
Anson, Texas 79501

Joel Spraberry  
Jones County Precinct 4 Commissioner  
P.O. Box 148  
Anson, Texas 79501

**Office of Public Utility Counsel**

Benjamin Barkley  
Chief Executive and Public Counsel  
Office of Public Utility Counsel  
P.O. Box 12397  
Austin, Texas 78711-2397

**Department of Defense Siting Clearinghouse**

Department of Defense  
Military Aviation and Installation Assurance  
Siting Clearinghouse  
3400 Defense Pentagon  
Room 5C646  
Washington, D.C. 20301-3400  
[osd.dod-siting-clearinghouse@mail.mil](mailto:osd.dod-siting-clearinghouse@mail.mil)

## **PUBLIC NOTICE**

### **Application of Lone Star Transmission, LLC to Amend its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County, Texas**

#### **PUBLIC UTILITY COMMISSION OF TEXAS (PUC) DOCKET NO. 58405**

Lone Star Transmission, LLC (Lone Star) gives notice of its intent to amend its Certificate of Convenience and Necessity (CCN) to construct a proposed 345-kV single-circuit transmission line in Jones County, Texas. Lone Star has filed its application to amend its CCN with the Public Utility Commission of Texas (Commission or PUC) in Docket No. 58405 – *Application of Lone Star Transmission, LLC to Amend its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County, Texas*.

Lone Star is filing a single routing option (Consensus Route) for this project that is approximately 4.55 miles in length. The estimated cost of the transmission line is approximately \$15.85 million, and the estimated cost of station improvements at the Phantom Hill Station is approximately \$16.95 million.

The new transmission line will be constructed between Lone Star's Phantom Hill Station, located northwest of the County Road (CR) 185 and CR 186 intersection, and the Tiger Solar Point of Interconnection (POI), located approximately 2.26 miles north of the CR 195 and U.S. Highway 277 intersection. The project will be constructed using primarily concrete and steel monopole structures.

#### **All routes and route segments included in this notice are available for selection and approval by the Public Utility Commission of Texas.**

Persons who are affected by the transmission line and wish to intervene in the docket or comment on the applicant's application should submit a request for intervention or comments to the PUC. The preferred method for you to file your request for intervention or comments is electronically, and you will be required to serve the request on other parties by email. Therefore, please include your own email address on the intervention form. Instructions for electronic filing via the "PUC Filer" on the Commission's website can be found here: <https://interchange.puc.texas.gov/filer>. Instructions for using the PUC Filer are available at: [https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing\\_Instructions.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/filings/E-Filing_Instructions.pdf). For assistance with your electronic filing, please contact the Commission's Help Desk at (512) 936-7100 or [helpdesk@puc.texas.gov](mailto:helpdesk@puc.texas.gov). You can review materials filed in this docket on the PUC Interchange at: <http://interchange.puc.texas.gov/>.

If you are unable to file your request for intervention electronically, you may file your request for intervention by mailing a hard copy of your request to the PUC. Mail the request for intervention to the following address:

Public Utility Commission of Texas  
Central Records  
Attn: Filing Clerk  
1701 N. Congress Ave.  
P.O. Box 13326  
Austin, Texas 78711-3326

The deadline for intervention in the docket is September 10, 2025, and the PUC should receive a letter from anyone requesting intervention by that date.

Persons who wish to intervene in the docket must also mail a copy of their request for intervention to all parties in the docket and all persons that have pending motions to intervene, at or before the time the request for intervention is mailed to the PUC. In addition to the intervention deadline, other important deadlines may already exist that affect your participation in this docket. You should review the orders and other filings already made in the docket.

*The only way to fully participate in the PUC's decision on where to locate the transmission line is to intervene in the docket. It is important for an affected person to intervene because the utility is not obligated to keep affected persons informed of the PUC's proceedings and cannot predict which route may or may not be approved by the PUC.*

The PUC has developed a brochure titled "Guide for Landowners Affected by a New Electric Transmission Line Route". Copies of the brochure are available from Lone Star by calling Tracy Wieczorek or may be downloaded from the PUC's website at [https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide\\_for\\_Landowners\\_Affected\\_by\\_a\\_New\\_Electric\\_Transmission\\_Line\\_Route.pdf](https://ftp.puc.texas.gov/public/puct-info/industry/electric/forms/ccn/Guide_for_Landowners_Affected_by_a_New_Electric_Transmission_Line_Route.pdf). The brochure includes sample forms for making comments and for making a request to intervene as a party in this docket. In addition to the contacts listed in the brochure, you may call the PUC at (512) 936-7120 or toll free at (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the PUC at (512) 936-7136 or toll free at (800) 735-2989.

A detailed routing map may be downloaded from Lone Star's website at <https://www.lonestartransmission.com/regulatory/phantom-hill-to-tiger-solar.html>.

If you have questions about the transmission line, you may contact Lone Star representative Tracy Wieczorek at (512) 236-3151 (office) or (512) 517-8798 (mobile).

### **Consensus Route Description**

For this project, only a Consensus Route is filed in Lone Star's CCN. The following narrative, along with the map in this notice shows the route and provides a detailed description of the route.

The Consensus Route (Route) originates on the north side of Lone Star Transmission, LLC's (Lone Star) existing Phantom Hill Station, located along Lone Star's existing Claytonville to West Shackleford 345-kV transmission line and northwest of the County Road (CR) 185 and CR 186 intersection in northcentral Jones County, Texas. The Route extends to the north approximately 205 feet and turns east. Here it extends east approximately 390 feet, crossing CR

185, turns to the south and extends, while parallelling the east side of CR 185, approximately 775 feet to the north side of an existing transmission line. Here it turns to the east and extends, parallelling the north side of an existing transmission line, approximately 11,517 feet, crossing CR 191, Redmud Creek, and CR 195. Here the Route angles to the north and extends approximately 5,455 feet, crossing Redmud Creek, then turns west and continues approximately 645 feet before turning to the north. From this point the Route parallels the east side of CR 195, extending north approximately 3,260 feet, then turns slightly northeast. Here it continues 1,819 feet and connects to the proposed Tiger Solar Point of Interconnection, located south of and directly adjacent to the Tiger Solar Substation, located on the east side of CR 195, approximately 2 miles north of Lone Star's existing Claytonville to West Shackleford 345-kV transmission line or approximately 2.26 miles north of the CR 195 and US Highway 277 intersection in northwestern Jones County, Texas.

**Newspaper Publication List**

Notice of the CCN Application will be published in the following newspaper of general circulation in Jones County:

**Jones County**

**The Western Observer**

1120 W. Court Plaza

Anson, TX 79501

<https://www.ansonobserver.com/>



August 11, 2025

Mr. Alan Cain  
Director of Wildlife  
Wildlife Division  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, Texas 78744

**RE: PUC Docket No. 58405; *Application of Lone Star Transmission, LLC to Amend Its Certificate of Convenience and Necessity for the Phantom Hill Station to Tiger Solar 345-kV Transmission Line in Jones County***

Dear Mr. Cain:

Lone Star Transmission, LLC (Lone Star) gives notice that it has filed an application with the Public Utility Commission of Texas (PUC) to amend its Certificate of Convenience and Necessity (CCN) in the above-referenced docket. The new transmission line will be constructed between Lone Star's Phantom Hill Station, located northwest of the County Road (CR) 185 and CR 186 intersection, and the Tiger Solar Point of Interconnection (POI), located approximately 2.26 miles north of the CR 195 and U.S. Highway 277 intersection in Jones County.

In accordance with the requirements of 16 Texas Administrative Code (TAC) § 22.52 and the PUC's CCN Application form, I have enclosed a copy of Lone Star's Application and its *Environmental Assessment for the Proposed Phantom Hill Station to Tiger Solar 345-kV Transmission Line Project*, which was prepared by Burns & McDonnell Engineering Company, Inc. and is Attachment 1 to Lone Star's CCN Application.

If you have questions about this project or Lone Star's CCN Application or Environmental Assessment, you may contact me at (512) 236-3151 (office) or (512) 517-8798 (mobile).

Sincerely,

A handwritten signature in black ink that reads "Tracy Wieczorek". The signature is written in a cursive, flowing style.

Tracy Wieczorek  
Director, Land Strategy & Community Relations  
Lone Star Transmission, LLC  
Office: (512) 236-3151  
Mobile: (512) 517-8798  
Email: [tracy.wieczorek@lonestar-transmission.com](mailto:tracy.wieczorek@lonestar-transmission.com)

Enclosures:

- Lone Star's Environmental Assessment

**AFFIDAVIT**

**STATE OF TEXAS**

**COUNTY OF TRAVIS**

I, Robert Orr, being duly sworn, file this application as Director, Regulatory Affairs for Lone Star Transmission, LLC (Lone Star), that, in such capacity, I am qualified and authorized on behalf of Lone Star to file and verify such application, am personally familiar with the maps and attachments filed with this application, and have complied with all the requirements contained in the application; and that all statements made and matters set forth therein and all attachments thereto are true and correct. I further state that the application is made in good faith and that this application does not duplicate any filing presently before the Public Utility Commission of Texas.

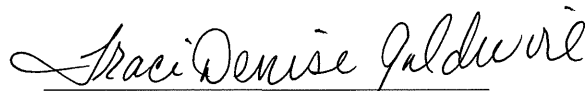


Robert Orr  
Director, Regulatory Affairs  
Lone Star Transmission, LLC

SUBSCRIBED AND SWORN TO BEFORE ME,

a Notary Public in and for the State of Texas, this

the 1<sup>st</sup> day of August, 2025.



Notary Public State of Texas

My Commission Expires: August 23<sup>rd</sup>, 2027

