



INDEX OF TEXAS ARCHAEOLOGY

Open Access Gray Literature from the Lone Star State

Volume 2019

Article 102

2019

Cultural Resource Survey for Proposed Construction of the San Felipe Substation with Associated Access Road and Overhead Electric ROW Located in Near the Town of Fabens, El Paso County, Texas

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**Cultural Resource Survey for Proposed Construction of the
San Felipe Substation with Associated Access Road and
Overhead Electric ROW Located in Near the Town of Fabens,
El Paso County, Texas**

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August 2019



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TABLE OF CONTENTS

ABSTRACT	1
INTRODUCTION.....	2
ENVIRONMENTAL SETTING.....	5
CULTURE HISTORY	5
Paleo-Indian Period	5
Archaic Period.....	6
Formative Period	7
Mesilla Phase.....	7
Doña Ana Phase	7
El Paso Phase	8
Historic Period.....	8
PREVIOUS RESEARCH.....	9
METHODS.....	9
RESULTS OF INVESTIGATIONS.....	10
RECOMMENDATIONS	10
APPENDIX A (EPE Project Map).....	10

LIST OF FIGURES

Figure 1. USGS 1:24:000 Project area map showing survey segments..	3
Figure 2. Project Area showing satellite image close-up of survey segment	4
Figure 3. Overview of eastern most survey ROW segment looking south.	11
Figure 4. Overview of eastern most survey ROW segment looking north	11
Figure 5. Overview of eastern survey segment near I-10 underpass looking south.	12
Figure 6. Overview of central survey segment, west of I-10 looking west.	12
Figure 7. Overview of San Felipe Substation block survey looking north.	123
Figure 8. Overview of San Felipe Substation block survey looking west.	13
Figure 9. Overview of the proposed OHE ROW corridor looking west.	14
Figure 10. Overview of the proposed OHE ROW corridor looking east.	14
Figure 11. Overview of the proposed roadway corridor ROW corridor looking west.	15
Figure 12. Overview of the proposed roadway corridor ROW corridor looking east.	15

ABSTRACT

On August 15 and 16, 2019, Advanced Archaeological Solutions (ADAS) conducted a block survey and linear right-of-way (ROW) surveys of several separate segments of proposed access road, overhead electric transmission line corridor area and a block survey area (33.75 acres) that total 2.44 miles (12,883 linear feet) located near the Town of Fabens, El Paso County, Texas (Figures 1-2).

EPE proposes to construct a new substation on approximately 18.8 acres of University Land (UL) administered by the University of Texas. The project will also include two 150 ft. wide transmission line corridors (approximately 1.64 miles total for both/ 47 acres) and a 75 ft. wide distribution/access road corridor approximately 0.8 miles long (12 acres). Acquisition of the easements from the University of Texas requires an Archaeological Survey of the proposed project boundaries in accordance with Texas Historical Commission (THC) regulations.

No cultural resource sites or isolated cultural occurrences were encountered in the proposed project area. Accordingly, it is recommended that the proposed undertaking will have no effect on prehistoric or historic properties and that the proposed project may proceed without further archeological review. However, in the rare and unusual case that buried cultural materials are encountered, construction should be halted immediately in the location of the discovery. In addition, Advanced Archaeological Solutions and the Texas State Historic Preservation Office should be contacted to determine a proper course of action.

INTRODUCTION

On August 15 and 16, 2019, Advanced Archaeological Solutions (ADAS) conducted a block survey and linear right-of-way (ROW) surveys of several separate segments of proposed access road, overhead electric transmission line corridor area and a block survey area (acres) that total 2.44 miles (12,883 linear feet) located near the Town of Fabens, El Paso County, Texas (Figures 1-2). EPE proposes to construct a new substation on approximately 18.8 acres of University Land (UL) administered by the University of Texas. The project will also include two 150 ft. wide transmission line corridors (approximately 1.64 miles total for both) and a 75 ft. wide distribution/access road corridor approximately 0.8 miles long. Acquisition of the easements from the University of Texas requires an Archaeological Survey of the proposed project boundaries in accordance with Texas Historical Commission (THC) regulations. Survey was conducted by two archaeologists, Michael Stowe and Amanda McDowell.

El Paso Electric Company will be constructing a new electrical substation known as San Felipe substation (700ft by 700ft). The substation site will be completely cleared of vegetation and leveled. Concrete foundations will be excavated and installed to an appropriate depth based on engineering design to support the electrical equipment. An access road for the substation will be installed with a minimum base course of 12-inches, travel surface of approximately 25ft, and include additional disturbance within corridor for drainage features. New transmission structures will be installed with varying depths based on engineering design and structure types. Excavation for transmission structures are typically 10% of the pole height plus 2ft using an augur or drilling rig. A work site at each transmission structure location will be graded and leveled for safe operation of construction equipment. A transmission access road will be installed within the corridor with a typical travel surface of 14ft.

The archaeological survey area includes a 75 meter (250 foot) transect corridor that was surveyed to cover the proposed OHE construction ROW corridor (150 foot corridor) which includes a 50 foot survey buffer to either side of the construction corridor. The survey buffer for the access road portion includes a 30 meter (100 foot) transect corridor that was surveyed to cover the proposed access road ROW corridor (75 foot corridor) as well as a 50 foot survey buffer to either side of the construction corridor. The San Felipe Substation footprint measures roughly 700 feet (east/west) by 1,175 feet (north/south) for a total of 18.80 acres and included a 100 foot buffer surrounding the proposed parcel (survey acreage is 33.10 Acres). Lands surveyed for the project area are publicly owned and administered by University Lands.

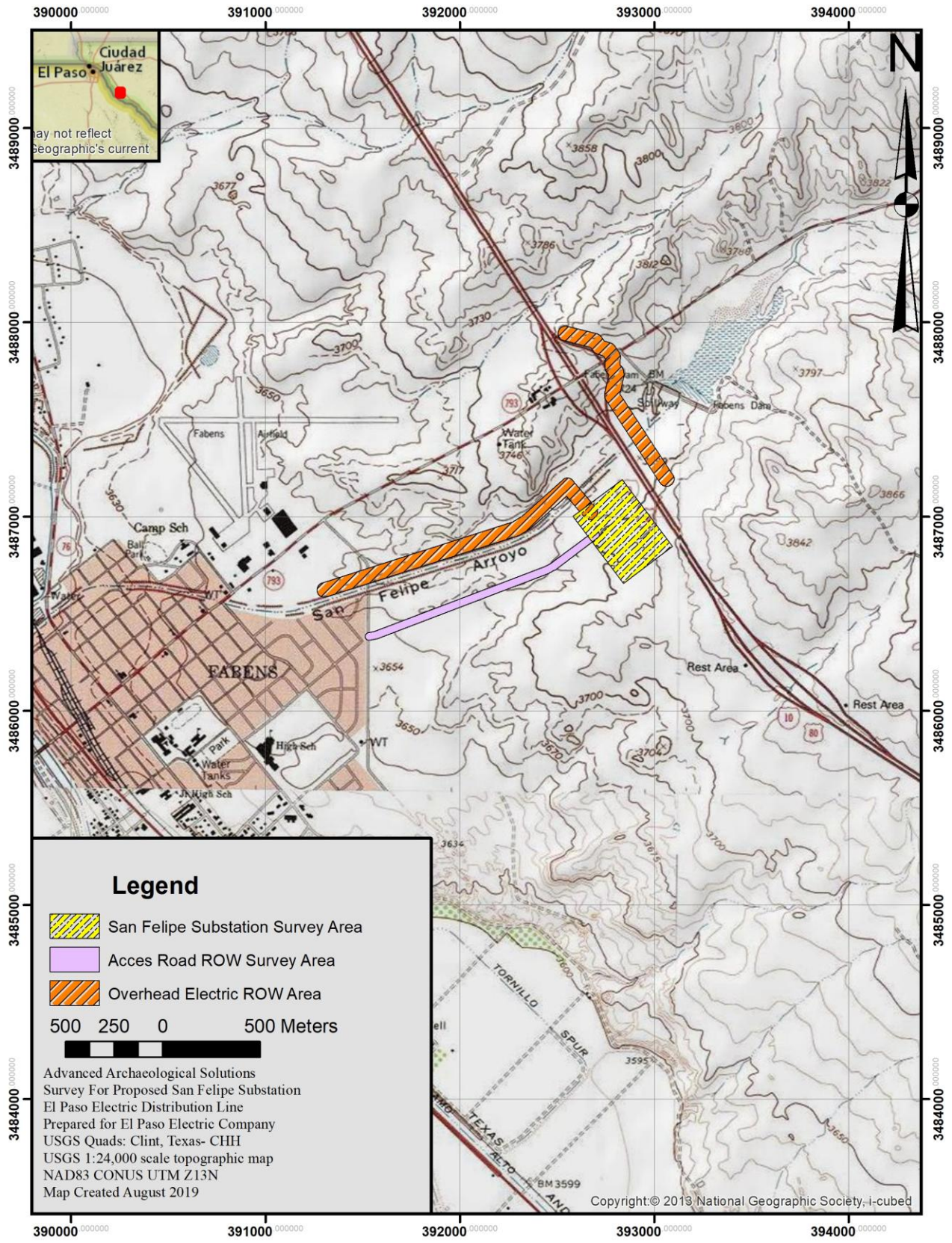


Figure 1. USGS 1:24,000 Project area map showing survey areas.

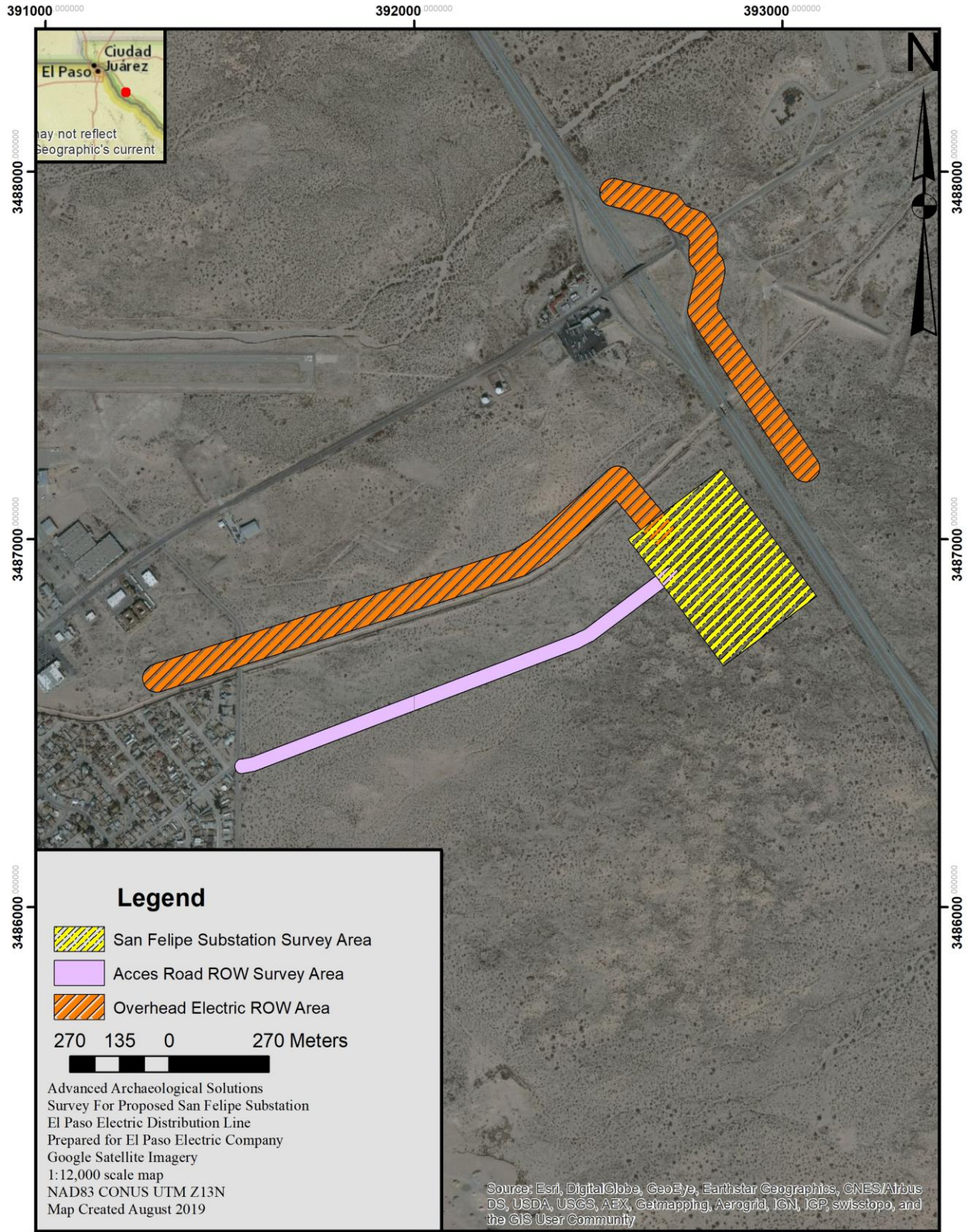


Figure 2. Project Area showing satellite imagery close-up of survey segments.

ENVIRONMENTAL SETTING

The project area is located within an extremely eroded and heavily disturbed desert landscape that is dominated by the presence of a large arroyo (San Felipe Arroyo) and heavily bladed and modified alluvial outwashes that extend east to west towards the Town of Fabens (see Figures 3-12). The soils consist of a compact sandy loam interspersed with sparse loose gravels. Ground cover (vegetation) throughout the project area is light to moderate and nonexistent in the central portion of the project area due to recent blading activities, existing two-track roadways from recent vehicle traffic as well as heavy sheet washing and numerous modern trash dumping. The biotic community is roughly comprised of primarily mesquite, creosote, yucca and assorted upland range grasses and forbs. The geomorphic integrity within the project area is noted as extremely poor based on the lack of intact soils as well as the level of mechanical disturbance noted throughout the area. Elevation is estimated between 3600-3800-ft above mean sea level (amsl).

CULTURE HISTORY

Due to the lack of cultural resources located during this survey, a detailed culture history will not be supplied. Instead, only a brief discussion of the prominent known occupations for this region of far west Texas will be presented to the reader. These include the Paleo-Indian, Archaic, Formative, and Historic periods. During the last 25 years, archaeological research in cultural resource management projects in southern New Mexico has provided extensive information on the past use of the region from the Paleo-Indian period through the present Euro-American era.

The research seems to indicate a gradual increase in population size and a slow reduction in mobility from the Paleo-Indian to the late Formative (El Paso phase) periods. Site sizes increase as do the number of sites and the quantity and diversity of artifacts. Economic strategies shift from small mobile hunting groups to larger agricultural communities. More permanent occupations occur later in the chronological sequence, but it is unclear if a year-round, sedentary settlement system ever became established prehistorically in the region.

Paleo-Indian Period (10,000-6000 B.C.)

The Paleo-Indian period reflects a highly specialized subsistence strategy of big-game hunting by small mobile groups during the Late Pleistocene period. The earliest occupation, termed Clovis

(10,000-9000 B.C.), is poorly represented in this area. Clovis period economy focused on hunting the now extinct mammoth, bison, camel, and horse as well as smaller fauna. The large, fluted spear point is distinctive of the Clovis period, and it has been recorded in the form of isolated occurrences throughout the region.

Better represented in the region, by both isolated projectile points and archaeological sites, is the Folsom complex (9000-8500 B.C.). Folsom complex archaeological evidence is represented by distinctive fluted spear points, which are regionally diminutive compared to those found elsewhere throughout North America. Environmental changes and hunting resulted in the extinction of mammoth and other Pleistocene fauna. The Folsom and later Midland complex was a modification of previous subsistence technologies to exploit bison and other, smaller fauna. Folsom period artifacts found in the region included items associated with stone tool manufacturing, hunting, butchering, and hide processing.

By the end of the Paleo-Indian period (approximately 8500-6000 B.C.), peoples associated with the Plano tradition occupied the area. Subsistence economies still focused on big game hunting, tool kits reflected different groups or task specialists that include the Angostura, Agate Basin, Plainview, and Cody complexes. Plano tradition projectile points are unfluted with distinctive collateral or transverse-parallel pressure flaking. Campsites of this type have been found along permanent water supplies and at spring sources in lower elevations.

Archaic Period (6000 B.C.-A.D. 200)

The Archaic period represents a shift from big game hunting economy to a broad-spectrum subsistence strategy. The Archaic economy is based on hunting and gathering, with emphasis on seed gathering and a reliance on mobility to exploit a variety of biotic communities throughout the Basin and Range Province. Hunting focused on small animals and some use of larger ungulates such as deer and pronghorn. Archaic period archaeological remains are found in a greater variety of topographic settings than those from the Paleoindian period, reflecting the different subsistence practices. During the Archaic, there is a trend toward less effective moisture. Plant and animal life adapted to this drying. Human groups modified their subsistence practices to exploit various biotic zones. Oftentimes, the use of these areas was tied to the season of the year.

Archaic site affiliations are typically based on projectile points considered indicative of the period. These were fixed to a wooden shaft and used in conjunction with the atlatl, a dart-throwing device used for hunting and warfare. The Archaic period is when groundstone tools were introduced. One-handed manos, used with slab and basin metates, were used to process seeds, plants, and animal matter. The introduction of agriculture was an important factor in the shift from mobile hunting and gathering units to sedentary aggregated populations. The Archaic is also when more permanent structures were built; these are, however, very ephemeral when compared to the structures of the subsequent period.

Formative Period (A.D. 200-1400)

The Formative period in the Southwest is traditionally marked by the advent of the use of ceramics. In this area, the Formative peoples are considered the Jornada branch of the Mogollon culture. Based on both surface structures and ceramic types, the Formative period is generally divided into three phases: Mesilla, Doña Ana, and El Paso.

Mesilla Phase (A.D. 200-1000)

The Mesilla phase is distinguished from the Archaic by the presence of brownware ceramics. Pottery-producing, early pithouse villages were established near the mouths of canyons and on higher alluvial terraces where dry-land and flood-land agriculture was utilized. By A.D. 1000, village-dwelling populations were employing an agricultural subsistence economy. El Paso Brownware is characteristic of the Mesilla Phase. Other intrusive ceramic types appeared in the area sometime between 700-800 A.D.; these include San Francisco Red and Mimbres Boldface Black-on-white. The occurrence of these wares indicates that there was some interaction between the neighboring groups. Toward the end of the Mesilla phase, El Paso Bichrome and Mimbres Classic Black-on-white appear in the site assemblages. Projectile point styles are also sometimes used to identify Mesilla phase sites; however, since many of the Late Archaic point styles are associated with the early Formative period as well, ceramics are a better temporal indicator.

Doña Ana Phase (A.D. 1100-1200)

The Doña Ana phase is defined as an approximately 100-year transition period between the Mesilla and the later El Paso phase. Most important is the transition from pithouse to surface

structures. Sites of this phase contain ceramics and projectile points that can be assigned to both Mesilla and El Paso phases. No clearly defined Doña Ana phase site has been documented, and the appropriateness of defining this transition as a separate chronological phase remains in question.

El Paso Phase (A.D. 1200-1400)

The El Paso phase is the most recent prehistoric occupation in the region and is the best documented. Subsistence relied heavily on intensive farming and was supplemented with hunting, particularly of smaller game, and gathering of native plant materials. Squash, corn, and beans are cultigens commonly recovered from these sites, as well as a variety of native plant remains such as mesquite, yucca, acorns, and cacti. El Paso phase residential sites are found along large drainages, basin floors, and alluvial fans. Pueblos are found along the Rio Grande and both the western and eastern margins of the Hueco Bolson. Larger sites, greater artifact densities, and clustered settlement patterns are typical of this phase.

Indicative of this phase is the presence of locally manufactured, painted ceramics known as El Paso Polychrome. Intrusive ceramics include Chupadero Black-on-white, Three Rivers Red-on-terracotta, and Lincoln Black-on-red, all from the north; Ramos Polychrome, from the south; and polychromes from the west. Around A.D. 1400, large agricultural settlements seem to be abandoned in the area. Athapaskans (Apaches) from the north moved into the region of the Middle Rio Grande and native populations changed substantially by the time of the Spanish Entrada in A.D. 1540.

Historic Period (A.D. 1450-Present)

Exploration of this region of the continent did not occur until 1541 during an expedition lead by Francisco Vazquez de Coronado. Numerous indigenous peoples were encountered, however the Apache are identified as the most noteworthy. It was not until 1845 that the first settlement was established in the Tularosa basin. After this date, numerous expeditions by the United States led to more permanent settlements throughout southern New Mexico.

PREVIOUS RESEARCH AND METHODOLOGY

Prior to survey, the Texas Historical Commission (THC) Archeological Sites Atlas was inspected to determine if any previously identified historic properties were present within the proposed survey parcel. Previously recorded cultural resources within 1 mile of the proposed portions of the Project are discussed below. Review of the Texas Historical and Archeological Sites Atlas (Atlas) in August 2019 revealed seven previously recorded cultural resources within 1 mile of the portions of the Project. Three sites (41EP5216, 41EP5213, 41EP5215, 41EP5210) were recorded as part of a University of Texas Field school. One site (41EP5926) was recorded as part of a survey for the Fabens Independent School District and two sites (41EP5922 and 41EP5921) was recorded as part of a project for a Border Patrol Shooting Range. None of the archaeological sites located during the records search are located within the proposed project area.

Archeological survey of the block parcel selected for the San Felipe Substation footprint and the linear ROW corridors was conducted by two professional archeologists walking transects spaced at 15-meter intervals, covering 100 percent of the project area. Several representative views of the project area were photographed. No artifacts were observed or collected during the survey. No major alluviation has occurred across the project area and surface visibility is high due to a lack of vegetation and severe surface erosion (i.e. wind erosion and sheetwashing). Additionally, large portions of the survey area were dominated by eroded drainage areas within the San Felipe Arroyo and steep slopes or by heavily eroded and mechanically bladed surface area (northern portion). Water erosion, through sheetwashing activities has also impacted the area by exposing Pleistocene age soils, indicating the geoarchaeological context of the project area is shallow and that surface visibility of cultural deposits and artifact assemblages should be high, and that significant features or deposits would be detected through surface observations. Therefore, it was recommended that subsurface shovel testing would not be required as a site detection and discovery method.

To distinguish between archaeological sites and isolated occurrences, three criteria were utilized as standard measures for evaluating the significance of cultural manifestations in the project area: artifact density, artifact diversity, and potential for buried deposits. Artifact scatters of less than 10 artifacts per 100 meters square, and single undatable features with no subsurface integrity and no associated artifacts were recorded as isolated occurrences.

RESULTS OF INVESTIGATIONS

No cultural sites or isolated occurrences were encountered in the proposed San Felipe Substation footprint, the proposed roadway ROW or the proposed overhead electric linear survey corridor. The majority of the survey area for this project is located within the San Felipe Arroyo drainage area. It is clear from the terrain that prehistoric cultural activity or sites in this area are extremely unlikely. The northern portion of the project is located just north of Interstate 10 and within a portion of terrain that has clearly been impacted by modern ground disturbance and sheet washing due to its proximity to the highway. Commercial and residential development surrounds the corridor and this development has most certainly impacted the parcel, even to the point that the ground appears to have been mechanically bladed sometime in the past given the considerably level nature of the terrain. Numerous two-track and bladed roads cross and bisect the project area. A large number of recent modern trash dumping events as well as recreational off road activities have significantly impacted most of the area west of the I-10 area.

The observed geomorphology revealed that the project area maintains poor soil integrity, indicating a very low probability for the presence of significant buried prehistoric cultural remains.

RECOMMENDATIONS

No cultural resource sites or isolated cultural occurrences were encountered in the proposed project area. Accordingly, it is recommended that the proposed undertaking will have no effect on prehistoric or historic properties and that the proposed project may proceed without further archeological review. However, in the rare and unusual case that buried cultural materials are encountered, construction should be halted immediately in the location of the discovery. In addition, Advanced Archaeological Solutions and the Texas State Historic Preservation Office should be contacted to determine a proper course of action.



Figure 3. Overview of eastern most survey ROW segment looking south.



Figure 4. Overview of eastern most survey ROW segment looking north.



Figure 5. Overview of eastern survey segment near I-10 underpass looking south.



Figure 6. Overview of central survey segment, west of I-10 looking west.



Figure 7. Overview of San Felipe Substation block survey looking north.



Figure 8. Overview of San Felipe Substation block survey looking west.



Figure 9. Overview of the proposed OHE ROW corridor looking west.



Figure 10. Overview of the proposed OHE ROW corridor looking east.



Figure 11. Overview of the proposed roadway corridor ROW corridor looking west.



Figure 12. Overview of the proposed roadway corridor ROW corridor looking east.

APPENDIX A

(EPE Project Map)



Disclaimer: Map is for planning & reference purposes only. EPE does not guarantee the x, y coordinates or accuracy of GIS data used in the development and publishing of this map.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

— Proposed Center Line	1:13,000		EL PASO ELECTRIC COMPANY SAN FELIPE SUBSTATION PROJECT
— Access_Road_Dist_Corr_75ft			
— CL1_Corridor_150ft			PLEYBA
— CL2_Corridor_150ft			Date: 7/9/2019
— Proposed Substation			