

5.7 CULTURAL RESOURCES

Cultural resources include archaeological and historical objects, sites and districts, historic buildings and structures, cultural landscapes, and sites and resources of concern to local Native Americans and other ethnic groups.

The purpose of this cultural resources study is to inventory cultural resources in the vicinity of the Bullard Energy Center (BEC) and identify any potential project-related effects to cultural resources. Records of correspondence with local Native Americans are included in the Technical Report (Appendix J, Cultural Resources Technical Report).

As part of the field inventory, archaeological field investigations and historic evaluations were undertaken to assess the presence/absence and/or the extent of specific sites and features. All cultural resources work for this project was carried out under the direct supervision of an archaeologist who meets the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (National Park Service [NPS], 1983 [36 Code of Federal Regulations (CFR) Part 61]), and is consistent with the procedures for compliance with Section 106 of the National Historic Preservation Act (NHPA), set forth at 36 CFR 800.

Detailed below are descriptions of project components; baseline conditions for prehistory, history, and ethnography; results of coordination with the Native American community; record searches; field surveys; and assessments of potential impacts (direct and indirect) on cultural resources on a component-by-component basis. The results of this study indicate that there are three previously recorded cultural resources in the study area. JRP Consulting also identified three additional historic structures within the study area, though none of these structures maintain the qualities required to make them historic resources for the purposes of CEQA. Appropriate mitigation measures are also set forth below to ensure site avoidance and/or proper treatment of cultural resources in the event of discovery.

Cultural resources work was conducted in compliance with California Environmental Quality Act of 1970 (CEQA). Work was also conducted in compliance with the California Energy Commission's (CEC's) "Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification" (CEC 1992) and "Rules of Practice and Procedure and Power Plant Site Regulations" (CEC 1997).

5.7.1 Affected Environment

5.7.1.1 Study Area

The BEC project will be located in the City of Fresno, Fresno County, California, and north of an area historically known as Highway City. The BEC site is located on North Golden State Boulevard, immediately east of Highway 99, northwest part of the City of Fresno. The cultural resource study area (an area defined as an approximate 0.5-mile radius from the BEC) was used to establish baseline conditions for cultural resources.

5.7.1.2 Site Description

The project consists of the following components:

- **BEC Site:** The BEC plant site is located approximately 1.25 miles southeast of the intersection of Herndon Avenue and North Golden State Boulevard, at 5829 North Golden State Boulevard, in the City of Fresno. The proposed plant site is a 12.3-acre parcel further described as Assessor's Parcel Number (APN) 505-080-22S. The parcel is zoned M-1 (light industrial use) and is located in an industrial area that is currently used as a truck depot, and construction equipment fabrication and storage yard.
- **Laydown Area:** The temporary construction laydown and parking site is a 9.2-acre parcel located immediately to the north of the plant site. Power line easements run across the western portion of the laydown area from south to north. This area is essentially flat, with a slight slope to the southeast.
- **Water and Wastewater Lines:** A Fresno city water main located near the southeast corner of the site along North Golden State Boulevard will be extended approximately 300 feet, to the northeast corner of the site. Wastewater from the site will be conveyed via an approximate 14-inch diameter, 1,500-foot sewer line proceeding northwest along North Golden State Boulevard, tying into the existing 54-inch City of Fresno trunk line, just north of the intersection of North Golden State Boulevard and West Bullard Avenue.
- **Gas Pipeline Route:** The project will connect to a PG&E trunk line approximately 9,500 feet west of the site, near the intersection of North Garfield Avenue and West Bullard Avenue. The primary pipeline route will convey gas via a pipeline up to 12 inches in diameter along West Bullard Avenue to North Golden State Boulevard, and then south to the site. Two alternate routes include the same PG&E connection location, continuing north along North Garfield Avenue to Herndon Avenue, then south along North Golden State Boulevard and North Weber Street to the site.

5.7.1.3 Natural History

The project area is located in the City of Fresno in an area labeled on the U.S. Geological Survey (USGS) 7.5' maps as Highway City. The project area is bordered by Highway 99 to the west, North Golden State Boulevard to the east, a vacant lot to the north, and a warehouse facility to the south. The surrounding area is a mix of industrial facilities, residential development, and farmland, primarily orchards.

The climate of Fresno County is classified as Mediterranean with mild, moderately wet winters, and hot dry summers. Regional climate is controlled primarily by the Pacific high-pressure system over the eastern Pacific Ocean, although local climate is strongly influenced by topography. Precipitation occurs mainly during the months of November through April and is generally associated with winter storm systems. Any rainfall that occurs during the summer is usually light and associated with isolated showers or thunderstorms.

During the Pleistocene (ending ca. 12,000 BP), the climate of California followed a pattern similar to that which is present today, with relatively warm-dry summers and cool-wet winters, and a cycle of alternating cool and warm periods. Generally, California was cooler than much of the rest of North America, with greater precipitation at the coast and fluctuating glaciers in the

Sierra Nevada. The desert regions and interior valleys, including the study area, contained numerous large pluvial lakes and marshes (Moratto 1984).

During the Holocene (beginning ca. 12,000 BP), California's climate has alternated between warm/dry and cool/moist periods (Moratto et al. 1995), including the warm/dry Altithermal, which ended ca. 2,900 BP and precipitated changes in animal and plant populations and distributions. Examination of multiple lines of evidence has revealed that California's Holocene climate was often unstable and prone to extremes of both drought and flooding (Graumlich 1993; Ingram et al. 1995, 1996; Jones and Kennett 1999; Stine 1994).

The Medieval Climatic Anomaly occurred between 1,500 and 900 years ago (Byrne et al. 2001; Ingram 1955). This event is thought to have been a catalyst for the massive and geographically far-ranging social changes that resulted in the social complexity visible at the time of European contact (Arnold 1983; Jones and Ferneau 2002; Lightfoot and Luby 2002; Weiss 2002). Though the droughts that book-end the Medieval Climatic Anomaly are usually the focus of archaeological attention (so much so that it is often simply referred to as the Medieval Warm Period), analysis of variant lines of evidence suggests that these two droughts occurred before and after a period of abnormally high rainfall and low temperatures (Ingram et al. 1995, 1996; Stine 1994). Moreover, paleo-salinity studies of the San Francisco Bay suggest that even during periods of overall high or low temperature and precipitation, variability between hot and cool and wet and dry was the norm (Ingram et al. 1995, 1996). Subsequent to the Medieval Climatic Anomaly, the "Little Ice Age," a period of prolonged cool winters, occurred (Simons et al. 2002).

Prior to extensive drainage in the mid-19th century, the San Joaquin Valley contained large lakes and marshes, including Tulare Lake, Buena Vista Lake, and the Fresno Slough. Tulare Lake was a large freshwater lake, and a related marshland covered the study area. These lakes, marshlands, rivers, and streams provided habitat for a wide variety of aquatic birds and plants, freshwater mollusks, amphibians, and fish (Moratto 1984).

5.7.1.4 Soils and Geology

Please refer to Sections 5.3, Geologic Hazards, and 5.4, Agriculture/Soils, respectively, for detailed descriptions of regional geology and soil conditions.

5.7.1.5 Disturbance within the Study Area

The study area has been disturbed by agricultural, industrial, and residential development. The proposed BEC site has been modified by the construction of asphalt-paved parking lots and roads, as well as the construction of buildings and structures for the servicing of trucks. The laydown area has been subject to extensive excavation, and the ground surface and edges of the excavation area suggest having been plowed at some point in the past. The presence of portions of a sidewalk on the property indicates that a substantial structure had been in the location where the ground had been excavated at some point in the recent past. Adjacent to the area of potential effect (APE), the construction of North Golden State Boulevard and Highway 99 represent extensive disturbance, as does the numerous industrial, residential, and commercial properties in the area.

5.7.1.6 Prehistory

Northern California, specifically portions of the San Francisco Bay region, has supported a continuous cultural occupation for at least the last 4,000 years (Elsasser 1978; Nelson 1909; Gifford 1916). The cultural occupation of the northern San Joaquin Valley can be divided into three time periods, or horizons, which help to define the practices and subsistence patterns of the people of that region. The designations Early, Middle, and Late Horizons were developed as a chronological sequence by Beardsley (1948, 1954) based upon his work in the Sacramento-San Joaquin Delta region to the San Francisco Bay area (Elsasser 1978:37).

The Early Period

The Early Period in California generally refers to the timeframe between 10,000 and 7,000 BP. Early Period components have been identified along the fossil lakeshores of Tulare Lake and Buena Vista Lake, in the east central and southwestern portions of the San Joaquin Valley, respectively. Lithic (stone) artifact assemblages associated with the Early Period are characterized by the presence of stemmed projectile points. The Witt site, on the fossil lakeshore of Tulare Lake also featured ‘fluted’ and concave based projectile points, associated with terminal Pleistocene ‘Clovis’ assemblages in other regions of North America (Riddell and Olsen 1969; Moratto 1984). The Buena Vista Lake site (CA-KER-116), in Kern County, is the other primary San Joaquin Valley site yielding Early Period stemmed points from lower layers in the stratigraphy (Fredrickson and Grossman 1977; Hartzell 1991, 1992). Stemmed points have also been recovered from several sites in the foothills at the margins of the valley, namely at the Skyrocket sites (CA-CAL-629 and -630) in the Calaveras County foothills, and at the Clark’s Flat site (CA-STA-S342) in the Stanislaus County foothills. Other Early Period lithic artifacts include cobble core tools (choppers and scrapers) and flake tools, as well as crescentic, leaf-shaped, ovate, and lanceolate bifaces. Groundstone artifacts of this period are typically expedient, showing light use wear, and often exhibit multiple forms of use wear.

The Middle Period

The Middle Period (7,000-2,500 BP) is characterized by an increase in groundstone implements and by ‘Pinto’ or ‘Stanislaus Stemmed’ projectile points (Peak and Crew 1990). These points have been recovered at CA-KER-116, the Witt site, the Skyrocket sites, and the Clark’s Flat site. While much of the flaked-stone tool assemblage in the Middle Period is similar to that of the Early Period, the presence of more groundstone milling equipment with extensive use wear suggests a greater reliance on plant foods than in the Early Period.

The Late Period

The Late Period refers to the time period between approximately 2,500 BP and European contact, at which time Native American lifeways were recorded in the ethnographic/historic record. The material culture patterns observed at contact emerged during the Late Period, and the ethnohistoric record provides a valuable resource for understanding Late Period archaeology (see below). The archaeological record for the Late Period reveals a significantly different suite of material culture than that seen in Middle Period assemblages. Heavily utilized mortar and pestle technology (associated primarily with acorn processing), and bow and arrow technology

both emerge during the Late Period. Large occupation sites, representing semi-permanent and permanent villages, emerge during this time as well. On the western margins of the San Joaquin Valley, these village sites typically feature dark-colored midden deposits, multiple excavated house pit depressions, and large, excavated communal structures. Other artifacts typical of Late Period deposits include freshwater and marine shell ornaments, ornaments and utilitarian implements of steatite and faunal bone, obsidian from eastern California sources, and notched cobbles thought to be associated with fishing.

5.7.1.7 Ethnography

The project is located within the boundaries of the Northern Valley Yokuts territory, at the northeastern end of the San Joaquin Valley, near the Little Panoche Creek (see Figure 5.7-1, North Valley Yokuts Ethnohistoric Villages). Tribal groups throughout the Northern California territories interacted with each other along their tribal boundaries, and as such the tribal boundaries are not considered permanent. Presented below is a discussion of the ethnography of this region.

“Yokuts” is a term applied to a large and diverse number of people inhabiting the San Joaquin Valley and Sierra Nevada foothills of central California. The Northern Valley Yokuts inhabited a 40- to 60-mile-wide area straddling the San Joaquin River, south of the Mokelumne River, east of the Diablo Range, and north of the sharp bend that the San Joaquin River takes to the northeast. The Southern Valley Yokuts inhabited the San Joaquin Valley south of the bend in the river. Although they were divided geographically and ecologically, they had similar linguistic styles. For the Northern Valley Yokuts, the San Joaquin River and its main tributaries served as a lifeline to the valley (Wallace 1978:462).

The Northern Valley tribes closely resembled the Yokuts groups to the south, although there were some cultural differences. The northerners had greater access to salmon and acorns, two important dietary resources, than the Southern Yokuts, and some of their religious practices reflected the influences of groups to their north, such as the Miwok. While inhumation was the usual practice in the southern valley, the Northern Valley Yokuts either cremated their dead or buried them in a flexed position (Wallace 1978:464, 468).

The Northern Valley Yokuts built their riverside villages on mounds along the water’s edge to avoid the spring floods, which were a result of heavy Sierra snow melts. Living beside rivers and streams provided plentiful river perch, Sacramento pike, salmon, and sturgeon. Hunting provided waterfowl such as geese and ducks as well as land animals such as antelope, elk, and brown bear although by all indications fish constituted a majority of the diet. The surrounding woodland, grasslands, and marshes provided acorns, tule root, and seeds.

A chief headed the tribal villages, which averaged around 300 people. Family houses were round or oval, sunken, with a conically shaped pole frame, and covered with tule mats. Each village also had a lodge for dances and other community functions, as well as a sweathouse (Wallace 1978:462-464).

The Northern Valley Yokuts used bone harpoon tips for fishing, stone sinkers for nets, chert projectile points for hunting, mortars and pestles, scrapers, knives, and bone awl tools to procure and manufacture food. Marine shells, procured from coastal tribes, were used for necklaces and other adornments, and marine shell beads sometimes accompanied the deceased. They used tule

reed rafts to navigate the waterways for fishing and fowling. The Yokuts also manufactured a range of intricate baskets for a variety of purposes, including storing, cooking, eating, winnowing, hopper mortars, and the transport of food materials. Very little is known of the Northern Valley Yokuts' clothing, but drawings of their tattoos show that they served not only as a decoration but also as a form of identity (Wallace 1978:464).

Historic accounts from an unnamed Spanish expedition in 1810 and 1811 recall that the Spaniards named one of the Yokuts' village Pescadero ("fisherman") after seeing the Indians catching fish. During the time of Mexican land grants, Rancho Pescadero north of Tracy was named for the Yokuts village (Hoover et al. 1990). According to early accounts, the Yokuts traded with neighboring tribes and were fairly peaceful. Initially, the Diablo Range served as a natural barrier against heavy recruitment by the coastal Spanish missions. However, by the early 19th century, Spanish, and later, Mexican missionaries began to explore the inner valleys in search of neophytes. The Yokuts became irritated with the intrusion, and soon began fighting back and stealing horses from rancheros and missions in retaliation for intrusion (ibid).

Eventually, the Northern Valley Yokuts were decimated by missionization, usurpation of land by rancheros, "49ers," farmers, and epidemics (malaria being the most devastating, in 1833).

5.7.1.8 Historic Setting

The study area historic setting can be divided into four periods:

- Early European Contact and Missions: 1769 to 1849
- Gold Rush and Agriculture Boom: 1849 to 1900
- The 20th Century Through World War Two (WWII): 1900 to 1945
- The Late 20th Century: 1945 to present

Early European Contact and the Missions

The study area is located northwest of the now dry bed of Tulare Lake. Up to the second half of the 19th century, this lake was the largest freshwater lake west of the Great Lakes. This lake was also home to several bands of Yokuts, to whom fugitives from the missions would often flee.

Though the Spanish missions were relegated to the coastal areas of California, Spanish soldiers and priests had made many forays into the San Joaquin Valley. The area surrounding Tulare Lake was a frequent target of Spanish parties searching for fugitives (Cook 1976; Smith 2004), and it is likely that fugitive-seeking expeditions also brought back unwilling converts from this area (Cook 1976).

An 1804 expedition to find land on which to locate a mission met with disinterest and a lack of cooperation on the part of the Tulare Indians. Further unsuccessful attempts to find land for an interior mission were made in 1806 and 1813. Father Zalvidea's journals of an 1806 expedition to capture runaway neophytes in the San Joaquin Valley described the valley as a dry, miserable place, not suitable for settlement. This description helped to discourage attempts at settlement for over a decade (Smith 2004).

From the 1820s through the 1840s parties from the missions, Anglo-American and French fur trappers, and Russian explorers began to explore the San Joaquin Valley. These explorations

caused international tensions, but also increased the American interest in California that had initially been sparked by the belief in Manifest Destiny. In 1848, at the conclusion of the Mexican-American War (1846-1848), California was among the lands ceded to the U.S. as part of the peace settlement.

Although dangers such as raids by the Yokuts were common, land in the San Joaquin Valley began to be granted by the Mexican authorities in the 1840s, a practice that continued when the U.S. government took possession of California.

The Gold Rush and Agricultural Boom

John Sutter discovered gold near his mill in Sacramento in 1848. Though he and his men originally tried to keep it secret, word soon got out and the Gold Rush began. The Central Valley (inclusive of both the San Joaquin and Sacramento valleys) and the Sierra Nevada were soon host to a teeming mass of placer miners and those who sought to make a living either by providing for the needs or making victims of these miners. The City of San Francisco sprang up almost overnight (earning it the nickname “the Instant City”), and several towns were established throughout California. Many of those already established grew quickly as the population boomed. In 1850, California’s population was deemed large enough for it to be eligible for statehood.

Near the study area, the town of Fresno City (west of the current location of the City of Fresno) was established at the head of the Fresno Slough to serve the needs of California’s fledgling riverboat industry. Fresno County was formed out of part of the larger Mariposa County in 1856.

This general area was plagued by many of California’s worst bandits, reportedly including the notorious Joaquin Murietta (though both the existence and the location of Joaquin Murietta has been questioned), throughout the mid-19th century (California Office of Historic Preservation 2004).

As many would-be miners found mining too difficult, the competition too fierce, or the payout too small (if not eventually non-existent for those who lacked the equipment to engage in large-scale mining operations), many turned to farming the soils of the Central Valley. This required the draining of many of the swamps and lakes in the San Joaquin Valley, including Lake Tulare near the study area.

Chinese workers, who had originally come to work in the mines, soon found themselves draining California’s wetlands and lakes to create farmland, or becoming farmhands. In addition to the well-known “Chinatowns” located in most large, and many small, cities in 19th century California, the Chinese workers left behind evidence of their activities in the work camps, the remains of which are still occasionally visible on the landscape.

These Chinese workers, and later migrant workers from other parts of Asia, would be the frequent targets of anti-migrant hostilities, both in the state and federal legislatures, in the streets of California’s towns, and in the state’s fields. In the 1890s, Fresno was the site of anti-migrant riots that resulted in the destruction of rural labor camps, possibly leaving archaeological traces of this activity (Takaki 1998).

Though agriculture began in the 1840s despite the ever-present threat of Indian raids, with the draining of the lakes and swamps of California’s Central Valley, agriculture became possible

over a much greater expanse of land. Stock raising became a dominant business in the study area during the 1860s. In the 1870s, the coming of the railroad provided a larger market to farmers and also an easier mode by which settlers could come to California, ushering in an era of general farming (County of Fresno 2006).

Irrigation began in the late 1860s, but remained controversial given the relatively limited water supply of the region. However, as irrigation became more common throughout the late 19th and early 20th centuries, the harsh, dry environment demonized by Zalvidea became a fertile, if still often hot, agricultural powerhouse.

Throughout the remainder of the 19th century, Fresno County's population continued to grow, though it still remained relatively sparse, as befits a primarily agricultural area. Many of the modern cities, including Fresno, Reedley, and Sanger, were either founded or incorporated. Many of the markers of American culture, including newspapers, the railroad, and public streetcars either were established or expanded (Fresno Historical Society 2001).

The 20th Century Through World War Two

Fresno County's population growth rapidly increased during the first half of the 20th century, starting with a population of over 37,000 in 1900 and continuing to grow to 276,515 people by 1950. Canals, dams, and artificial bodies of water including Hume Lake were created to supply water to both the people and agriculture of Fresno County (Fresno Historical Society 2001).

Tumultuous events of the early 20th century included the early growth of the labor movement; World War One (WWI); the Great Depression; conflicts between laborers native to California and migrant laborers from Asia, Central and South America; and, during the Depression, conflicts in the south and Midwest of the U.S. Fresno County continued to grow, and even prosper. The founding of new towns, newspapers, educational institutions (including a normal school and the first junior college in California), and the coming of radio all served to tie Fresno County into the larger U.S.

Increases in the price of Fresno's popular crops, such as raisins, raised land prices within the county and the growth of both staple and cash crops brought money to the area.

With the outbreak of WWII, anti-Japanese sentiments led to the establishment of the Japanese internment camps in California and other parts of the western U.S. The establishment of temporary detention camps in eastern Fresno County and the Fresno Assembly Center expanded this region's role in WWII from that of producing food and supplies and providing soldiers.

The Late 20th Century

As with the rest of California, the post-WWII return of soldiers and growth of families led to even greater population growth. By 1950, Fresno County had a population of 276,515, and more cities continued to be incorporated throughout the 1940s and 1950s. By 1954, Fresno County had become the leading agricultural production county in the nation (Fresno Historical Society 2001). The presence of major transportation corridors (including Highway 99, Highway 152, a railroad, and an airport converted from military to civilian use) caused non-agriculturally-centered industries to grow in and around Fresno, as well.

Fresno County reached a population of 799,407 by 2000 (Umbach 2002). An increasingly broad ethnic community has led to a rich cultural life in Fresno County, though it has also played a role in racial tension related to labor and to the laws concerning immigration.

Though Fresno County is now home to many different industries, it has maintained its agricultural character, especially outside the major cities.

5.7.1.9 Native American Consultation

The BEC Native American correspondence discussed below, including the Native American Heritage Commission (NAHC) contact letter, NAHC response, Native American mailing list, and consultation letters, is confidential. Copies of this correspondence are provided in the confidential technical report (Appendix J, Cultural Resources Technical Report).

The California NAHC was contacted on September 1, 2006 and again on September 18, 2006, for a list of local Native American groups and/or individuals with direct or indirect knowledge of cultural resources within or near the project area. These consultations also sought to identify any sacred lands within the area (including a 1-mile radius study area) identified in the NAHC's Sacred Lands File. The NAHC responded on September 27, 2006 indicating that the search of the Sacred Lands File was negative, and providing a list of six local Native American contacts for Fresno County.

Letters describing the project and maps of the site and various components were sent on September 28, 2006 by certified mail, to the six contacts identified by the NAHC as appropriate for Fresno County. The letters inquired whether the groups/individuals had any concerns regarding the project, or wished to provide input regarding cultural resources in the project area.

On October 27, 2006, Matthew Armstrong called the Santa Rosa Rancheria, Table Mountain Rancheria, and Mr. Jerry Brown of the Chaishiha Tribe to follow-up on the letters. A message was left for Mr. Brown, and the cultural resources office of Table Mountain Rancheria stated that they had no concerns about the proposed project. Mr. Lalo Franco of the Santa Rosa Rancheria had no specific concerns about the project, but he did request that either a Native American monitor be present during construction or that a representative from Santa Rosa Rancheria be allowed to give a cultural resource presentation to the construction crew and management prior to the beginning of construction. In addition, Mr. Franco requested that the client enter into a re-burial agreement (sample contract attached in Appendix J – Cultural Resources Technical Report) to determine the fate of human remains should any be uncovered during construction.

5.7.1.10 Key Personnel Qualifications

The key cultural resources personnel who conducted and/or supervised the field survey and prepared the technical report (Appendix J, Cultural Resources Technical Report) are:

- Brian Hatoff, Master of Arts (MA), Registered Professional Archaeologist (RPA) (URS Principal Investigator for the project)
- Reid Farmer, MA, RPA (URS Archaeologist)
- Matthew Armstrong (URS Archaeologist)

Mr. Hatoff meets the professional standards of the Secretary of the Interior for this work (Standards and Guidelines for Archaeology and Historic Preservation, NPS 1983) and is certified by the Register of Professional Archaeologists.

5.7.1.11 Background Research

Archaeology

A records search was requested by URS of the South San Joaquin Valley Information Center of the California Historical Resources Information System (SSJVIC File No. 06-408) for all previous archaeological surveys and studies, all previously recorded sites, National Register listed and eligible properties (National Association of State Historic Preservation officers et al. 1988 and annual updates in the Federal Register), California Historical Landmarks (Office of Historic Preservation 1997), Points of Historic Interest (Office of Historic Preservation 1992), and locally listed historic properties and structures within one mile of the project site. A 1-mile radius search from the BEC was requested for the records search. The request was sent to the SSJVIC by fax on August 28, 2006.

In a response received by URS Santa Barbara on October 25, 2006, the SSJVIC reported that six previous surveys had been performed within the project area, five had been conducted within a 0.5-mile radius, and 13 within a 1.0-mile radius (see Table 5.7-1, Previously Recorded Resources). Three previously recorded cultural resources are located within the project area, and two more lie within 0.5 miles of the project area (see Table 5.7-2, Previous Surveys).

The three resources located within the study area include the Foriestere Underground Gardens, a subterranean home carved into the hardpan near Shaw Avenue in the first half of the 20th century which is listed on the National Register of Historic Places (NRHP); the Hortencia Rodriquez Residence, a decaying residence that is recommended ineligible for listing and is, as such, not a cultural resource for the purposes of CEQA; the third property is another private residence that has become severely deteriorated and modified from its original form, and as a result is recommended not eligible for listing and not a cultural resource for the purposes of CEQA.

**TABLE 5.7-1
PREVIOUSLY RECORDED RESOURCES**

Site Number	Description	Source	In Project Area	Within 0.5 Mile
P-10-5230	Private residence, badly deteriorating.	Alviso 1995	X	
P-10-5231	Private residence, badly deteriorating.	Mellon 1996	X	
SHL # 916	Forestiere Underground Gardens	Forestiere 1977	X	
P-10-004701	Foundations from historic structures	Kiaha et al. 2001a		X
P-10-004702	Historic debris and well pump	Kiaha et al. 2001b		X

**TABLE 5.7-2
PREVIOUS SURVEYS**

Report Number	Source	In Project Area	Within 0.5 Mile	Within 1 Mile
FR-1713	Billat (no date)		X	
FR-2011	City of Fresno 2001	X		
FR-2017	Varner 2004			X
FR-2019	ART 2004			X
FR-1733	ATC Associates 2000a			X
FR-1734	ATC Associates 2000b			X
FR-1858	Earthtouch 2001		X	
FR-1930	Wlodarski 2003			X
FR-2112	Varner 2005			X
FR-677	Roop 1993		X	
FR-503	Michael Paoli and Associates 1995			X
FR-135	Hatoff et al 1995	X		
FR-407	Granskog 1985b	X		
FR-405	Granskog 1985a			X
FR-268	Bissonnette 1991			X
FR-269	Michael Paoli and Associates 1990			X
FR-69	Hudlow and de la Garza 1996		X	
FR-40	Wren 1997		X	
FR-294	Bissonnette 1993			X
FR-385	Cursi 1980a			X
FR-386	Cursi 1980b			X
FR-302	Bissonnette 1994	X		
FR-1811	Hildebrand and Roper 1997		X	
FR-1640	Binning et al 1999		X	

Built Environment Research

JRP Consulting performed searches of the NRHP, the California Register of Historic Resources (CRHR), California Historic Landmarks and California Points of Historical Interest. In addition, the following libraries and repositories were also consulted: California State Library, Sacramento; Shield's Library, UC Davis; Fresno County Public Library; the Henry Madden Library at CSU Fresno; and the Fresno County property information provided by First American Real Estate Solutions.

5.7.1.12 Field Survey

Survey Methodology and Coverage

Archaeology

Two URS archaeologists conducted an archaeological survey from August 29 through August 31, 2006 by walking the power plant location, the laydown area, and all linears in 5-meter transects where possible, and using opportunistic survey methods in all other locations.

Built Environment Research

JRP performed survey of the proposed project site, as well as adjacent lots and properties. Structures were examined both up-close and from the public roads when it was not possible to approach the structure.

Current Archaeological Survey Results

No new archaeological sites were recorded during the survey, though it is possible that there may be buried archaeological resources associated with a railroad spur found crossing North Golden State Boulevard (see Figure 5.7-2, Cultural Area Surveyed). Though it is conceivable that buried archaeological resources associated with 20th century occupation of the laydown area may be present, the severity of excavation and soil disturbance in that area coupled with the lack of archaeological resources present on the surface suggests that this is not likely.

Current Built Environment Survey Results

JRP identified three historic buildings during their survey.

7020 West Bullard Avenue. This property is a one-story residence with an animal shed and corral. Initially a small square building, a mobile home was incorporated into the rear at a right angle creating an L-plan house.

7102 West Bullard Avenue. This property contains a one-story residence and several outbuildings. The residence is a small concrete-block building. The outbuildings include a pre-fabricated metal shed and an irregular outbuilding of unknown function.

6330 North Golden State Boulevard. This property is a former fig orchard containing a two-story 962-square foot Craftsman style bungalow and associated outbuildings, which appear to be sheds of some sort.

All of these properties fail to meet the significance criteria set forth in CEQA, and are therefore not considered cultural resources for the purposes of CEQA.

5.7.2 Environmental Consequences

CEC regulations require that BEC undergo various environmental resource assessments (i.e., cultural, paleontological, biological, etc.) as part of this Application for Certification (AFC). With few exceptions, the potential effects of any project upon cultural resources are evaluated under CEQA or the National Environmental Policy Act (NEPA) (see Table 5.7-3, Legal and Regulatory Authorities). The BEC is not a federal undertaking, and therefore the AFC is written in compliance with CEQA and serves as CEQA environmental documentation. Under CEQA,

the potential effects of the project upon cultural resources must be evaluated. Although not considered a federal undertaking, the project has been concurrently assessed with regard to the requirements of Section 106 of NHPA and its implementing regulations set forth as 36 CFR 800.

**TABLE 5.7-3
LEGAL AND REGULATORY AUTHORITIES**

AFC Section	Authority	Administering Agency	Requirements/Compliance
5.7.2.2, Federal Level Mandates	NEPA; 42 USC 4321-4327; 40 CFR section 1502.25	Lead Federal Agency	Analysis of federal environmental impacts on federal lands or for projects requiring federal money, assistance, and/or permits
5.7.2.2, Federal Level Mandates	Archaeological and Historic Preservation Act of 1976 (16 USC 469)	Secretary of the Interior and Lead Federal Agency	Provides for coordination with the secretary when a federally licensed undertaking may cause irreparable damage to significant cultural resources
5.7.2.2, Federal Level Mandates	American Indian Religious Freedom Act of 1979 (42 USC 1996)	Lead Federal Agency	Establishes U.S. Government policy to protect and preserve traditional religious beliefs and practices
5.7.2.2, Federal Level Mandates	Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001)	Lead Federal Agency	Establishes mechanism for right of Indian tribes to claim ownership of human remains and certain cultural items
5.7.2.2, Federal Level Mandates	Secretary of the Interior's Standards and Guidelines, September 29, 1983	Secretary of the Interior and Lead Federal Agency	Establishes standards for the gathering and treatment of data related to cultural resources
5.7.2.1, State Level Mandates	The Warren-Alquist Act §§ 25520, 25527, 25529	CEC	Requires that cultural, historic, and aesthetic resources be taken into account in consideration of an application for certification. Requires that a portion of any such resources on public land be set aside for public access
5.7.2.1, State Level Mandates	CEQA Section 15064.5; California Public Resources Code § 5024, 5024.5, and 21083.2; Title 14, CCR § 15126	CEC	Formal findings by the lead state agency regarding project-related effects to important cultural resources and unique paleontological resources
5.7.2.1, State Level Mandates	Cal. Pub. Res. Code §§ 25523(A), 25527; 20 CCR §§ 1752, 1752.5, 2300-2309, and Chapter 2, Subchapter 5, Article 1, Appendix B, Part (i)	CEC	Special consideration of unique historical, archaeological, and cultural sites
5.7.2.1, State Level Mandates	Cal. Health & Safety Code § 7050.5	County Coroner (Medical Examiner)	Determination of origin of human remains and coordination with NAHC

**TABLE 5.7-3
LEGAL AND REGULATORY AUTHORITIES**

AFC Section	Authority	Administering Agency	Requirements/Compliance
5.7.2.1, State Level Mandates	Cal. Pub. Res. Code § 5024.1	State Historical Resources Commission	Establishes the California Register of Historic Resources and procedures for nominating sites to the register
5.7.2.1, State Level Mandates	Cal. Pub. Res. Code § 5097.5	Fresno County Planning Department	Prevent unauthorized removal of archaeological resources on public lands
5.7.2.1, State Level and Mandates	Cal. Pub. Res. Code § 5097.94 and 5097.98.21.	Native American Heritage Commission	Consult with the NAHC and Native American groups and individuals identified by the NAHC to identify important cultural properties that may be impacted by the project
5.7.2.3, Local Mandates	Fresno County Master Plan	Fresno County Planning Department	Calls for adherence to CEQA cultural resources regulations within Fresno County

Notes:

- | | |
|---|--|
| AFC = Application for Certification | NAHC = Native American Heritage Commission |
| CCR = California Code of Regulations | NEPA = National Environmental Policy Act |
| CEC = California Energy Commission | U.S. = United States |
| CEQA = California Environmental Quality Act | USC = U.S. Code |
| CFR = Code of Federal Regulations | |

5.7.2.1 State-level Mandates

Cultural resources include archaeological and historical objects, sites and districts, historic buildings and structures, cultural landscapes, and sites and resources of concern to local Native American and other ethnic groups. The BEC Cultural Resources Technical Report (Appendix J) is consistent with compliance procedures set forth in CEQA, CCR Sections 15064.5 and 15126.4, and Section 106 of the NHPA, set forth at 36 CFR 800.

In considering impact significance under CEQA and NHPA, the significance of the resource itself must first be determined. At the state level, consideration of significance as an “...important archaeological resource” is measured by cultural resource provisions considered under CEQA Sections 15064.5 and 15126.4, and the draft criteria regarding resource eligibility to the California Register of Historic Resources (CRHR).

Generally, under CEQA, a historical resource (including built environment historic and prehistoric archaeological resources) is considered significant if it meets the criteria for listing on the CRHR. These criteria are set forth in Section 15064.5, and are defined as resource items that:

- Are associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
- Are associated with lives of persons important to our past
- Embody the distinctive characteristic of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values
- Have yielded, or may be likely to yield, information important to prehistory or history

Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under Public Resources Code (PRC) 5097.98.

Impacts to “unique archaeological resources” and “unique paleontological resources” are also considered under CEQA, as described under PRC 21083.2. A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that (without merely adding to the current body of knowledge) there is a high probability that it meets one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific questions and there is a demonstrable public interest in that information
- The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person

A non-unique archaeological resource indicates an archaeological artifact, object, or site that does not meet the above criteria. Impacts to non-unique archaeological resources and resources which do not qualify for listing on the CRHR receive no further consideration under CEQA.

Under CEQA Section 15063.5, a project potentially would have significant impacts if it would cause substantial adverse change in the significance of:

- A historical resource (i.e., a cultural resource eligible to the CRHR)
- An archaeological resource (defined as a unique archaeological resource which does not meet CRHR criteria)
- A unique paleontological resource or unique geologic feature (i.e., would directly or indirectly destroy a site)
- Human remains (i.e., would disturb or destroy burials)

A non-unique archaeological or paleontological resource is given no further consideration, other than the simple recording of its existence by the lead agency.

Criteria for eligibility for the CRHR are very similar to those of the NRHP, which are the significance assessment tools used under the NHPA. The criteria of the NRHP apply when a project has federal involvement. Note that a property that is eligible for the NRHP is also eligible to the CRHR. On projects with federal involvement, impacts to significant resources are assessed and addressed under the procedures of Section 106 of the NHPA, set forth at 36 CFR 800.

All resources encountered during the mitigation and monitoring phases of the BEC, with the exception of isolate artifacts and isolate features that appear to lack integrity or data potential, will be evaluated for significance per CRHR and CEQA criteria described above. If a resource is found to be significant, then it will be avoided through alterations in project design when feasible. In the event that avoidance of cultural resources is not possible via project design modifications, appropriate mitigation measures will be developed, in accordance with appropriate regulations and consultation with the CEC.

The Warren-Alquist Act (WAA) requires that cultural resource studies be performed as an element of the AFC for power facilities. Section 25520 requires that applications describe the projected impacts of a facility upon historic resources. Section 25527 prohibits the construction of facilities in locations where they may impact historic or aesthetic resources unless the construction of the facility is consistent with the use of said locations, there are no substantial adverse effects, and permission of the agency if any having ownership and/or control of the land is obtained. Section 25529 requires that any facilities constructed on lands containing historic or aesthetic resources set aside a portion of the property to allow the continued use of said resource. In addition, the WAA references the Public Utilities Code, section 1002, which states that historical and aesthetic values are to be one of the factors considered by the Public Utilities Commission in granting certifications.

5.7.2.2 Federal Level Mandates

The legal frameworks for addressing cultural resources at the federal and state levels are generally equivalent. The four criteria for evaluation established by the NRHP (listed below) are identified at 36 CFR 60.4 and are in accordance with the regulations outlined in 36 CFR 800 established by the Advisory Council on Historic Preservation (ACHP).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

1. Resources that are associated with events that have made a significant contribution to the broad patterns of our history
2. Resources that are associated with the lives of persons significant in our past
3. Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
4. Resources that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4)

Hence, these evaluating criteria are used to help determine what properties should be considered for protection from destruction or impairment (36 CFR 60.2).

BEC is not considered a federal undertaking, however, the legal framework for addressing cultural resources at the federal and state levels are generally equivalent and are used somewhat interchangeably herein.

5.7.2.3 *Local Mandates*

On the local level, compliance with the Fresno County General Plan (FCGP 2000) may be necessary. According to the plan, a goal of Fresno County is to identify, protect, and enhance important archaeological and historic resources within the county. In order to achieve this goal, a number of policies, measures, and programs targeting the management of cultural resources have been adopted by the county. In general, compliance with CEQA and Section 106 satisfies the county's concerns for cultural resources. Table 5.7-3, Legal and Regulatory Authorities, details legal and regulatory authorities associated with cultural resource concerns.

The City of Fresno 2025 Master Plan (CFMP), which is the currently available master plan, states that the goal of the City of Fresno vis-à-vis cultural resources is to “Safeguard Fresno’s heritage by preserving resources which reflect important cultural, social, economic, and architectural features so that community residents will have a foundation upon which to measure and direct physical change.” To this end, a number of policies are set forth in the master plan. However, only the following policies and policy points are directly or indirectly relevant to the proposed project.

Policy G-11-c. of the CFMP requires the following actions in order to “Implement and broaden the resource conservation program as set forth by the Preservation of Historic Structures Ordinance:”

- Perpetuate, protect, enhance, and revitalize historic resources.
- Encourage adaptive current uses of historic resources, while preserving their unique features.
- Zoning, building, fire, health, housing, landscape/xeriscape, and other related codes shall be liberally construed, and amended if necessary, to provide for a more supportive regulatory structure to assist in historic preservation objectives, while maintaining the essential level of protection for health and safety.
- Encourage the use of, and educate city staff on the use of, the State Historic Building Code. This code shall be used to guide plan checking and inspections in structures that have been recognized by the Historic Preservation Commission as qualified under the Historic Building Code.
- Before the issuance of a formal demolition order by the city involving structures over 50 years old, potential Local Register listing shall be reviewed by historic preservation staff, and, if necessary, referred to the Historic Preservation Commission. This shall be subject to staffing levels and amendment of the city’s Historic Preservation Ordinance.
- Before any non-emergency removal of historic trees or landscape elements, the City Historic Preservation Commission shall be given an opportunity to review the proposed action and make a recommendation as to potential alternative actions.
- Prior to demolition, the city shall offer for sale all city-owned relocatable Local Register, National Register, or State Landmark structures acquired within public project boundaries to buyers prepared to relocate the structures. All such structures shall be offered for sale a minimum of 180 days. Preference will be given to buyers intending to relocate these structures to parcels in designated city historic districts.

- The Historic Preservation Commission may recommend to the city council that the city be the “purchaser of last resort” to acquire endangered structures that are on the Local or National Historic Register, or are State Historic Landmarks, and relocate them to other locations in historic districts. The commission and council shall establish criteria to prioritize the acquisition of endangered historic structures based upon economic feasibility for each individual project and the need to balance such commitments of financial resources so that an acquisition does not materially detract from accomplishing other priority projects which require public historic preservation funding.

Policy G-11-d of the CFMP requires the following actions in order that “Prehistoric resources (those containing archaeological and paleontological material) shall be protected:”

- In any public or private project, it shall be a condition of project permits that work stop immediately in the immediate vicinity of the find if archaeological and/or nonhuman fossil material is encountered on the project site.
- If there are suspected human remains, the Fresno County Coroner shall be immediately contacted. If the remains or other archaeological materials are possibly Native American in origin, the Native American Heritage Commission shall be immediately contacted, and the California Archaeological Inventory’s Southern San Joaquin Valley Information Center shall be contacted to obtain a referral list of recognized archaeologists.
- An archaeological assessment shall be conducted for the project if prehistoric human relics are found that were not previously assessed during the environmental assessment for the project. The site shall be formally recorded, and archaeologists’ recommendations shall be made to the city on further site investigation or site avoidance/preservation measures.
- If non-human fossils are uncovered, the museum of paleontology at University of California at Berkeley shall be contacted to obtain a referral list of recognized paleontologists. If the paleontologist determines the material to be significant, it shall be preserved.

Policy G-11-e states that “If the site of a proposed development or public works project is found to contain unique prehistoric (archaeological or paleontological) resources, and it can be demonstrated that the project will cause damage to these resources, reasonable efforts shall be made to permit any or all of the resources to be scientifically removed, or it shall be preserved in situ (left in an undisturbed state). In situ preservation may include the following options, or equivalent measures:

- Amending construction plans to avoid prehistoric resources.
- Setting aside site containing these resources by deeding them into permanent conservation easements.
- Capping or covering these resources with a protective layer of soil before building on the sites.
- Incorporating parks, green space, or other open space in the project to leave prehistoric sites undisturbed and to provide a protective cover over them.
- In order to protect prehistoric resources from vandalism or theft, their location shall not be publicly disclosed until or unless the site is adequately protected.”

One element of policy G-11-g states that “When proposed plans, projects, policies, or programs conflict with historic preservation objectives, the Historic Preservation Commission’s recommendations on resolving the conflict shall be considered by staff, planning commission, and the city council.”

5.7.2.4 Bullard Energy Center Site

Archaeology

No archaeological resources were detected within the site during intensive pedestrian survey, though it is possible that buried resources may be encountered during ground disturbance.

Built Environment

All three of the properties located by JRP fail to meet the criteria necessary to be considered cultural resources for the purposes of CEQA. Of the previously recorded historic resources in or near the study area, all but one are not eligible for listing, and as such are not cultural resources for the purpose of CEQA, and the one eligible property, the State Historic Landmark the Forestiere Gardens, will not be impacted by the construction of the energy center or the installation of pipelines.

5.7.2.5 Direct, Indirect, and Cumulative Impacts

Direct Impacts

Direct impacts are typically associated with construction activity and have the potential to immediately alter, diminish, or destroy all or part of the character and quality of historic and archaeological resources. At this time, the only potential direct impact of the proposed project will be the disturbance caused to the railroad spur should it be damaged during construction.

Indirect Impacts

Indirect impacts as defined in the California Department of Transportation (Caltrans) Guidance for Consultants (Caltrans 1991) “...are related to the primary consequences of the completed project and may be several steps removed from the project in the chain of cause and effect. Indirect impacts can normally be expected to cause change in the character or use of built environment by the introduction of undesirable auditory or visual intrusions. Noise and vibration activity itself may be considered indirect effects...” It is important to note that the Caltrans guidance define certain categories of projects that have virtually no potential for affecting historic resources, which they define as project with a “minimal APE.” These undertakings typically include “...repair, maintenance, or minor alteration of existing streets, sidewalks, gutters... and similar facilities” (Caltrans 1991). The construction, operation and maintenance of the BEC project are not expected to result in significant new indirect impacts to archaeological or built environment cultural resources.

Cumulative Impacts

Section 5.18, Cumulative Impacts, presents information on other projects that could affect the same resources as BEC. The reader is referred to that section for details regarding each of these projects.

Each of these projects was assessed in conjunction with BEC to ascertain the potential contribution of BEC to cumulative impacts to the cultural resources base. Based on this analysis it has been concluded that cumulative impacts from BEC on the regional cultural resources base are limited because implementation of the mitigation measures proposed below for cultural resources will reduce project-related impacts to a less-than-significant level. Although no archaeological sites have been identified that would be affected by the project, in the event that such a site were encountered, data recovery and/or site avoidance would ensure that the information content of site would be retained. These measures would limit the contribution to cumulative impacts of BEC on the regional cultural resources base.

5.7.3 Mitigation

5.7.3.1 Mitigation of Construction-related Impacts

Mitigation under Section 106 of the NHPA, as declared by CEQA Sections 15064.5 and 15126.4 and NEPA, must address impacts to values for which a cultural resource is considered important. To mitigate adequately, it must therefore be determined what elements make a cultural resource eligible for the CRHR and/or NRHP.

The applicant is committed to archaeological site avoidance where feasible. However, in the event that testing is required, the initial testing/evaluation program would be conducted expeditiously. If avoidance of a site found to be significant is not possible, BEC would comply with CEQA/CRHR and Section 106 of the NHPA in consultation with the CEC and the State Historic Preservation Office (SHPO) in order to complete formal determinations of eligibility and effect, and to formalize mitigation agreements.

Impacts and Mitigation Measures

Measures to ensure avoidance of cultural resources and measures to avoid indirect impacts to nearby cultural resources are described below. The mitigation measures and procedures described would apply to any cultural resources in the project APE, or cultural resources determined not to be significant when the CEC and SHPO (if a federal undertaking) concur with the determination, regardless of facility component. With implementation of the applicant-committed measures listed below, no significant unavoidable impacts to known cultural resources are expected to occur.

CUL-1. Avoidance

In order to ensure that no known or unknown resources are damaged, routes of any access roads of other temporary use areas that must be built or graded that are located outside of areas previously surveyed for cultural resources will be subjected to archaeological survey prior to construction. If a potentially significant cultural resource is discovered, the route/temporary use area will be modified to avoid that resource. If there are not feasible means to avoid the

resource, the cultural resource will be tested; if found significant, the measures for mitigation described below will be implemented. These will be done in consultation with CEC.

CUL-2. Physical Demarcation and Protection

In instances where a project facility must be placed within 100 feet of a cultural resource not previously found to be ineligible for inclusion on the CRHR, the cultural resource will be temporarily fenced or otherwise demarcated on the ground, and the area will be designated environmentally sensitive. Construction equipment will be directed away from the cultural resource and construction personnel will be directed to avoid entering the area. Where cultural resource boundaries are unknown, the protected area will include a buffer zone with a 100-foot radius. In some cases, additional archaeological work may be required to demarcate the boundaries of the cultural resource in order to ascertain whether the cultural resource can be avoided.

CUL-3. Crew Education

Prior to beginning of construction near any sensitive cultural resource, the construction crew will be informed of the resource values involved and of the regulatory protections afforded those resources. The crew will also be informed of procedures relating to designated culturally sensitive areas, and cautioned not to drive into these areas or to park or operate construction equipment in these areas. The crew will be cautioned not to collect artifacts, and asked to inform a construction supervisor in the event that cultural remains are uncovered.

CUL-4. Archaeological Monitoring

All initial grading or excavation within 100 feet of any potentially significant resource that may have a subsurface component will be monitored by an archaeologist. If subsurface materials are uncovered, construction work in the immediate vicinity will be halted and the emergency discovery procedures described below will be implemented.

CUL-5. Native American Monitoring

In order to ensure participation by interested members of the Native American community, it is recommended that a Native American monitor be present during archaeological cultural resource testing and/or data recovery operations at archaeological cultural resources that appear to have a prehistoric or ethnographic component. The monitor will be retained either directly by the project applicant, or through the subconsultant conducting the actual fieldwork.

CUL-6. Formal Compliance with CEQA Section 15064.5 and 15126.4 and Section 106 of the NHPA

In the event that a resource cannot be avoided during the placement of any project facility, further archaeological work will be undertaken as appropriate to assess the importance/significance of the resource prior to the project implementation.

CUL-7. Mitigation Through Investigation

If known resources cannot be avoided during construction or maintenance of the facility, or unanticipated resources are discovered during construction, they will be addressed under the procedures set forth at CEQA Section 15064.5. If possible, the resource will be avoided first through design modification, or second, through protective measures as described above. If the resource cannot be avoided, the project archaeologist will consult with the CEC and SHPO with

regard to resource significance. If it is determined that the resource is significant, then measures to mitigate impacts will be devised in consultation with the CEC and SHPO and will be carried out by the applicant.

5.7.3.2 Specific Mitigation Measures

Specific actions recommended at each project facility are described below. In devising specific mitigation measures to address impacts for any cultural resources that cannot be avoided during construction through project design modification, there is a potential for ongoing impacts to the resource. Any mitigating data recovery shall be adequately scoped, in conjunction with the regulatory agency(s), to address potential long-term ongoing impacts. Project policy will dictate that crews and vehicles engaged in operation and maintenance will confine activities to the greatest possible extent to existing roads, or will perform inspections by air or on foot.

Bullard Energy Center Site

Currently, there is no reason to expect that the project will impact any archaeological or historic sites previously recommended eligible for listing on federal, state, or local registers. The Railroad Spur may be a significant cultural resource, and if it is to be damaged by construction, further evaluation should be performed, and mitigation of damage, either through project re-design or study, may be necessary.

The surviving portion of old Bullard Road retains integrity of material and location. However, it is a common type of road, of which better examples exist elsewhere, and its setting has been radically altered by the construction of housing and industrial buildings in the area. As such, it is recommended to not be a Cultural Resource for the purposes of CEQA and requires no further action.

5.7.4 Laws, Ordinances, Regulations, and Standards Compliance

Cultural resource laws, ordinances, regulations, and standards (LORS) are described below.

The archaeological survey described above served to identify cultural resources present within and immediately adjacent to the BEC site and associated project components. The BEC project is considered a state-level undertaking and as such, is subject to state LORS for paleontological and cultural resources. Any cultural resource potentially affected by the project will be subject to compliance with the provisions outlined in CEQA/CRHR and possibly Section 106 of the NHPA. If a cultural resource is discovered during construction, and cannot be avoided, a program of site evaluation will be undertaken to ascertain resource significance under CEQA/CRHR and Section 106 of the NHPA. If such a resource is determined to be significant, mitigation measures will be developed in concert with the CEC, SHPO, and other agencies as appropriate. At this time no specific permit requirements have been identified at the federal, state, or local levels to perform any cultural resources work that may subsequently be required during the construction or operation phases of the project.

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Adequacy Issue: Adequate _____ Inadequate _____ DATA ADEQUACY WORKSHEET Revision No. _____ Date _____

Technical Area: _____ Technical Staff: _____

Project: _____ Technical Senior: _____

Docket: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	<p>...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.</p>	<p>5.7.1 5.7.2 5.7.3</p>		
Appendix B (g) (2) (A)	<p>A brief summary of the ethnology, prehistory, and history of the region in which the project site and related facilities are located and maps at a scale of 1:24,000, indicating areas of ethnographic occupation. The region may vary depending on the extent of the territory occupied or used by prehistoric cultures indigenous to the area in which the project is located.</p>	<p>5.7.1.6 through 5.7.1.8 Figure 5.7-1</p>		

DATA ADEQUACY WORKSHEET

Technical Area: _____ Technical Staff: _____

Project: _____

Project Manager: _____ Docket: _____

Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (2) (B)	A description of all literature searches and field surveys used to provide information about known cultural resources in the project vicinity. If survey records of the area potentially physically affected by the project are not available, and the area has the potential for containing significant cultural resources, the applicant shall submit a new or revised survey for any portion of the area lacking comprehensive survey data. A discussion of the dates of the surveys, methods used in completing the surveys, and the identification and qualification of the individuals conducting the surveys shall be included.	5.7.1.11		The information regarding the dates, methods, and personnel for the surveys was not made available through the information center (and may not have been in final reports). However, the companies that generated the reports follow a practice of allocating responsibility to qualified individuals and performing adequate fieldwork.
Appendix B (g) (2) (C)	A discussion of the sensitivity of the project area described in subsection (g)(2)(A) and the presence and significance of any known archeological sites and other cultural resources that may be affected by the project. Information on the specific location of archeological resources shall be included in a separate appendix to the application and submitted to the Commission under a request for confidentiality pursuant to Title 20, California Code of Regulations, § 2501 et seq.	5.7.1.3 5.7.1.11 Appendix J		
Appendix B (g) (2) (D)	A summary of contacts and communications with, and responses from, Native American representatives who may have an interest in heritage lands and/or resources potentially affected by the proposed project.	5.7.1.9		

Adequacy Issue: Adequate _____ Inadequate _____ DATA ADEQUACY WORKSHEET Revision No. _____ Date _____

Technical Area: _____ Project: _____

Technical Staff: _____

Project Manager: _____ Docket: _____

Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (2) (E)	In the discussion on mitigation and monitoring prepared pursuant to subsection (g)(1), a discussion of any educational programs proposed to enhance awareness of potential impacts to archeological resources by employees and contractors, measures proposed for mitigation of impacts to known cultural resources, and a set of contingency measures for mitigation of potential impacts to previously unknown cultural resources.	5.7.3		
Appendix B (h) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;	Table 5.7-3		

DATA ADEQUACY WORKSHEET

Cultural Resources Technical Staff: _____

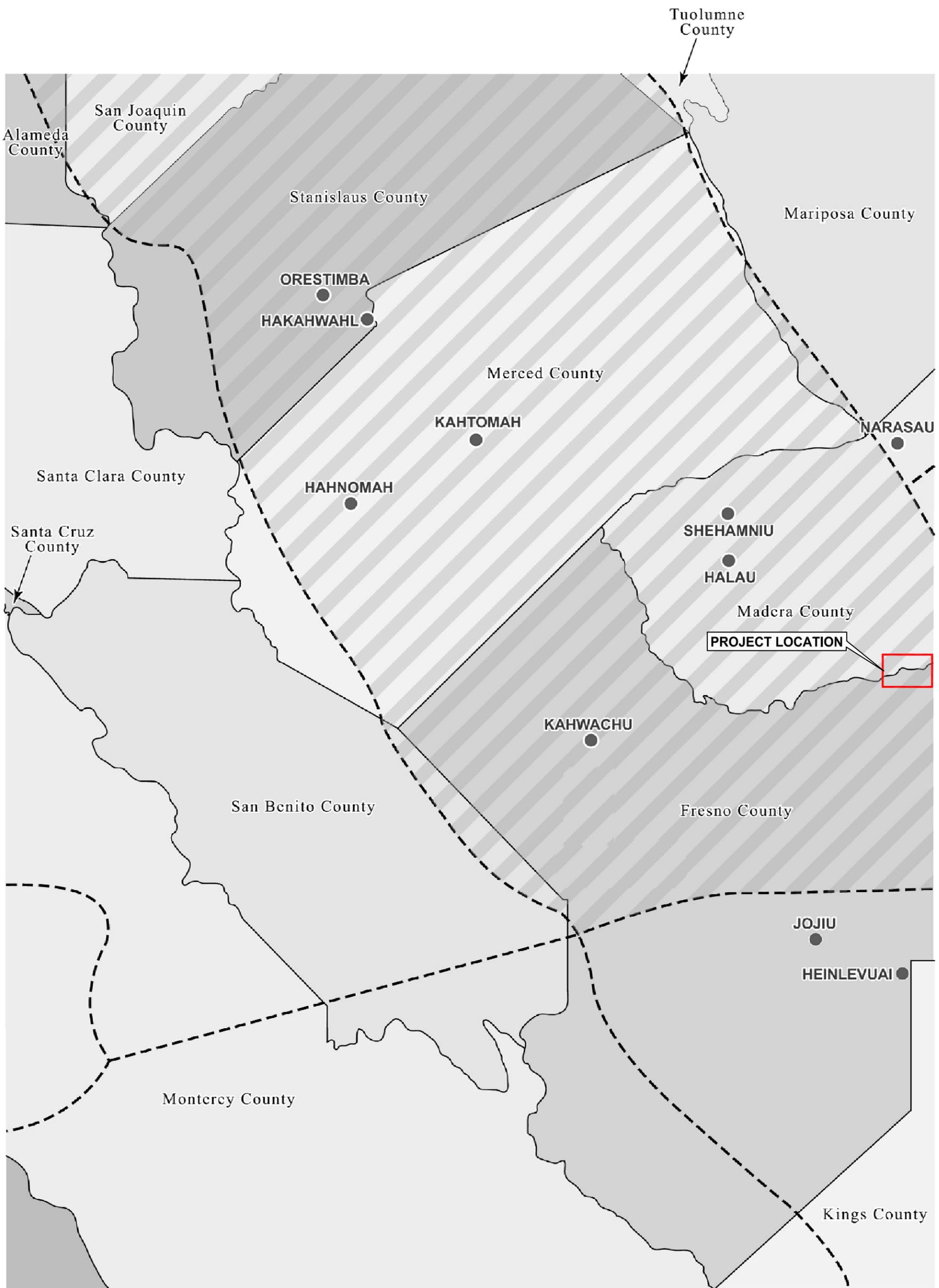
Project: _____ Technical Senior: _____

Area: _____

Docket: _____

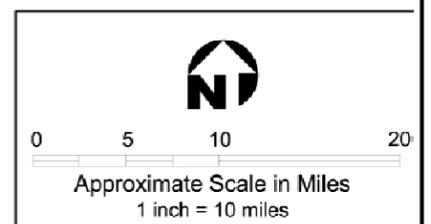
Project Manager: _____

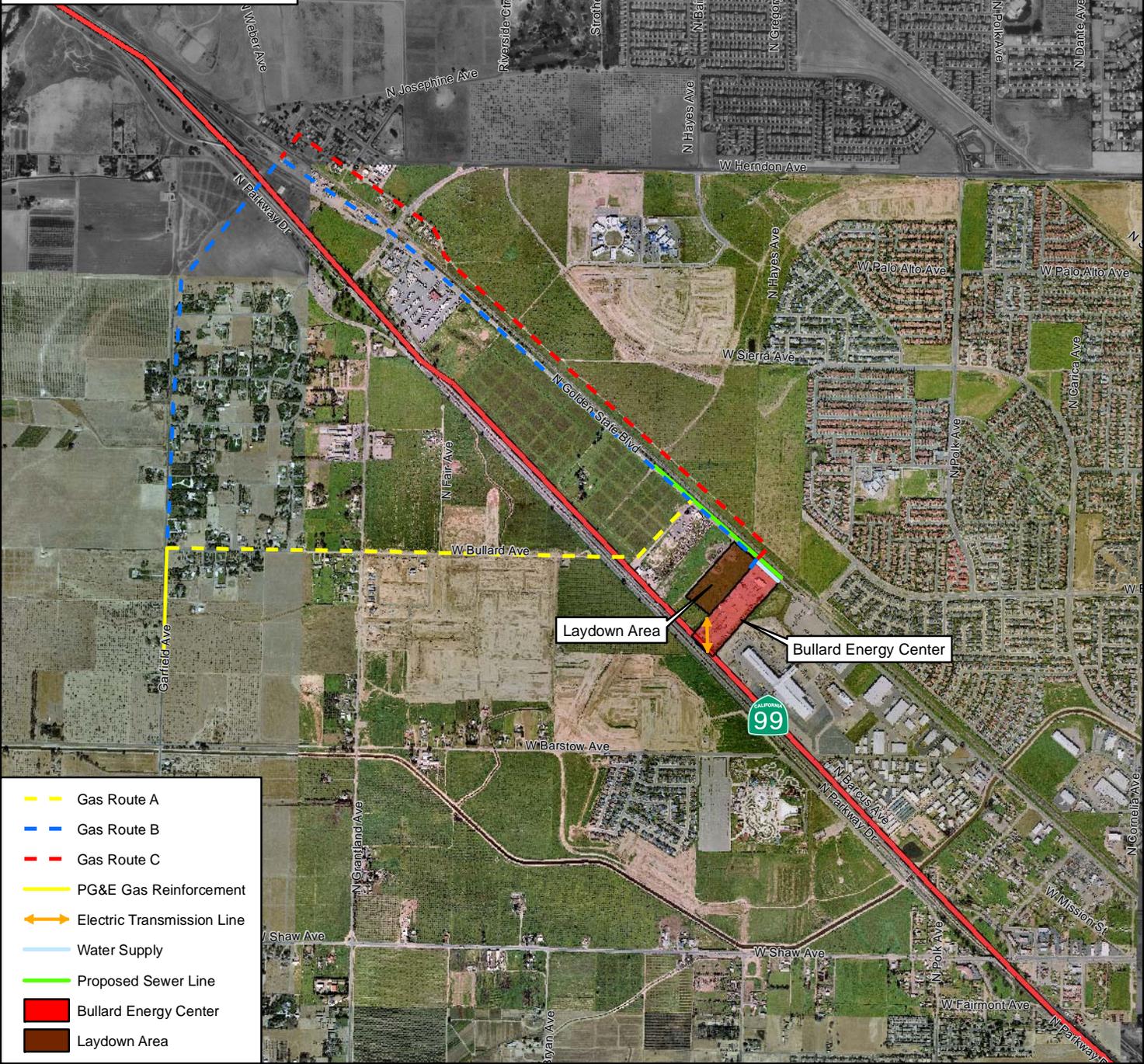
SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (h) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Table 5.7-3		Unless a federal hook is found, the only official to be contacted for cultural resources is the Fresno County Coroner in the event that human remains are found. If a federal hook is found for the project, then the State Historic Preservation Officer (SHPO) may have to consult to agree that there are no adverse impacts to cultural resources. Otherwise, the contacts for cultural resource issues should be the same as for other environmental issues or else should be indicated by the agency contacts for other environmental issues.
Appendix B (h) (2)	A discussion of the conformity of the project with the requirements listed in subsection (h)(1)(A).	5.7.2.1 5.7.2.2 5.7.2.3		
Appendix B (h) (3)	The name, title, phone number, and address, if known, of an official within each agency who will serve as a contact person for the agency.	NA		See above
Appendix B (h) (4)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	NA		See above



Legend

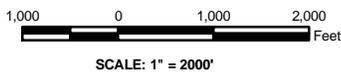
-  Ethnolinguistic Boundaries
-  North Valley Yokuts Ethnohistoric Territory
-  Yokuts Villages (locations approximate, based on LATTI 1949)





- Gas Route A
- Gas Route B
- Gas Route C
- PG&E Gas Reinforcement
- Electric Transmission Line
- Water Supply
- Proposed Sewer Line
- Bullard Energy Center
- Laydown Area

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SOURCES:
Airphoto USA (color aerial Feb. 2005);
Western Mapping Center (aerial 1998);
Streetmap USA (streets).



Cultural Area Surveyed

Bullard Energy Center

FIGURE 5.7-2

