3.2.4 Communication Towers

Review of the Federal Communication Commission (FCC) database indicated that there are no amplitude modulation radio (AM radio) transmitters within the study area. There are no frequency modulation radio (FM radio) transmitters/microwave towers/other electronic installations identified within the study area. There are two additional FM radio transmitters/microwave towers/other electronic installations within 2,000 feet of the study area boundary (FCC 2022).

3.2.5 Utility Features

Utility features reviewed include existing electrical transmission lines, distribution lines, pipelines, water and gas/oil wells, and water and gas/oil storage tanks. Data sources used to identify existing electrical transmission and distribution lines include utility company and regional system maps, aerial imagery, USGS topographic maps, additional available planning documents, and field reconnaissance surveys. Existing transmission lines identified within the study area include three 345-kV transmission lines and six 138-kV transmission lines. Distribution lines are prevalent throughout the developed portions of the study area; however, these features were not mapped or inventoried.

Data was obtained from the RRC (RRC 2022c) which provided a GIS layer for existing oil and gas wells, pipelines, and supporting facilities. The 2022 RRC dataset along with aerial photograph interpretation and field reconnaissance were used to identify and map existing oil and gas related facilities. Four pipelines and one oil and gas well were identified within the study area (RRC 2022c).

Water wells within the study area are primarily located in the southern portion of the study area (TWDB 2022b).

3.2.6 Socioeconomics

This section presents a summary of economic and demographic characteristics for the county and describes the socioeconomic environment of the study area. Literature sources reviewed include publications of the United States Census Bureau (USCB), and the Texas State Data Center (TXSDC).

Population Trends

Bexar County experienced a population increase between 2010 and 2020 of 15 percent. By comparison, population at the state level increased by nearly 14 percent during the 2010s (USCB 2022).
According to TXSDC projections, Bexar County is projected to experience population growth of 69 percent during the next 30 years, from 2020 to 2050. By comparison, the population of Texas is expected to experience population increase of 65 percent over the next three decades (TXSDC 2018). Table 3-7 presents the past population trends and projections for the study area county and for the state of Texas.

TABLE 3-7 POPULATION TRENDS

	PAST		PROJECTED		
STATE/COUNTY	2010	2020	2030	2040	2050
Texas	25,145,561	28,635,442	34,894,452	40,686,496	47,342,105
Bexar County	1,714,773	1,978,826	2,502,617	2,914,615	3,353,060

Sources: USCB 2010 and 2022; TXSDC 2018.

Employment

From 2010 to 2020, the civilian labor force (CLF) in the study area county increased by 23 percent (186,014 people). By comparison, the CLF at the state level grew by 19 percent (2,251,395 people) over the same time period (USCB 2022). Table 3-8 presents the CLF for the study area county and the state of Texas for the years 2010 and 2022.

Between 2010 and 2020, Bexar County experienced a decrease in its unemployment rate from 6.9 percent in 2010, to 5.7 percent in 2020. By comparison, the state of Texas also experienced a decrease in the unemployment rate over the same period. The state's unemployment rate decreased from 7.0 percent in 2010, to 5.3 percent in 2020 (USCB 2022). Table 3-8 presents the employment and unemployment data for the study area county and the state of Texas for the years 2010 and 2020.

TABLE 3-8 CIVILIAN LABOR FORCE AND EMPLOYMENT

STATE/COUNTY	2010	2020
Texas		
Civilian Labor Force	11,962,847	14,214,242
Employment	11,125,616	13,461,358
Unemployment	837,231	752,884
Unemployment Rate	7.0%	5.3%
Bexar County		
Civilian Labor Force	793,358	979,372
Employment	738,564	923,138
Unemployment	54,794	56,234
Unemployment Rate	6.9%	5.7%

Source: USCB 2000 and 2017.

Leading Economic Sectors

The major occupations in Bexar County in 2020 are listed under the category of management, business, science, and arts occupations, followed by sales and office occupations (USCB 2022). Table 3-9 presents the number of persons employed in each occupation category during 2020 in the study area county.

TABLE 3-9 OCCUPATIONS IN THE COUNTY OF THE STUDY AREA

OCCUPATION	BEXAR COUNTY
Management, business, science, and arts occupations	330,424
Service occupations	180,874
Sales and office occupations	220,104
Natural resources, construction, and maintenance occupations	87,701
Production, transportation, and material moving occupations	104,035

Source: USCB 2022.

In 2010 and 2020, the industry group employing the most people in Bexar County was educational services, and health care and social assistance (USCB 2022). Table 3-10 presents the number of persons employed in each of the industries in the study area county for the years 2010 and 2020.

TABLE 3-10 INDUSTRY IN THE COUNTY OF THE STUDY AREA

INDUSTRY GROUP	BEXAR COUNTY	
	2010	2020
Agriculture, forestry, fishing and hunting, and mining	4,864	9,356
Construction	60,387	74,506
Manufacturing	44,307	48,653
Wholesale trade	21,801	20,637
Retail trade	87,948	109,719
Transportation and warehousing, and utilities	35,297	44,786
Information	18,424	15,173
Finance and insurance, and real estate and rental and leasing	71,493	82,834
Professional, scientific and management, and administrative and waste management services	79,856	109,639
Educational services, and health care and social assistance	163,102	213,312
Arts, entertainment, and recreation, and accommodation and food services	73,044	108,124
Other services, except public administration	37,264	44,988
Public administration	40,777	41,411

Source: USCB 2022.

3.2.7 Community Values

The term "community values" is included as a factor for the consideration of transmission line route approval under PURA 37.056(c)(4)(A-D); however, the term has not been defined by the PUC. The PUC CCN application requires information concerning the following items related to community values:

- Public open-house meeting if applicable.
- Approval or permits required from other governmental agencies.
- Brief description of the area traversed.

- Habitable structures within 300 feet of the centerline for transmission lines of 230 kV or less.
- AM and FM radio, microwave, and other electronic installations in the area.
- FAA-registered public use airstrips, private airstrips, and heliports located in the area.
- Irrigated pasture or croplands utilizing center-pivot or other traveling irrigation systems.
- Parks and recreation areas.
- Historical and archeological sites.

In addition, POWER also evaluated the Project for community values and resources that might not be specifically listed by the PUC, but that might be of importance to a particular community as a whole. Although the term "community values" is not formally defined in PUC rules, in several dockets the PUC and Staff have used the following as a working definition: the term "community values" is defined as *a shared appreciation of an area or other natural resource by a national, regional, or local community*. Examples of a community resource would be a park or recreational area, historical or archeological site, or a scenic vista (aesthetics). POWER mailed consultation letters to various local elected and appointed officials to identify and collect information regarding community values and community resources.

3.3 Recreational and Park Areas

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

3.3.1 National/State/County/Local Parks

No national or state parks were identified within the study area (National Parks Service [NPS] 2022a; TPWD 2022c). No county or local parks were identified within the study area (City of San Antonio 2022d). Additional recreational activities such as hunting and fishing might occur on private properties throughout the study area but are not considered to be open to the general public.

3.3.2 Wildlife Viewing Trails

Review of the TPWD *Great Texas Wildlife Trails Heart of Texas East* indicates that there is one wildlife viewing loop, Mission Loop, within the study area. There are no sites of interest located within the study area (TPWD 2022d).

3.4 Aesthetic Values

PURA § 37.056(c)(4)(C) incorporates aesthetics as a consideration when evaluating proposed electric transmission facilities. There are currently no formal guidelines provided for managing visual resources on private, state, or county owned lands. For the purposes of this study, the term aesthetics is defined by POWER to accommodate the subjective perception of natural beauty in a landscape and measure an area's scenic qualities. The visual analysis was conducted by describing the regional setting and determining a viewer's sensitivity. Related literature, aerial photograph interpretation, and field reconnaissance surveys were used to describe the regional setting and to determine the landscape character types for the area.

Consideration of the visual environment includes a determination of aesthetic values (where the major potential effect of a project on the resource is considered visual) and recreational values (where the location of a transmission line could potentially affect the scenic enjoyment of the area) that would help define a viewer's sensitivity. POWER considered the following aesthetic criteria that combine to give an area its aesthetic identity:

- Topographical variation (hills, valleys, etc.).
- Prominence of water in the landscape (rivers, lakes, etc.).
- Vegetation variety (woodland, meadows).
- Diversity of scenic elements.
- Degree of human development or alteration.
- Overall uniqueness of the scenic environment compared with the larger region.

The study area is partially wooded, with industrial development concentrated in the southern portion. The predominant land use within the study area is industrial and partially wooded. Portions of the study area have been impacted by land improvements associated with industrial activities from the O.W. Sommer Power Plant, local roadways, and multiple existing transmission lines associated with the O.W. Sommer Power Plant along with other utility corridors and conveyor belts. Overall, the study area viewscape consists of low intensity industrial development.

The study area is located within the Texas Hill Country, which is known to be a scenic area of Texas. However, no known high-quality aesthetic resources, designated views, or designated scenic roads or highways were identified within the study area.

The study area is located within the 28-county Texas Independence Trail Region. There are no sites of interest along the trail within the study area (THC 2022a).

A review of the NPS website did not indicate any Wild and Scenic Rivers, National Monuments, National Memorials, National Historic Sites, National Historic Trails, or National Battlefields within the study area (NWSRS 2022; NPS 2022b and 2022c).

Based on these criteria, the study area exhibits a moderate degree of aesthetic quality for the region. The southern portion of the study area maintains the feel of industrial development with the O.W. Power Plant and associated transmission lines, while the northern portion of the study is partially wooded. Although some portions of the study area might be visually appealing, the aesthetic quality of the study area overall is not distinguishable from that of other adjacent areas within the region.

3.5 Historical (Cultural Resource) Values

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

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

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

Archeological resources are sites where human activity has measurably altered the earth and left deposits of physical remains (e.g., burned rock middens, stone tools, petroglyphs, house foundations, trails, trash scatters). Most archeological sites in Texas are Native American (prehistoric), Euro/African American, or Hispanic in origin. Almost the entire study area has been surveyed for archaeological resources and there are multiple recorded sites inside the study rea. High probability areas (HPAs) for prehistoric and historic archeological resources were determined based on proximity to perennial water sources, certain topographic features, and the presence of structures on historic maps in currently undeveloped areas.

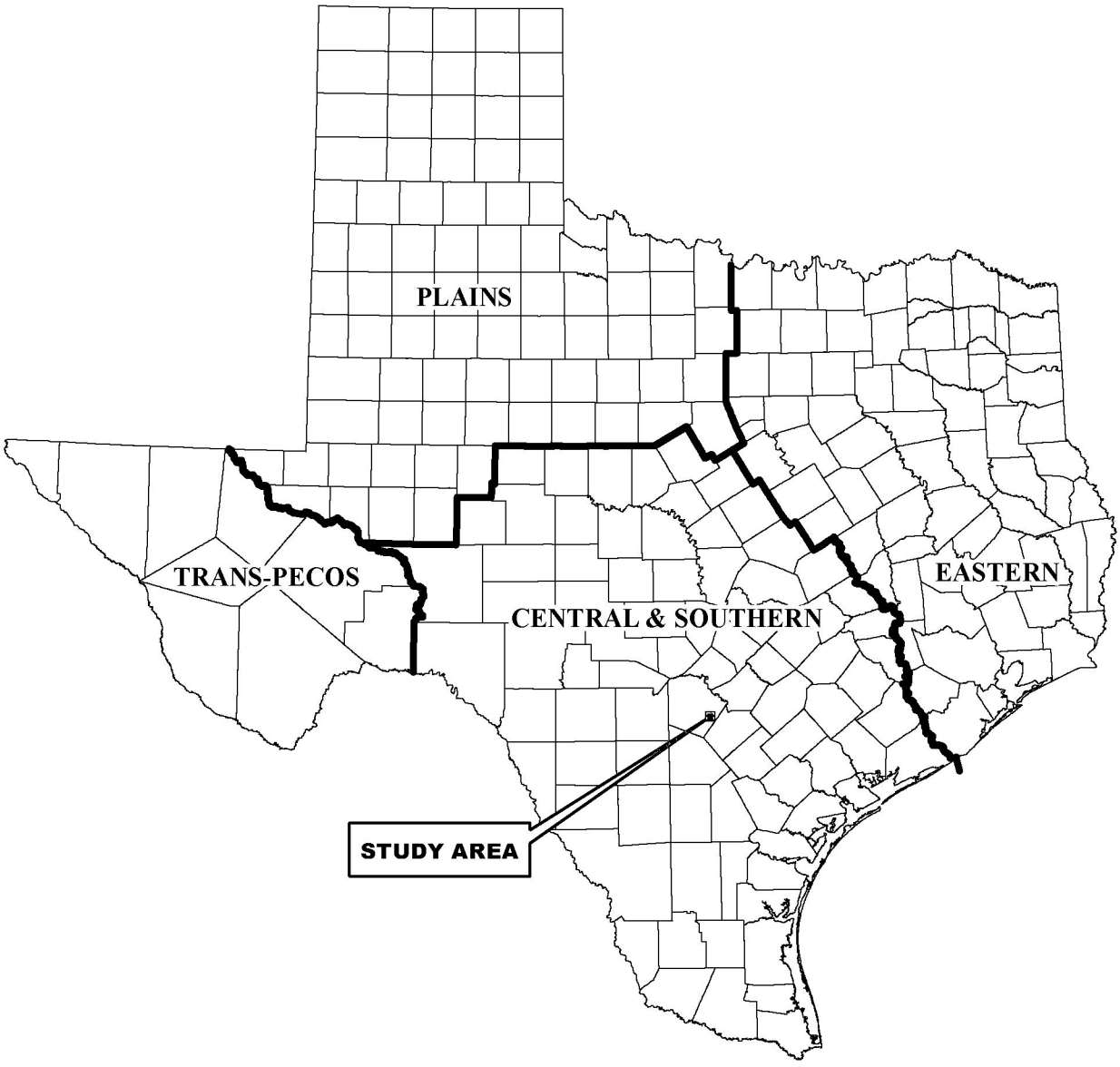
Historical resources include standing buildings or structures (e.g., houses, barns and outbuildings), and may also include dams, canals, bridges, transportation routes, silos, etc., and districts that are non-archeological in nature and generally more than 50 years of age.

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

3.5.1 Cultural Background

Prehistory

The study area is located within the central and southern cultural resource planning region as shown on Figure 3-4 (Mercado-Allinger et al. 1996). Bexar County is near the border between the South Texas and Central Texas archeological regions, and the Central Texas and the Savannah and Prairie archeological regions as mapped by Pertulla (2004). Although the archeological record within and near the study area is likely to reflect influence and shared traits from all three of the archeological regions, the following discussion focuses on the cultural chronology of central Texas, as presented by (Collins 2004).



0 50 100 200
Miles

Source: Mercado - Allinger et. al., 1996

Date: 9/27/2022

Legend

Cultural Resource Planning Region Boundary

County Bounday

TRANSMISSION INTERCONNECT - PADUA GRID BESS PROJECT

Figure 3-4
Location of the Study Area In Relation to the Cultural Resources Planning Regions of Texas

CPS ENERGY

POWER ENGINEERS

The prehistory of the prehistoric occupation of central Texas is most often divided into three broad periods spanning at least the last 11,500 years. These periods include the Paleoindian period, beginning around 11,500 years before present (BP) and lasting approximately 2,700 years. Following the Paleoindian period is the long-lasting Archaic period, which subsumes almost two-thirds of the prehistoric occupation of central Texas from about 8,800 BP until 1,250 BP. The final period before Euroamerican contact is the Late Prehistoric period, which ended with the first Spanish expedition into the region in the late 1600s.

The Paleoindian period in central Texas is divided into the early and late sub-periods. The early Paleoindian period, also called the Clovis cultural horizon, began about 11,500 BP and is the earliest known cultural sequence in the region. Corresponding with the waning years of the Pleistocene era, the early period was characterized by a comparatively cooler, wetter environment. Despite the popular misconception that these early populations were primarily hunters, evidence from the Gault Site in central Texas suggests that their diet was more generalized (Collins 2002). Archeological evidence indicates that these early hunting and gathering populations subsisted on a well-diversified resource base that included not only the last of the mammoth, but also smaller animals, fish, and a variety of reptiles. Site types dating to this period are also varied and include kill, quarry/stone-working, cache, camp, ritual, and burial sites. Artifacts associated with early Paleoindian period sites include large, fluted Clovis spear points, bone and ivory points, and stone bolas. Many of the artifacts were made from exotic stone suggesting a wide-ranging hunting and gathering territory. When the Pleistocene era came to an end around 10,900 BP and the mammoth populations had all but disappeared, prehistoric populations began to focus their hunting efforts on bison, one of the hallmarks of the transition for the early to the late Paleoindian period (Collins 2004).

The late Paleoindian period in central Texas extended from about 10,900 to 8,800 BP. Although the subsistence base now emphasized large game over the more diversified resource base of the early period, small animals, fish, reptiles, and plants remained important food sources. Small groups continued to hunt, gather plants, and obtain raw material for stone tool manufacture over a broad territory. The hallmark Clovis spear points of the early Paleoindian period gave way to the shorter, fluted Folsom points. There was a greater variety of smaller dart points (Collins 2004) including the St. Mary's Hall point, from the St Mary's Hall site (41BX229) and the Brackenridge Park site (41BX1396) in Bexar County (City of San Antonio Office of Historic Preservation [OHP] 2022a).

Archaic Period (8,800 to 1,250 BP)

The Archaic period is subdivided into Early (ca. 8,800 to 6,000 BP), Middle (ca. 6,000 to 4,000 BP), and Late (4,000 to 1,250 BP) sub-periods. The transition from the late Paleoindian period to the Early Archaic is gradual and is generally characterized as a time when broad territorial hunting and gathering became more localized and

artifact assemblages began to show greater diversity than during the late Paleoindian period (Collins 2004). The Brackenridge Park site is considered a transition site having both Paleoindian and Early Archaic tool types. The Higgins site (41BX184) and the Panther Springs site (41BX228), both in Bexar County, also have evidence of early Archaic occupations. Projectile points during this period were much more varied than in the Paleoindian and task-specific tools begin to appear, including Clear Fork tools and Guadalupe bifaces (OHP 2022b). Hallmarks of the Early Archaic include the greater use of groundstone tools and the widespread occurrence of heat-altered rocks, which may have functioned as hearths, ovens, or other features. Although there is a paucity of subsistence data for the Early Archaic in central Texas, there is some evidence that deer, various small animals, fish, and roasted plant bulbs were part of the diet, and bison is absent from the archeological assemblages dating to this sub-period (Collins 2004).

During the early portion of the Middle Archaic, bison hunting is evident in the archeological record. However, by around 5,000 BP, bison are once again absent from the archeological record in central Texas, concomitant with the onset of the driest conditions faced by humans in central Texas (Collins 2004). Near the study area, the Middle Archaic is subdivided further into Clear Fork (early) and Round Rock (late) intervals. In general, projectile points crafted during the Middle Archaic are large and straight-stemmed and sometimes found in large quantities at Middle Archaic sites. This greater density of tools may indicate an increase in population (OHP 2022b). Burned rock middens were prolific in central Texas during this time and in many instances appear to have been used for processing plants adapted to the drier climate such as sotol, a semi-succulent plant used for both food and fiber products (Collins 2004).

The onset of the Late Archaic occurred when central Texas was at its driest, around 4,000 BP. Burned rock middens continued to be a common site type in the earliest years of the sub-period, even increasing in frequency in the eastern region of central Texas. As the desert plants were replaced by plants adapted to a moister climate around 3,500 to 2,500 years ago the number of burned rock middens in east-central Texas decreased but did not entirely disappear. West-central Texas remained dry and burned rock middens continued to be used to process the plant foods at the same intensity as during the Middle Archaic. There is also evidence of increasing population during the Late Archaic (Collins 2004). Cemeteries are commonly found in central Texas during the Late Archaic including several in Bexar County. Burial goods found with the human remains at these cemeteries, such as worked conch shells, indicate regional trade with coastal communities (OHP 2022b).

Late Prehistoric Period (1,250 to 300 BP)

The onset of the Late Prehistoric period has been arbitrarily set by some archaeologists around 1,250 BP but may have started as recently as 800 BP. Little changed in subsistence patterns during the late Prehistoric; the hunting and gathering strategy continued as did the processing of plants in burned rock middens. The most notable shift

from the Late Archaic to the Late Prehistoric was the introduction and subsequent prevalence of arrow points over dart and spear points in the archeological record. There also appears to be an increase in intergroup violence, possibly as a result of increasing population pressure, as evidenced by numerous skeletal remains exhibiting fatal arrow wounds. Pottery and evidence for small-scale agriculture begin to appear in the archeological assemblages dating to the latter part of the late Prehistoric period (Collins 2004).

Shortly before the arrival of Europeans to Central Texas, native groups were living in small band-sized encampments and large, diffuse camps comprised of people with multiple tribal affiliations. Hunting focused on bison, but also included deer and antelope. Group mobility patterns were governed by the seasonal movements of the native animals and availability of resources, and later affected by the newly introduced horse. The presence of Caddoan ceramics at several central Texas sites indicates a long pattern of Hasinai Caddo interaction with groups indigenous to central Texas (Collins 2004).

Historic Period (ca. 500 to 50 BP)

Direct European contact in this region began with exploratory expeditions in the late seventeenth and early eighteenth centuries. The earliest contact came in 1691 when Domingo Terán de los Ríos and Damián Massanet travelled through on an expedition to East Texas (Jasinski 2022). During this expedition, the Spanish explorers encountered an indigenous population that came to be known as Payaya and established the name of San Antonio de Padua for an indigenous village and nearby river. In 1709, another expedition led by Antonio de san Buenaventura y Olivares and Isidro Félix de Espinosa came through the region (Chipman 2022a), after which the area was frequently revisited by exploratory expeditions (Chipman 2022b).

Beginning in 1718 and continuing through the 1720s, Spanish occupation intensified as population increased following the construction of the presidio of San Antonio de Bexar and multiple missions (Handbook of Texas Online 2022). Olivares founded the Mission San Antonio de Valero on May 1st at its original location west of San Pedro Springs. Days later, the presidio of San Antonio de Béxar was founded near the mission by Martín de Alcarón, governor of Coahuila y Texas (Jasinski 2022). Both the presidio and the mission were relocated to their latest locations in 1722 and 1724, respectively, with the presidio on the west bank of the San Antonio River directly across from the mission on the east bank. Additional missions were established as the population of the area steadily rose (Schoelwer 2022).

Development of the area continued to intensify as construction projects grew to support the population and the responsibilities of the newly established government. The San Fernando de Béxar settlement was founded in 1731, the first civil government in Texas. By 1773, San Fernando became the capital of Spanish Texas (de la Teja 2022). San Fernando de Béxar initially consisted of military personnel and civilians including Mexican

frontiersman, resident families, and Native Americans living at the missions. Later, it evolved into a castas, or an organization of social hierarchy based on racial divisions. This society was typical in North American Spanish colonies and consisted of Europeans and European descendants, Native Americans, African descendants, and mixed-race groups (Jasinski 2022).

During the late eighteenth and early nineteenth centuries San Fernando suffered a hostile period. Surrounding Native American communities such as the Apache and Comanche put pressure on communication networks and the surrounding farmland, and there were military upheavals in the city (de la Teja 2022). In 1811, Captain Juan Bautista de las Casas assumed governorship of Texas in what was known as the Casas Revolt. The revolt was short-lived, however, and ended with the incumbent governor, Manuel María de Salcedo re-instated, and the city was recaptured in 1813 (Caldwell 2022). This tumultuous period eventually led to the re-organization of the provinces of Texas and Coahuila into one state governed out of Saltillo (de la Teja 2022). During the initial stages of the Texas Revolution, San Fernando de Béxar was besieged and occupied by rebel forces. By 1837, it had been renamed San Antonio and was county seat of Bexar County (de la Teja 2022).

The impetus for the Texas Revolution began when several Mexican states rebelled against President Antonio Lopez de Santa Anna's reformation that replaced the constitution of 1824 with a new government. Coahuila y Tejas were among the rebelling states, and on February 23, 1836, the Mexican army under Santa Anna retaliated against the Texian rebels by laying siege to San Antonio. The resulting became known as the Battle of the Alamo. This rebellion ultimately ended on April 21, 1836, with the independence of Texas and the subsequent removal of Mexican forces from San Antonio (Barker and Pohl 2022).

Following the war for independence, San Antonio became the seat of Bexar County within the Republic of Texas, hostilities with Comanches persisted, such as the Council House Fight in 1840 (Dickson Schilz 2022), and San Antonio was seized twice by Mexico in 1842 (Jasinski 2022). Hostilities with Mexico only intensified after Texas was annexed by the US in 1845 and the Mexican-American War began in 1846. The US military established a headquarters in San Antonio in 1848 but was forced to surrender it to militia forces in 1861 when Texas seceded from the Union at the outset of the American Civil War (Jasinski 2022).

Southeast of San Antonio, and generally south of the study area, the town of Elmendorf, Texas was established in 1885 and named for the former mayor of San Antonio Henry Elmendorf (Long 2022). Mr. Elmendorf encouraged the building of a brick plant in the area to take advantage of local clay sources. For many years the Star Clay Products brick factory was the largest employer for the town of Elmendorf (Long 2022).

After the Civil War, San Antonio became a prosperous hub supporting multiple industries and growing in population. Cattle trail drives were an integral part of the San Antonio economy, as well as the wool from the nearby hill country. In 1877, the Galveston, Harrisburg, and San Antonio Railway reached San Antonio. A second railroad, the International-Great Northern, reached San Antonio in 1881. The railroads fueled local industries, and five additional railroads connected San Antonio to distant markets by 1900 (Jasinski 2022).

Construction of the dam to form Calaveras Lake began in 1967. Partially filled with treated wastewater and water pumped from the San Antonio River, Calaveras Lake was one of the first projects in the US to use treated wastewater for power plant cooling (TWDB 2022c).

3.5.2 Literature and Records Review

Historical and archeological data for the study area were reviewed online through the TASA (THc2022b) and THSA (THC 2022c). Previously recorded archeological site location data was digitized on June 22, 2022. Previously recorded cultural resource site data available online from the THSA were obtained to identify locations of historical sites, SALs, cemeteries, HTCs, and OTHMs within the study area, as well as previously conducted cultural resource investigations. The TxDOT Historic Resources of Texas Aggregator was reviewed for historic properties and bridges (TxDOT 2022c). The NPS databases and websites pertaining to NRHP, National Historic Trails, and National Historic Landmark properties were also reviewed to locate and define boundaries for historic properties recorded at the national level (NPS 2022). The City of San Antonio Office of Historic Preservation (OHP) Interactive Map of Local Districts and Landmarks database was reviewed for local districts and landmarks (OHP 2022c). The results of the review are summarized in Table 3-11.

TABLE 3-11 RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA

ARCHEOLOGICAL SITES	NRHP-LISTED RESOURCES	NRHP DETERMINED - ELIGIBLE RESOURCE	STATE ANTIQUITIES LANDMARKS	CEMETERIES	OTHM
12	0	3	3	0	0

Source: THC 2022a and 2022b.

Review of the THC and NPS data indicated that no NRHP-listed resources, cemeteries, OTHM, TxDOT historic properties, or TxDOT eligible- or listed bridges are recorded within the study area. A total of 12 previously recorded archeological sites and four previous investigations have been recorded within the study area. Three of the archeological sites are designated State Antiquities Landmarks and have been determined eligible for listing on the NRHP.

The prehistoric archeological sites that have been recorded in the study area appear to be campsites with burned rock and/or lithic scatters in close proximity to streams (e.g., Hondo Creek and Calaveras Lake [formally Calaveras Creek]) or uplands adjacent to these channels (USGS 1953 and 1967). Historic sites include artifact scatters, ranch activity, and activity associated with a historic road. Of the 12 archeological sites recorded in the study area, nine are prehistoric in age, one is historic, and two contain historic and prehistoric components (Table 3-12). All of the sites were originally recorded in 1987 in advance of the Calaveras Lake Generation Expansion Project (Brown and Jones 1988). Three of the sites, 41BX727, 41BX732, and 41BX745, have been determined eligible for listing on the NRHP and are designated SALs. Both 41BX727 and 41BX745 are campsites with burned rock and debitage. Site 41BX732 is a horse ranch complex with a cement slab, barn, silo, cistern, and a scatter of cement, barbed wire, metal, glass, piping, and bricks.

The portions of sites 41BX728 and 41BX740 recorded in 1987 have been determined ineligible for listing on the NRHP (Anderson and Smith 2019). Site 41BX728 is a lithic procurement area. Site 41BX740 is a campsite with burned rock, debitage, and ochre.

The remaining seven sites have not been formally evaluated for inclusion on the NRHP. Of these, prehistoric sites 41BX729, 41BX730, 41BX731, and 41BX733 are campsites containing burned rock, debitage. Site 41BX739 also contained an ochre fragment and a projectile point. Sites 41BX734 and 41BX735 had both prehistoric and historic components. Sites 41BX734 and 41BX735 are multicomponent sites. The prehistoric component of 41BX734 is a lithic scatter with debitage and a core; and the historic component is a scatter of beams, wire, and railroad tie. The prehistoric component of site 41BX735 is a campsite with debitage, biface fragments, and burned rock; this historic component is an historic road, fence, and scatter of ceramics, and milk glass.

TABLE 3-12 RECORDED ARCHEOLOGICAL SITES WITHIN THE STUDY AREA

TRINOMIAL	PERIOD	NRHP STATUS	SITE DESCRIPTION
41BX727	Prehistoric	Eligible/SAL	campsite with debitage and burned rock
41BX728	Prehistoric	Ineligible within ROW	lithic procurement area and campsite with debitage, cores, burned rock, and a scraper
41BX729	Prehistoric	Undetermined	campsite with a core, debitage, and burned rock
41BX730	Prehistoric	Undetermined	campsite with debitage, bifaces, and burned rock
41BX731	Prehistoric	Undetermined	campsite with debitage, biface, and burned rock
41BX732	Historic	Eligible/SAL	horse ranch complex with a cement slab, barn, silo, a cistern and a scatter of cement, barbed wire, metal, glass, piping, and bricks
41BX733	Prehistoric	Undetermined	campsite with debitage and burned rock
41BX734	Prehistoric/Historic	Undetermined	lithic scatter with debitage and a core; historic scatter of box beams, wire, and one railroad tie
41BX735	Prehistoric/Historic	Undetermined	campsite with debitage, biface fragments, and burned rock; historic road with a fence, ceramics, and milk glass

TABLE 3-12 RECORDED ARCHEOLOGICAL SITES WITHIN THE STUDY AREA

TRINOMIAL	PERIOD	NRHP STATUS	SITE DESCRIPTION
41BX739	Prehistoric	Undetermined	campsite with debitage, burned rock, a projectile point, and ochre
41BX740	Prehistoric	Ineligible within ROW	campsite with debitage, tested cobble, core, burned rock, and ochre
41BX745	Prehistoric	Eligible/SAL	campsite with a lithic scatter and burned rock

Source: THC 2022b.

3.5.3 Previous Investigations

According to the TASA (THC 2022b), there have been at least four cultural resource investigations within the study area boundaries (see Table 3-13). Most of the study area was surveyed as part of the Calaveras Lake Generation Expansion project (now known as the (Brown and Jones 1988).

TABLE 3-13 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS WITHIN THE STUDY AREA

AUTHOR	YEAR	REPORT TITLE	INVESTIGATING AGENCY NAME	SITE(S) RECORDED/VISITED
Information unavailable on the TASA	-	Information unavailable on the TASA	-	-
David O Brown and Laura K. Jones	1988	Archaeological Survey, Proposed Calaveras Lake Generation Expansion Project, Bexar County, Texas (Brown and Jones 1988)	Espey, Huston & Associates, Inc., Austin	41BX727, 41BX728, 41BX729, 41BX730, 41BX731, 41BX732, 41BX733, 41BX734, 41BX735, 41BX739, 41BX740, 41BX745
Clay T. Schultz and Bruce Darnell	2008	Phase I Cultural Resources Survey at Calaveras Lake, Bexar County, Texas (Schultz and Darnell 2008)	Raba-Kistner Consultants, Inc., San Antonio	41BX727, 41BX732, 41BX737, 41BX745
Nesta Anderson and Sheldon Smith	2019	Intensive Archaeological Survey of Calaveras Power Station, Bexar County, Texas (Anderson and Smith 2019)	Pape-Dawson Engineers Inc., Austin	41BX728, 41BX740, 41BX745

Source: THC 2022b.

3.5.4 High Probability Areas

Review of the previously recorded cultural resource site data indicates that the study area has not been entirely examined during previous archeological and historical investigations. Consequently, the records review results do not include all possible cultural resource sites within the study area. To further assess and avoid potential impacts to cultural resources, HPAs for prehistoric archeological sites were defined during the route analysis process. HPAs were designated based on a review of the site and survey data within the study area, as well as soils and geologic data, topographic variables, and previously surveyed areas. Within the study area, the prehistoric HPAs

typically occur near and along streams, at the heads of major draws, near springs, and outcroppings of chert gravels suited to stone tool manufacture. Terraces and topographic high points that would provide flats for camping and expansive landscape views as well as access to fresh water sources are also considered to have a high probability of containing prehistoric archeological sites.

Historic age resources are likely to be found near water sources. However, they will also be located in proximity to primary and secondary transportation routes (e.g., trails, roads, and railroads) which provided access to the sites. Buildings and cemeteries are also more likely to be located within or near historic communities.

4.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ROUTES

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

TABLE 4-1 LAND USE AND ENVIRONMENTAL DATA FOR PROPOSED ROUTE EVALUATION

Evaluation Criteria		
Land Use		**Route**
1	Length of proposed route (miles)	1.96
2	Number of habitable structures[1] within 300 feet of ROW centerline	4
3	Length of ROW using existing transmission line ROW	0
4	Length of ROW parallel and adjacent to existing transmission line ROW	1.47
5	Length of ROW parallel and adjacent to other existing ROW (e.g., roadways, highways, utilities, etc.)	0.44
6	Length of ROW parallel and adjacent to apparent property lines[2] or other natural or cultural features	0.00
7	Sum of evaluation criteria 4, 5, and 6	1.91
8	Percent of evaluation criteria 4, 5, and 6	97%
9	Length of ROW across parks/recreational areas[3]	0
10	Number of additional parks/recreational areas[3] within 1,000 feet of ROW centerline	0
11	Length of ROW across cropland	0
12	Length of ROW across pasture/rangeland	0.17
13	Length of ROW across land irrigated by traveling systems (rolling or pivot type)	0
14	Length of route across conservation easements and/or mitigation banks (Special Management Area)	0
15	Length of route across gravel pits, mines, or quarries	0
16	Length of ROW parallel and adjacent to pipelines[4]	0.46
17	Number of pipeline crossings	1
18	Number of transmission line crossings	3
19	Number of IH, US and state highway crossings	0
20	Number of FM or RM road crossings	0
21	Number of FAA registered airports[5] with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0
22	Number of FAA registered airports[5] having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0
23	Number of private airstrips within 10,000 feet of the ROW centerline	0
24	Number of heliports within 5,000 feet of the ROW centerline	1
25	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0
26	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	0
27	Number of identifiable existing water wells within 200 feet of the ROW centerline	0
28	Number of oil and gas wells within 200 feet of the ROW centerline (including dry or plugged wells)	0
Aesthetics		
29	Estimated length of ROW within foreground visual zone[5] of interstate, US and state highways	0

TABLE 4-1 LAND USE AND ENVIRONMENTAL DATA FOR PROPOSED ROUTE EVALUATION

	Evaluation Criteria	
30	Estimated length of ROW within foreground visual zone[5] of FM/RM roads	0
31	Estimated length of ROW within foreground visual zone[5][6] of parks/recreational areas[3]	0
Ecology		
32	Length of ROW across upland woodlands/brushlands	1.58
33	Length of ROW across bottomland/riparian woodlands	0.07
34	Length of ROW across NWI mapped wetlands	0
35	Length of ROW across critical habitat of federally listed threatened or endangered species	0
36	Length of ROW across open water (lakes, ponds)	0
37	Number of stream crossings	2
38	Length of ROW parallel (within 100 feet) to streams	0
39	Length of ROW across Edwards Aquifer Zones	1.96
40	Length of ROW across FEMA mapped 100-year floodplain	0.18
Cultural Resources		
41	Number of cemeteries within 1,000 feet of the ROW centerline	0
42	Number of recorded cultural resource sites crossed by ROW	4
43	Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	4
44	Number of NRHP-listed or determined-eligible properties crossed by ROW	0
45	Number of additional NRHP-listed or determined-eligible properties within 1,000 feet of ROW centerline	3
46	Length of ROW across areas of high archeological site potential	1.30

Notes: All length measurements are shown in miles unless noted otherwise.
[1]Single-family and multi-family dwellings, and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230 kV or less.
[2]Apparent property boundaries created by existing roads, highways, or railroad ROWs are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria.
[3]Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the Project.
[4]Only steel pipelines six inches and greater in diameter carrying petrochemicals were quantified in the pipeline crossing and paralleling calculations.
[5]As listed in the Chart Supplement South Central US (FAA 2022b formerly known as the Airport/Facility Directory South Central US) and FAA 2022a.
[6]One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of interstates, US and state highway criteria are not "double-counted" in the length of ROW within the visual foreground zone of FM roads criteria.
[7]One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone of interstates, US, and state highway criteria and/or with the total length of ROW within the visual foreground zone of FM roads criteria.

4.1 Impacts on Natural Resources/Environmental Integrity

4.1.1 Impacts on Physiography and Geology

Construction of the proposed transmission line is not anticipated to have any significant adverse effects on the physiographic or geologic features and resources of the area. Erection of the pole structures proposed for the Project will require the excavation and/or minor disturbance of small quantities of near-surface materials but should have no measurable impacts on the geologic resources or features along the Proposed Route. No geological hazards were identified within the study area and no geologic hazards are anticipated by the Proposed Route.

4.1.2 Impacts on Soils

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

The highest risk for soil erosion and compaction is associated with the clearing and construction phases of the Project. In accordance with CPS Energy standard construction specifications, woody vegetation will be cleared within the ROW, as necessary to achieve the conductor to ground clearances of the transmission line. Areas with vegetation removed will have the highest potential for soil erosion and the movement of heavy equipment down the cleared ROW creates the greatest potential for soil compaction. Prior to construction, CPS Energy will develop a SWPPP to minimize potential impacts associated with soil erosion, compaction, and off-ROW sedimentation. Implementation of this plan will incorporate temporary and permanent BMPs to minimize soil erosion on the ROW during rainfall events. The SWPPP will also establish the criteria for mitigating soil compaction and re-vegetation to maintain soil stabilization during the construction and post construction phases. The native herbaceous layer of vegetation will be maintained, to the extent practical, during construction. Denuded areas will be seeded and/or further stabilized with the implementation of permanent soil berms or interceptor slopes to stabilize disturbed areas and minimize soil erosion potential. The ROW will be inspected during and post construction to identify potential high erosion areas and that BMPs are implemented and maintained.

The potential for erosion and compaction will be minimized by CPS Energy's development and implementation of a SWPPP for the Project.

4.1.3 Impacts on Surface Water

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

The Proposed Route has two stream crossings (there are no river crossings), does not cross any open water features, and does not parallel (within 100 feet) any streams or rivers. These determinations are based on the NHD and, since the dataset's inception, the hydrology of some stream features may have been altered by construction of drainage ditches, impoundments, and residential areas.

4.1.4 Impacts on Ground Water

The Proposed Route occurs entirely within the Carrizo-Wilcox Aquifer and the EAA Jurisdictional Boundary. Due to the Project's location within the EAA Jurisdictional Boundary, CPS Energy will consult with the EAA to ensure compliance with program requirements. The construction, operation, and maintenance of the Project are not anticipated to adversely affect groundwater resources within the study area.

During construction activities, a potential impact to groundwater resources is related to fuel and/or other chemical spills. Avoidance and minimization measures of potential contamination of water resources will be identified in the SWPPP. CPS Energy will take all necessary precautions to avoid the occurrence of these spills. If an unauthorized discharge occurs during construction, CPS Energy will comply with EAA notification requirements.

The Proposed Route crosses 1.96 miles of the Carrizo-Wilcox Aquifer (see Table 4-1).

4.1.5 Impacts on Floodplains

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

The Proposed Route crosses 0.18 mile of FEMA-mapped floodplain associated with Hondo Creek (see Table 4-1). Prior to construction CPS Energy will coordinate with the county floodplain administrator to acquire any permits.

4.1.6 Impacts on Wetlands

As indicated in Table 4-1, the Proposed Route does not cross any NWI mapped wetlands. One NWI mapped wetland was identified within the study area; in addition, unmapped wetlands still have the potential to occur within the study area. Removal of vegetation in wetlands increases the potential for erosion and sedimentation, which can be detrimental to downstream plant communities and aquatic life. Wetland areas also provide habitat to

a number of species and are often used as migration corridors for wildlife. Mitigation measures with BMPs will be implemented, as appropriate, in identified areas of wetland potential during construction activities to further avoid and minimize impacts to those areas. CPS Energy proposes to implement BMPs as a component of their SWPPP to prevent off-ROW sedimentation and degradation of potential wetland areas. With the use of these avoidance and minimization measures, the Proposed Route is not anticipated to have a significant impact on potential wetlands.

The temporary and/or permanent placement of fill material within jurisdictional waterways and wetlands may require a permit from the USACE under Section 404 of the CWA. If necessary, CPS Energy will coordinate with the USACE – Fort Worth District prior to clearing and construction to ensure compliance with Section 404 of the CWA.

4.1.7 Impacts on Coastal Natural Resources Areas

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

4.1.8 Impacts on Vegetation

Potential impacts to vegetation will result from clearing the ROW of woody vegetation and/or mowing/clearing of herbaceous vegetation. These activities facilitate ROW access for structure construction, line stringing, and future maintenance activities of the proposed transmission line.

Impacts to vegetation will generally be limited to the transmission line ROW. Additional clearing might be necessary in temporary easements outside of the ROW to facilitate the construction of the transmission line. The clearing activities will be completed while minimizing the impacts to existing groundcover vegetation when practical. Future ROW maintenance activities might include periodic mowing and/or herbicide applications to maintain an herbaceous vegetation layer within the ROW.

Clearing trees and shrubs from woodland areas typically generates a degree of habitat fragmentation. The magnitude of anticipated habitat fragmentation was minimized to the extent possible during the routing process by paralleling existing linear features such as roadways. During the route development process, consideration was given to avoid wooded areas and/or to maximize the length of the routes parallel to existing linear features. Vegetation clearing will occur only where necessary to provide access, workspace, and future maintenance access to the ROW.

As indicated in Table 4-1, the Proposed Route crosses 0.07 mile of bottomland/riparian woodlands and 1.58 miles across upland woodlands/brushlands.

4.1.9 Impacts on Wildlife

The primary impacts of construction activities on wildlife species are typically associated with temporary disturbances from construction activities, and with the removal of vegetation (habitat modification). Increased noise and equipment movement during construction might temporarily displace mobile wildlife species from the immediate workspace area. These impacts are considered short-term and normal wildlife movements would be expected to resume after construction is completed. Potential long-term impacts include those resulting from habitat modifications and/or fragmentation. The Proposed Route crosses areas of upland woodlands/brushlands, which can represent the highest degree of habitat fragmentation by converting the area within the ROW to an herbaceous habitat. During the routing process, POWER attempted to minimize potential woodland habitat fragmentation by paralleling existing linear features and avoiding paralleling streams to the extent feasible.

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

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

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

4.1.10 Impacts on Aquatic Resources

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

Construction of the Project is not anticipated to have significant impacts to wildlife and aquatic resources within the study area. Direct impacts would be associated with the loss of woodland/brushland habitat, which is reflected in the vegetation analysis discussed above. Habitat fragmentation was minimized for the Proposed Route within woodland areas by paralleling existing linear features to the extent feasible. While highly mobile animals might temporarily be displaced from habitats near the ROW during the construction phase, normal movement patterns should return after Project construction is complete. Implementation of a SWPPP utilizing BMP will minimize potential impacts to aquatic habitats.

4.1.11 Impacts to Threatened and Endangered Species

In order to determine potential impacts to threatened or endangered species, POWER utilized available information for the species under review. Known occurrence data from TXNDD for the study area and Project scoping comments from TPWD were reviewed. A USFWS IPaC consultation, TPWD county listings, and USFWS designated critical habitat locations were included in the review.

The TXNDD data provides a data record of state-listed, rare, and federally threatened/endangered species and rare vegetation communities that have been documented within a given area. The absence of species within the TXNDD database is not a substitute for a species-specific field survey. Prior to construction, a field survey will be completed of the PUC approved Proposed Route to determine if suitable habitat for threatened and endangered species is present. Additional consultation with USFWS and TPWD might be required if suitable habitat is observed during field surveys.

Plant Species and Sensitive Vegetation Communities

No federally-listed plant species were identified within the study area and construction of the Proposed Route is not anticipated to impact any threatened or endangered plant species.

Threatened and Endangered Animal Species

As indicated in Table 4-1, the Proposed Route does not cross any known USFWS designated critical habitat of federally-listed endangered or threatened species.

Federally-listed and Candidate Species

Potential federally-listed avian species in the study area include the golden-cheeked warbler, piping plover, red knot, and whooping crane. The USFWS only requires consideration of impacts to the piping plover and red knot for wind energy projects within their migratory route; however, for due diligence, they have been included in this impact evaluation. Although these avian species may occur as migrants within the study area, no significant impacts to nesting or foraging habitat is anticipated from the Proposed Route.

The piping plover, red knot, and whooping crane may occur temporarily within the study area as a non-breeding migrant, if potential suitable stopover habitat is available. These species may be susceptible to minor temporary disturbance during construction efforts; however, no impacts from the Proposed Route are anticipated to occur to these species' nesting or foraging habitat. Prior to construction, additional consultation with USFWS might be required to determine appropriate mitigation practices, if any.

The San Marcos salamander and Texas blind salamander are not anticipated to occur within the Study area due to the study area being outside known distributions for both species. CPS Energy plans to span all surface waters and will implement a SWPPP to prevent off-ROW sedimentation and degradation of surface waters. No impacts from the Proposed Route are anticipated for these species.

Karst species listed for Bexar County are not anticipated to occur within the study area due to the lack of suitable karst habitat. The study area is not located within a designated karst zone. CPS plans to implement a SWPPP to prevent off-ROW sedimentation to ground waters. No impacts from the Proposed Route are anticipated for these species.

The fountain darter is not anticipated to occur within the study area. The study area is located outside the known species distribution. CPS Energy plans to implement a SWPPP to prevent off-ROW sedimentation to surface waters. No impacts from the Proposed Route are anticipated to this species.

The monarch butterfly is anticipated to occur within the study area as a temporary migrant during spring and fall months. The monarch butterfly has the potential to occur wherever suitable stopover habitat is available. It is advised that individuals are avoided during construction. No impacts from the Proposed Route are anticipated to this species.

The bald eagle may occur within the study area if suitable habitat is available. Bald eagles and their nests are protected under the MBTA and BGEPA. Nests are protected if they have been used within the previous five nesting seasons. If nests are identified or individuals are observed during the field survey of the Proposed Route, CPS Energy will further coordinate with the TPWD and USFWS to determine avoidance or mitigation measures.

The black lace cactus may occur within the study area if suitable habitat is available. Potential direct impacts to this vegetation community type may occur from equipment/vehicle traffic crushing vegetation or compacting soil. These impacts will be minimized to the greatest extent practicable by implementing a SWPPP that will establish criteria for mitigating soil compaction during construction and re-vegetation post construction. If the species is encountered, CPS energy will further coordinate with USFWS to determine avoidance or mitigation measures.

The bracted twistflower and Texas wild-rice are not anticipated to occur within the study area. CPS Energy will be implementing a SWPPP to establish mitigation for soil compaction due to construction and re-vegetation post construction. No impacts from the Proposed Route are anticipated to either of these species.

State-Listed Species

The American black bear, wood stork, and Cagle's map turtle are not anticipated to occur within the study area due to the lack of potential suitable habitat. The Proposed Route is not anticipated to have adverse impacts to these species.

The white-faced ibis and wood stork may occur within the study area if suitable habitat is available. CPS Energy proposes to conduct ROW clearing activities in compliance with state (TPWC Chapter 64) and federal (MBTA) regulations regarding avian species and appoint a qualified biologist to conduct surveys for active nests prior to vegetation clearing.

The false spike mussel may occur within the study area if suitable aquatic habitat is available. CPS Energy proposes to span all surface waters crossed by the Proposed Route and implement a SWPPP to prevent sedimentation into surface waters.

Due to a restrictive range, neither the toothless blindcat or the widemouth blindcat are anticipated to occur within the study area. CPS Energy proposes to implement a SWPPP to prevent sedimentation into surface waters. No impacts due to the Proposed Route are anticipated for either species.

The Texas horned lizard, Texas tortoise, and white-nosed coati may occur within the study area if suitable habitat is available. If present, species may be susceptible to minor temporary disturbance during construction efforts, but the Project is not anticipated to result in significant adverse impacts to these species' populations.

CPS Energy proposes to conduct a site-specific karst survey prior to construction to avoid potential impacts to cave-obligate species and implement BMPs within their SWPPP to minimize impacts to aquatic species. A field survey for potential suitable habitat for state and federal protected species will be completed after PUC approval of the Proposed Route for the Project. Additional consultation with TPWD and the USFWS for avoidance and mitigation measures may be required if suitable habitat is observed during the field survey of the PUC approved Proposed Route.

4.2 Impacts on Human Resources/Community Values

4.2.1 Impacts on Land Use

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

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

Route Length

The length of a proposed route can be an indicator of the relative magnitude of land use impacts. Generally, all other things being equal, the shorter the route, the less land is crossed, which usually results in the least amount of potential impacts. The total length of the Proposed Route is approximately 1.96 miles (see Table 4-1).

Compatible ROW

PUC Substantive Rule 25.101(b)(3)(B) requires that an applicant for a CCN, and ultimately the PUC, consider whether new transmission line routes are within existing compatible ROWs and/or are parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features. Criteria were used to evaluate the use of existing transmission line ROW, length parallel and adjacent to existing transmission line ROW, length of route parallel to other existing linear ROWs, and length of ROW parallel and adjacent to apparent property lines. The Proposed Route does not utilize existing transmission line ROW. The Proposed Route is parallel and adjacent to existing transmission line ROW for approximately 1.47 miles. The Proposed Route is also parallel to other existing ROW (roadways, railways, utilities, etc.) for approximately 0.44 mile. However, the Proposed Route is not parallel or adjacent to apparent property lines or other natural or cultural features (see Table 4-1). Additionally, CPS Energy and the operator of the proposed Padua Grid BESS (all of the landowners crossed by the Proposed Route) have granted easements for the proposed Project.

Typically, a more representative account for the consideration of whether new transmission line routes are parallel to existing compatible ROWs, apparent property lines, or other natural or cultural features is demonstrated with the percentage of total route length parallel to any of these existing linear features. The percentage can be calculated for the Proposed Route by adding up the total length parallel to existing transmission lines, other existing ROW, and apparent property lines and then dividing the result by the total length of the route. The percentage of the Proposed Route paralleling existing linear features is 98% (see Table 4-1).

Developed and Residential Areas

Typically, one of the most important measures of potential land use impacts is the number of habitable structures located in the vicinity of the route. Based on direction provided by the PUC, habitable structure identification is included with the CCN application. POWER determined the number of habitable structures located within 300 feet of the Proposed Route and the distance from the centerline through the use of GIS software, interpretation of aerial photography, and verification during reconnaissance surveys. The Proposed Route has four habitable structures located within 300 feet of its centerline and are all associated with the O.W. Sommers Power Plant (see Table 4-1).

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

Lands with Conservation Easements

As discussed in Section 3.2.1, there are no known conservation easements within the study area. Therefore, the Proposed Route would have no direct impact on lands with conservation easements.

4.2.2 Impacts on Agriculture

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

The Proposed Route crosses approximately 0.17 mile of land categorized as pastureland/rangeland; however, because the ROW for this project will not be fenced or otherwise separated from adjacent lands, there will be no significant long-term displacement of ongoing activities. The Proposed Route does not cross any lands with known mobile irrigation systems (rolling or pivot type) (see Table 4-1).

4.2.3 Impacts on Transportation/Aviation Features

Transportation Features

Potential impacts to transportation could include temporary disruption of traffic or conflicts with future proposed roadways and/or utility improvements. Traffic disruptions would include those associated with the movement of equipment and materials to the ROW, and slightly increased traffic flow and/or periodic congestion during the construction phase of the Project. In the rural areas, these impacts are typically considered minor, temporary, and short-term. In the urban areas, the temporary impacts to traffic flow can be significant during construction; however, the Proposed Route is not located in areas that is considered as urban. CPS Energy will coordinate with the agencies in control of the affected roadways to address these traffic flow impacts. As mentioned in Section 3.2.3, there were no state roadway projects within the study area. The Proposed Route does not cross any US Hwys, SHs, or FM roads (see Table 4-1).

Aviation Facilities

According to FAA regulations, Title 14 C.F.R. 77, the construction of a transmission line requires FAA notification if tower structure heights exceed the height of an imaginary surface extending outward and upward at a slope of 100:1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of a public or

military airport having at least one runway longer than 3,200 feet. The FAA also requires notification if tower structure heights exceed a 50:1 slope for a horizontal distance of 10,000 feet from the nearest runway of a public or military airport where no runway is longer than 3,200 feet in length, and if tower structure heights exceed a 25:1 slope for a horizontal distance of 5,000 feet for heliports.

No public FAA registered airports with at least one runway longer than 3,200 feet were identified within 20,000 feet of the Proposed Route. There were no FAA registered airports with a runway longer than 3,200 feet identified within 10,000 feet of the Proposed Route. There were no private airstrips identified within 10,000 feet of the Proposed Route (see Table 4-1).

There is one heliport identified within 5,000 feet of the Proposed Route associated with the O.W. Sommers Power Plant (see Table 4-1).

4.2.4 Impacts on Communication Towers

The Proposed Route would not have a significant impact on electronic communication facilities or operations in the study area. No commercial AM radio transmitters were identified within 10,000 feet of the Proposed Route. Additionally, no FM radio tower or other electronic communication facilities were identified within 2,000 feet of the Proposed Route centerline (see Table 4-1).

4.2.5 Impacts on Utility Features

Utility features include existing electrical transmission lines, distribution lines, water wells, pipelines, and oil and gas wells. Numerous water wells were identified within the study area and were mapped and avoided to the extent practicable. There are no identifiable water wells within 200 feet of the Proposed Route (see Table 4-1).

The Proposed Route crosses three existing transmission lines (see Table 4-1).

There are no identifiable oil and gas wells within 200 feet of the Proposed Route (see Table 4-1).

The Proposed Route does cross one identified pipeline and is parallel and adjacent to a pipeline for approximately 0.46 mile. Additionally, the Proposed Route does not cross any gravel pits, mines, or quarries (see Table 4-1).

If additional unidentified utility features are crossed by or are in close vicinity to the Proposed Route centerline approved by the PUC, CPS Energy will coordinate with appropriate entities to obtain necessary permits or permission as required.

4.2.6 Impacts on Socioeconomics

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

4.2.7 Impacts on Community Values

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

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

4.3 Impacts on Parks and Recreation Areas

Potential impacts to parks or recreation areas include the disruption or preemption of recreation activities. No parks or recreational areas meeting the definition set forth in the PUC application were identified within the study area. Thus, no significant impacts to the use of parks and recreation facilities are anticipated to result from the location of the Proposed Route. Also, no adverse impacts are anticipated for any of the fishing or hunting areas from the Proposed Route. The Proposed Route does not cross and is not located within 1,000 feet of any parks and recreation facilities (see Table 4-1).

4.4 Impacts on Aesthetic Values

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

the existing setting in the use and/or enjoyment of an area, in the case of valued community resources and recreational areas.

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

Since no designated landscapes protected from most forms of development or by legislation exist within the study area, potential aesthetic impacts were evaluated by estimating the length of the Proposed Route that would fall within the foreground visual zones (one-half mile with unobstructed views) of major highways, FM roads, and parks or recreational areas. The Proposed Route lengths within the foreground visual zone of IH, US Hwys, SH, FM roads, and parks or recreational areas were tabulated and are discussed below.

The Proposed Route does not have any portion of its ROW length located within the foreground visual zone of IHs, US Hwys, SHs, and FM roads. Also, the Proposed Route does not have any portion of its ROW length located within the foreground visual zone of parks or recreational areas (see Table 4-1).

Overall, the character of the rural landscape within the study area includes partially wooded areas with industrial development associated with the O.W. Sommers Power Plant scattered throughout. The industrial developments within the study area have already impacted the aesthetic quality within the area. The construction of the Proposed Route is not anticipated to significantly impact the aesthetic quality of the landscape.

4.5 Impacts on Historical (Cultural Resources) Values

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

Impacts associated with the construction, operation, and maintenance of transmission lines can affect cultural resources either directly or indirectly. Construction activities associated with any proposed project can adversely

impact cultural resources if those activities alter the integrity of key characteristics that contribute to a property's significance as defined by the standards of the NRHP or the Antiquities Code of Texas. These characteristics might include location, design, setting, materials, workmanship, feeling, or association for architectural and engineering resources or archeological information potential for archeological resources.

4.5.1 Direct Impacts

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

4.5.2 Indirect Impacts

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

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

4.5.3 Summary of Cultural Resource Impacts

The distance of each recorded site located within 1,000 feet of the Proposed Route was measured using GIS software and aerial photography interpretation (see Table 4-3). A review of the THC, NPS, and TxDOT data, described in Section 3.5, indicated that 11 archeological sites are recorded within 1,000 feet of the Proposed

Route (see Table 4-2). Three of these archeological sites have been determined to be eligible for listing on the NRHP. The cultural resources recorded within 1,000 feet of the Proposed Route are discussed below.

TABLE 4-2 ARCHEOLOGICAL SITES RECORDED WITHIN 1,000 FEET OF THE PROPOSED ROUTE

SITE TRINOMIAL	DISTANCE IN FEET FROM CENTERLINE	NRHP ELIGIBILITY
41BX727	605	Eligible
41BX728	**0**	**Portions of site determined ineligible**
41BX729	828	Undetermined
41BX731	112	Undetermined
41BX732	241	Eligible
41BX733	711	Undetermined
41BX734	66	Undetermined
41BX735	**0**	**Undetermined**
41BX739	**0**	**Undetermined**
41BX740	**0**	**Portions of site determined ineligible**
41BX745	576	Eligible

Note: Bold entries will be crossed by 75-foot-wide ROW.

Of the 11 archeological sites recorded within 1,000 feet of the Proposed Route, three (sites 41BX727, 41BX732, and 41BX745), have been determined to be eligible for the NRHP, and are designated as State Antiquities Landmarks. None of the three sites are crossed by the Proposed Route, which are mapped 605, 241, and 576 feet, respectively, from sites 41BX727, 41BX732, and 41BX745. Sites 41BX727 and 41BX745 are described as campsites with debitage and burned rock. Site 41BX732 is the remains of a horse ranch complex, including a concrete slab, outbuildings, a cistern, and associated scatter of artifacts. Due to their distance from the Proposed Route, no direct impacts are anticipated for these State Antiquities Landmarks. No indirect impacts are anticipated as the Proposed Route parallels an existing transmission ROW.

Of the remaining eight archeological sites, sites 41BX728, 41BX735, 41BX739, and 41BX740 are crossed by the Proposed Route. Portions of sites 41BX728 and 41BX740 have been determined ineligible for listing on the NRHP, whereas sites 41BX735 and 41BX739 have not been formally assessed for listing on the NRHP. The recorders of these sites suggest that all four are ineligible for listing on the NRHP. All four of the crossed sites are described as campsites with burned rock, debitage, and at sites 41BX739 and 41BX740, ochre. Site 41BX728 is also a lithic procurement site. The remaining sites within 1,000 feet of the Proposed Route have not been formally assessed for listing on the NRHP. Three of these sites, sites 41BX729, 41BX731, and 41BX733 are campsites similar to those described above. Site 41BX374 is a multicomponent site. The prehistoric component of site

41BX734 is a lithic scatter containing debitage, and a core; and the historic component is a scatter of historic beams, wire, and a railroad tie.

Although much of the Proposed Route has been surveyed for cultural resources, the potential for undiscovered cultural resources does exist along the route. To assess this potential, a review of geological, soils, and topographical maps was undertaken by a professional archeologist to identify areas along the route where unrecorded prehistoric archeological resources have a higher probability to occur. These HPAs for prehistoric archeological sites were identified near unnamed streams in the study area particularly where previous surveys have not been conducted, and near previously recorded sites. To facilitate the data evaluation and each HPA was mapped using GIS and the length of HPA tabulated. Historic HPA were mapped near previously recorded historic sites and NRHP properties, and near structures depicted on historic topographic maps. Based on the analysis, the Proposed Route crosses 1.30 miles of HPA (see Table 4-1).

The Proposed Route is illustrated on Figures 4-1 (Appendix B topographic based) and 4-2 (Appendix C aerial based).

TABLE 4-3 LAND USE FEATURES IN THE VICINITY OF THE PROPOSED ROUTE

MAP NUMBER	STRUCTURE OR FEATURE	APPROXIMATE DISTANCE FROM ROUTE CENTERLINE[1] (FEET)
1	Industrial	256
2	Industrial	248
3	Industrial	249
4	Industrial	271
101	Helipad	2,897
-	41BX727	605
-	41BX728	0
-	41BX729	828
-	41BX731	112
-	41BX732	241
-	41BX733	711
-	41BX734	66
-	41BX735	0
-	41BX739	0
-	41BX740	0
-	41BX745	576

[1] Due to the potential horizontal accuracies of the aerial photography and data utilized, all habitable structures within 310' have been identified.

5.0 AGENCY CORRESPONDENCE

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

Federal, state and local agencies/officials contacted include:

- Federal Aviation Administration (FAA)
- Federal Emergency Management Agency (FEMA) – Region 6
- National Park Service (NPS)
- Natural Resource Conservation Service (NRCS) – Texas Office
- United States Army Corps of Engineers (USACE) – Fort Worth District
- Military Aviation and Installation Assurance Siting Clearinghouse
- United States Environmental Protection Agency (USEPA) – Region 6
- United States Fish and Wildlife Service (USFWS)
- Railroad Commission of Texas (RRC)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Department of Transportation (TxDOT) – Aviation Division, Environmental Affairs Division, Planning & Programming, and San Antonio District Engineer
- Texas General Land Office (GLO)
- Texas Historical Commission (THC)
- Texas Parks and Wildlife Department (TPWD)
- Texas Water Development Board (TWDB)

In addition to letters sent to the agencies listed, POWER also requested and reviewed TXNDD Element Occurrence Records from TPWD (TXNDD 2022). POWER also requested and reviewed previously recorded archeological site information from TARL and reviewed the THC's TASA for additional cultural resource information. As of the date of this document, written responses to letters sent in relation to the study area that were received are listed and summarized below.

The USACE Section 408 Coordinator submitted a response email dated July 14, 2022, stating that they had assigned Project Number 408-SWF-2022-0028. They have determined that the Project will not require authorization under Section 14 of the River and Harbors Act. The USACE have also determined that there are no existing USACE federally authorized civil works project in the vicinity of the Project. However, authorization may still be required under Section 404 of the Clean Water Act. CPS Energy will coordinate with USACE as needed.

The USACE Regulatory Division submitted a response email dated July 17, 2022, stating that they had assigned Project Number SWF-2022-00347 and a regulatory project manager to the request.

The USACE Regulatory Division also submitted a response email dated August 6, 2022, stating that they are unable to determine whether any permits are required and are requesting more specific information regarding the Project. CPS Energy will coordinate with USACE as needed.

The USFWS Austin Ecological Services Field Office submitted a response letter dated July 11, 2022, providing a list of the federally listed threatened and endangered species in the county within the study area. The USFWS also provided the definitions of the affected determinations and referenced the MBTA and BGEPA. CPS Energy will coordinate with the USFWS as needed.

The NRCS submitted a response letter dated July 20, 2022, stating that the proposed Project does not involve any NRCS easements. They also recommended soil erosion prevention practices for the Project and provided a report based on Web Soil Survey. CPS Energy will coordinate with the NRCS as needed.

The FAA submitted a response letter dated July 25, 2022, stating that if CPS Energy is planning to sponsor any construction or alterations which may affect navigable airspace, an FAA Form 7460-1 must be filed electronically via a website listed on the letter. CPS Energy will coordinate with the FAA as needed.

FEMA submitted a response letter dated August 15, 2022, requesting that the community floodplain administrator be contacted for the review of, and possible permit requirements for, the Project. CPS Energy will coordinate with the floodplain administrator as needed.

The Texas GLO submitted a response letter dated July 20, 2022, stating that based on the study area they will not have any environmental issues or land use constraints at this time. CPS Energy will coordinate with the GLO as needed.

The THC submitted a response letter dated August 15, 2022, stating that it is likely an archeological survey and a Texas Antiquities Permit will be required. CPS Energy will coordinate with the THC as needed.

The TPWD submitted a response letter dated August 24, 2022, providing a list of regulations pertaining to the Project and a number of recommendations for the Project to comply with these regulations. CPS Energy has considered such comments and recommendations and believes that its proposed actions will adequately address all such concerns. After a transmission line route has been approved by the Commission, CPS Energy will perform a natural resources assessment, which will consider threatened and endangered wildlife and plant species along the approved route. Before beginning construction, CPS Energy will undertake appropriate measures to identify whether a habitat for potential endangered or threatened species exists and to respond appropriately. CPS Energy will use avoidance and mitigation procedures to comply with laws protecting federally listed species.

CPS Energy will re-vegetate any affected right-of-way as necessary and according to CPS Energy's vegetation management practices, the SWPPP developed for construction of the transmission facilities, and in many instances, landowner preferences or requests. CPS Energy's standard vegetation removal, construction, and maintenance practices adequately mitigate concerns expressed by TPWD. Further, CPS Energy will use appropriate avian protection procedures and will comply with all environmental laws and regulations, including those governing threatened and endangered species.

CPS Energy will comply with all applicable regulatory requirements in constructing the proposed transmission facilities, including any applicable requirements under Section 404 of the Clean Water Act. CPS Energy will cooperate with the USFWS and TPWD if threatened or endangered species' habitats are identified during field surveys. If construction affects federally listed species or their habitat or affects water under the jurisdiction of the USACE or the TCEQ, CPS Energy will cooperate with the USFWS, USACE, and TCEQ, as appropriate, to coordinate permitting and perform any required mitigation. The standard mitigation requirements included in the ordering paragraphs of the Commission's typical final orders, coupled with CPS Energy's current practices, are reasonable measures for a utility to undertake when constructing a transmission line and are sufficient to address the TPWD's comments and recommendations

Bexar County submitted a response email dated August 19, 2022, stating a floodplain permit will be required and other permits may also be required. CPS Energy will coordinate with Bexar County as needed.

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6.0 LIST OF PREPARERS

This EA and Route Analysis was prepared for CPS Energy by POWER. A list of the POWER employees with primary responsibilities for the preparation of this document is presented below.

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Appendix A

Agency Correspondence

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FEDERAL

Mr. Rob Lowe
Southwest Regional Administrator
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10101 Hillwood Parkway
Fort Worth, TX 76177

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U.S. Army Corps of Engineers – Fort Worth District
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STATE

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Austin, TX 78711-2967

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Region 13 Acting Director
Texas Commission on Environmental Quality
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Texas Department of Transportation
125 E. 11th Street
Austin, TX 78701-2483

Mr. Doug Booher
Director, Environmental Affairs Division
Texas Department of Transportation
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Austin, TX 78701-2483

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Director, Transportation Planning & Programming
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San Antonio District Engineer
Texas Department of Transportation
4615 NW Loop 410
San Antonio, TX 78229-0928

Mr. George Bush
Commissioner
Texas General Land Office
1700 N. Congress Ave.
Austin, TX 78711

Mr. Mark Wolfe
Executive Director
Texas Historical Commission
P.O. Box 12276
Austin, TX 78711

Ms. Laura Zebehazy
Wildlife Habitat Assessment Program
Texas Parks and Wildlife Department
WHAB@tpwd.texas.gov

Mr. Jeff Walker
Executive Administrator
Texas Water Development Board
P.O. Box 13231
Austin, TX 78711-3231

July 12, 2022
(via Mail)

Mr. Rob Lowe
Southwest Regional Administrator
Federal Aviation Administration
10101 Hillwood Parkway
Fort Worth, TX 76177

Re: Proposed Transmission Interconnect - Padua Grid BESS Project
Bexar County, Texas
POWER Engineers, Inc. Project No. 179566

Dear Mr. Lowe:

CPS Energy is evaluating the construction of a new single circuit 138 kV transmission line in Bexar County, Texas. The proposed 138 kV line will extend approximately two miles from the CPS Energy O. W. Sommers Switchyard located at the O. W. Sommers Power Plant at the southern end of Gardner Road, to the proposed Padua Grid Battery Energy Storage System (BESS) Switchyard located at the intersection of Burshard Road and Gardner Road. The preliminary study area is shown on the enclosed map.

POWER Engineers, Inc. (POWER) is preparing an Environmental Assessment (EA) to support CPS Energy's internal and external regulatory activities associated with the project. POWER is gathering data on the existing environment and identifying environmental, cultural, and land use constraints within the study area. POWER will evaluate the route between the end points that consider identified constraints and the need to serve increasing electrical load in the area.

We are requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your input will be an important consideration in the evaluation of the route and in the assessment of potential impacts of the route. In addition, we would appreciate receiving information about any permits, easements, or other approvals by your agency/office that you believe could affect this project, or if you are aware of any major proposed development or construction in the study area. Upon certification of the route for the proposed project, CPS Energy will identify and obtain necessary permits, if required, from your agency/office.

Thank you for your assistance with this proposed electric transmission line project. Please contact me by phone at 281-765-5507, or by e-mail at lisa.barko@powereng.com if you have any questions or require additional information. We would appreciate receiving your reply by July 22, 2022.

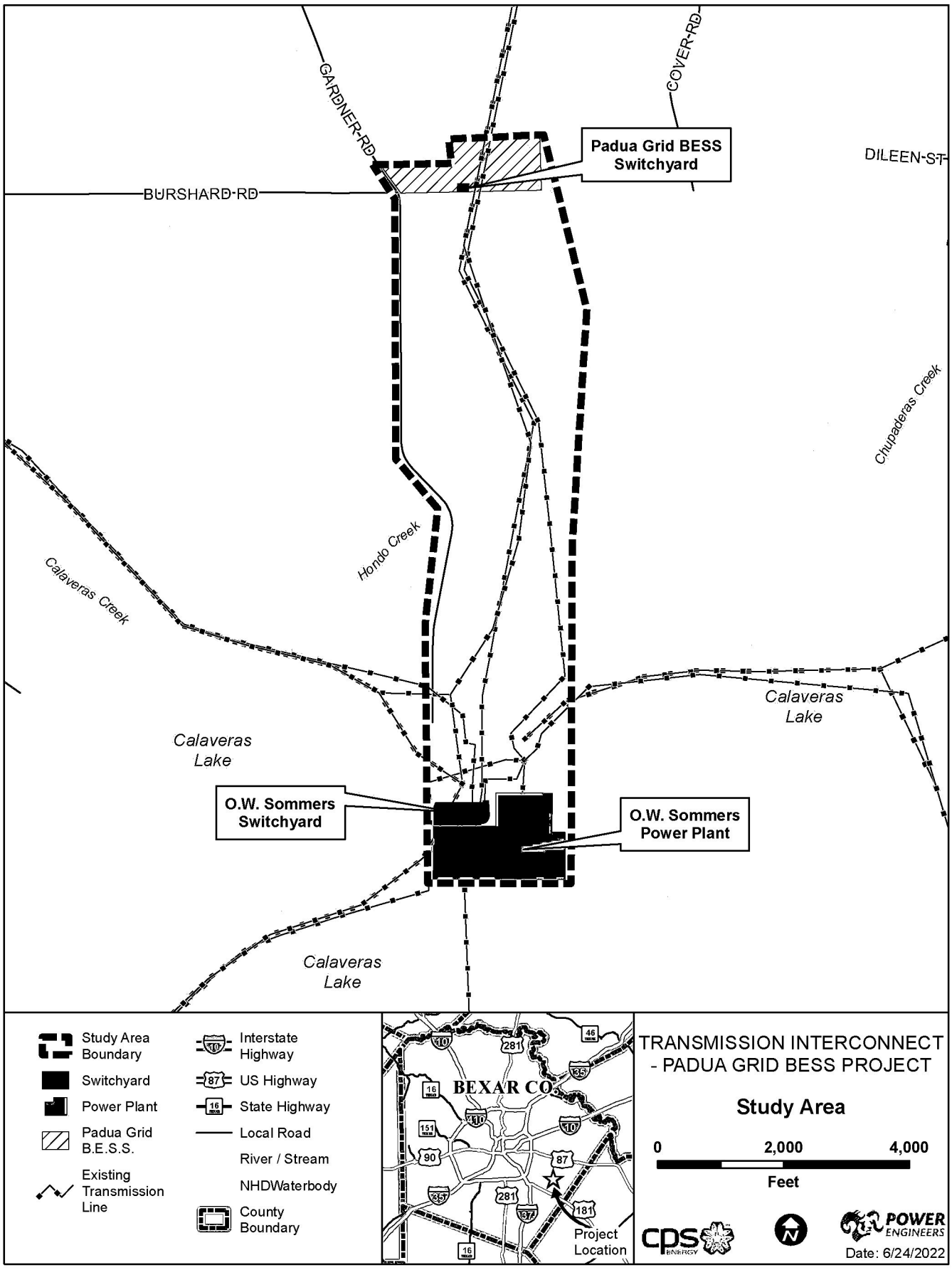
Sincerely,

Lisa Barko Meaux

Lisa Barko Meaux
Project Manager

Enclosure(s):
Preliminary Study Area Map

Sent via Mail
ProjectWise 179566


GARDNER RD
COVER RD
BURSHARD RD
DILEEN ST
Padua Grid BESS Switchyard
Chupaderas Creek
Hondo Creek
Calaveras Creek
Calaveras Lake
Calaveras Lake
Calaveras Lake
O.W. Sommers Switchyard
O.W. Sommers Power Plant
Study Area Boundary
Switchyard
Power Plant
Padua Grid B.E.S.S.
Existing Transmission Line
Interstate Highway
US Highway
State Highway
Local Road
River / Stream
NHDWaterbody
County Boundary
BEXAR CO.
Project Location
TRANSMISSION INTERCONNECT
- PADUA GRID BESS PROJECT
Study Area
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2,000
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Feet
Date: 6/24/2022

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From:	Story, Jason E CIV USARMY CESWF (USA)
To:	Williams, Denise
Cc:	Meaux, Lisa; Jetton, Montey E CIV USARMY CESWF (USA); Sissom, Mark A CIV USARMY CESWF (USA); Story, Jason E CIV USARMY CESWF (USA)
Subject:	[EXTERNAL] Proposed Transmission Interconnect - Padua Grid BESS Project, 408-SWF-2022-0028, no 408
Date:	Thursday, July 14, 2022 8:26:31 AM

Dear Denise Williams:

The Fort Worth District of the U.S. Army Corps of Engineers has received your inquiry regarding the subject project (proposed 138 kV transmission line project located in Bexar County, Texas). This project has been assigned Section 408 Request Number 408-SWF-2022-0028. Please use this number in all future correspondence regarding this project. Based on your description of the proposed work, and other information available to us, we have determined this project will not involve activities that require authorization under Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408). We have determined there are no existing U.S. Army Corps of Engineers federally authorized Civil Works projects in the vicinity of your proposed project. We have placed a copy of the information you submitted in our files. Thanks for coordinating with us on this matter. Please contact me at (817) 886-1852, or email jason.e.story@usace.army.mil for any questions.

Authorization may still be required under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899, which are administered by the Regulatory Division. Information about the Regulatory Division can be found at https://www.swf.usace.army.mil/Missions/Regulatory/ [swf.usace.army.mil].

For more information on Section 408, visit the Fort Worth District Section 408 webpage at https://www.swf.usace.army.mil/Missions/Section-408/ [swf.usace.army.mil].

Sincerely,

Jason Story
Section 408 Coordinator
Fort Worth District
Biologist
RPEC
U.S. Army Corps of Engineers
Office 817-886-1852
Cell 817-239-8475
jason.e.story@usace.army.mil

For more information on Section 408, visit the Fort Worth District Section 408 webpage at https://www.swf.usace.army.mil/Missions/Section-408/ [swf.usace.army.mil]

From: denise.williams@powereng.com <denise.williams@powereng.com>
Sent: Tuesday, July 12, 2022 11:36 AM
To: Story, Jason E CIV USARMY CESWF (USA) <Jason.E.Story@usace.army.mil>
Cc: lisa.barko@powereng.com
Subject: [URL Verdict: Neutral][Non-DoD Source] Proposed Transmission Interconnect - Padua Grid BESS Project

Dear Mr. Story,
On behalf of our client, CPS Energy, please find attached a proposed project information letter.

Thank you for your assistance with this proposed electric transmission line project. Please contact the Project Manager, Lisa Barko-Meaux, by phone at 281-765-5507, or by e-mail at lisa.barko@powereng.com , if you have any questions or require additional information.
Thank you,

Denise M. Williams
Project Lead I
16825 Northchase Drive
Suite 1200
Houston, TX 77060
281-765-5511 Office
281-794-6885 Cell

POWER Engineers, Inc.
www.powereng.com

From: Gray, Natasha A CIV USARMY CESWF (USA)
To: Meaux, Lisa
Cc: Williams, Denise; Bartels, Brian C CIV USARMY CESWF (USA)
Subject: [EXTERNAL] SWF-2022-00347 (Transmission Interconnect-Padua Grid BESS Project)
Date: Monday, July 18, 2022 9:39:31 AM

Dear Ms. Barko Meaux:

Thank you for your letter received July 12, 2022, concerning a proposal by CPS Energy for the construction of a new single circuit 138kV transmission line located in Bexar County, Texas. The project has been assigned Project Number SWF-2022-00347, please include this number in all future correspondence concerning this project.

Mr. Brian Bartels 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 [swf.usace.army.mil] and particularly guidance on submittals at https://swf-apps.usace.army.mil/pubdata/environ/regulatory/introduction/submital.pdf [swf-apps.usace.army.mil] and mitigation at https://www.swf.usace.army.mil/Missions/Regulatory/Permitting/Mitigation [swf.usace.army.mil] 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 [swf.usace.army.mil] or contact Mr. Brian Bartels by telephone (817) 886-1742, or by email Brian.C.Bartels@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 [corpsmapu.usace.army.mil]

Brandon W. Mobley
Chief, Regulatory Division

Please do not mail hard copy documents to Regulatory staff or office, unless specifically requested.

For further details on corresponding with us, please view our Electronic Application Submittals special public notice at:
https://www.swf.usace.army.mil/Portals/47/docs/regulatory/publicnotices/2020/PublicNoticeElectronicApplications.pdf?ver=2019-11-21-123723-627 [swf.usace.army.mil]

USACE Fort Worth District Regulatory Division Website
http://www.swf.usace.army.mil/Missions/Regulatory.aspx [swf.usace.army.mil]

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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758-4460
Phone: (512) 490-0057 Fax: (512) 490-0974

In Reply Refer To:
Project Code: 2022-0062164
Project Name: Padua

July 11, 2022

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, that may occur within the boundary of your proposed project and/or may be affected by 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.*).

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 ECOS-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 ECOS-IPaC system by completing the same process used to receive the enclosed list.

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 sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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 projects 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.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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 Code 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:

Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758-4460
(512) 490-0057

Project Summary

Project Code: 2022-0062164
Event Code: None
Project Name: Padua
Project Type: Transmission Line - New Constr - Above Ground
Project Description: transmission line - new construction - above ground
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@29.32217455,-98.3175099988963,14z

Counties: Bexar County, Texas

Endangered Species Act Species

There is a total of 18 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 2 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[1], 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.

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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
Golden-cheeked Warbler *Setophaga chrysoparia*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/33

Piping Plover *Charadrius melodus*	Threatened

Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.
There is **final** critical habitat for this species. The location of the critical habitat is not available.
This species only needs to be considered under the following conditions:

- Wind Energy Projects

Species profile: https://ecos.fws.gov/ecp/species/6039

Red Knot *Calidris canutus rufa*	Threatened

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
This species only needs to be considered under the following conditions:

- Wind Energy Projects

Species profile: https://ecos.fws.gov/ecp/species/1864

Amphibians

NAME	STATUS
San Marcos Salamander *Eurycea nana* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6374	Threatened
Texas Blind Salamander *Eurycea rathbuni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5130	Endangered

Fishes

NAME	STATUS
Fountain Darter *Etheostoma fonticola* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5858	Endangered

Insects

NAME	STATUS
[no Common Name] Beetle *Rhadine exilis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6942	Endangered
[no Common Name] Beetle *Rhadine infernalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3804	Endangered
Helotes Mold Beetle *Batrisodes venyivi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1149	Endangered
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Arachnids

NAME	STATUS
Braken Bat Cave Meshweaver *Cicurina venii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7900	Endangered
Cokendolpher Cave Harvestman *Texella cokendolpheri* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/676	Endangered
Government Canyon Bat Cave Meshweaver *Cicurina vespera* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7037	Endangered
Government Canyon Bat Cave Spider *Tayshaneta microps* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/553	Endangered
Madla Cave Meshweaver *Cicurina madla* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2467	Endangered
Robber Baron Cave Meshweaver *Cicurina baronia* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2361	Endangered

Flowering Plants

NAME	STATUS
Bracted Twistflower *Streptanthus bracteatus* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2856	Proposed Threatened
Texas Wild-rice *Zizania texana* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/805	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency:	Power Engineer
Name:	Virginia Brown
Address:	2600 Via Fortuna
Address Line 2:	Ste 450
City:	Austin
State:	TX
Zip:	78746
Email	virginia.brown@powereng.com
Phone:	5129683968

United States Department of Agriculture

Natural
Resources and
Conservation
Service

State Office

101 S. Main Street
Temple, TX 76501
Tel: 254.742.9800
Fax: 844.496.8111

July 20, 2022

POWER Engineers, Inc.
16825 Northchase Drive
Suite 1200
Houston, TX 77060

Attention: Lisa Barko Meaux

Subject: Proposed Transmission Interconnect – Pauda Grid BESS Project

Thank you for the opportunity to provide input on the potential environmental effects of constructing a new electric transmission line in Bexar County, Texas. The proposed project area does not involve any USDA-NRCS easements.

The soils in the proposed project area have been reviewed and there are a few limitations that should be taken into consideration while planning for the project. Approximately 55 acres (7%) of the study area is rated as experiencing frequent flooding. There is also an additional spot of land where the soil is rated as hydric, which can be an indicator of a wetland. Most of the soils in the area have very high potential for erosion by wind; soil erosion prevention practices are recommended for this project. The site is rated high- to moderate-risk for soil-induced steel corrosion.

Enclosed is a report based on Web Soil Survey that contains maps and details of relevant soil interpretations. We encourage you to consider this information and take measures to protect the soil and water quality.

Please contact me by email at samuel.araya@usda.gov if you have any questions.

Sincerely,

Samuel Araya
Soil Scientist

U.S. Department
of Transportation
**Federal Aviation
Administration**

Southwest Region

10101 Hillwood Parkway
Fort Worth, TX 76177

July 25, 2022

Lisa Barko Meaux
Power Engineers, Inc.
16825 Northchase Drive
Suite 1200
Houston, TX 77060

Dear Ms. Meaux:

This is in response to your July 12, 2022, correspondence concerning a proposed new 138-kilovolt transmission line in Bexar County, Texas. You requested information concerning environmental and land use constraints or other issues of interest within the study area. You also requested information regarding any permits, easements, or other approvals by the agency that may affect the project.

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

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

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

Sincerely,

For Rob Lowe
Regional Administrator, Southwest Region

CC: Obstruction Evaluation Group, AJV-15

TEXAS GENERAL LAND OFFICE
GEORGE P. BUSH, COMMISSIONER

July 20, 2022

Lisa Barko Meaux
Power Engineers, Inc.
16825 Northchase Drive, Ste 1200
Houston, TX 77060-6012

Re: Proposed Transmission Interconnect-Padua Grid BESS Project
Bexar County, Texas
POWER Engineers, Inc. Project No. 179566

Dear Ms. Meaux:

On behalf of Commissioner Bush, 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 on this project, I can be reached by email at jeff.burroughs@glo.texas.gov or by phone at (512) 463-7845.

Again, thank you for your inquiry.

Sincerely,

Jeff Burroughs
Manager, Right-of-Way Department
Leasing Operations

From:	Meaux, Lisa
To:	Brewer, Ashley; Williams, Denise
Cc:	Brown, Virginia
Subject:	FW: SWF-2022-00347 (T-Line Interconnect-Padua Grid BESS in Bexar County, Texas) - Additional Information Request
Date:	Monday, August 08, 2022 9:37:01 AM

Please incorporate in to the EA as appropriate.
Thanks,
Lisa

LISA BARKO MEAUX
PROJECT MANAGER
ENVIRONMENTAL DEPARTMENT MANAGER
16825 Northchase Drive, Suite 1200
Houston, Texas 77060

281-765-5507 direct
713-962-8476 cell
lisa.barko@powereng.com

POWER Engineers, Inc.
www.powereng.com

From: Bartels, Brian C CIV USARMY CESWF (USA) <Brian.C.Bartels@usace.army.mil>
Sent: Saturday, August 06, 2022 9:08 AM
To: Meaux, Lisa <lisa.barko@powereng.com>
Subject: [EXTERNAL] SWF-2022-00347 (T-Line Interconnect-Padua Grid BESS in Bexar County, Texas) - Additional Information Request

Ms. Meaux:

This email is regarding information received July 12, 2022, concerning proposed construction of a transmission line interconnect and Padua grid BESS switchyard located in Bexar County, Texas. This project has been assigned Project Number SWF-2022-00347. Please include this number in all future correspondence concerning this project.

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

Submitted information lacks details regarding proposed WOTUS impacts and / or avoidance; thus, we are unable to determine whether a DA permit / permit verification would be required. Additional

information is required for us to continue our evaluation of the proposed project. Please provide or be aware of the following, if applicable:

- Detailed description of the project, including map(s) and KMZ file showing specific locations where a discharge of dredged or fill material would occur within WOTUS (i.e., rivers, streams, wetlands, ponds).
    - Please differentiate between impact types (i.e., identify proposed impacts as permanent or temporary).
    - Please include acreages of proposed impacts differentiated by type (include linear footage when streams are impacted).
    - Please differentiate the type and amounts of material (in cubic yardage) that would be placed within WOTUS.

- For each location where discharge of material would occur within WOTUS, please provide the following site-specific information, when applicable:
    - Latitude and longitude coordinates in decimal degrees, county / parish, waterway name,
    - ecological characterization of the project location (i.e., stream type, wetland type, other type of water feature) including the NWI classification,
    - width of the ordinary high-water mark (OHWM),
    - proposed method of construction (e.g., open trench, HDD, span structure, culvert, etc.), and
    - dimensions of any proposed bridge / culvert crossing(s), typical cross-section.

- Regarding the establishment and maintenance of right(s)-of-way:
    - Please include dimensions of temporary and permanent right(s)-of-way, and
    - the method(s) of clearing and maintaining vegetation within right(s)-of-way in and around streams and wetlands.

- If complete avoidance of WOTUS is proposed, please indicate where WOTUS would be avoided and the method of avoidance, e.g., by using horizontal directional drilling (HDD).
    - If all WOTUS would be avoided, then the Regulatory Division would issue a no-permit-required (NPR) letter at the request of the applicant.

- NOTE: The Regulatory Division will perform a jurisdictional determination of any water feature at the request of the applicant.

Please send your response to us so that we may continue our evaluation of your request. If we do not receive sufficient requested information within 30 days of the date of this communication, we will consider your application administratively withdrawn. If withdrawn, you may re-open your application at a later date by submitting the requested information.

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

Please consider the potential effects of the proposed action on cultural resources (RE: Section 106 of the National Historic Preservation Act) and federally listed threatened and endangered (T&E) species in your planning efforts. For additional information about T&E species, please contact the U. S. Fish and Wildlife Service (Arlington Field Office [fws.gov], Austin Field Office [fws.gov], Clear Lake Field Office [fws.gov]).

We encourage you to avoid and minimize adverse impacts to streams, wetlands, and other WOTUS in planning this project. We gladly will schedule a pre-application meeting at the request of the applicant to discuss project specifics and answer questions regarding our processes.

For more information on the USACE Regulatory Program, please reference the Fort Worth District Regulatory Branch [swf.usace.army.mil]:

- Nationwide Permit 57 for Electric Utility Line and Telecommunication Activities

[swf.usace.army.mil],

- Electronic submittal process [swf.usace.army.mil],
- General permits (NWPs / RGPs) [swf.usace.army.mil], and
- Application submittal forms (e.g., pre-application meeting request) and templates [swf.usace.army.mil].

If you have any questions about the evaluation of your submittal, please contact me at your convenience.

Brian Bartels
Regulatory Specialist, Regulatory Division—Evaluations Branch

U.S. Army Corps of Engineers (CESWF-RDE)
819 Taylor Street, Rm. 3A37
P.O. Box 17300
Fort Worth, Texas 76102-00300
M: 316-617-9534
O: 817-886-1742
brian.c.bartels@usace.army.mil
http://www.swf.usace.army.mil/Missions/Regulatory.aspx [swf.usace.army.mil]

Please refrain from sending hard-copy documents to the regulatory office unless specifically requested. Details regarding our electronic application submittal process may be viewed at: *https://www.swf.usace.army.mil/Portals/47/docs/regulatory/publicnotices/2020/PublicNoticeElectronicApplications.pdf?ver=2019-11-21-123723-627* [swf.usace.army.mil]

Please assist us in better serving you by completing the survey at: *http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey* [corpsmapu.usace.army.mil]

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

FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION 6
MITIGATION DIVISION

RE: Proposed Transmission Interconnect-Padua Grid Bess Project Bexar County, Texas POWER Engineers, Inc. Project No 179566

NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

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

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

Bexar, TX
Robert Branch
Development Services Engineer
1948 Probandt Street
San Antonio, TX 78241
rbrach@bexar.org
(210) 335-1243

REVIEWER:

Loukisha Williams
Floodplain Management and Insurance Branch
Mitigation Division
(940) 383-7228 DATE: 8/15/2021

POWER ENGINEERS

Date Rec'd: 7/20/22		
Rec'd by: dlo		
	Action	Info
RA		✓
Deputy RA		
XA		
Analyst		
RES		
REC		
MIT	✓	
MSD		
NP		
Grants		
File	✓	
Suspense Date: 8-9-22		

POWER ENGINEERS, INC.
16825 NORTHCHASE DRIVE
SUITE 1200
HOUSTON, TX 77060 USA

PHONE 281-765-5500
FAX 281-765-5599

July 12, 2022
(via Mail)

Mr. Tony Robinson
Region 6 Regional Administrator
Federal Emergency Management Agency
FRC 800 N. Loop 288
Denton, TX 76209-3698

Re: Proposed Transmission Interconnect - Padua Grid BESS Project
Bexar County, Texas
POWER Engineers, Inc. Project No. 179566

Dear Mr. Robinson:

CPS Energy is evaluating the construction of a new single circuit 138 kV transmission line in Bexar County, Texas. The proposed 138 kV line will extend approximately two miles from the CPS Energy O. W. Sommers Switchyard located at the O. W. Sommers Power Plant at the southern end of Gardner Road, to the proposed Padua Grid Battery Energy Storage System (BESS) Switchyard located at the intersection of Burshard Road and Gardner Road. The preliminary study area is shown on the enclosed map.

POWER Engineers, Inc. (POWER) is preparing an Environmental Assessment (EA) to support CPS Energy's internal and external regulatory activities associated with the project. POWER is gathering data on the existing environment and identifying environmental, cultural, and land use constraints within the study area. POWER will evaluate the route between the end points that consider identified constraints and the need to serve increasing electrical load in the area.

We are requesting that your agency/office provide information concerning environmental and land use constraints or other issues of interest to your agency/office within the study area. Your input will be an important consideration in the evaluation of the route and in the assessment of potential impacts of the route. In addition, we would appreciate receiving information about any permits, easements, or other approvals by your agency/office that you believe could affect this project, or if you are aware of any major proposed development or construction in the study area. Upon certification of the route for the proposed project, CPS Energy will identify and obtain necessary permits, if required, from your agency/office.

July 12, 2022

Thank you for your assistance with this proposed electric transmission line project. Please contact me by phone at 281-765-5507, or by e-mail at lisa.barko@powereng.com if you have any questions or require additional information. We would appreciate receiving your reply by July 22, 2022.

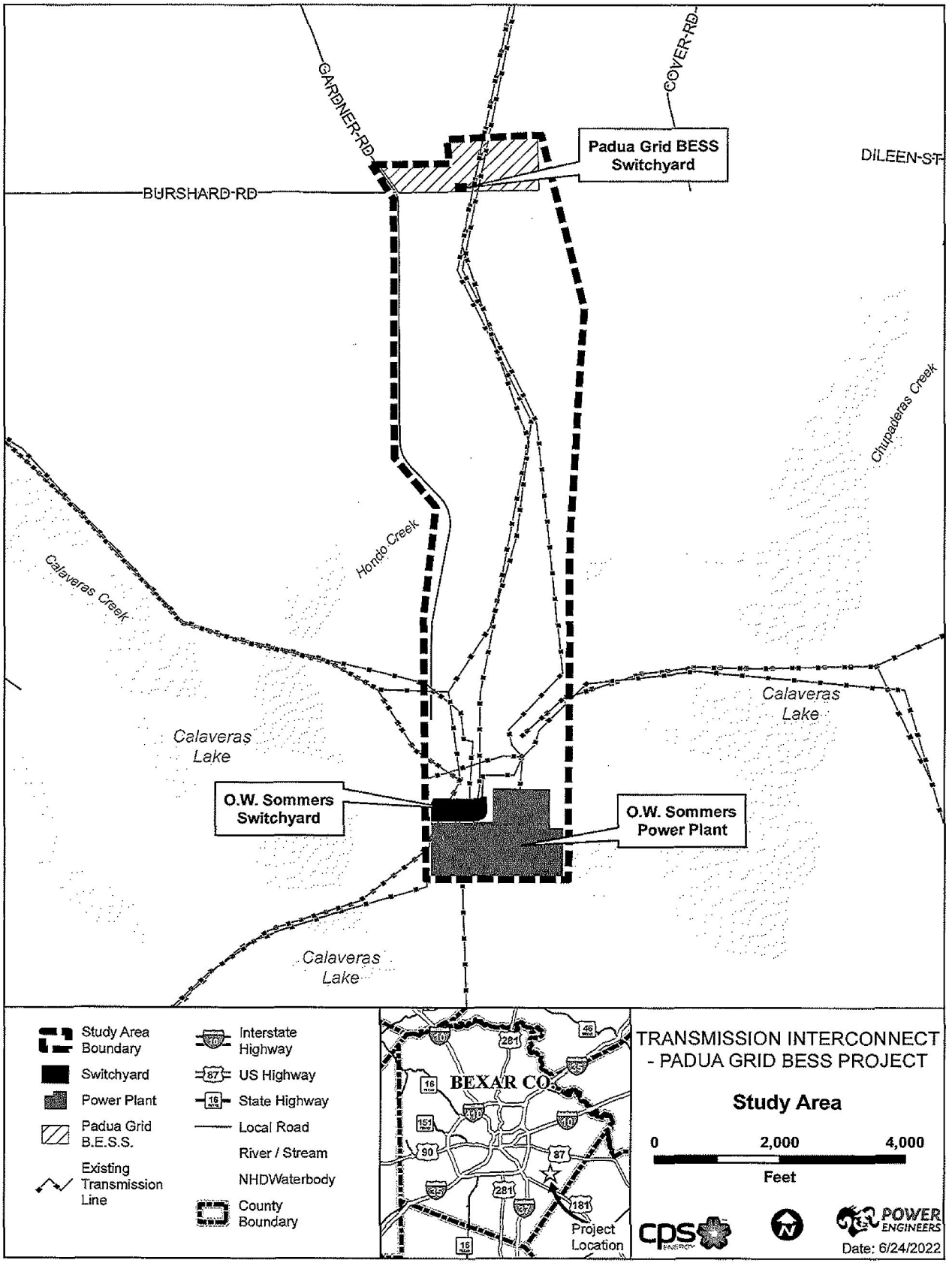
Sincerely,

Lisa Barko Meaux

Lisa Barko Meaux
Project Manager

Enclosure(s):
Preliminary Study Area Map

Sent via Mail
ProjectWise 179566


GARDNER-RD
COVER-RD
DILEEN-ST
BURSHARD-RD
Padua Grid BESS Switchyard
Chupaderas Creek
Hondo Creek
Calaveras Creek
Calaveras Lake
Calaveras Lake
Calaveras Lake
O.W. Sommers Switchyard
O.W. Sommers Power Plant
Study Area Boundary
Switchyard
Power Plant
Padua Grid B.E.S.S.
Existing Transmission Line
Interstate Highway
US Highway
State Highway
Local Road
River / Stream
NHDWaterbody
County Boundary
BEXAR CO.
Project Location
TRANSMISSION INTERCONNECT - PADUA GRID BESS PROJECT
Study Area
0
2,000
4,000
Feet
POWER ENGINEERS
Date: 6/24/2022

August 15, 2022

Lisa Barko Meaux
Power Engineers, Inc.
7600 N. Capital of Texas Highway
Suite 320
Austin, TX 78731

Re: Project Review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas, Proposed Transmission Interconnect – Padua Grid BESS Project, Bexar County, Texas (THC Tracking No. 202212475)

Dear Ms. Barko Meaux,

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer (SHPO), the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff, led by Caitlin Brashear and Emily Dylla, has completed its review. Per our records, there are no known above-ground historic resources in the study area. The Study Area has not undergone archaeological investigation that meets modern standards in the state of Texas. There are well over a dozen known archeological sites within the study area, some of which are eligible for listing on the National Register of Historic Places and/or are listed State Antiquities Landmarks. Mapped geological and soil units in the Study Area suggest a high likelihood for buried archeological sites. It is likely an archeological survey of the proposed project area will be required.

Please also note as the City of San Antonio owns the Study Area, this project is also subject to regulation under 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, please submit a scope of work meeting all applicable state and federal requirements for our review. We welcome submissions through our online eTRAC system. Links to the eTRAC portal and a user guide can be found on our website at https://www.thc.texas.gov/etrac-system

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: caitlin.brashear@thc.texas.gov, emily.dylla@thc.texas.gov.

Sincerely,

For Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

From:	Meaux, Lisa
To:	Williams, Denise
Cc:	Brewer, Ashley; Brown, Virginia
Subject:	FW: Proposed Transmission Interconnect-Padua Grid Bess Project Bexar County, Texas POWER Engineers, Inc. Project No 179566
Date:	Monday, August 22, 2022 12:08:54 PM
Attachments:	BUILDING PERMIT AUTHORIZATION GUIDELINES - Revised 1-10-2022.pdf

Please incorporate into the EA as appropriate.

LISA BARKO MEAUX
PROJECT MANAGER
ENVIRONMENTAL DEPARTMENT MANAGER
16825 Northchase Drive, Suite 1200
Houston, Texas 77060

281-765-5507 direct
713-962-8476 cell
lisa.barko@powereng.com

POWER Engineers, Inc.
www.powereng.com

From: Brach, Robert <RBrach@bexar.org>
Sent: Friday, August 19, 2022 3:00 PM
To: Meaux, Lisa <lisa.barko@powereng.com>
Cc: 'Williams, Loukisha' <loukisha.williams@fema.dhs.gov>
Subject: [EXTERNAL] RE: Proposed Transmission Interconnect-Padua Grid Bess Project Bexar County, Texas POWER Engineers, Inc. Project No 179566

Hi Lisa,

Please refer to the attached document for permits issued by Bexar County.

A floodplain permit from Bexar County Public Works will be required.

Additionally, a storm water quality permit from Bexar County Public Works may be required if more than one acre of land is being disturbed by this project.

If any work is being conducted in the Bexar County maintained right of way (ROW), a ROW permit will be required from Bexar County Public Works.

If there is a structure that is used by employees being constructed or modified, a permit from the Bexar County Fire Marshal may be required.

The attached document also references possible City of San Antonio permits that may be required.

Sincerely,

Bob Brach PE
Development Services Engineer
210-335-1243

From: Williams, Loukisha <loukisha.williams@fema.dhs.gov>
Sent: Monday, August 15, 2022 7:29 AM
To: lisa.barko@powereng.com
Cc: Brach, Robert <RBrach@bexar.org>
Subject: Proposed Transmission Interconnect-Padua Grid Bess Project Bexar County, Texas POWER Engineers, Inc. Project No 179566

Lisa Barko
Project Manager
16825 Northchase Dr
Suite 1200
Houston, Texas 77060

Ms. Barko,

Thank you for contacting FEMA for information in reference to your questions pertaining Proposed Transmission Interconnect-Padua Grid Bess Project Bexar County, Texas POWER Engineers, Inc. Project No 179566 request for information. Please review our attached response.

Loukisha Williams
Program Support Assistant
Floodplain Management & Insurance
Mitigation-Region 6
O: 940-383-7228 Mobile: (202) 258-3794

Loukisha.Williams@fema.dhs.gov

FEMA

BUILDING PERMIT AUTHORIZATION GUIDELINES

Download the Bexar County Fire Marshal Building Permit application: https://www.bexar.org/DocumentCenter/View/1170/Building-and-System-Permit-Application-PDF?bidId=. The first page of the building permit application is the Building Permit Authorization (BPA) form. If the BPA is for new construction located within the City of San Antonio (COSA) Extraterritorial Jurisdiction (ETJ), the submitted BPA will need documentation that COSA has reviewed the proposed improvements noted in B and C below on this page before submitting the BPA form to Bexar County Public Works.

In general, the process is as follows:

0. Schedule an appointment to submit the building permit application and electronic plan files to the Fire Marshal Office (FMO). The FMO permit review may occur before or during the BPA review process noted below. The building permit issuance will not occur until the FMO receives a signed BPA page from Public Works. (See: https://www.bexar.org/643/Permits-Applications)
1. City Permits and Fees (**COSA determination for storm water detention; Military Protection Area Certificate of Compliance prior to BPA submittal to Bexar County Public Works**)
2. Bexar County Public Works/Environmental Services Permit Verification
3. Building Permit Authorization (BPA) Released by Bexar County Public Works
4. Permit Review/Issuance (once executed BPA form has been provided) by Bexar County Fire Marshal
5. Construction and Inspection
6. Certification and Food Service Permits
7. Permit Renewal and Maintenance

City Permits and Platting Location: 1901 S Alamo St San Antonio 78204 **Contact: 210-207-1111**

A. Platting – City Development Services Staff will make a Determination for the requirement of platting. Either a subdivision plat or a Certificate of Determination (COD) will be required. The use, if specified on the COD, must match the proposed use of the proposed structure (i.e. a COD for residential use will not apply to a commercial building).

B. City Storm Water – COSA Public Works requires a determination if detention is required. If detention is not required or provided, the city will determine a fee in lieu of detention (FILO) to pay for the new square footage of impervious cover (i.e. building footprints, asphalt, sidewalks, concrete pads, etc.). If detention is required or provided, the city will review and approve the Storm Water Detention design. A COSA storm water representative will sign and stamp the BPA form and site plan that shows the areas of impervious cover (existing and proposed). If a FILO is paid, provide a copy of Storm Water Regional Storm Water application form with the BPA form. If detention is required, provide a PDF of construction documents approved by the City. See the following link for additional information:
https://www.sanantonio.gov/TCI/Services/Storm-Water-Plan-Review/Regional-Storm-Water Management-Program

C. Military Protection Area Certificate of Compliance (MPACOC) – COSA will verify the Land Use, outdoor lighting, building heights, sound attenuation measures, and Edwards Aquifer compliance where applicable. See the following links for more information:
https://gis.sanantonio.gov/proposedannexation/viewer/view.html and
https://www.sanantonio.gov/Planning/PlanningUrbanDesign/Annexation#233951381-areas-near-military-bases

D. Tree, Outdoor Sign, and Irrigation permits are also required in the ETJ from COSA. **(Not applicable to BPA process)**

Bexar County Public Works and Environmental Services Permits
Location: 1948 Probandt San Antonio Texas 78214 **BPA Main Contact: Luz Gonzales (luz.gonzales@bexar.org) 210-335-0030**

Submit the entire permit application (pages 1-4) with a brief description of the proposed work and site plan to Bexar County Public Works via e-mail to BPA.permit@bexar.org or in person at 1948 Probandt. Examples of proposed work are: 1) site clearing, grading, underground and offsite utilities, and foundation; 2) new building with interior finish out; 3) new shell building; 4) tenant finish out; 5) remodel of existing structure; 6) cell tower; 7) change of occupancy; or any combination of the previous items. Bexar County verifies subdivision plat status, Right-Of-Way (driveway access, turn lanes, utility connections) permits, Floodplain development permits, on-site drainage, compliance with COSA IB-570 related to Atlas 14 precipitation frequency estimates (see: https://docsonline.sanantonio.gov/FileUploads/DSD/IB570.pdf), OSSF (septic) permits, Storm Water Quality Permits, and Post Construction permits. We recommend submitting the applicable permit applications listed on page 2 before submitting the BPA to avoid delays to the project. See page 2 for additional information regarding subdivision plats, permits, military limited lighting, and food service permits.

Subdivision plats – if a subdivision plat is required but not recorded, County Development Services Staff must complete at LEAST one review of the plat materials to verify that no conflicts exist between the proposed buildings and easements shown on the plat. If a conflict exists, a revised site plan or plat will be required. Typical review time: First submittals: 30 calendar days; Resubmittals: 15 calendar days.

(Tiffany Simper tsimper@bexar.org 210-335-6944 or Stephen Laskowski Stephen.laskowski@bexar.org 210-335-6785)

A. **Storm Water Quality (SWQ) Permit** – (Permit Cost: $500) A Bexar County Storm Water Quality Permit is required when one (1) or more acres of soil are being disturbed. Recommend to submit the SWQ permit application at least 30 days before submitting the BPA form. You need an issued SWQ Permit before the Public Works signs the BPA form. Review time: First Submittals 30 days; Resubmittals 15 days.
Submittal requirements are (see: https://www.bexar.org/2059/Storm-Water-Quality-Site-Development-Per):
1. Application (signed)
2. Fee
3. Copy of Storm Water Pollution Prevention Plan (SWPPP) *(Can be a hard copy or PDF with hard copy of site plan)*

(Zaid Subhi @zaid.subhi@bexar.org; 210-335-6663)

B. **Post Construction Permit** – (Permit Cost $50 or $250; Please reference the lower right corner of Mitigation Worksheet) – Submit this permit application concurrent with the Storm Water Quality Permit. A Bexar County Post Construction Permit is required when one (1) or more acres of soil is being disturbed. The review verifies when mitigation is required based on the amount of impervious cover in excess of the target impervious cover shown on the proposed improvement. Review time: Concurrent with Storm Water Quality Permit.
Submittal requirements are (see: https://www.bexar.org/2147/Post-Construction-Permits):
1. Application (signed)
2. Mitigation Worksheet
3. Fee (check mitigation worksheet)
4. Supporting documentation for mitigation if mitigation is required

(Zaid Subhi @zaid.subhi@bexar.org; 210-335-6663)

C. **Right-of-Way permits (ROW)** – (Permit cost: Varies) A Bexar County Right-of-Way permit is required for all work within a county maintained right of way. You must have an issued ROW permit before starting work. (see: https://www.bexar.org/1493/Right-of-Way-Permits). Review time: 15 -30 days.

(Todd Sang @ tsang@bexar.org; 210-335-6649)

D. **On Site Sewage Facility (OSSF) Permit** – (Permit cost: contact to verify) An OSSF permit is required for sites that are not serviced by public sanitary sewer. If no water service is available, provide information about restroom provisions for employees. An OSSF permit must be submitted (if new construction) or renewed (if existing construction) before Public Works signs the BPA. Review time: 30 days.

(Mike Lara @ mikel@bexar.org; 210-335-0295)

E. **Floodplain Permit** – (Permit cost: $50.00) A Bexar County Floodplain Development Permit is required for any property that is encumbered or adjacent to the FEMA designated 1% (100yr) floodplain. Floodplain permits are issued after the applicable Permits A-D listed above have been issued. You must have an issued permit before starting work. (see: https://www.bexar.org/1492/Flood-Development-Permits). Review time: First submittals: 30 calendar days; Resubmittals: 15 calendar days.

(Erin Lowe @ erin.lowe@bexar.org; 210-335-3843)

F. **Military Limited Lighting Regions (MLLR)** - Bexar County Development Services will review exterior lighting design plans for the proposed development outside of the COSA Military Protection Area. You may find the limits of the MLLR along with the requirements in the most recent court order. An accepted lighting plan is required before Public Works signs the BPA. (see: https://www.bexar.org/643/Permits-Applications) Review time: 7-14 days.

G. **Food Service Establishment (FSE) Permits: (Not applicable to the BPA process)**
1. Application and Fee
2. Website: https://www.bexar.org/DocumentCenter/View/20001/FOOD-PERMIT-APPLICATION_1948-Probandt

(Yvonne Cisneros or Jesse Zendejas @ Healthpermits@bexar.org; 210-335-6700 [Option 6])

August 24, 2022

Lisa Barko Meaux
POWER Engineers, Incorporated
16825 Northchase Drive, Suite 1200
Houston, TX 77060

RE: Proposed Transmission Interconnect – Padua Grid BESS Project, Bexar County, Texas
POWER Engineers Project Number 179566

Dear Ms. Barko Meaux:

Texas Parks and Wildlife Department (TPWD) received the preliminary information request regarding the project referenced above. On behalf of CPS Energy, POWER Engineers, Incorporated (POWER) is preparing an Environmental Assessment (EA) to support CPS Energy's internal and external regulatory activities associated with the project.

Project Description

CPS Energy is proposing to construct a new 138-kilovolt (kV) single circuit transmission line in Bexar County, Texas. The proposed line would begin at the CPS Energy O.W. Sommers Switchyard located at the O.W. Sommers Power Plant at the southern end of Gardner Road and extend approximately two miles to the proposed Padua Grid Battery Energy Storage System (BESS) Switchyard located at the intersection of Burshard Road and Gardner Road.

POWER is gathering and evaluating environmental data for the study area. TPWD staff reviewed the information provided and offer the following comments and recommendations.

Recommendation: When new construction is the only feasible option, TPWD recommends routing new transmission lines along existing road, pipeline, transmission line or other utility right-of-ways (ROW) or easements to reduce habitat fragmentation. By utilizing previously disturbed areas, existing utility corridors, county roads, private roads, railroads, and highway ROW, adverse impacts to fish and wildlife resources would be mitigated by avoiding and/or minimizing impacts to undisturbed habitats. A copy of *TPWD Recommendations for Electrical Transmission/Distribution Line Design and Construction*, which include general recommendations for transmission line construction, is available online at TPWD's Wildlife Habitat Assessment Program website.

Federal Regulations

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) Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

Review of aerial photography and the Ecological Mapping Systems of Texas (EMST), indicate that the study area includes post oak motte and woodland, live oak motte and woodland, native invasive mesquite shrubland and deciduous woodland, floodplain hardwood forest, and savanna grassland habitats. The availability of nesting, feeding and loafing habitat in close proximity to a waters source (Calaveras Lake) increases the potential for resident and migratory birds to occur in the study area. Additionally, the project area is in the middle of the Central Migratory Flyway through which millions of birds pass during spring and fall migration.

Data from the eBird online application have documented more than 250 bird species, including state listed and species of greatest conservation need (SGCN), at the Calaveras Lake Park eBird hotspot approximately two miles southeast of the project study area.

> **Recommendation:** It is TPWD's understanding that the proposed route would parallel existing transmission line ROW. Identifying and routing new transmission lines along existing utility corridors or other previously disturbed areas is supported by TPWD. Additionally, TPWD recommends scheduling any vegetation clearing or trampling to occur outside of the March 15 - September 15 migratory bird nesting season in order to comply with the MBTA.
>
> If vegetation clearing must be scheduled to occur during the nesting season, TPWD recommends the vegetation to be impacted should be surveyed for active nests by a qualified biologist. Nest surveys should be conducted no more than five days prior to the scheduled clearing to ensure recently constructed nests are identified. If active nests are observed during surveys, TPWD recommends a 100-foot radius buffer of vegetation remain around nests until eggs have hatched and the young have fledged; however, the size of the buffer zone is dependent on various factors and can be coordinated with the local or regional USFWS office.

The potential exists for birds to collide with transmission lines and associated guy wires and static lines. Bird fatalities can also occur due to electrocution if perching birds simultaneously make contact with energized and grounded structures. Birds most susceptible of colliding with electrical transmission lines (e.g., egrets, waterfowl, doves, and shorebirds) occur on the Calaveras Lake Park eBird hotspot species list near the project's study area.

> **Recommendation:** TPWD strongly recommends that transmission lines should be marked with line markers or bird flight diverters to reduce the potential of birds flying into the lines. Line alterations to prevent bird electrocutions should not necessarily be implemented after such events occur as all electrocutions may not

be known or documented. Incorporation of preventative measures along portions of the routes that are most attractive to birds (as indicated by frequent sightings) prior to any electrocutions is a preferred alternative.

TPWD recommends the transmission line design should utilize avian safety features described in the publication:

Avian Power Line Interaction Committee (APLIC). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Edison Electric Institute and APLIC. Washington, D.C.

In particular, the overhead ground wire should be marked with line markers to increase its visibility. Additional recommendations are available in the document entitled, "*TPWD Recommendations for Electrical Transmission/Distribution Line Design and Construction*" available on TPWD's website.

State Regulations

Parks and Wildlife Code, Chapter 64-Birds

State law prohibits any take or possession of nongame birds, including their eggs and nests. Laws and regulations pertaining to state-protection of nongame birds are contained in chapter 64 of the Texas Parks and Wildlife Code (PWC); specifically, section 64.002 provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. PWC section 64.003, regarding destroying nests or eggs, provides that, no person may destroy or take the nests, eggs, or young and any wild game bird, wild bird, or wild fowl. PWC chapter 64 does not allow for incidental take.

Although not documented in the Texas Natural Diversity Database (TXNDD), many bird species which are not listed as *threatened* or *endangered* are protected by chapter 64 of the PWC and are known to be year-round or seasonal residents or seasonal migrants through the proposed project area.

Recommendation: Please review the *Federal Regulations: Migratory Bird Treaty Act* section above for recommendations as they are applicable for chapter 64 of the PWC compliance.

Parks and Wildlife Code, Section 68.015

PWC regulates state-listed threatened and endangered animal species. The capture, trap, take, or killing of state-listed threatened and endangered animal species is unlawful unless expressly authorized under a permit issued by the USFWS or TPWD. A copy of *TPWD Guidelines for Protection of State-Listed Species*, which includes a list of penalties for take of species, can be found on the TPWD Wildlife Habitat Assessment Program website. State-listed species may only be handled by persons with appropriate authorization from the TPWD Wildlife Permits Office. For more

information regarding Wildlife Permits, please contact the Wildlife Permits Office at (512) 389-4647.

The potential occurrence of state-listed species in the project area is primarily dependent upon the availability of suitable habitat. Direct impacts to high quality or suitable habitat therefore are directly proportional to the magnitude and potential to directly impact state-listed species. State-listed reptiles that are typically slow moving or unable to move due to cool temperatures are especially susceptible to being directly impacted during ROW clearing and construction of the transmission line.

> **Recommendation:** TPWD recommends reviewing the most current TPWD annotated county lists of rare species for Bexar County, as state-listed species could be present depending upon habitat availability. These lists are available online at the TPWD Wildlife Diversity website. Environmental documents prepared for the project should include an inventory of existing natural resources within the proposed transmission line route. Specific evaluations should be designed to predict project impacts upon these natural resources including potential impacts to state-listed species.

The following state-listed species have the potential to occur within the study area if suitable habitat is available:

Texas horned lizard (*Phrynosoma cornutum*)

Texas horned lizard

Suitable habitat for the Texas horned lizard may be present within the project area. The Texas horned lizard can be found in open, arid, and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees.

If present in the project area, the Texas horned lizard could be impacted by ground disturbing activities, including ROW clearing. A useful indication that the Texas horned lizard may occupy the area is the presence of Harvester ant (*Pogonomyrmex* sp.) nests as they are the primary food source of horned lizards. Texas horned lizards are active above ground when temperatures exceed 75 degrees Fahrenheit. During warmer seasons, they may be able to avoid slow (<15 miles per hour) moving equipment. Texas horned lizards may hibernate on-site in loose soils a few inches below ground during the cooler months (October through April). Construction in these areas could harm hibernating lizards. If horned lizards (nesting, gravid females, newborn young, lethargic from cool temperatures or hibernation) cannot move away from noise and approaching construction equipment, they could be negatively affected by construction activities.

> **Recommendation:** TPWD recommends that a pre-construction survey be conducted to determine if horned lizards are present within the transmission line route corridor. As stated above, a useful indicator of potential occupancy is the

presence of Harvester ants. Surveys should be conducted during warmer months of the year when horned lizards are active.

TPWD recommends avoiding disturbance of the Texas horned lizard and colonies of the Harvester ant during clearing and construction. TPWD recommends a permitted biological monitor be present during construction to attempt to capture and relocate Texas horned lizards if found. If the presence of a biological monitor is not feasible, state-listed species observed during construction should be allowed to safely leave the site on their own

Species of Greatest Conservation Need

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 and/or declining populations, face threat of extirpation or extinction but currently lack the legal protection given to threatened or endangered species. Special landscape features, natural communities, and SGCNs are rare resources for which TPWD actively promotes conservation, and TPWD considers it important to evaluate and, if necessary, 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 TXNDD. The most current and accurate TXNDD data can be requested from the TXNDD website.

Please note that the absence of TXNDD information in an area does not imply that a species is absent from that 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 species, the data from the TXNDD do 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. These data are not inclusive and **cannot be used as presence/absence data**. This information cannot be substituted for on-the-ground surveys.

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 determined with repeated negative observations and consideration of all the variable factors contributing to the lack of detectable presence.

Suitable habitat for the following SGCN species may occur in the project area. The following beneficial management practices (BMP) are provided to assist in project planning to avoid/minimize potential impacts.

Texas indigo snake (*Drymarchon melanurus erebennus*)

The Texas indigo snake is the largest nonvenomous snake in North America and is typically associated with aquatic habitats including creeks, streams, ponds, and

drainages. The riparian corridors along creeks, ponds, drainage ditches, and Calaveras Lake in the project area provide suitable habitat for this species. Due to its high metabolism, it has a large home range in which it searches for prey and may be encountered away from aquatic habitats.

Recommendation: Because all snakes are generally perceived as a threat and killed when encountered during vegetation clearing, TPWD recommends project plans include comments to inform contractors of the potential for the Texas indigo snake to occur in the project area. The Texas indigo snake is non-venomous; contractors should be advised to avoid impacts to this species and other snakes as long as the safety of the workers is not compromised. For the safety of workers and preservation of a natural resource, attempting to catch, relocate and/or kill non-venomous or venomous snakes is discouraged by TPWD. If encountered, snakes should be permitted to safely leave project areas on their own. TPWD encourages construction sites to have a "no kill" policy in regard to wildlife encounters.

Western (ornate) box turtle (*Terrapene ornata*)

The ornate or western box turtle is an emydid turtle that occurs throughout Texas, typically in open habitats such as pastures, prairie, savannahs and open woodlands. Adults have a home-range size of approximately 6-14 acres. The ornate box turtle is omnivorous although the bulk of the diet consists of insects. Ornate box turtles will also eat carrion and small amounts of plant matter. Ornate box turtles are active spring through fall with courtship and mating occurring primarily in the spring. This species is threatened by habitat loss and fragmentation, vehicle strikes on roads, and collection for the pet trade and food markets.

Recommendation: TPWD recommends a biological monitor be present during construction to attempt to relocate SGCN turtles or other reptile species if found. If the presence of a biological monitor during construction is not feasible, state-listed threatened species and SGCN species observed during construction should be allowed to safely leave the site or be relocated by a permitted individual to a nearby area with similar habitat that would not be disturbed during construction. TPWD recommends that any translocations of reptiles be the minimum distance possible no greater than one mile, preferably within 100-200 yards from the initial encounter location.

Recommendation: Reptiles are susceptible to becoming entrapped in trenches or other excavations in a project area. Regarding potential wildlife entrapment in trenches and the use of an exclusion fence, please see recommendations under the *Beneficial Management Practices* heading below.

Beneficial Management Practices

TPWD recommends implementing the following BMP to avoid or minimize impacts to wildlife and SGCN, including state listed SGCN, potentially occurring within the construction corridor for this project:

1. In general, TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from discrete areas to be disturbed. In many cases, sediment control fence placement for the purposes of controlling erosion and protecting water quality can be modified minimally to also provide the benefit of excluding wildlife access to construction areas. The exclusion fence should be buried at least six inches and be at least 24 inches high. The exclusion fence should be maintained for the life of the project and only be removed after the project activities are completed and the disturbed sites have been revegetated or otherwise stabilized. Construction personnel should be encouraged to examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities.

2. For soil stabilization and/or revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding due to a reduced risk to wildlife. If erosion control blankets or mats would be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting and hydromulch containing microplastics should be avoided.

3. TPWD recommends designing the project to minimize removal of vegetation and retain native habitats. TPWD recommends that precautions be taken to avoid impact to SGCN flora and fauna, natural plant communities, and priority habitat types of the ecoregion while working in Bexar County, or if encountered during project construction, operation, and maintenance activities. Areas exhibiting a native grass and forbs component should be protected from disturbance and from introduction of non-native vegetation. TPWD encourages clearly marking areas found to contain rare plants as work zone avoidance areas prior to construction, maintenance, and operation activities.

4. TPWD recommends informing employees and contractors of the potential for state listed species and other SGCN to occur in the project area and to avoid impacts to all wildlife that are encountered. Wildlife observed during construction should be allowed to safely leave the site or be translocated to a nearby area with similar habitat that would not be disturbed during construction. TPWD recommends that any translocations of reptiles be the minimum distance possible, no greater than

one mile, and preferably with 100-200 yards from the initial encounter location. For purposes of relocation, surveys, monitoring, and research, state listed species may only be handled by persons with the appropriate authorization obtained through the TPWD Wildlife Permits Program. For more information on this authorization, please contact the Wildlife Permits Office at (512) 389-4647.

5. Waterways, floodplains, riparian corridors, lakes, and wetlands provide valuable wildlife habitat, and TPWD recommends protecting them to the maximum extent possible. TPWD recommends establishing disturbance-free buffers contiguous to wetlands or aquatic systems to preserve wildlife cover, food sources, and travel corridors and constructing the transmission line to span all creeks. During construction, trucks and equipment should use existing bridges to cross creeks. Erosion control measures should be installed prior to construction and maintained until disturbed areas are permanently revegetated using site-specific native vegetation.

6. Where trenching or other excavation is involved in construction, TPWD recommends contractors keep trenching, excavation, and backfilling crews close together to minimize the number of trenches or excavation areas left open at any given time during construction. Any holes left open for more than two daylight hours should be inspected for the presence of trapped wildlife prior to backfilling. TPWD recommends any open trenches or excavation areas be covered overnight and inspected every morning to ensure no wildlife species have been trapped. If trenches and excavation areas cannot be backfilled the day of initial excavation or covered overnight, then escape ramps should be installed, if feasible, at least every 300 feet. Escape ramps consist of short lateral trenches or wooden planks sloping to the surface at an angle less than 45 degrees (1:1).

7. Significant declines in the population of migrating monarch butterflies (*Danaus plexippus*), a federal candidate species, have led to widespread concern about this species and other native insect pollinator species due to reduction in native floral resources. To support pollinators and migrating monarchs, TPWD encourages the establishment of native wildflower habitats on private and public lands. Infrastructure ROW can provide habit for a diverse community of pollinators, providing food, breeding, or nesting opportunities. Infrastructure ROW extend across a variety of landscapes and can aid dispersal of pollinators by linking fragmented habitats. By acting as refugia for pollinators in otherwise inhospitable landscapes, this habitat can contribute to the maintenance of healthy ecosystems and provide ecological services such as crop pollination. The publication, Monarch Habitat Development on Utility Rights of Way, can be found at the TPWD Wildlife Habitat Assessment Program webpage. TPWD encourages the project proponent to restore or revegetate impacted areas with vegetation that provides habitat for monarch butterflies and other pollinator species. Species appropriate for establishment within the project area can be found by accessing the Lady Bird Johnson Wildflower Center, working with TPWD biologist to develop an appropriate list of species, or utilizing resources found at the Monarch Watch website or the Xerces Society's Guidelines webpage. For areas of the site that

already exhibit floral resources and for areas that are planted with floral resources, TPWD recommends incorporating pollinator conservation into maintenance plans for the site to promote and sustain the availability of flowering species throughout the growing season. TPWD recommends scheduling vegetation maintenance to occur after seeds from pollinator plants have been released and avoiding herbicide that affect floral resources.

8. To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of SGCN to the TXNDD following the data submittal instructions found at the *TPWD Texas Natural Diversity Database: Submit Data* webpage. An additional method for reporting observations of species is through the iNaturalist community app where plant and animal observations are uploaded from a smartphone. The observer then selects to add the observation to specific TPWD Texas Nature Tracker Projects appropriate for the taxa observed, including Herps of Texas, Birds of Texas, Texas Eagle Nests, Texas Whooper Watch, Mammals of Texas, Rare Plants of Texas, Bees & Wasps of Texas, Terrestrial Mollusks of Texas, Texas Freshwater Mussels, Fishes of Texas, and All Texas Nature.

TPWD advises review and implementation of these recommendations in the preparation of the environmental document for the project. Please contact me at (361) 431-6003 or **russell.hooten@tpwd.texas.gov** if you have any questions or we may be of further assistance.

Sincerely,

Russell Hooten

Russell Hooten
Wildlife Habitat Assessment Program
Wildlife Division

/rh 48820

cc: Marisa Wagley, Public Utilities Commission of Texas

Appendix B

Figure 4-1
Proposed Route with Environmental and Land Use Constraints (Topographic Base Map)

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GARDNER RD
COVER RD
BURSHARD RD
Padua Grid
BESS Switchyard
O.W. Sommers
Switchyard
Hondo Creek
Calaveras Creek
Chupaderas Creek

Legend

Project Components
- Study Area Boundary
- Proposed Route
- Switchyard
- Padua Grid BESS
- Power Plant

Existing Utility Features
- Existing Substation
- 138 kV Transmission Line
- 345 kV Transmission Line

Transportation Features
- Local Road
- Railroad

Land Use Features
- Water Well
- Oil/Gas Well
- Oil/Gas Pipeline

Hydrologic Features
- River / Stream
- NWI Wetland
- Floodplain

Administrative Features
- Parcel Boundary

1 inch = 500 feet

Note:
Sensitive cultural resource data are not shown on this map as these data are not to be reproduced, distributed, or released to the public.

Some data layers including property boundaries, pipelines, railroads, and oil/gas well sites obtained from third-party sources are inaccurate to varying degrees. These data have not been corrected and should be used as a general guide to feature locations only.

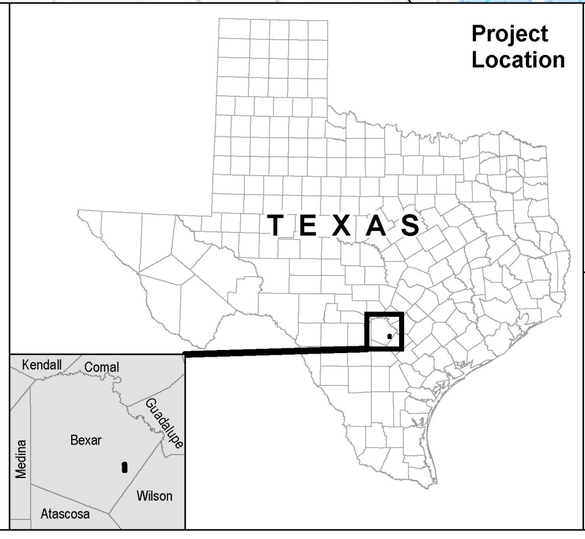
Digitization of initial preliminary transmission line segments was performed based on aerial interpretation of these features.

Some legend symbols are enlarged for easier identification.

Once the consensus route is approved by the Commission, the represented centerline is subject to modification after access has been granted and on the ground surveys have been completed to identify unknown constraints or the extent of known constraints.

Base Map: http://goto.arcgisonline.com/maps/USA_Topo_Maps

Project Location



TRANSMISSION INTERCONNECT
- PADUA GRID BESS PROJECT

Figure 4-1
Proposed Route With Environmental and Land Use Constraints

0 1,000 2,000
Feet

Date: 9/27/2022

Path: G:\Projects\179566_CPS_Padua\DD\GIS\apps\EA\Fig_4_1_Constraints.mxd

Appendix C

Figure 4-2
Habitable Structures and Other Land Use Features In the Vicinity of the Proposed Route (Aerial Base Map)

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GARDNER RD
COVER RD
BURSHARD RD
Padua Grid
BESS Switchyard
O.W. Sommers
Switchyard
Calaveras Creek
Hondo Creek
Calaveras Creek
Chupaderas Creek
1
2
3
4
101 CPS Energy Helipad
Approximately 2,896 Feet
South of Proposed Route

Legend

Project Components
- Study Area Boundary
- Proposed Route
- Switchyard
- Padua Grid BESS
- Power Plant

Existing Utility Features
- Existing Substation
- 138 kV Transmission Line
- 345 kV Transmission Line

Transportation Features
- Local Road
- Railroad
- 101 Helipad

Habitable Structures
- 1 Habitable Structure and Map ID

Land Use Features
- Oil/Gas Pipeline

Hydrologic Features
- River / Stream
- Waterbody

Administrative Features
- Parcel Boundary

1 inch = 500 feet

Note:
Sensitive cultural resource data are not shown on this map as these data are not to be reproduced, distributed, or released to the public.

Some data layers including property boundaries, pipelines, railroads, and oil/gas well sites obtained from third-party sources are inaccurate to varying degrees. These data have not been corrected and should be used as a general guide to feature locations only.

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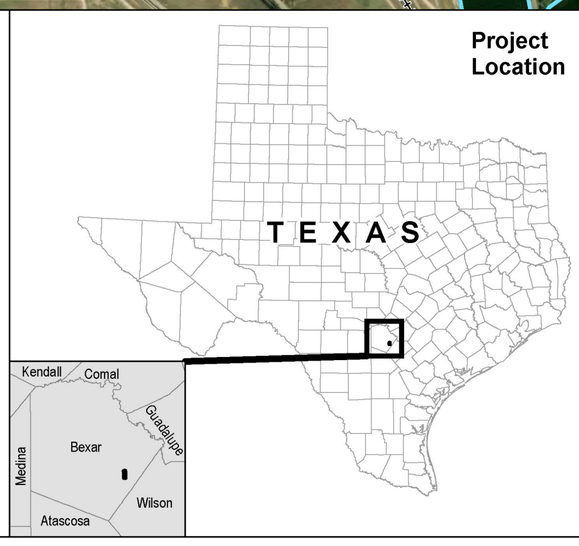
Some legend symbols are enlarged for easier identification.

Once the consensus route is approved by the Commission, the represented centerline is subject to modification after access has been granted and on the ground surveys have been completed to identify unknown constraints or the extent of known constraints.

Base Map: ESRI Aerial imagery 2022

Project Location



TRANSMISSION INTERCONNECT
- PADUA GRID BESS PROJECT

Figure 4-2
Habitable Structures and Land Use Features in the Vicinity of the Proposed Route

0 1,000 2,000
Feet

Date: 9/27/2022

Path: G:\Projects\179566_CPS_Padua\DD\GIS\apps\EA\Fig_4_2_Inventory.mxd