3.5 Cultural Resources

This section describes the regulatory and environmental setting for cultural resources in the program and project areas: archaeological materials, human remains, and historic architecture, places, and artifacts. It also describes impacts on cultural resources that would result from implementation of the program and the two individual projects. Mitigation measures are prescribed where feasible and appropriate.

3.5.1 Existing Conditions

Regulatory Setting

Federal

Archaeological and architectural resources (buildings and structures) are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470f), and its implementing regulations: Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979.

Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies (e.g., U.S. Army Corps of Engineers, National Park Service) to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing on the National Register of Historic Places NRHP). NHPA Section 101(d)(6)(A) allows properties of traditional religious and cultural importance to a tribe to be determined eligible for inclusion in the National Register. Under the NHPA, a find is significant if it meets the National Register listing criteria under 36 CFR 60.4, as stated below.

> 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:
>
> a) That are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> b) That are associated with the lives of persons significant in our past, or
>
> c) 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, or
>
> d) That have yielded, or may be likely to yield, information important in prehistory or history.

Federal review of projects is normally referred to as the Section 106 process. The Section 106 process normally involves step-by-step procedures that are described in detail in the implementing regulations (36 CFR Part 800) and summarized here.

- Establish a federal undertaking.
- Delineate the Area of Potential Effects.

- Identify and evaluate historic properties in consultation with the SHPO and interested parties.
- Assess the effects of the undertaking on properties that are eligible for inclusion in the National Register.
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the Advisory Council on Historic Preservation.
- Proceed with the project according to the conditions of the agreement.

State

The State of California implements the NHPA through its statewide comprehensive cultural resource preservation programs. The California Office of Historic Preservation (OHP), an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the State's jurisdiction.

California Environmental Quality Act (CEQA)

CEQA, as codified in PRC Sections 21000 et seq. and implemented via the CEQA Guidelines (14 CCR Section 15000 et seq.), is the principal statute governing the environmental review of projects in the state. The CEQA Guidelines define a historical resource as: (1) a resource in the California Register of Historic Resources (CHRH); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (PRC Section 5024.1[b]). The CRHR criteria are based on NRHP criteria. Certain resources are determined by CEQA to be automatically included in the California Register, including California properties formally eligible for or listed in the National Register. To be eligible for the California Register as a historical resource, a prehistoric or historic-period resource must be significant at the local, state, and/or federal level under one or more of the following criteria [14 CCR Section 4852(b)].

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

For a resource to be eligible for the CRHR, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. A resource that does not retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the California Register.

CEQA requires lead agencies to determine if a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and State CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the State CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083.2 regarding unique archaeological resources. A unique archaeological resource is 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 any of the following criteria [PRC Section 21083.2 (g)].

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

The State CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (State CEQA Guidelines Section 15064[c][4]).

Local

The Alameda County General Plan consists of several documents that discuss specific geographic areas in detail in the western part of the county, as well as general goals, policies, and actions for house, safety, conservation, open space, noise, and recreation. In 2012, the Alameda County Board of Supervisors adopted a historic preservation ordinance that codified the definition and maintenance of the Alameda County Register of Historic Resources, how properties can be added or removed from the county register, and what activities may be subject to review. The ordinance also provided incentives for the preservation of historic resources.

Environmental Setting

Prehistoric Context

The Bay Area was a region of intense human occupation long before the European explorers settled in the region in the eighteenth century. In the early twentieth century, the prehistory of the region was virtually unknown, aside from a small amount of ethnographic information (Kroeber 1925) and the discovery of a few prehistoric sites at the southern end of the San Francisco Bay (Nelson 1909).

Milliken et al. (2007) present the idea that a series of culture changes in the San Francisco Bay Area took place during the 11500–8000 cal B.C. time frame, suggesting that Clovis big-game hunters, then initial Holocene gatherers, lived in the area. Presumably, however, evidence to support this has been washed away by stream action, buried under more recent alluvium, or submerged on the continental shelf (Rosenthal and Meyer 2004:1). There is evidence, however, for an in-place forager

economic pattern, beginning around 8000 cal B.C., followed by a series of five cycles of change that began at approximately 3500 cal B.C., as described below.

The Early Holocene (Lower Archaic), cal 8000 to 3500 B.C.

Between cal 8000 and 3500 B.C., the Bay Area appears to have been occupied by a widespread but sparse population of hunter-gatherers. The millingslab and handstone, as well as a variety of large, wide-stemmed and leaf-shaped projectile points, all emerged during this period (Milliken et al. 2007:114).

The Early Period (Middle Archaic), cal 3500 to 500 B.C.

Several technological and social developments characterize this period in the Bay Area. Rectangular *Haliotis* and *Olivella* shell beads, the markers of the Early Period bead horizon, continued in use until at least 2,800 years ago (Ingram 1998; Wallace and Lathrop 1975:19). The mortar and pestle were first documented in the Bay Area shortly after 4000 B.C., and by 1500 cal B.C., cobble mortars and pestles, and not millingslabs and handstones, were used at sites throughout the Bay Area, including ALA-307 (West Berkeley) and ALA-483 (Livermore Valley) (Wiberg 1996:373).

Lower Middle Period (Initial Upper Archaic), 500 cal B.C.to cal A.D. 430)

Although it is unclear when the "major disruption in symbolic integration systems" originated, it is clear in the record around 500 B.C. and may have begun several hundred years earlier (Milliken et al. 2007:115). A new suite of decorative and presumed religious objects appeared during the Early Period–Middle Period Transition (EMT) (Elsasser 1978), which corresponds to the beginning of this period. Bead Horizon M1 of the Middle Period (Upper Archaic, 200 cal B.C. to cal A.D. 430), which developed out of the EMT, marked the first of a series of bead horizons of central California bead trade until cal A.D. 1000 (Groza 2002).

Upper Middle Period (Late Upper Archaic), cal A.D. 430 to 1050)

During the Upper Middle Period (Late Upper Archaic) (cal AD 430 to 1050), the *Olivella* saucer bead trade network of the Lower Middle Period collapsed. More than half of the known M1 sites were abandoned. In the remaining sites, the number of sea otter bones greatly increased (Bennyhoff 1994a, 1994b).

Initial Late Period (Lower Emergent), cal A.D. 1050 to 1550

During this period, burial objects became much more elaborate, and initial markers of the Augustine Pattern appeared in the form of multi-perforated and bar-scored *Haliotis* ornaments and new *Olivella* bead types in sites such as SCL-690 (Hylkema 2007). Classic Augustine Pattern markers, which appeared in bead horizon L1 (after cal AD 1250), include the arrow, flanged pipe, *Olivella* callus cup bead, and the banjo effigy ornament (Bennyhoff 1994c).

Evidence for increased social stratification throughout the Bay Area after AD 1250 can be found in mortuary evidence, such as higher-quality burial items in high-status burials and cremations (Fredrickson 1994:62). This may have reflected a new regional ceremonial system that was the precursor of the ethnographic Kuksu cult, a ceremonial system that unified the many language groups around the Bay Area during bead horizon L1 (Milliken et al. 2007:117).

Terminal Late Period: Protohistoric Ambiguities

An upward cycle of regional integration was likely commencing around the time of Spanish settlement in the Bay Area. Such regional integration was a continuing characteristic of the Augustine Pattern, most likely brought to the Bay Area by Patwin speakers from Oregon, who introduced new tools (such as the bow) and traits (such as pre-interment grave-pit burning) into central California. Perhaps the Augustine Pattern, with its inferred shared regional religious and ceremonial organization, was developed as a means of overcoming insularity, not in the core area of one language group, but in an area where many neighboring language groups were in contact (Milliken et al. 2007:118).

Ethnography

The program area is located within the ancestral territory of the Ohlone. Historically, the Ohlone were called the Costanoan Indians. *Costanoan* is derived from the Spanish word *costaños*, meaning "people of the coast" (Levy 1978:494). The term Ohlone or Costanoan denotes a larger group with many other tribelets throughout the Bay Area (Levy 1978:485). The term *Ohlone* is preferred by the present-day members of the group.

The Ohlone are believed to have inhabited the area since AD 500 or earlier. Their territory extended along the coast from San Francisco Bay in the north to just beyond Carmel in the south, and as much as 60 miles inland.

The Ohlone are a linguistically defined group. Eight different but related languages were spoken by the Ohlone. The Ohlone languages, together with Miwok, comprise the Utian language family of the Penutian stock (Levy 1978:485-486).

The program area is within the territories of the *Luecha* and *Ssaoam* tribelets of Ohlone. Milliken placed the Luechas on Corral Hollow and Arroyo Mocho in the "rough lands southeast of the Livermore Valley" (Milliken 1995:247). However, they may have primarily dwelled farther east, along the San Joaquin River (Schenck 1926:133). The Ssaoam tribe lived in the dry hills and tiny valleys around Bushy Peak and Altamont Pass, hill lands which separated the Livermore Valley from the San Joaquin Valley (Milliken 1995:255).

The Ohlone were hunter-gatherers and relied on acorns and seafood; however, they also exploited many other foods, including various seeds (growth was promoted by controlled burning), berries, roots, land and sea mammals, reptiles, and insects (Levy 1978:491-493).

Aboriginally, the Ohlone were politically organized by tribelet, each having a designated territory. A tribelet comprised one or more villages and camps within a territory often designated by geographic features. Tribelets generally had 100 to 250 members (Kroeber 1925). The office of tribelet chief was inherited patrilineally and could be occupied by a man or woman. Duties of the chief included directing ceremonial activities and serving the leader of a council of elders, which functioned primarily in an advisory capacity to the community (Levy 1978:487).

Seven Spanish missions were founded in Ohlone territory between 1777 and 1797. Mission life, for the most part, was devastating to the Ohlone population. As a result of introduced diseases and a declining birth rate, the Ohlone population fell from 10,000 or more in 1770 to less than 2,000 in 1832 (Cook 1943a, 1943b; Levy 1978:486). After the missions were secularized by the Mexican government (around 1830), many Native Americans, including Ohlones, left the missions in an attempt to reestablish their previous lives. Many Ohlone found work as wage laborers on the

ranchos and mines or in domestic positions. There was a partial return to aboriginal religious practices and subsistence strategies, but for the most part, the Ohlone culture was greatly diminished (Levy 1978:486-487). Today, descendants of the Ohlone still live in the area, and many are active in maintaining their traditions and advocating Native American issues.

3.5.2 Environmental Impacts

Methods for Analysis

Records Search

A cultural resources records search was conducted at the California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC), Sonoma State University, Rohnert Park, in June 2013. The records search encompassed the program area (in which the Golden Hills and Patterson Pass project areas are contained) and a 1/8-mile search radius around the program area.

The records search included reviews of the NWIC databases of archaeological sites and reports; the National Register and the Directory of Archaeological Determinations of Eligibility for California through June 2013; the California Register, California Historical Landmarks, and Points of Historical Interest; the California Inventory of Historic Resources; and the Historic Property Date Files for Alameda County through 2013. The NWIC records search also included review of the General Land Office (GLO) 1862 Canada de Los Vaqueros plat map; and the 1862 and 1867 plats of Township 2 South, Range 3 East. None of the GLO plats contained any cultural information within the program area.

Records search results for the program area and the individual project areas—Patterson Pass and Golden Hills—are discussed below. The project areas are much smaller than the program area and contain fewer resources and have had fewer studies than the program area.

Program Area

The NWIC records search identified 90 cultural resources within the program area. Of those 90 resources, 9 are prehistoric, 1 is multi-component (a site with both historic archaeological and prehistoric components), and the remaining sites are historic-period sites: 55 historic archaeological (including 4 isolates), 19 historic architectural, and 6 sites with both historic archaeological and architectural components.

Because of the large amount of resources identified within the program area, all of these resources will not be presented here. However, the different types of resources will be briefly discussed.

The prehistoric resources within the program area include two rockshelters, three bedrock mortar sites, a seasonal occupation site, and a scatter of milling slab fragments and a bowl mortar. The multi-component site is P-01-011054, the Tesla Complex. This complex consists of two prehistoric features and seven loci of historic-period mining and residential features (Newland and Erickson 2010). None of these resources have been evaluated for NRHP or CRHR eligibility.

The Brushy Peak Archaeological District (P-01-011111) is adjacent to the program area. This district is located at the Brushy Peak Regional Preserve in the East Bay Regional Park District (EBRPD), and its boundaries correspond to those of the property line of EBRPD (Fentress and Guerrero 2010),

which is surrounded on three sides by the program area. It consists of a Native American village and bedrock mortar complexes. The district also includes four distinct loci containing various bedrock mortars and/or lithic scatters. One of these loci, Locus 1, is a previously recorded site, CA-ALA-622. CA-ALA-622 consists of a variety of bedrock mortars and lithic scatters in four distinct areas. In the district form, P-01-011111 has a NRHP status of 3S. However, the district is not yet listed in the NRHP.

Historic resources within the program area include a variety of historic-era archaeological sites and isolates, structures and objects, and sites comprised of both archaeological and architectural components.

The historic-era archaeological resources include resources associating with mining (mine adits, shafts, portals, waste rock piles, depressions, and prospecting scrapes); house sites (including foundations); artifact scatters (consisting of glass and ceramic fragments; construction and building debris; part of farm machinery/equipment, and cans and other metal items); isolated glass and fence post fragments; former reservoir or pond sites; remnants of corrals and windmills; pipe frames; former mining town sites (Harrietville, Harrisville); drainages and overflow channels; historic roads (the Tesla-Livermore Road, the West Mitchell Ravine Road, and the Mitchell Ravine Road); a historic-era private family cemetery (with gravel and telephone poles placed horizontally around the perimeter to protect the area); and the leveled field from the Old Tesla baseball field.

The historic architectural resources include transmission lines, canals, extant residential structures and ranching complexes, the Southern (Union) Pacific Railroad, bridges, corrals/troughs, and a culvert. Those resources that contain both historic-era archaeological and architectural components are comprised of former ranch complexes and homestead sites with extant buildings and structures, collapsed structures, foundations, and artifact scatters.

Table 3.5-1 presents the resources within the program area that have been considered for NRHP or CRHR eligibility and their status, if applicable.

The NWIC records indicated that about 130 studies have been conducted within or adjacent to the program area and that approximately 75% of the program area has been studied. Because of the extensive number of studies that have been conducted within the program area, they will not be discussed in detail in this document. However, it will be noted that portions of the program area have been extensively studied, through a variety of survey reports. Many of the studies conducted in the 1980s were for various phases and locations of the current windfarms within the program area. Additional studies within the program area include studies for landfill sites and associated facilities, pipelines and transmission lines, property evaluations, bridge assessments, cellular tower studies, water conveyance development and improvement, road improvements, studies for the Brushy Peak Regional Preserve, and a variety of overview studies covering historic, ethnographic, and geoarchaeological topics in Alameda County and beyond.

Table 3.5-1. Resources within the Program Area Considered for NRHP/CRHR Eligibility

Resource Number	Site Period	Site Type	Description	Location	NRHP/CRHR Eligibility
P-01-010447/ CA-ALA-596	Historic Architectural	Historic–Transmission line	Segment of the Tracy-Contra Costa-Ygnacio Transmission line; constructed in 1951	Within program area	NRHP status code 6Z
P-01-010448/ CA-ALA-587	Historic Architectural	Historic–Transmission line	Segment of the Tracy-Los Vaqueros Transmission Line; constructed in 1951	Within program area	NRHP status code 6Z
P-01-010501	Historic Architectural	Historic–Rail line segment	Segment of the Southern (Central) Pacific Railroad Grade where it crosses Midway Road; 100 feet long; centered on Midway Road; tracks and ties have been removed; however, the grade is in excellent condition and retains its ballast rock	Within program area	The CPRR may meet CRHR Criteria 1 and 3, but it has not been formally evaluated
P-01-010504	Historic Archaeological and Architectural	Historic–Windmill and farm features	Water pumping windmill, with an associated abandoned truck, collapsed water tank, concrete trough, and a cattle corral	Within program area	Recommended not eligible for NRHP or CRHR
P-01-010613	Historic Archaeological and Architectural	Historic–Road	Segment of Grant Line Road - paved, 2 lanes, approximately 30 feet wide; route was placed as early as 1874; the Road runs along the route of the original Lincoln Highway (the first paved transcontinental road)	Within program area	Appears to meet CRHR Criterion 1 but has not been formally evaluated
P-01-010947	Historic Architectural	Historic–Transmission line	Pittsburg-Tesla 230kV transmission line, approximately 31 miles long and oriented northwest to southeast; constructed by PG&E in 1959–1960	Within program area	Recommended not eligible for NRHP or CRHR
P-01-011111	Prehistoric and Historic	Prehistoric–Archaeological District	Brushy Peak Archaeological District: a prehistoric habitation site with bedrock mortar complexes; four human burials were exposed during wetlands pond construction in 2006; obsidian projectile point, chert flake stone tools and debitage, ground stone tools, and fire-affected rock were observed	Adjacent to program area	NRHP status code 3S
P-01-011114	Prehistoric	Prehistoric–Outcrop	24+ bedrock mortars and a cupule are located on sandstone outcrops and boulders; sandstone formations are located in open grassland	Within P-01-11111, which is adjacent to the program area	Within the Brushy Peak Archaeological District (NRHP status code 3S)

Golden Hills Project Area

Three resources were identified by the NWIC as being in the Golden Hills project area. All three are historic-era resources.

- P-01-000163/CA-ALA-441H: a historic-era ranch complex consisting of 5 separate features (2 stream ripraps, one stream riprap/possible check dam, one possible check dam, and footings for two structures with possible drainage ditches and a sparse scatter of ceramic and glass fragments and metal/construction debris.
- P-01-000177/CA-ALA-455H: the Santucci Property Homestead, a historic-era ranch complex with standing buildings (barns, shed, root cellar, cattle feeding areas); corrals, fences, foundations, collapsed structure; various construction and domestic debris.
- P-01-010957: the remnants of an abandoned corral.

None of these resources has been evaluated for NRHP/CRHR eligibility.

Twenty-three studies have been conducted within or adjacent to portions of the Golden Hills project area. About 75% of this project area has been studied.

- S-121, Fredrickson, D. and P. Banks. 1975. *An Archaeological Reconnaissance of the Proposed Altamont Landfill Site*. No resources in the Golden Hills project area were identified during this study.
- S-2623, Holman, M. 1981. *Archaeological Reconnaissance of the Windpower Generator Farm to be Located on the Jess Ranch East of Livermore, Alameda County* (letter report). No resources in the Golden Hills project area were identified during this study.
- S-2865, Holman, M. 1982. *Archaeological Field Reconnaissance of the Wind Farm Planned for the Lands of Mulqueeney and Hera in Alameda County* (letter report). No resources in the Golden Hills project area were identified during this study.
- S-5657, Slater, S. and M. Holman. 1982. *An Archaeological Reconnaissance of Six Windfarm Parcels near Altamont Pass, Alameda County*. No resources in the Golden Hills project area were identified during this study.
- S-5659, Holman, M. 1982. *An Archaeological Field Reconnaissance of Properties Being Considered for Windfarm Development* (letter report). No resources in the Golden Hills project area were identified during this study.
- S-5862, Holman, M. 1982. *An Archaeological Reconnaissance of the Proposed Fayette Manufacturing Company Wind Farm on the Morgan, Shuff, Haera, and Costello Properties, Altamont Pass, Alameda County, California*. No resources in the Golden Hills project area were identified during this study.
- S-5868, Holman, P. 1983. *A Field Archaeological Reconnaissance of a Proposed Wind Farm for the Fields Ranch, Altamont Pass, Alameda County* (letter report). No resources in the Golden Hills project area were identified during this study.
- S-6007, Fredrickson, D. 1983. *Archaeological Survey of the Wind Energy Company Project Area near Altamont Pass, Alameda County, California*. No resources in the Golden Hills project area were identified during this study.

- S-6125, Holman, M. 1983. *An Archaeological Reconnaissance of the Ralph Properties Windfarm Project Area, Altamont Pass, Alameda County, CA*. No resources in the Golden Hills project area were identified during this study.
- S-6489, Clark, M. 1984. *Archaeological Reconnaissance of the Gomes North Parcel, Alameda County, CA*. No resources in the Golden Hills project area were identified during this study.
- S-7075, Holman, M. 1984. *Santucci Property Archaeological Reconnaissance* (letter report). P-01-000177/CA-ALA-455H was identified during this study.
- S-8942, Ruckle, J. 1974. *Archaeology of the California State Water Project*. No resources in the Golden Hills project area were identified during this study.
- S-9119, Killam, W. 1987. *Cultural Resources Investigations and Intensive Survey for the Lawrence Livermore Direct Service 230-kV Transmission Line*. P-01-000163/CA-ALA-441H was identified during this study.
- S-9995, Killam, W. 1988. *Cultural Resources Investigations for the Tracy-Banks Transmission Line, Alameda County, CA*. No resources in the Golden Hills project area were identified during this study.
- S-11396, BioSystems Analysis, Inc. 1989. *Technical Report of Cultural Resources Studies for the Proposed WTG-WEST, Inc., Los Angeles to San Francisco and Sacramento, CA: Fiber Optics Project*. No resources in the Golden Hills project area were identified during this study.
- S-17993, Hatoff, B. B. Voss, S. Waechter, S. Wee, and V. Bente. 1995. *Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project*. No resources in the Golden Hills project area were identified during this study.
- S-18762, Archeo-Tec. 1989. *Cultural Resources Evaluation of the Proposed Mountain House Planned Community, Alameda and San Joaquin Counties, CA*. No resources in the Golden Hills project area were identified during this study.
- S-27973, Dice, M. 2003. *Records Search and Site Visit for Sprint Telecommunications Facility Candidate SF58XC002A (Altamont Pass), 11830 South Highway 580 East, Livermore, Alameda County* (letter report). No resources in the Golden Hills project area were identified during this study.
- S-29359, Pastron, A. and R. Brown. 1998. *Historical Cultural Resource Assessment, Existing Telecommunications Facility, I-580-C, Site No. PL-110-03, 11701 N. Flynn Road, Livermore* (letter report). No resources in the Golden Hills project area were identified during this study.
- S-32791, Psota, S., M. Newland, and A. Praetzellis. 2000. *Attachment A, Site Description and Photographs, PL-113-02 Monopole, 11700 N. Flynn Road, Livermore, CA*. No resources in the Golden Hills project area were identified during this study.
- S-35187, Schmid, T. 2008. *Archaeological Survey Report, Clifton Court Forebay Delta Maintenance Project*. No resources in the Golden Hills project area were identified during this study.
- S-35796, Siskin, B., C. DeBaker, and J. Lang. 2009. *Cultural Resources Investigations and Architecture of the Pittsburg-Tesla Transmission Line, Contra Costa and Alameda Counties, CA*. P-01-000957 was recorded during this study.

Patterson Pass Project Area

No resources were identified by the NWIC as being in the Patterson Pass project area.

Five studies have been conducted within or adjacent to portions of the Patterson Pass project area. This entire project area has been studied.

- S-5868, Holman, M. 1983. A Field Archaeological Reconnaissance of a Proposed Wind Farm for the Fields Ranch, Altamont Pass, Alameda County, California (letter report). No resources in the Patterson Pass project area were identified during this study.
- S-6133, Holman, M. 1983. Field Archaeological Reconnaissance of the Proposed Sweet Property Wind Farm (letter report). No resources in the Patterson Pass project area were identified during this study.
- S-6490, Clark, M. 1983. Archaeological Reconnaissance of the Moy Property, Alameda County, California. No resources in the Patterson Pass project area were identified during this study.
- S-11396, BioSystems Analysis, Inc. 1989. Technical Report of Cultural Resources Studies for the Proposed WTG-WEST, Inc., Los Angeles to San Francisco and Sacramento, California: Fiber Optic Cable Project. No resources in the Patterson Pass project area were identified during this study.
- S-17993, Hatoff, B. B. Voss, S. Waechter, S. Wee, and V. Bente. 1995. Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project. No resources in the Patterson Pass project area were identified during this study.

Field Survey

A cultural resources field survey is in process to cover those portions of the Golden Hills project area that were not previously covered by the surveys referenced above, but it was not completed at the time of preparation of this EIR.

Archaeological Site Sensitivity

Program Area

Previous studies throughout the program area and eastern Alameda County have documented that prehistoric resources in this area are buried and may have little or no visible surface evidence. Because there is an archaeological district (the Brushy Peak Archaeological District, as described above) adjacent to the program area, that location should be considered sensitive for buried resources.

An additional area of archaeological site sensitivity appears to be in the southeastern portion of the program area. This area contains about 50 known resources, primarily historic-era archaeological. They consist of former town sites, mines and mine shafts, prospect scrapes and rock piles associated with pit mining, historic-era artifact scatters, a variety of corrals, troughs, and historic roads, as well as two rock outcrops. It is therefore possible that additional historic-era archaeological, as well as prehistoric, resources are present within this portion of the program area.

A final area of archaeological site sensitivity appears to be in the middle portion of the program area, along the eastern border in proximity to the Alameda and San Joaquin Counties boundary. This area contains about 15 historic-era archaeological resources, including former ranch and house sites, windmill and farm features, artifact scatters, a historic-era family cemetery, a transmission line, the

remains of a reservoir, and four historic-era isolates (glass fragments). It is therefore possible that additional historic-era archaeological resources are present within this portion of the program area.

Project Areas

No resources have been previously recorded in the Patterson Pass project area, and three resources have been previously recorded in the Golden Hills project area. Both project sites have been extensively studied through a variety of reports, including studies for transmission lines and wind resources; cellular tower studies; area-wide inventory reports; and studies for commercial and residential development. Neither project area is considered sensitive for archaeological resources.

Summary of Native American Contact

A letter, submitted by fax, was sent to the Native American Heritage Commission (NAHC) on June 20, 2013. The letter described the program and requested a review of the Sacred Lands Files for the program area. The letter also requested a list of interested Native American tribal groups and individuals who may have concerns pertaining to Native American issues in the program area. The NAHC responded on June 26, 2013, stating that the search failed to indicate the presence of Native American cultural resources in the immediate program area. The NAHC also provided a list of the Native American tribal groups and individuals to be contacted regarding the proposed program.

On June 28, 2013, letters describing the proposed program that included a map of the program area were sent to the following individuals.

- Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan
- Jakki Kehl
- Katherine Erolinda Perez
- Ramona Garibay, Representative, Trina Marine Ruano Family
- Irene Zwierlein, Chairperson, Amah/Mutsun Tribal Band
- Rosemary Cambra, Chairperson, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Jean-Marie Feyling, Amah/Mutsun Tribal Band
- Tony Cerda, Chairperson, Coastanoan Rumsen Carmel Tribe

Per his request, an email was sent to Andrew Galvan of the Ohlone Indian Tribe. To date, no responses have been received from any of those contacted. Native American consultation is ongoing and will be updated for the final EIR.

Determination of Significance

In accordance with Appendix G of the State CEQA Guidelines, program Alternative 1, program Alternative 2, the Golden Hills Project, or the Patterson Pass Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

- Disturb any human remains, including those interred outside of formal cemeteries.
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Impacts and Mitigation Measures

Where projects are proposed in the program area, a survey and evaluation to identify potential historic resources and a re-evaluation of recorded historic resources would need to be conducted in the project's area of potential effect (APE). The APE would include the properties adjacent to the project area if the project may pose an indirect impact on a historic resource by altering its historic setting. Having a significant impact on the historic integrity of a property by affecting its historic setting is a significant impact on a historic resource. If the APE of a proposed project within the program area contains a historic resource, as defined in the State CEQA Guidelines, and the resource would be substantially adversely changed by the proposed project, the resulting impact would cause a substantial adverse change in the significance of the historic resource.

The program has identified the following construction and operation activities as likely to occur. These activities could result in substantial adverse changes in the significance of historical resources.

1. Temporary meteorological tower installation.
    a. If the construction and operation of the temporary meteorological tower causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
2. Temporary staging area set-up.
    a. If the construction and operation of the temporary staging area set-up causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
3. Existing wind turbine removal.
    a. If the removal of an existing wind turbine causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
4. Temporary meteorological tower removal.
    a. If the removal of the temporary meteorological tower causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
5. Road infrastructure upgrades.
    a. If an upgrade to the road infrastructure causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.

1) Road infrastructure upgrades may include widening of existing internal roads, widening of entrances to access roads and public roads, and replacement of existing culverts with larger ones.

6. Wind turbine construction.
    a. If the construction of a new wind turbine causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
        1) Construction of the wind turbines would include new concrete foundations (see #9), batch plant construction (see #7), and crane area construction (see #9). Both the batch plant and crane areas would be reclaimed following the completion of the construction of the wind turbine.
7. Final site selection and preparation.
    a. If the selection and preparation of a site causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
8. Batch plant construction.
    a. See #6 above. If the construction of a batch plant causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
9. Foundation excavation and construction.
    a. See #6 above. If the construction and operation of the foundation causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
10. Crane pad construction.
    a. See #6 above. If the construction of a crane pad construction area causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
11. Assembly of tower.
    a. If the assembly of the tower causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
12. Installation of turbine nacelle.
    a. If the installation of turbine nacelles causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
13. Attachment of rotors.
    a. If the attachment of rotors causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.

14. Collection system upgrades and installation.
    a. If the upgrades and installation of the collection system causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
15. Communication system installation.
    a. If the installation of the communication system causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
16. Permanent meteorological tower installation.
    a. If the construction and operation of the permanent meteorological tower causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.
17. Reclamation of landscape.
    a. If the reclamation of landscape causes the demolition, destruction, relocation, or alteration of a historical resource, the proposed project could cause a substantial adverse change in the significance of that historical resource.

Mitigation of significant impacts must lessen or eliminate impacts that a proposed project will have on a historic resource. This can be accomplished through redesign to eliminate objectionable or damaging aspects of the project. Examples include redesigning a project to retain rather than remove a character-defining feature, reducing the massing size of a proposed new addition to the historic setting, or relocating a structure outside the boundaries of a historic setting.

Relocation of a historic resource may constitute an adverse impact on the resource. However, in situations in which relocation is the only feasible alternative to demolition, relocation may mitigate below a level of significance provided that the new location is compatible with the original character and use of the historical resource, and the resource retains its eligibility for listing on the California Register (14 CCR Section 4852(d)(1)).

In most cases, the use of drawings, photographs, or displays does not mitigate the physical impact on the environment caused by demolition or destruction of a historical resource (14 CCR Section 15126.4(b)). However, CEQA requires that all feasible mitigation be undertaken even if it does not mitigate below a level of significance. In this context, recordation serves a legitimate archival purpose. The level of documentation required as mitigation should be proportionate with the level of significance of the resource (California State Parks, Office of Historic Preservation 2013).

Impact CUL-1a-1: Cause a substantial adverse change in the significance of a historical resource—program Alternative 1: 417 MW (less than significant with mitigation)

Nineteen historic architectural resources have been recorded within the program area. There may be more unrecorded historic resources within the area. Some of the historic resources that were recorded may no longer exist or may be too significantly altered to still be considered historic resources, as defined in Section 15064.5 of the State CEQA Guidelines. If the APE of a proposed project within the program area contains a historic resource, as defined in the State CEQA Guidelines, and the resource would be substantially adversely changed by the proposed project, the

resulting impact would cause a substantial adverse change in the significance of the historic resource.

Implementation of Mitigation Measure CUL-1a would reduce this impact to a less-than-significant level by amending project design to avoid a significant impact on the historic resource. If avoidance is not feasible, then the impact would be significant. Mitigation Measure CUL-1b would reduce such an impact to a less-than-significant level by recording the historic resource following the documentation standards and guidelines of the National Park Service's (NPS) Historic American Building Survey (HABS) or Historic American Engineering Record (HAER).

Mitigation Measure CUL-1a: Avoid historic resources

Where feasible, avoid historic resources in design and layout of a proposed project in the program area.

Mitigation Measure CUL-1b: Appropriate recordation of historic resources

If Mitigation Measure CUL-1a is determined to be infeasible, the significantly affected historic resource should be recorded following the guidelines of NPS, HABS, or HAER. The recordation documentation must be provided to NPS, the SHPO, and local repositories as determined by Alameda County. The documentation with a HABS or HAER report will include written data, a photography record with large-format rectified photography, and, depending on the level of significance of the resource, an architectural drawing set. The standards for these recordation components are defined in NPS guidance, and the level of recordation is determined by Alameda County in consultation with other lead agencies, if required. There are three standard levels of HABS and HAER recordation defined by the NPS.

Impact CUL-1a-2: Cause a substantial adverse change in the significance of a historical resource—program Alternative 2: 450 MW (less than significant with mitigation)

Nineteen historic architectural resources have been recorded within the program area. There may be more unrecorded historic resources within the area. Some of the historic resources that were recorded may no longer exist or may be too significantly altered to still be considered historic resources, as defined in Section 15064.5 of the State CEQA Guidelines. If the APE of a proposed project within the program area contains a historic resource, as defined in the State CEQA Guidelines, and the resource would be substantially adversely changed by the proposed project, the resulting impact would cause a substantial adverse change in the significance of the historic resource.

Implementation of Mitigation Measure CUL-1a would reduce this impact to a less-than-significant level by amending project design to avoid a significant impact on the historic resource. If avoidance is not feasible, then the impact would be significant. Mitigation Measure CUL-1b would reduce such an impact to a less-than-significant level by recording the historic resource following the documentation standards and guidelines of the National Park Service's (NPS) Historic American Building Survey (HABS) or Historic American Engineering Record (HAER).

Mitigation Measure CUL-1a: Avoid historic resources

Mitigation Measure CUL-1b: Appropriate recordation of historic resources

Impact CUL-1b: Cause a substantial adverse change in the significance of a historic resource—Golden Hills Project (less than significant with mitigation)

The Golden Hills Project may cause a substantial adverse change in the significance of a historical resource—Dam #3 (P01-010958). This resource is the remains of an earthen dam that measured 30 feet long, 12 feet wide, and 10 feet high. Per the 1999 recordation, the associated pond, located behind it, had dried up. No other features are recorded or were observed during the Google Earth remote reconnaissance survey by the architectural historian in June 2013.

Dam #3 has not been determined eligible to the CRHR and NRHP. However, Section 15064.5 states:

> The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register or historical resources, or identified in an historical resources survey does not preclude a lead agency from determining that the resource may be an historical resources as defined in Public Resources Code section 5020.1(j) or 5024.1

Should the proposed project require the demolition, destruction, or alteration of this resource or its immediate surroundings such that the significance of the resource is materially impaired, then a substantial adverse change would result. Implementation of Mitigation Measure CUL-1a would reduce this impact to a less-than-significant level by avoiding the historic resource. If avoidance is infeasible, implementation of Mitigation Measure CUL-1b would be employed. Because the dam is an engineered feature, an HAER would be appropriate documentation to reduce this impact to a less-than-significant level.

Mitigation Measure CUL-1a: Avoid historic resources

Mitigation Measure CUL-1b: Appropriate recordation of historic resources

Impact CUL-1c: Cause a substantial adverse change in the significance of a historic resource—Patterson Pass Project (no impact)

There are no historical resources recorded in any of the three parcels that comprise the Patterson Pass Project. No other features are recorded or were observed during the Google Earth remote reconnaissance survey by the architectural historian in June 2013. There would be no impact.

Impact CUL-2a-1: Cause a substantial adverse change in the significance of an archaeological resource—program Alternative 1: 417 MW (less than significant with mitigation)

As discussed in *Methods for Analysis*, a variety of prehistoric and historic-era archaeological resources are present within the program area. Given the large size of the program area, the moderate to high sensitivity for buried sites (especially near Brushy Peak), and the moderate to high sensitivity for historic archaeological resources towards the eastern and southeastern portions of the program area, there is a possibility of encountering and damaging previously unrecorded archaeological resources during ground-disturbing activities. This impact would be significant, but implementation of Mitigation Measures CUL-2a, 2b, 2c and 2d would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation

Alameda County will require applicants to retain qualified personnel to conduct an archaeological field survey of the program area to determine whether significant resources exist

within the program area. The inventory and evaluation will include the documentation and result of these efforts, the evaluation of any cultural resources identified during the survey, and cultural resources monitoring, if the survey identifies that it is necessary.

Mitigation Measure CUL-2b: Develop a treatment plan for any identified significant cultural resources

If any significant resources are identified through the preconstruction survey, a treatment plan that could include site avoidance, capping, or data recovery will be developed and implemented.

Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction

Prior to the initiation of any site preparation and/or the start of construction, the project applicant will ensure that all construction workers receive training overseen by a qualified professional archaeologist who is experienced in teaching nonspecialists, to ensure that forepersons and field supervisors can recognize archaeological resources (e.g., areas of shellfish remains, chipped stone or groundstone, historic debris, building foundations, human bone) in the event that any are discovered during construction.

Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities

The project applicant will ensure that construction specifications include a stop-work order if prehistoric or historic-era cultural resources are unearthed during ground-disturbing activities. If such resources are encountered, the project applicant will immediately halt all activity within 100 feet of the find until a qualified archaeologist can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative (if appropriate), will develop a treatment plan that could include site avoidance, capping, or data recovery.

Impact CUL-2a-2: Cause a substantial adverse change in the significance of an archaeological resource—program Alternative 2: 450 MW (less than significant with mitigation)

As discussed in *Methods for Analysis*, a variety of prehistoric and historic-era archaeological resources are present within the program area. Given the large size of the program area, the moderate to high sensitivity for buried sites (especially near Brushy Peak), and the moderate to high sensitivity for historic archaeological resources toward the eastern and southeastern portions of the program area, there is a possibility of encountering and damaging previously unrecorded archaeological resources during ground-disturbing activities. This impact would be significant, but implementation of Mitigation Measures CUL-2a, 2b, 2c and 2d would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation

Mitigation Measure CUL-2b: Develop a treatment plan for any identified significant cultural resources

Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction

Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities

Impact CUL-2b: Cause a substantial adverse change in the significance of an archaeological resource—Golden Hills Project (less than significant with mitigation)

Archaeological resources have been identified in the Golden Hills project area. Damage to these archaeological resources would be a significant impact, but implementation of Mitigation Measures CUL-2a, CUL-2b, CUL-2c, CUL-2d and 2e would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation

Mitigation Measure CUL-2b: Develop a treatment plan for any identified significant cultural resources

Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction

Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities

Mitigation Measure CUL-2e: Avoid all cultural resources during construction and operation

Avoid archaeological resources in design, layout, construction, and operation of the proposed project.

Impact CUL-2c: Cause a substantial adverse change in the significance of an archaeological resource—Patterson Pass Project (less than significant with mitigation)

Although no cultural resources have been identified in the Patterson Pass project area, there is the possibility of encountering and damaging previously unrecorded archaeological resources during ground-disturbing activities. This impact would be significant, but implementation of Mitigation Measures CUL-2a, 2b, 2c, and 2d would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-2a: Conduct a preconstruction cultural field survey and cultural resources inventory and evaluation

Mitigation Measure CUL-2b: Develop a treatment plan for any identified significant cultural resources

Mitigation Measure CUL-2c: Conduct worker awareness training for archaeological resources prior to construction

Mitigation Measure CUL-2d: Stop work if cultural resources are encountered during ground-disturbing activities

Impact CUL-3a-1: Disturb any human remains, including those interred outside of formal cemeteries—program Alternative 1: 417 MW (less than significant with mitigation)

Although there is no indication that the program area has been used for human burials, because prehistoric sites are known to be present in the program area, the possibility cannot be discounted entirely. Although the possibility is unlikely, human remains could be discovered during ground-disturbing activities. This impact would be significant, but implementation of Mitigation Measure CUL-3 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities

The project applicant will ensure the construction specifications include a stop-work order if human remains are discovered during construction or demolition. There will be no further excavation or disturbance of the site within a 100-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Alameda County Coroner will be notified and will make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report will be submitted to Alameda County. This report will contain a description of the mitigation program and its results, including a description of the monitoring and testing resources analysis methodology and conclusions and a description of the disposition/curation of the resources.

Impact CUL-3a-2: Disturb any human remains, including those interred outside of formal cemeteries—program Alternative 2: 450 MW (less than significant with mitigation)

Although there is no indication that the program area has been used for human burials, because prehistoric sites are known to be present in the program area, the possibility cannot be discounted entirely. Although the possibility is unlikely, human remains could be discovered during ground-disturbing activities. This impact would be significant, but implementation of Mitigation Measure CUL-3 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities

Impact CUL-3b: Disturb any human remains, including those interred outside of formal cemeteries—Golden Hills Project (less than significant with mitigation)

Although there is no indication that the Golden Hills project area has been used for human burials, because prehistoric sites are known to be present, the possibility cannot be discounted entirely.

Although the possibility is unlikely, human remains could be discovered during ground-disturbing activities. This impact would be significant, but implementation of Mitigation Measure CUL-3 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities

Impact CUL-3c: Disturb any human remains, including those interred outside of formal cemeteries—Patterson Pass Project (less than significant with mitigation)

Although there is no indication that the PPPS has been used for human burials, because prehistoric sites are known to be present in the larger Program area, the possibility cannot be discounted entirely. Although the possibility is unlikely, human remains could be discovered during ground-disturbing activities. This impact would be significant, but implementation of Mitigation Measure CUL-3 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-3: Stop work if human remains are encountered during ground-disturbing activities

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