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APPENDIX E

CULTURAL RESOURCES TECHNICAL REPORT

CONFIDENTIAL AND NOT FOR PUBLIC DISTRIBUTION

This appendix presents the Cultural Resources Technical Report prepared for the Border BESS Project. A copy of the confidential report has been provided to the California Energy Commission.

Confidentiality Statement

The Cultural Resources Technical Report prepared by Rincon Consultants, Inc. for the BESS Project contains sensitive and confidential information concerning archaeological resources. This report should be held confidential and is not for public distribution. Archaeological site locations are exempt from the California Public Records Act, as specified in Government Code 6254.10, and from the Freedom of Information Act (Exemption 3), under the legal authority of both the National Historic Preservation Act (PL 102-574, Section 304[a]) and the Archaeological Resources Protection Act (PL 96-95, Section 9[a]). Sections of this report contain locational maps and other sensitive information. Distribution should be restricted appropriately.

A copy of the Confidential Cultural Resources Technical Report is on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield. The report should be cited as follows:

Rotella, Brianna, Theadora Fuerstenberg, and Christopher Duran
2022. Cultural Resources Technical Report for the *Henrietta 99.4 Megawatt Battery Energy Storage System Project*. Rincon Consultants, Inc., Project No. 22-12592. Report on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield.

Henrietta 99.4 Megawatt Battery Energy Storage System Project

Cultural Resources Technical Report
CONFIDENTIAL

prepared for

Henrietta BESS LLC
16027 25th Avenue
Kings County, California 92154

prepared by

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August 2022

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Rotella, Brianna, Theadora Fuerstenberg, and Christopher Duran

2022. *Cultural Resources Technical Report* for the *Henrietta 99.4 Megawatt Battery Energy Storage Systems Project*. Rincon Consultants, Inc., Project No. 22-12592. Report on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield.

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Executive Summary

Rincon Consultants, Inc. (Rincon) was retained to conduct a cultural resources study and prepare a Cultural Resources Technical Report for the Henrietta BESS LLC, 99.4 megawatt (MW) Henrietta Battery Energy Storage System (BESS) Project ((BESS Project). The BESS Project is located at 16027 25th Avenue, near Lemoore in unincorporated Kings County (County), California. Rincon understands that the BESS Project is subject to approval by the California Energy Commission (CEC), and a cultural resources study is needed to support the Post-Certification Amendment for the Project, pursuant to Title 20, California Code of Regulations (CCR), Section 1769 (a)(1) *Post Certification Petition for Changes in Project Design, Operation or Performance and Amendments to the Commission Decision*.

This cultural resources study and Cultural Resources Technical Report was completed according to Title 20, CCR Section 1769 (a)(1) and includes discussion and assessment of the proposed BESS Project changes, cultural resources present, and BESS Project compliance with applicable laws, ordinances, regulations, and standards. This report also assesses whether the original CEC Conditions of Certification stipulated for cultural resources relative to the Henrietta Peaker Plant project (CEC Docket No. 01-AFC-18) are applicable to the BESS Project. The original Conditions of Certification for cultural resources (CUL-1 through CUL-6) are listed in Section 2.2 of this report.

Henrietta BESS LLC proposes to implement a 99.4 MW BESS Project east of the existing Henrietta Peaker Plant (HPP). . Given the interrelationship between the HPP and the Henrietta BESS Project, the CEC has jurisdiction over the permitting of the BESS Project.

The following analysis follows Title 20, CCR, Appendix B guidelines and includes a general description of the proposed site and related facilities, maps of the proposed Project area and related facilities, a cultural resources records search, archival research, a Sacred Lands File search, a pedestrian field survey, desktop historical built environment analysis, and recommendations. Although the CEC's regulatory nexus is exempt from compliance with the California Environmental Quality Act, this report refers to California Register of Historical Resources (CRHR) thresholds for assessing significance of cultural resources.

The proposed area of direct impact and BESS Project activities is located on approximately 5.5 acres within the northeastern undeveloped portion of the approximately 20-acre property. The BESS Project area referred to herein includes the entire 20-acre HPP parcel. In the early 2000s, the existing HPP facilities were licensed by the CEC and built in the western portion of the Project area. Prior to site development for the HPP, the entire property has been subject to extensive plowing, tilling, and grading activities since the early 1900s. The portion of the BESS Project site area north of the existing transmission line corridor that traverses the general BESS site area from southwest to northeast was used for construction laydown during construction of the HPP and was subsequently used for agricultural crop production until 2015.

[redacted]

The pedestrian survey conducted for the BESS Project included the entire approximately 20-acre HPP property, including the existing HPP facilities in the western portion and the approximately 5.5-acre area of direct BESS Project impact which is located primarily in the eastern portion of the 20-acre HPP parcel, but also includes upgrades to the HPP southern perimeter road as well as several 13.8 kilovolt (kV) power poles to be installed in the HPP portion of the parcel. The entire Project area appears to have been extensively graded during the construction of the HPP facilities and associated infrastructure; many surficial disturbances were noted. [redacted]

The proposed BESS Project changes have a moderate potential to impact intact cultural resources. The property has been subject to extensive plowing, tilling, and grading activities since the early 1900s. However, the depth of ground disturbance related to such activities is typically no greater than 1.5 to 2 feet below surface. The depth of ground disturbance for the current BESS Project consists of up to 3 feet of BEES Project site grading, up to approximately 5 feet for the new detention basin, and 15 feet for 13.8 kV pole foundations/placement, the majority of which will occur in areas east of the current HPP facility and disturbances associated with that facility's development. [redacted]

The majority of the BESS Project-related changes are consistent with the previous impact assessment for the existing HPP facilities. However, despite the disturbed nature of the BESS Project area, there is a ***moderate risk*** of encountering subsurface archaeological deposits due to the alluvial sediments, [redacted] and the likely depth of previous disturbances in comparison to anticipated disturbances for the current BESS Project. [redacted]

The Conditions of Certification (CUL-1 through CUL-6) for the original CEC certification include Worker Environmental Awareness Program, Native American and Archaeological Monitoring, preparation of a Cultural Resources Monitoring and Mitigation Plan, and measured for unanticipated discoveries of buried archaeological resources. The original Conditions of Certification are considered sufficient to protect cultural resources for the current BESS Project amendment. In addition to CUL-1 through CUL-6, Rincon also recommends adherence to standard conditions for the treatment of unanticipated discoveries of human remains. This measure is outlined along with CUL-1 through CUL-6 in Section 6 of this report.

1 Introduction

Rincon was retained by Henrietta BESS LLC to conduct a cultural resources study and prepare a Cultural Resources Technical Report for the Henrietta BESS LLC, 99.4 Megawatt (MW) Henrietta Battery Energy System Storage (BESS) Project (BESS Project). The BESS Project is located at 16027 25th Avenue near Lemoore in unincorporated Kings County, California. The planned Henrietta BESS site is located east of the existing Henrietta Peaker Plant (HPP).. This analysis includes the entire 20-acre HPP parcel and was conducted to support the Post-Certification Amendment for the BESS Project that will be submitted to California Energy Commission (CEC). This report was prepared to support the assessment of potential impacts to historical resources and unique archaeological resources as defined by the California Environmental Quality Act (CEQA), but pursuant to Title 20, California Code of Regulations (CCR), Section 1769(a)(1) *Post Certification Petition for Changes in Project Design, Operation or Performance and Amendments to the Commission Decision*.

The following analysis follows Title 20, CCR, Appendix B guidelines, and includes a general description of the proposed BESS Project site and related facilities, maps of the proposed BESS Project area and related facilities, a cultural resources records search, archival research, a Sacred Lands File (SLF) search, field survey, desktop historical built environment analysis, and recommendations.

1.1 Project Location

The proposed Henrietta BESS site (Project area) is located within an approximately 20-acre parcel at 16027 25th Avenue, near Lemoore, Kings County, California, and situated approximately 1 mile south of State Route 198 (SR-198) and west of Avenal Cutoff Road (Figure 1). The 20-acre HPP parcel is known as Assessor Parcel Number (APN) 024-109-070- 000. The area of impact for the proposed BESS Project encompasses approximately 5.5 acres primarily in the eastern portion of the overall 20-acre parcel depicted in the *Westhaven, Calif.* U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map. The entire 20-acre parcel, including the BESS site has been previously graded. The Project area is located in Township 19 South, Range 19 East, Section 27, 28, 33, and 34, San Bernardino baseline and meridian (Figure 2). The property is bordered by 25th Avenue to the west, Pacific Gas and Electric (PG&E) substation facilities to the north, and solar development to the east and south. Land use surrounding the Project area is characterized by the United States Naval Air Station Lemoore to the north, active agricultural fields, scattered rural residences, and power generation and transmission facilities.

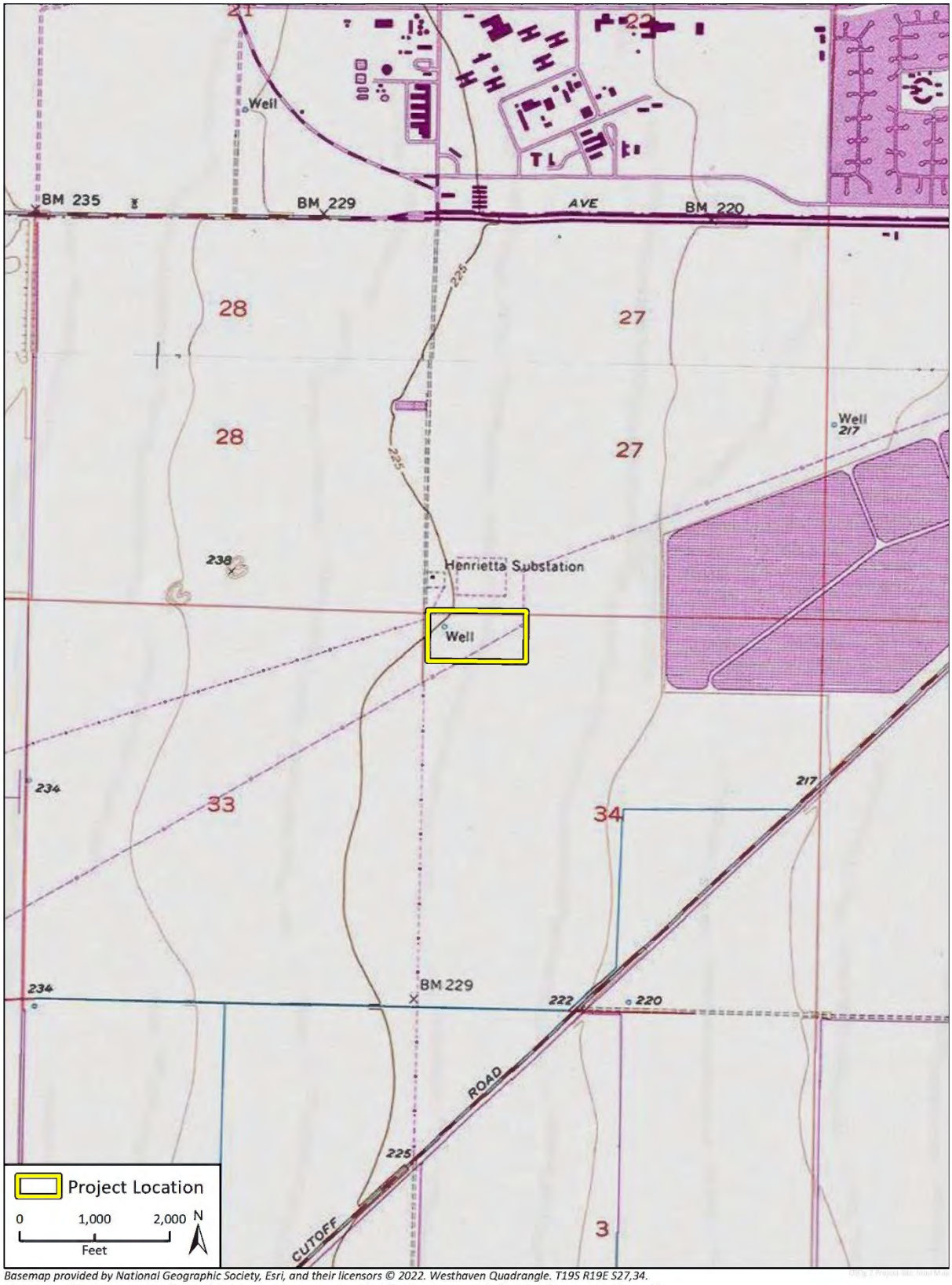
Figure 1 Regional Location Map

Basemap provided by Esri and its licensors © 2022.

Project Location

N

Figure 2 Project Location Map



Basemap provided by National Geographic Society, Esri, and their licensors © 2022. Westhaven Quadrangle. T19S R19E S27,34.
The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

1.2 Project Description

Below is a summary of the Project as currently defined. See Figure 3 for Project details.

1.2.1 Technology Overview

The HPP is interconnected to the adjacent PG&E Henrietta Substation to the north via an existing approximately 650-foot-long nominal 70 kV transmission line. The Henrietta BESS project will include an on-site 13.8 kV switchyard. An approximately 690-foot-long 13.8 kV overhead dual circuit distribution line will connect the BESS switchyard to the 13.8 kV sides of the existing HPP generator step-up transformers (GSU). The dual circuit line will connect to HPP's existing 13.8 kV buss duct in the area between the combustion turbine generator terminals and the low side of the GSUs. This connection will be made such that one circuit will connect to the Unit 1 buss duct and the other circuit will connect to the Unit 2 buss duct. Operation of the Henrietta BESS facility will be integrated with the existing HPP, but the BESS will be charged from the electrical grid and not the HPP.

The Henrietta BESS would be capable of operating for short duration (e.g., 1-2 hours at its full capacity or for longer durations at partial capacity as directed by the California Independent Systems Operator). If the 99.4 megawatt (MW) of energy is needed for dispatch to the electrical grid for more than short duration, the peaker plant would then be called upon to meet the dispatch orders. The proposed BESS facility would consist primarily of modular battery storage system enclosures and inverters installed on concrete pad foundations or piles. Battery technologies being considered are lithium iron phosphate (LFP) and lithium nickel manganese cobalt oxide or other technologies that may be available as the BESS project is designed. Batteries would be installed in enclosures that are electrically connected together to reach the desired output of BESS. The medium voltage transformers and inverters would be located adjacent to the enclosures they serve. Approximate dimensions for the battery enclosures vary but are typically in the range of 8-feet wide by 23-feet long by 9.5-feet high. It is possible that enclosure dimensions could vary and be up to 40-feet long depending on the supplier. Battery output degrades over time requiring replacement and/or additional battery bank modules ("augmentation"). Allowance for this work and the physical enclosures required will be made during construction of the BESS. The Henrietta BESS Project includes upgrades to the existing HPP plant perimeter roadway (outside the HPP fence line) on the southern and central portions of the HPP parcel to provide stable access to the Henrietta BESS site and construction laydown area for construction and operation of the facilities.

1.2.2 Project Details

The Henrietta BESS site will be connected to the HPP to the as described above in Section 1.2.1. . The 99.4 MW BESS site area, including switchyard, 13.8 kV electrical interconnection route to the HPP, site access roadways and construction laydown/parking area can be seen on the Preliminary Site Layout (Figure 3). A summary of ground disturbance is presented in Table 1.

The key components of the proposed Henrietta BESS Project as currently defined are listed below:

- 99.4 MW of batteries with 99.4 MW hours of energy production per hour per cycle (e.g., 99.4 MW hours for 1 or 2 hours)
- The proposed BESS facilities will be located on an approximate 3.1-acre site area encompassing the BESS site and the BESS switchyard within the overall 20-acre site owned by MRP San Joaquin Energy LLC.

Figure 3 Detailed Site Map

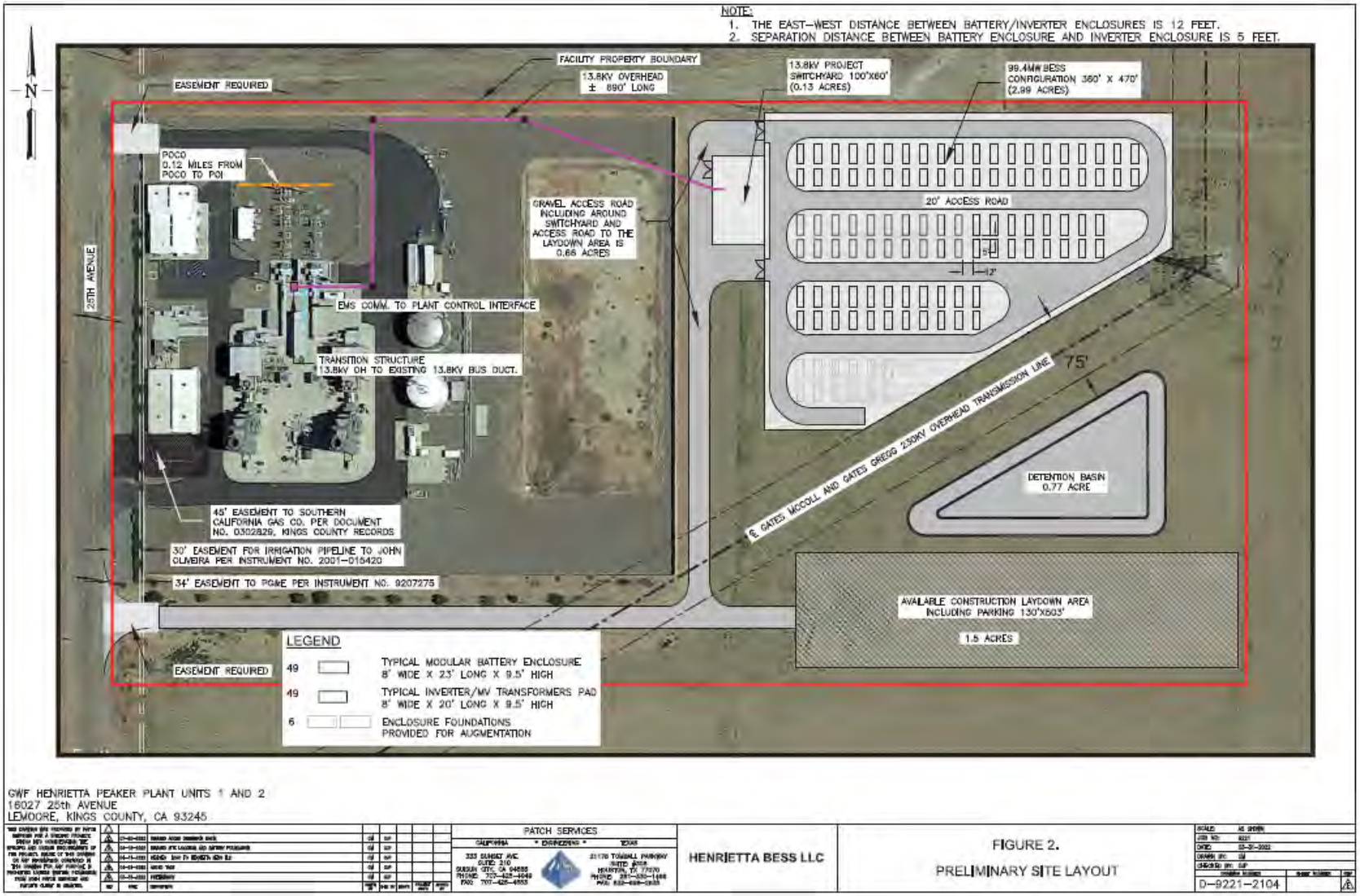


Table 1 Summary of Ground Disturbance and Earthwork

Project Component	Approximate Quantity (+/-)	Comments
Site Access Road Improvements		Approximately 1,300 feet of new or improved access road construction will be performed by grading to a uniform width of 25 feet, compacting the road surface, and adding up to an approximately
Acreage	0.83 acre	
Cut and fill (avg. 2.5')	3,350 yd^3	
Gravel import for road (1-foot depth)	1,340 yd^3	
BESS Site/Switchyard		Vegetation on the area is maintained on an annual basis, as needed, for fire prevention. Grading and excavation will be required for site levelling, drainage control, and foundations. Assumed average cut and replacement of existing soil required for reconditioning, extends to a depth of 2-3 feet (assumed average of 2.5 feet). Earthwork/soil conditioning material will be balanced onsite, as practical. Assumed concrete pad foundations for BESS enclosures, inverters/transformers, and BESS Switchyard. If pile foundations were utilized instead of concrete pad foundations, it is estimated that ~8 piles (e.g., H-Frame, +/-15'long) would be required per BESS and Inverter/Transformer enclosure (~880 piles total)
Acreage	3.14 acres	
Cut and soil conditioning (ave.2.5 feet depth)	15,500 yd^3	
Gravel import for pad (1-foot later)	5,000 yd^3	
Concrete import for pad (assume 18-inch pad)	1,500 cubic yards (assume 110 foundations at 10 feet wide by 25 feet long by 1.5 feet thick)	
Engineered Fill import for concrete pad support (assume 1-foot depth)	1,000 yd^3	
Temporary Laydown		Vegetation on the area is maintained on an annual basis, as needed, for fire prevention. No grading is proposed. It is assumed that approximately 600 linear feet of temporary internal access roadways will need to be established within the laydown area. It is further assumed that 9 inches of gravel surface Will be placed on the access roadways for stability and to limit fugitive dust generation.
Acreage	1.5 acres	
Gravel Import for temporary internal laydown area access road (9pprox.. 600-feet long and 25-feet wide; 9 inches of gravel)	425 yd^3	
13.8 kV Overhead Line Pole Foundations		Approximately 690-foot-long overhead 13.8 kV line with assumed maximum 80-foot-tall dual circuit poles. Currently assume 3 poles required plus 2 dead-end structures
Assume 15-feet deep, 4-foot diameter hole (9pprox.. 7 cubic yards per pole foundation)	Approx. 35 yd^3	

1.3 Personnel

Rincon Senior Archaeologist Theadora Fuerstenberg MA, Registered Professional Archaeologist (RPA), managed this cultural resources study and provided senior oversight. Theadora Fuerstenberg meets the Secretary of the Interior's *Professional Qualification Standards* for archaeology (National Park Service 1983). Archaeologist Alyssa Newcomb, MA, conducted the archaeological pedestrian survey and Archaeologist Brianna Rotella, BA, authored this report. Geographic Information System Analyst Allysen Valencia, BA, prepared the figures found in the report. Principal Andrew Pulcheon, MA, RPA, reviewed this report for quality control and quality assurance.

2 Regulatory Setting

This section includes a discussion of federal, state, and local laws, ordinances, regulations, and standards governing cultural resources, as well as applicable Conditions of Certification and CEC citing guidelines. The CEC has jurisdiction over the proposed Project, therefore the Project should adhere to Title 20, CCR, Section 1769 (a)(1): *Post Certification Petition for Changes in Project Design, Operation or Performance and Amendments to the Commission Decision*.

2.1 Federal Regulations

National Historic Preservation Act

Cultural resources are considered during federal undertakings chiefly under Section 106 (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), and the National Environmental Policy Act (NEPA). Properties of traditional, religious, and cultural importance to Native Americans are considered under both Section 101 (d)(6)(A) and Section 106 36 CFR 800.3-800.10 of the National Historic Preservation Act (Department of the Interior 2004). Other federal laws include the Archaeological and Historic Preservation Act of 1974, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1989, among others.

Section 106 (16 United States Code 470f) requires federal agencies to account for the effects of their undertakings on any district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected historic property is assessed and mitigation measures are proposed to reduce any impacts to an acceptable level. Historic properties are those significant cultural resources listed in or eligible for listing in the NRHP per the criteria listed at 36 CFR 60.4.

There is currently no identified federal regulatory nexus for the Henrietta BESS Project.

2.2 State Regulations

Section 21.11 A. Exemption from CEQA Documentation Requirements

Certified regulatory programs such as the CEC are exempt from the provisions of CEQA concerning preparation initial studies, negative declarations, and Environmental Impact Reports contained in CEQA Chapters 3 and 4 (Public Resources Code Sections 21100–21154). The environmental review and public comment procedures required under the CEC's regulatory program are deemed equivalent to review under CEQA. Instead of preparing an environmental review document under CEQA, the CEC follows the environmental review process included in its own regulatory program.

CEQA

Formal findings of importance (for state purposes, eligibility for the California Register of Historical Resources [CRHR]) and Project effects are made by the lead state regulatory agency or, for federal undertakings, in consultation with the federal lead agency, the State Historic Presentation Officer,

4. If there are changes to the scheduling of the construction phases of the project, a letter shall be submitted to the CPM within five (5) days of identifying the changes.

A copy of the current schedule of anticipated project activity and a copy of current maps shall be submitted in each MCR.

CULTURAL RESOURCES MONITORING AND MITIGATION PLAN

CUL-3 Prior to the start of ground disturbance the designated cultural resources specialist shall prepare, and the project owner shall submit to the CPM for review and approval, a Cultural Resources Monitoring and Mitigation Plan (CRMMP), identifying specific measures to minimize potential impacts to sensitive cultural resources. Approval of the CRMMP, by the CPM, shall occur prior to any ground disturbance.

Protocol: The Cultural Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures.

a. A discussion of the inclusion of Native American observers or monitors, the procedures to be used to select them, and their role and responsibilities. Native American monitors/consultants shall be provided an opportunity to provide comments regarding the choice of the curation facility.

b. A discussion of the location(s) where monitoring of project construction activities is deemed necessary. Monitoring shall be conducted full time, during ground disturbance that exceeds the level of previous disturbance at the project site and in the vicinity of the Avanal Road Cutoff.

c. A discussion of the requirement that, if there is an unanticipated discovery, all cultural resources encountered will be recorded on a DPR form 523 and mapped (may include photos).

d. A discussion that all archaeological materials collected as a result of the archaeological investigations shall be curated in accordance with The State Historical Resources Commission's "Guidelines for the Curation of Archaeological Collections," into a retrievable storage collection in a public repository or museum. The public repository or museum must meet the standards and requirements for the curation of cultural resources set forth at Title 36 of the Code of Federal of Regulations, Section 79.

   If there is an unanticipated discovery and materials are collected, an addendum to the CRMMP shall be provided that discusses any requirements, specifications, or funding needed for curation of the materials to be delivered for curation and how requirements, specifications and funding will be met. The name and phone number of the contact person at the institution shall also be included. In addition, information shall be included indicating that the project owner will pay all curation fees and that any agreements concerning curation will be retained and available for audit for the life of the project.

e. A discussion of the proposed Cultural Resource Report (CRR) which shall be prepared according to ARMR Guidelines. The CRR shall include all cultural resource information obtained as a result of this project. All survey reports, monitoring records and additional research reports not previously submitted to the CHRIS shall be included as an appendix to the CRR. Comments provided by Native American monitors/consultants regarding newly discovered Native American artifacts shall be included in this report. This report shall be

- For any cultural resource encountered, the project owner shall notify the CPM within 24 hours after the find.
- All required data recovery and mitigation shall be completed expeditiously unless all parties agree to additional time.

Verification: At least thirty (30) days prior to the start of ground disturbance, the project owner shall provide the CPM with a letter confirming that the CRS, alternate CRS and cultural resources monitor(s) have the authority to halt construction activities in the vicinity of a cultural resource find and stating that the CRS will notify the CPM and project owner within 24 hours after a find.

CULTURAL RESOURCE SPECIALIST DUTIES

CUL-6 1. The CRS, alternate CRS, or monitors shall monitor ground disturbance full time in the vicinity of the project site where project ground disturbance exceeds previously disturbed soil. Cultural resources monitoring shall also occur full time on the gas pipeline in the vicinity of the Avenal Cutoff Road. Additional monitoring shall occur at the discretion of the CRS. In the event that the CRS determines that full- time monitoring is not necessary in certain locations, a letter providing a detailed justification for that decision to reduce the level of monitoring shall be provided to the CPM for review and approval.

2. Monitors shall keep a daily log of any monitoring or cultural resource activities and the CRS shall prepare a weekly summary report on the progress or status of cultural resources-related activities. The CRS may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff.

3. The CRS shall notify the project owner and the CPM, by telephone, of any incidents of non-compliance with any cultural resources conditions of certification within 24 hours of becoming aware of the situation. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the conditions of certification.

4. A Native American monitor shall be obtained to monitor ground disturbance in areas where Native American artifacts may be discovered. Informational lists of concerned Native Americans and Guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that will be monitored. Native American monitors shall also be given an opportunity to comment on any discovered Native American artifacts. These comments shall be included in the CRR required in CUL-3.

2.3 Local Regulations

Kings County

Kings County General Plan has guidelines for determining the significance of archaeological and historical resources, as well as mitigation measures to avoid, preserve, and adequately record significant cultural resources (Kings County 2009). Goal 26 of the open space element of the General Plan stipulates the preservation of significant historical and archaeological sites and structures in Kings County. The County also follows all provisions of CEQA regarding cultural resources.

If it can be demonstrated that a project will cause damage to a significant cultural resource, reasonable efforts must be made to mitigate the impact to a level below significant. Mitigation measures identified by CEQA (Section 21083.2) and the *CEQA Guidelines* (Section 15064.5) include the following:

3 Natural and Cultural Setting

This section provides background information pertaining to the natural and cultural context of the Project area. It places the Project area in the broader natural environment that has sustained populations throughout history. This section also provides an overview of regional indigenous history, local ethnography, and post-contact history. This background information describes the distribution and type of cultural resources documented in the vicinity of the Project area to inform the cultural resources sensitivity assessment.

3.1 Natural Setting

The Project is located in the central San Joaquin Valley, approximately 220 feet (67 meters) above mean sea level. The Project area is surrounded by expansive alluvial floodplains, river and creek channels, dried lakebeds, and various other riparian environments. The environmental setting is bordered by low-rising, gradual uplands, and various coastal ranges to the west, the Diablo Range to the north, the Sierra Nevada Range to the east, and the Temblor Range to the south. The general Project area consists of the existing HPP and adjacent facilities and is surrounded by agricultural land, scattered commercial development, a military installation, and paved roads and highways. The proposed Project area is located in low-lying agricultural fields west of Highway 41, with vegetation comprising of native and non-native grasses. The region has a Mediterranean climate, with dry summers, mild winters, and relatively low annual rainfall that occurs primarily in the winter and spring. The average annual high temperature is 98°F, the average annual low temperature is 38°F, and the average annual precipitation is 9 inches (Western Regional Climate Center 2022).

According to published geologic mapping, the Project area is underlain by recent alluvial fan deposits in the great valley. More specifically, sediments deposited from streams emerging from highlands surrounded the Great Valley, Modesto Formation, including granitic sand and silt (Jenkins 1965). The soil type within the Project area consists of Lethent clay loam, comprised of the following series: Lethent (85 percent), Garces (4 percent), Gepford (3 percent), Houser (3 percent), Panoche (2 percent), Unanamed (2 percent), and Twisselman (1 percent) (California Soil Resource Lab 2022). The Lethent Series is dominant series in the Project area and is discussed here. The Lethent Series consists of clay loam typically found on low lying alluvial fans, fan remnants, basins, and basin rims. A typical soil profile of the Lethent Series features moist, strong coarse clay loam from 0 to 6 inches, moist, weak to strong medium clay to clay loam from 6 to 31 inches, and a moist, slightly hard, sandy loam from 31 to 60 inches below surface (California Soil Resource Lab 2022). The underlying geomorphology of the region is quaternary alluvium and marine deposits, dating from the Pleistocene to Holocene (Jennings et al. 1977). The Project area is in an alluvial deposit that dates to the era of known human occupation in the region; therefore, the archaeological sensitivity for the Project area, based on sediments alone, is high.

3.2 Cultural Setting

3.2.1 Indigenous History

The Central Valley has been described as one of the largest intermontane basins extending 650 kilometers from the Siskiyou Mountains to the Tehachapi Mountains (Rosenthal et al. 2007). No

3.2.2 Ethnographic Overview

Southern Valley Yokuts

The project area is located in the traditional territory of Southern Valley Yokuts territory (Wallace 1978). The ethnographic Southern Valley Yokuts lived in the southern San Joaquin Valley south of the San Joaquin River to the foot of the Tehachapi Mountains (Kroeber 1925, Wallace 1978). Three geographical divisions of the Yokuts are the Northern Valley, Southern Valley, and Foothill Yokuts. The distinction between the three groups is primarily based on language dialect (Mithun 2001).

The Yokuts established large permanent village settlements, or closely associated smaller settlements. Residential structures were most often of two types: single-family dwellings and larger communal residences that housed ten families or more. Villages frequently included mat-covered granaries and a sweathouse (Mithun 2001, Sutton et al. 2016).

The basic economic unit among the Yokuts was the nuclear family. The nuclear family was linked to totemic lineages based on patrilineal descent. Totem symbols were passed from father to offspring. Families that shared the same totem formed an exogamous lineage. Totems were associated with one of two moieties. This moiety division played a role during ceremonies and other social events (Wallace 1978).

Yokuts were split into self-governing local groups that included several villages. Each group had a chief who directed ceremonies, mediated disputes, handled punishment of those doing wrong, hosted visitors, and provided aid to the impoverished. In certain cases, settlements had two chiefs, one for each moiety. Other political positions included the chief's messenger and the spokesman (Wallace 1978).

Shamans were an important part of Yokut village life. A Yokut Shaman gained power through a dream or vision. If, after this vision, the man accepted the role as shaman, he would pray, fast, and acquire talismans to aid him in his future work. Shamans had the ability to heal the sick and served a primary role in religious life (Wallace 1978).

Yokuts gathered food from fishing, collecting, and hunting small game. They used tule rafts and caught fish with nets, spears, basket traps, and bow and arrow. They often gathered mussels and hunted turtles in lakes, rivers, and streams. Wild seeds and roots contributed a large portion to the Yokuts diet. Tule roots were gathered, dried, and pounded into a flour which was prepared as a mush. Tule seeds and grass and flowering herb seeds were prepared in the same way. Leaves and stems of certain plants, such as clover and fiddleneck, were also collected. Acorns, a staple of most California Native Americans, were not readily available in the ethnographic territory of the Yokuts. Some Yokuts tribes traded for acorns with neighboring groups, such as the Salinan and Chumash to the west, the Foothill Yokuts to the east, and the Kawaiisu and Kitanemuk to the southeast (Kroeber 1925). Waterfowl was frequently hunted with snares, nets, and bow and arrow. Land mammals and birds contributed a smaller part of the Yokuts diet. Small game was occasionally taken in snares or traps or shot with bows and arrows (Wallace 1978, Sutton et al. 2016).

Yokuts technology depended primarily on tule. Stems of the plant served as the raw material for baskets, cradles, boats, housing, and many other items. Manos and metate were used to process food and animal hides (Barton et al. 2010, Sutton et al. 2016). Tools such as knives, projectile points, and scraping tools were made from imported lithic materials because stone was not readily available in the Central Valley. Some tools, such as bead drills, could be made from local obsidian

(Sutton et al. 2016). Marine shells secured through trade with coastal groups were used as shell money and personal adornment items, such as *Olivella* beads (Sutton et al. 2016, Wallace 1978).

Currently, descendants of the ethnographic Yokuts reside in the Santa Rosa Indian Community of the Santa Rosa Rancheria in Lemoore. The Tachi Yokut Tribe make up the membership of this community and carry on many of the traditional lifeways.

3.2.3 Historic Overview

Post-contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican American War, signals the beginning of the American Period when California became a territory of the United States.

Spanish Period (1769 to 1822)

Spanish explorers made sailing expeditions along the coast of what was then known as Alta (upper) California between the mid-1500s and mid-1700s. In 1542, while in search of the legendary Northwest Passage, Juan Rodríquez Cabríllo recorded a visit to the Santa Barbara area. Sebastian Vizcaíno also conducted exploration of the coast in 1602 and named the Santa Barbara Channel when his ship entered it on the feast day of Saint Barbara (Kyle 2002). The Spanish crown laid claim to Alta California based on the surveys conducted by Cabríllo and Vizcaíno (Bancroft 1885, Gumprecht 1999).

By the eighteenth century, Spain developed a three-pronged approach to secure its hold on the territory and counter against other foreign explorers. The Spanish established military forts known as presidios, as well as missions and pueblos (towns) throughout Alta California. The 1769 overland expedition by Captain Gaspár de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. Portolá established the Presidio of San Diego as the first Spanish settlement in Alta California in 1769. Franciscan Father Junípero Serra also founded Mission San Diego de Alcalá that same year, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823. (Graffy 2010).

Construction of missions and associated presidios was a major emphasis during the Spanish Period in California to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns; just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles).

Spain began making land grants in 1784, typically to retiring soldiers, although the grantees were only permitted to inhabit and work the land. The land titles technically remained property of the Spanish king (Livingston 1914).

4 Methods

This section presents the methods for each task completed during the preparation of this assessment.

4.1 Background and Archival Research

4.1.1 California Historical Resources Information System

Rincon conducted a cultural resources records search of the California Historical Resources Information System (CHRIS) records utilizing information obtained from the Southern San Joaquin Valley Information Center (SSJVIC) at California State University, Bakersfield in March 2022. The search was performed to identify previously conducted cultural resources studies and previously recorded cultural resources within the Project area and a 1-mile radius surrounding it. Results from the records search can be found in Appendix A of this report.

4.1.2 Background Research

As part of the background research for this project, Rincon also reviewed the State Built Environment Resources Directory, NRHP, CRHR, California Historical Landmarks, California Points of Historic Interest, and the California Office of Historic Preservation Archaeological Determinations of Eligibility.

Additionally, the following resources were reviewed:

- Google Earth imagery;
- United States Geological Survey [USGS] topographic quadrangles for 1929, 1956, 2012, 2018, 2018, and 2021 Westhaven; 1940 and 1943 Stratford; 1948, 1955, 1956, 1958, 1960, 1962, and 1966 Fresno; and 1993 Visalia (USGS 2022); and
- Aerial photographs dating to 1955, 1984, 1994, 2005, 2009, 2010, 2012, 2014, 2016, and 2018 (Nationwide Environmental Title Research [NETR] 2022).

4.1.3 Native American Outreach

Rincon contacted the Native American Heritage Commission (NAHC) on March 23, 2022, to request a search of the SLF and a contact list of Native Americans culturally affiliated with the project vicinity. The results of this search are focused on the USGS topographic sections surrounding the project area. Generally, a positive SLF indicates that a Tribe has reported a sacred site within a 1 to 3-mile vicinity of a project area. Appendix B provides documentation of Rincon's outreach effort to locally affiliated Native American tribes.

4.2 Field Survey

On April 4, 2022, Rincon archaeologist Alyssa Newcomb, MA, RPA, conducted a pedestrian field survey of the approximately 20-acre Project area using transect intervals of 10-meters. Exposed ground surfaces were examined for artifacts (e.g., flaked stone tools, tool-making debris, ground stone milling tools), ecofacts (marine shell and bone), soil discoloration that might indicate the

5 Results

[redacted] Known Cultural Resources Studies

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted] Known Cultural Resources

[redacted]

5.2.1 [redacted]

[redacted]

5.2.2 [redacted]

[redacted]

5.2.3 [redacted]

[redacted]

5.2.4 Review of Historical Topographic Maps and Aerial Imagery

[redacted]

5.2.5 Native American Outreach

A response from the NAHC was received on May 24, 2022, stating that the results of the SLF search were *negative*, meaning no tribal heritage resources are noted in the Project vicinity. A list of five individuals from five tribal groups in the region was provided (see Appendix B).

5.3 Field Survey

[redacted]

[redacted]

5.3.1 [redacted]

[redacted]

5.3.2 [redacted]

[redacted]

Figure 4 Survey Coverage Map

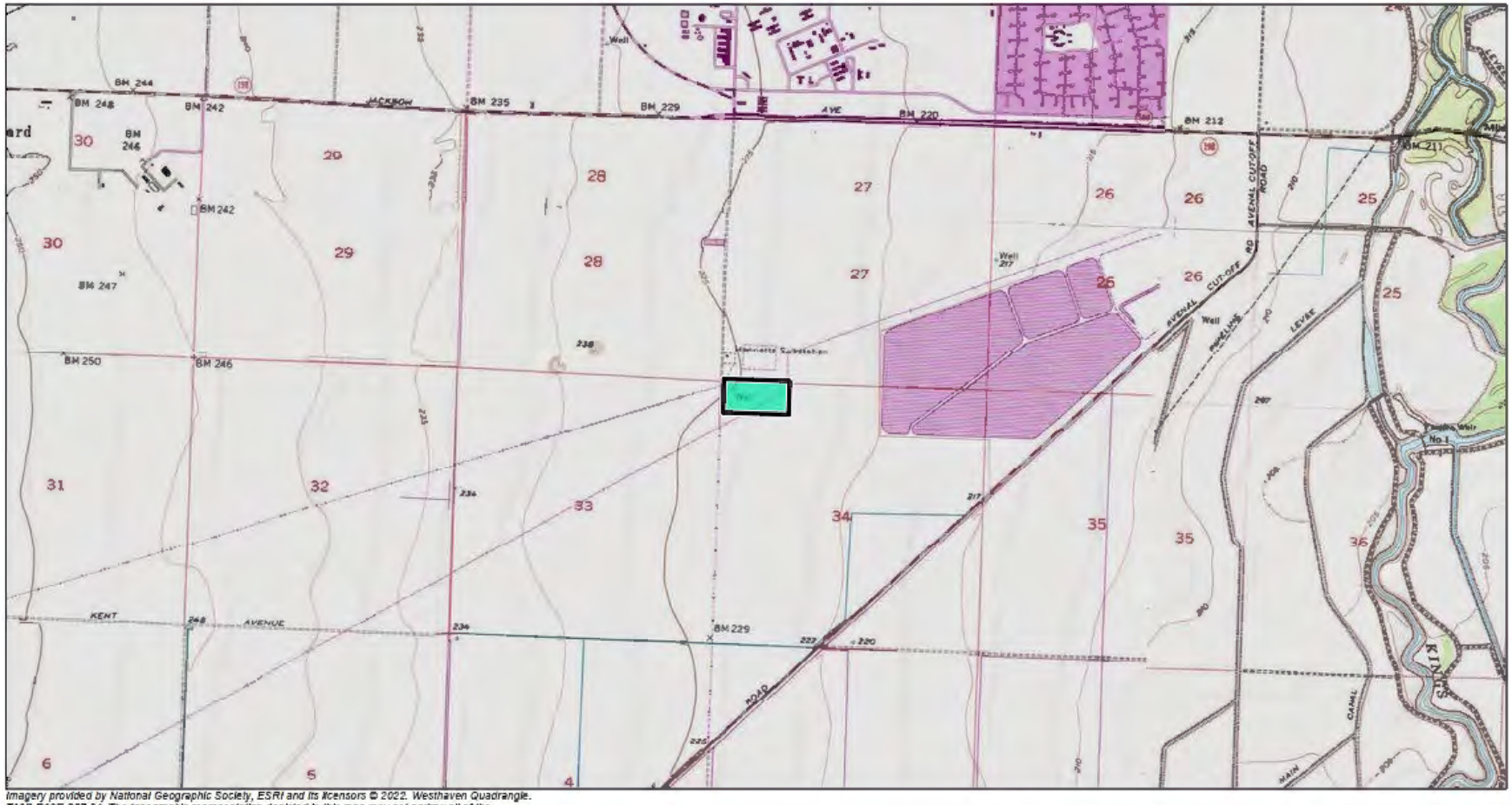


Figure 5 Overview of the Existing HPP Facilities, Facing West

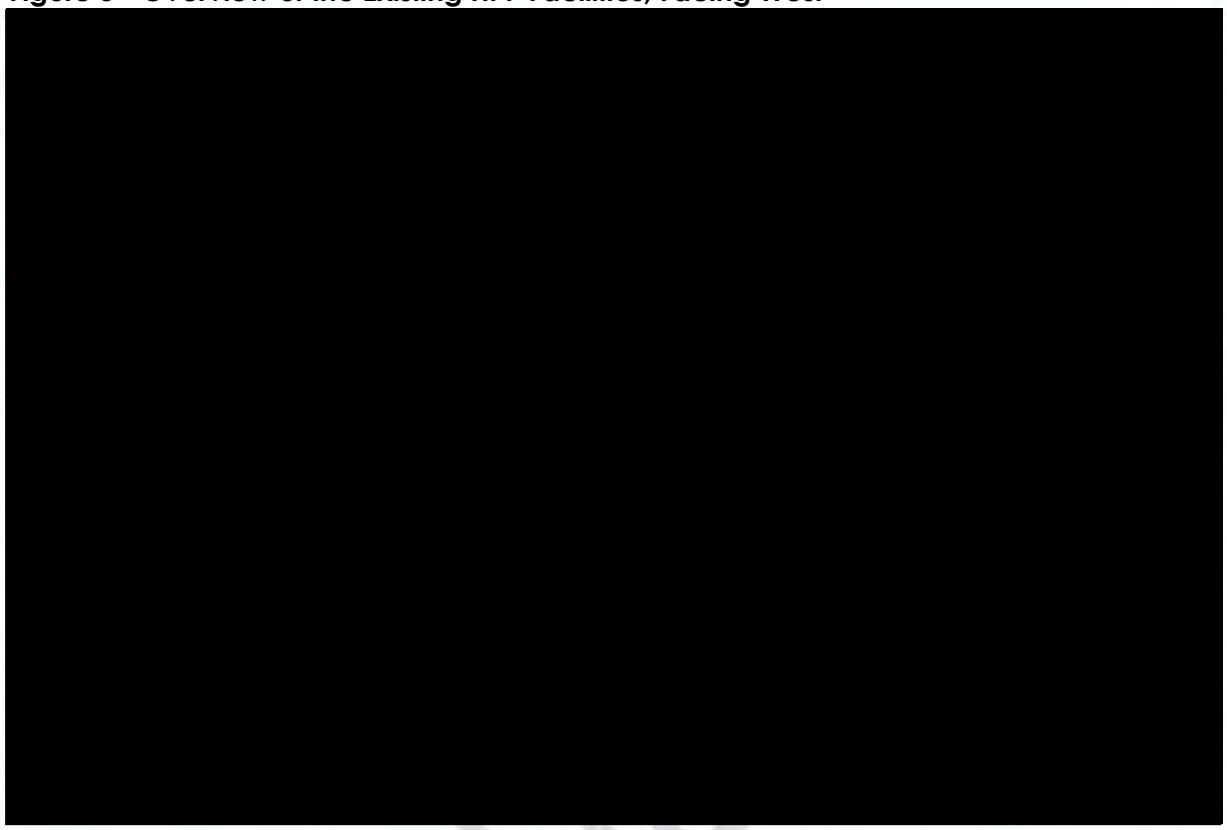


Figure 6 Overview of the Existing HPP Facilities, Facing Southwest

Figure 7 View of Existing Detention Basin Within HPP Facilities Property, Facing South

Figure 8 Overview of BESS Project Area, Facing Southwest

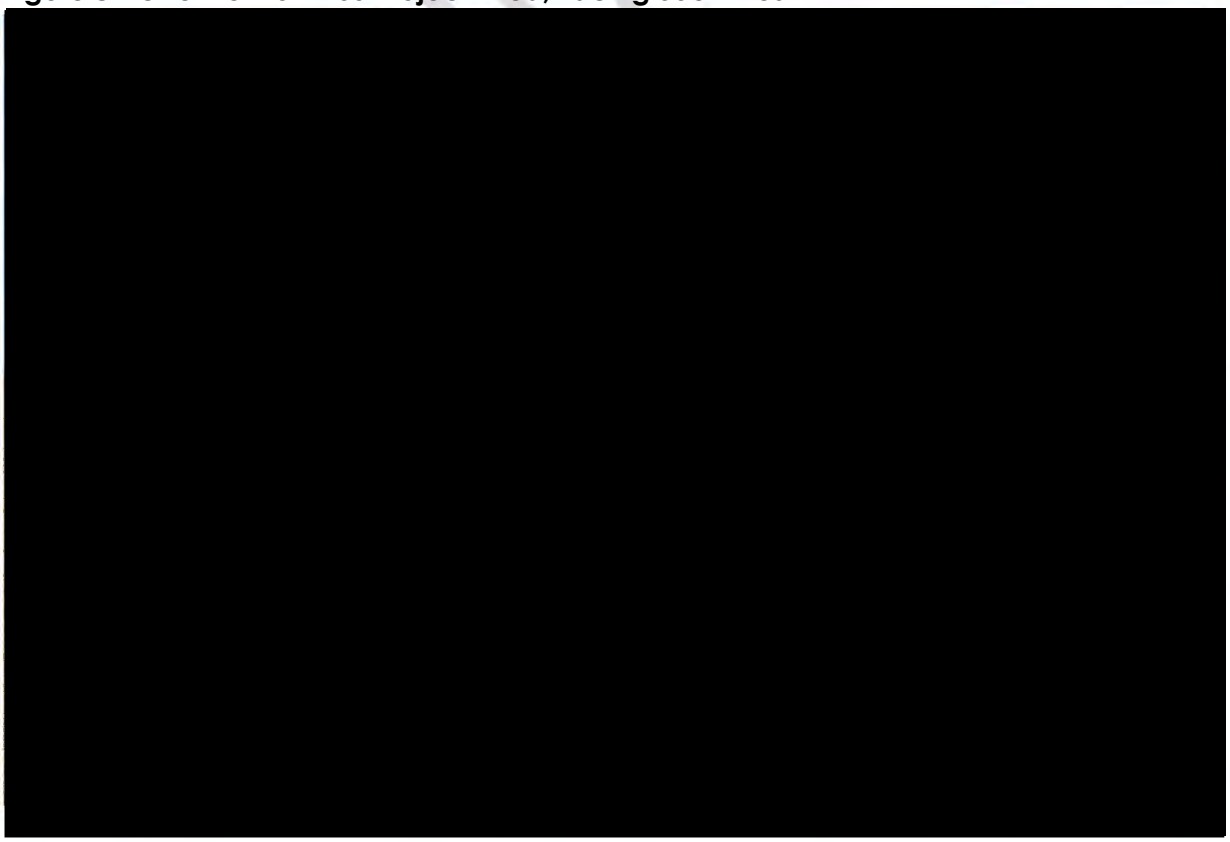
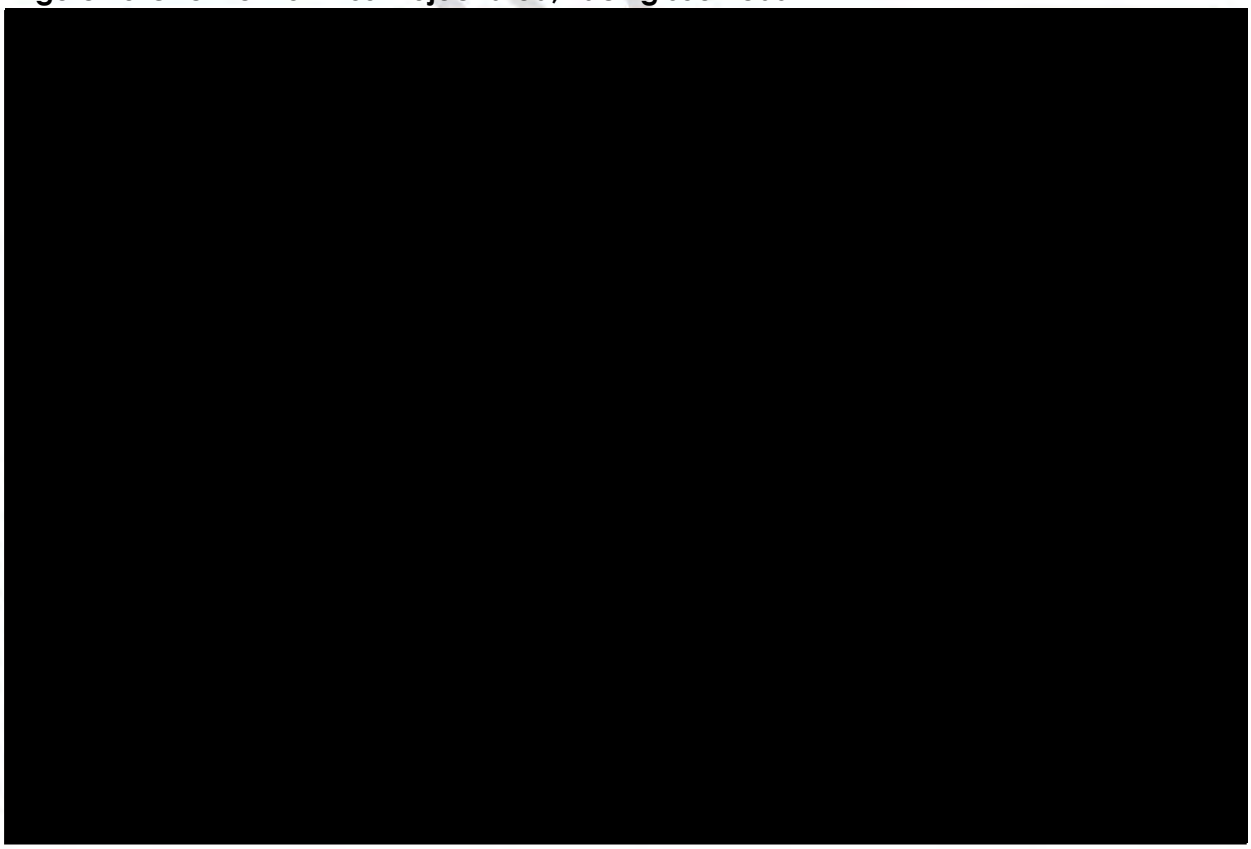


Figure 10 Overview of BESS Project area, Facing southeast



6.1 Unanticipated Discovery of Human Remains

In the unlikely event of an unexpected discovery of human remains, all ground-disturbing activities in the vicinity of the discovery will be immediately suspended and redirected elsewhere. All steps required to comply with State of California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 will be implemented including contacting the Kings County Coroner. If the human remains are determined to be prehistoric, the coroner will notify the NAHC, which will determine and notify a most likely descendant. The most likely descendant shall complete an inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access.

Based on consultation with Henrietta BESS LLC, the applicant has committed to incorporating these additional measures into the proposed Project in order to protect potentially present human remains.

Appendix A

CONFIDENTIAL – South Coast Information Center Records Search Results

Appendix B

Native American Heritage Commission Sacred Land Files Search

Appendix C

California Department of Parks and Recreation 523 Series Form

APPENDIX E

CULTURAL RESOURCES TECHNICAL REPORT

CONFIDENTIAL AND NOT FOR PUBLIC DISTRIBUTION

This appendix presents the Cultural Resources Technical Report prepared for the Border BESS Project. A copy of the confidential report has been provided to the California Energy Commission.

Confidentiality Statement

The Cultural Resources Technical Report prepared by Rincon Consultants, Inc. for the BESS Project contains sensitive and confidential information concerning archaeological resources. This report should be held confidential and is not for public distribution. Archaeological site locations are exempt from the California Public Records Act, as specified in Government Code 6254.10, and from the Freedom of Information Act (Exemption 3), under the legal authority of both the National Historic Preservation Act (PL 102-574, Section 304[a]) and the Archaeological Resources Protection Act (PL 96-95, Section 9[a]). Sections of this report contain locational maps and other sensitive information. Distribution should be restricted appropriately.

A copy of the Confidential Cultural Resources Technical Report is on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield. The report should be cited as follows:

Rotella, Brianna, Theadora Fuerstenberg, and Christopher Duran
2022. Cultural Resources Technical Report for the *Henrietta 99.4 Megawatt Battery Energy Storage System Project*. Rincon Consultants, Inc., Project No. 22-12592. Report on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield.