

NAME VACA-PENA ADOBE

COUNTY Solano,

APPROVAL COMMITTEE:-

Aubrey Drury

Henrietta Toothaker

Carl I. Wheat

Peter T. Conmy

Approved at the May 20, 1955 meeting

STATE PARK COMMISSION

  
DIRECTOR, DEPARTMENT OF NATURAL RESOURCES

REGISTERED LANDMARK NUMBER 1534

DATE May 31, 1955

VACA PEÑA ADOBE  
(Rancho Los Potos)

Approved:

*Peter T. Commy*  
5-6-55

Disapproved:

Comments:

*Checked pots and found  
them to be correct.*

*Peter T. Commy*

VACA PEÑA ADOBE  
(Rancho los Potos)

Approved:

*Paul G. Wheat*

Disapproved:

Comments:

7/11/12

**VACA PEÑA ADOBE**  
**(Rancho los Potos)**

Approved: *Henrietta Tothaker*

Disapproved:

Comments:

VACA PEÑA ADOBE  
(Rancho los Putos)

Approved: *Cambrey Dwyer*

Disapproved:

Comments: *In the text for the proposed tablet;  
Is it "... of 10 leagues" or  
"...10 square leagues?"* *A*

RECEIVED  
DIVISION OF  
BEACHES AND PARKS

MAY 17 8 20 AM '55

APPLICATION FOR REGISTRATION OF HISTORICAL POINT OF INTEREST

Name of Historical Point VACA PENA ADOBE

Location ABOUT 2 MILES SOUTH OF VACAVILLE ON HGY. #40

Name of Owner MISS ANITA VACA LYON AND ALBERT LYON

Street \_\_\_\_\_

City DAVIS, CALIFORNIA

HISTORY AND DESCRIPTION

JUÁN Felipe Pena and Manuel Cabeza De Vaca and their families left New Mexico in 1840 for Los Angeles. They then traveled up the California coast to Sonoma Mission and arrived here in Lagoon Valley in August 1841. In 1843 Pena and Vaca received a Mexican Land Grant, <sup>from ~~Patrick Lyon~~ Manuel Michelorena</sup> including Lagoon and Vaca Valleys, of some 44,000 acres known as Rancho de Los Putos. The Vaca family received this land in return for having given so many sons to serve in the army of the King of Spain.

~~The~~ adobe house was constructed in 1846 for the Pena family by Patrick Lyon and <sup>Indians brought from Santa Barbara</sup> in return for a parcel of land. <sup>helped in construction</sup> Nearby another adobe, now demolished, was built by Lyon for the Vaca family also in 1846.

Following a marriage between the Vaca and Pena families, descendants from both families resided in ~~this~~<sup>the</sup> home.

On August 21, 1850, Manuel Caveza De Vaca deeded to William McDaniel nine square miles the consideration being that McDaniel should pay \$3,000 and deed to Vaca 200 lots and lay out a town

naming it Vacaville.

Many early day travelers stopped at this adobe to rest themselves and their horses before continuing their journeys.

Descendants of Penas and Vacas still live in Vacaville and nearby communities.

STATEMENT OF PROPERTY OWNER TO THE PARK COMMISSION

AUTHORIZING THE NUMBERING AND REGISTRATION OF HISTORICAL POINT OF INTEREST

Auta Vaca Lyon

REFERENCES TO BOOKS, RECORDS, AND OTHER AUTHORITIES SUSTAINING THESE FACTS

MISS ANITA VACA LYON, OWNER

MRS. LOLITA STOLP, NIECE OF MISS LYON

"HISTORY OF Solano COUNTY" Book from Solano County Library

ARE PICTURES ATTACHED? YES

IS STATEMENT OF OWNER ATTACHED? YES

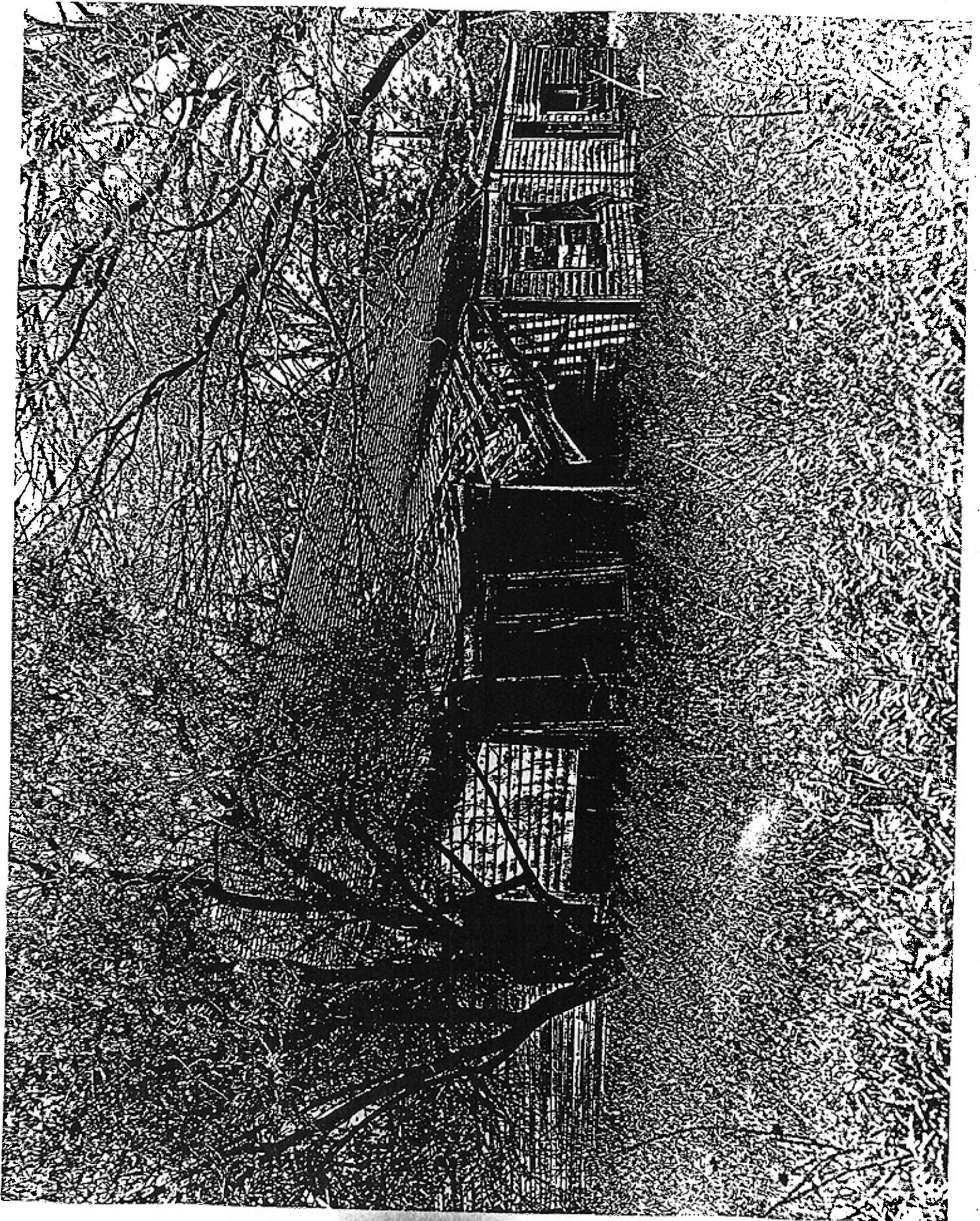
VACAVILLE PARLOR #293  
NATIVE DAUGHTERS OF THE GOLDEN WEST

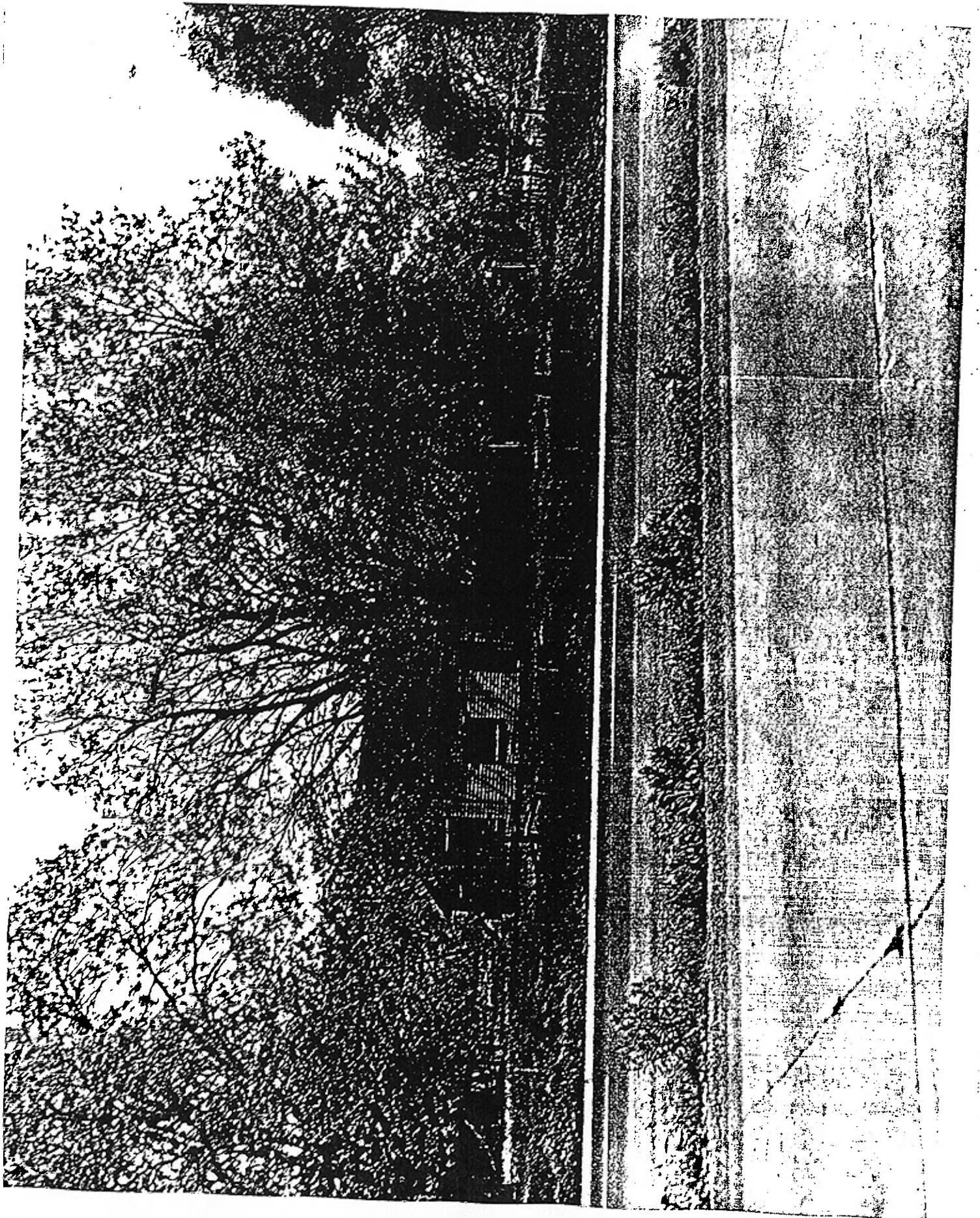
Signed Ella E. Lundy Pres

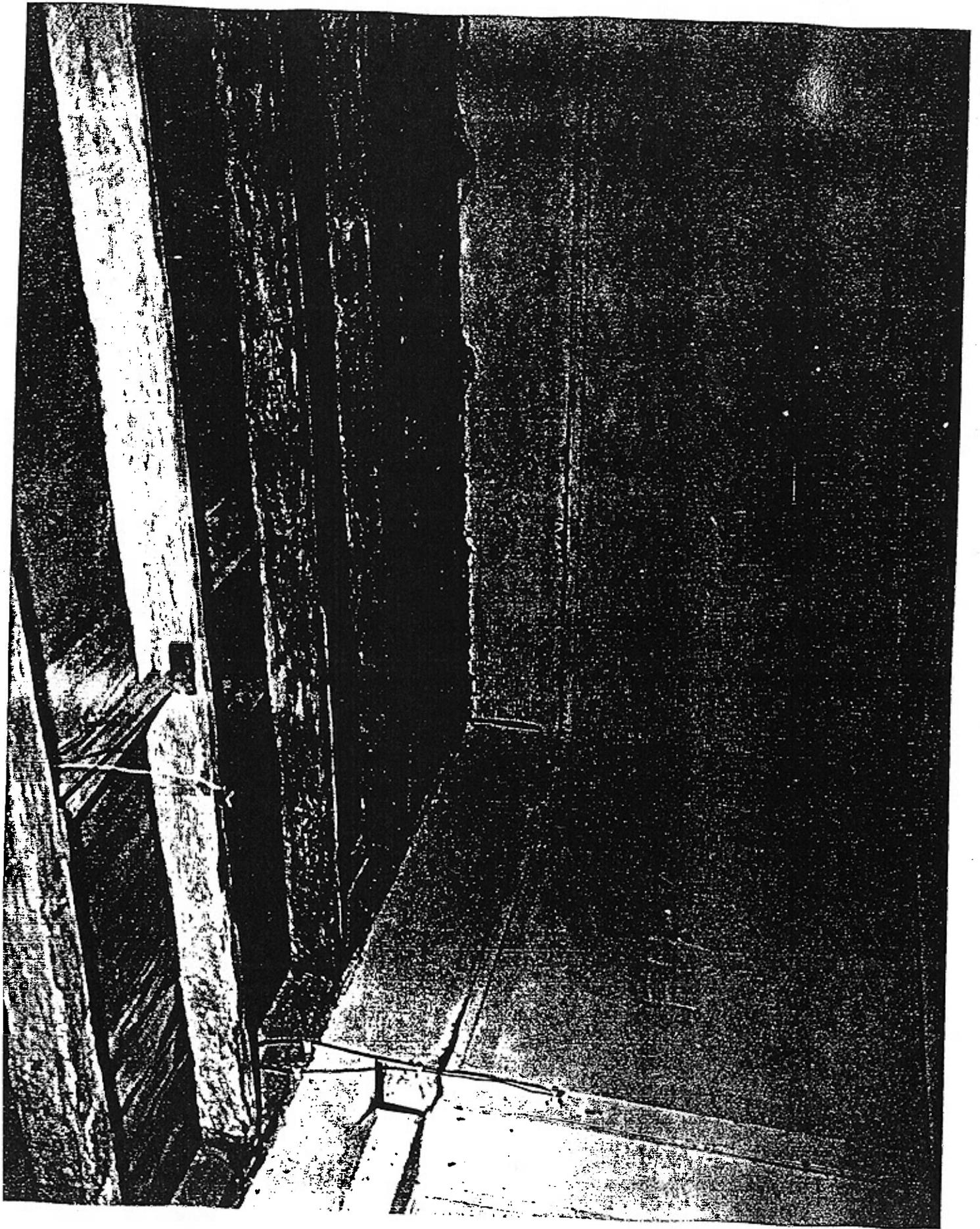
City VACAVILLE, CALIFORNIA

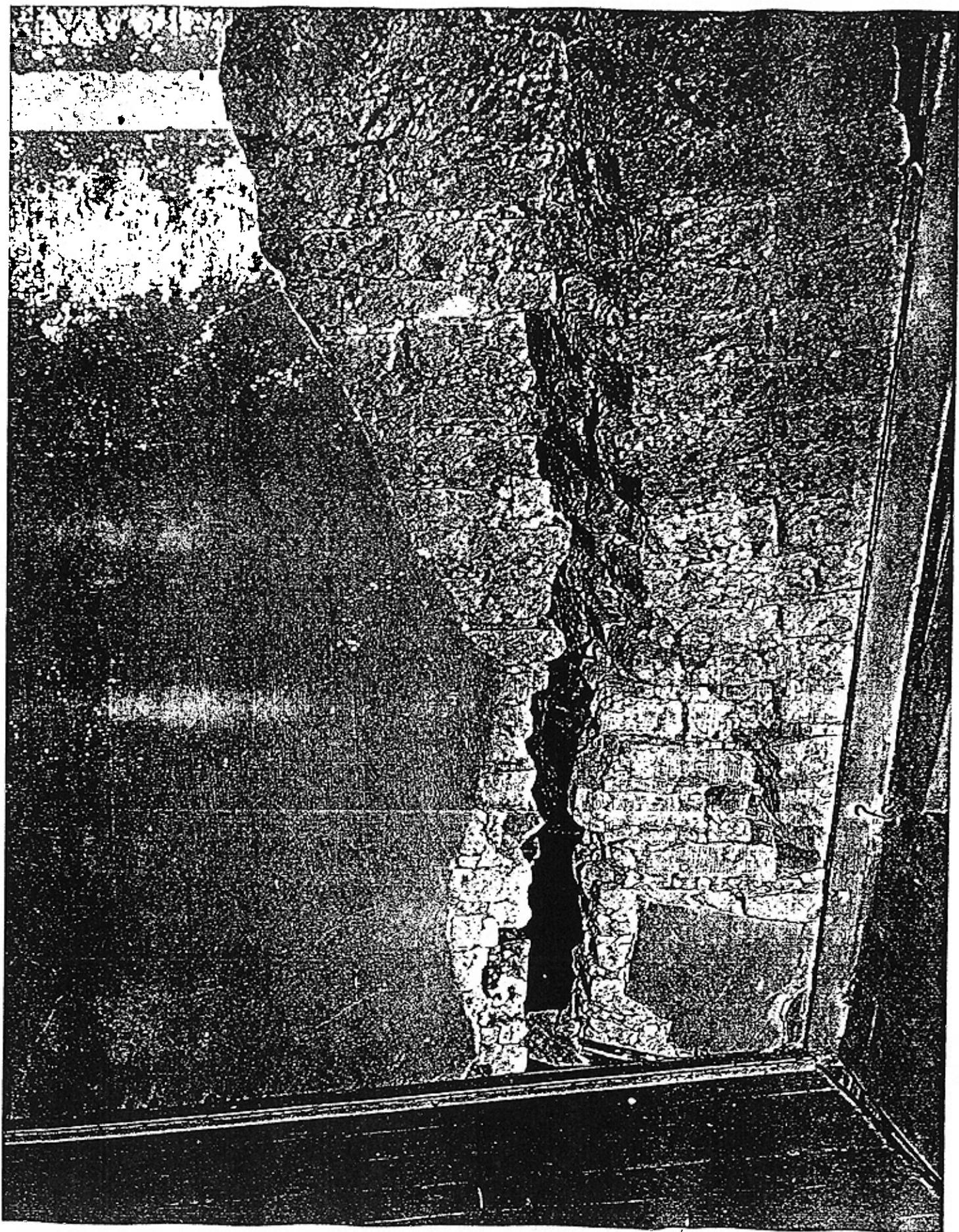
Date APRIL 19, 1955

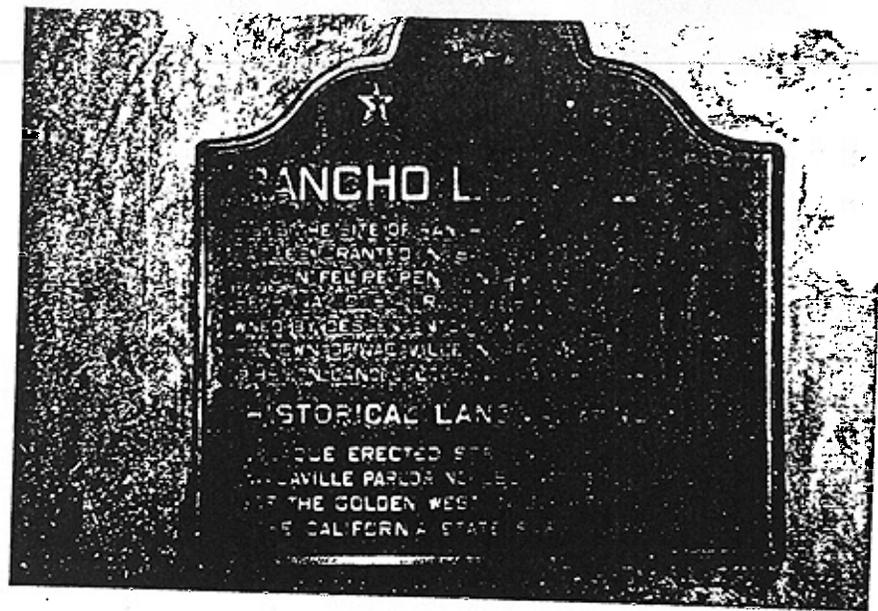
(This form when filled out completely is to be sent to the Historical Landmarks Advisory Committee, P. O. Box 2390, Sacramento 11, California)



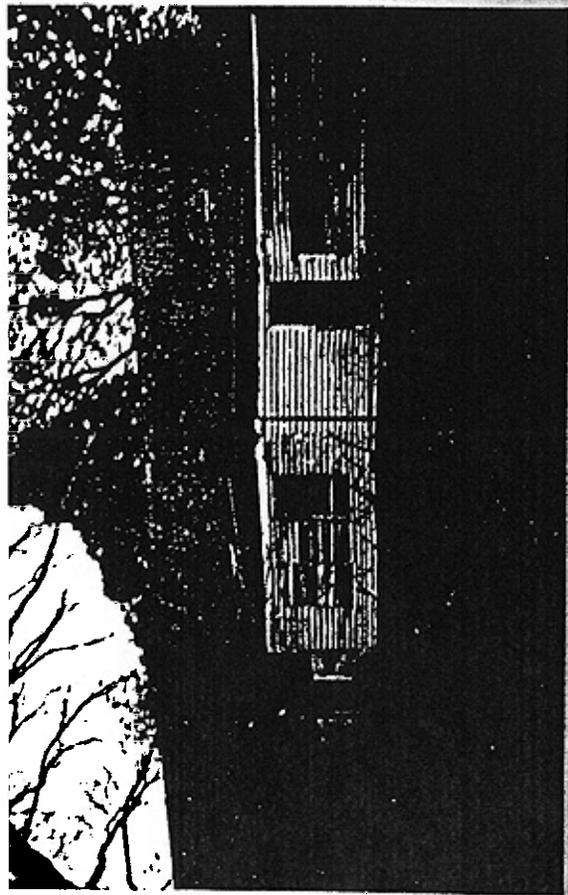
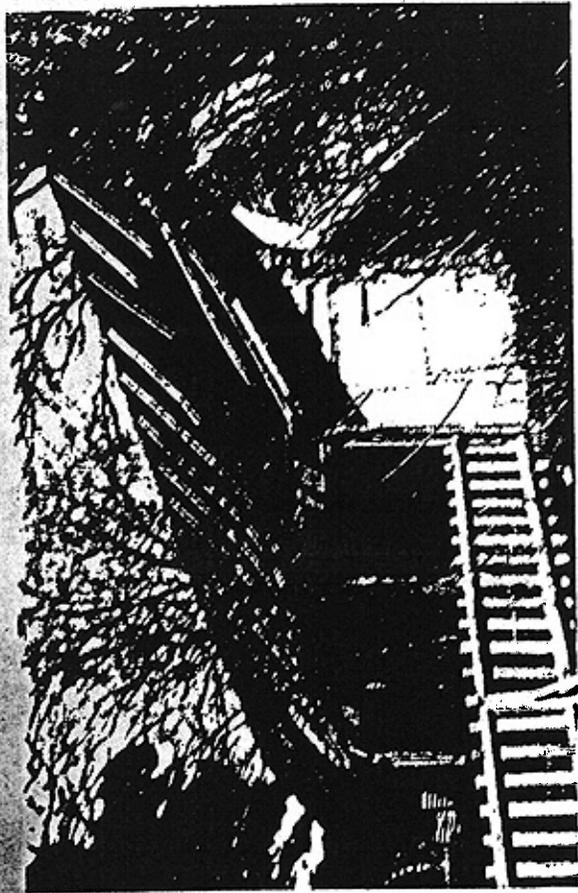
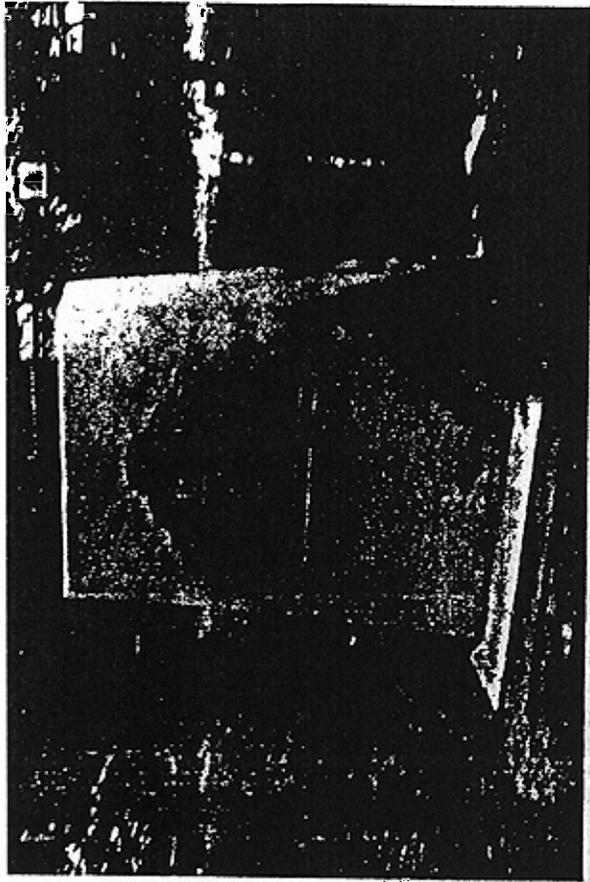












115 Years Old

# Restoration Of Vaca-Pena Historic Adobe Nears

Page B3  
THE SACRAMENTO BEE  
Wednesday, March 7, 1962

VACAVILLE, Solano Co. — Nestled among trees in the Lagoon Valley some miles west of Vacaville, is what appears to be an abandoned old house, partially covered with plastic. US Highway 140 travelers and passersby see it with curiosity. Some stop, they find that it is the old Vaca-Pena adobe, the home of the first European settlers between the Napa-Sonoma area and Fort Sutter in Sacramento.

On a day in the not too distant future the home will be restored to its original condition. Hard work will be done. It will be a task, but some true for the many diligent citizens in the area who have worked long and hard to bring monument to the pioneer settlers of Solano County. On August 15, 1847, Juan Felipe Pena and Juan Manuel Vaca and their families arrived in the area from New Mexico.

The partners raised cattle and grain on the land they had been given in the Spanish-Mexican Land Grant. Until their arrival, the population of the area was made up

of Spanish and Mexican society. With the help of the city, the adobe was restored to its original condition. The adobe now stands on a mere one and one half acres of the original land. Though a historical monument, it has been allowed to deteriorate over the years.

During the 1880s the adobe was damaged and Americanized by being framed over. The adobe now stands on a mere one and one half acres of the original land. Though a historical monument, it has been allowed to deteriorate over the years.

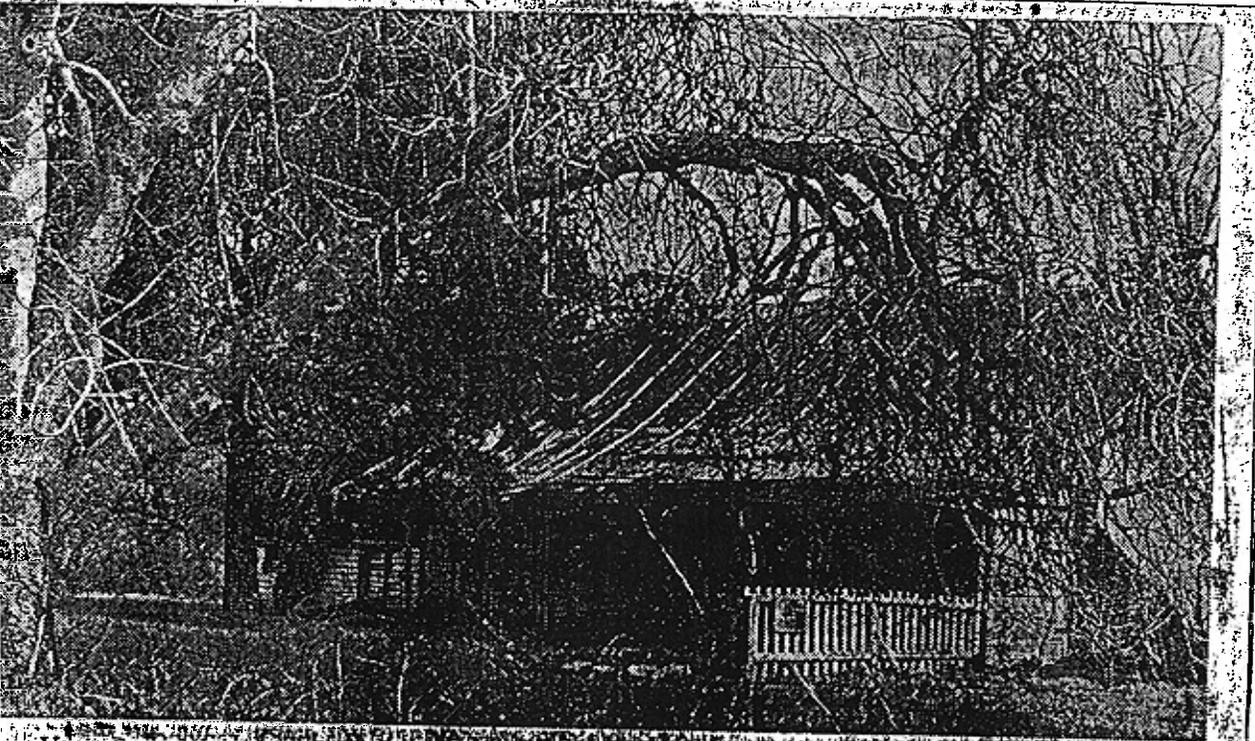
City Property  
Two years later, the Vacaville City Council accepted the deed from the historical

society which felt that in working together with the city, the project would see an early completion. The property is now in the process of being annexed to the City of Vacaville.

Financial aid for the project has been offered by the Solano County Board of Supervisors, the city of Vacaville, the county historical society and several civic organizations.

Since the property is now owned by the city, inmates of the California Medical Facility near Vacaville are able to provide the hand labor needed for the reconstruction of the 111 year old home at a low cost.

Map Digging  
At the present time, archeological diggings are being conducted and contour maps are being made under the direction of Merle Justice, reconstruction superintendent. The cost of the project has been estimated at \$30,000. It will be completed within three years.



Vaca-Pena adobe home, erected in 1842, two miles west of Vacaville, Solano County.

**RANCHO LOS PUTOS**

THIS IS THE SITE OF RANCHO LOS PUTOS, A LARGE  
 GRANT GRANTED IN 1845 BY GOVERNOR PICO  
 TO DON FELIPE PENA AND MANUEL BENAVIDES.  
 THE PENA ADOBE, ERECTED HERE IN 1842, IS STILL  
 OWNED BY DESCENDANTS OF THE PENA-VACA FAMILIES.  
 THE TOWN OF VACAVILLE, NEARBY, WAS SETTLED  
 FIRST ON LAND SOLD BY VACA TO WILLIAM W. GIBBS.

**HISTORICAL LANDMARK NO. 520**

PLAQUE ERECTED SEPTEMBER 8, 1955 BY  
 VACAVILLE PARLOR NO. 293, NATIVE DAUGHTERS  
 OF THE GOLDEN WEST, IN COOPERATION WITH  
 THE CALIFORNIA STATE PARK COMMISSION.

...e was placed at the historic home by the Native Daughters of the West in cooperation with the state park commission. Bee Photos

## Steps Are Taken For Restoring Historic Adobe

VACAVILLE, Solano Co.—  
First steps in a program to  
restore the Vaca-Pena adobe

home as an historical land-  
mark have been completed  
but further activity will be  
delayed until after the spring  
rains.

Located on US Highway 40  
two miles west of Vacaville,  
the adobe was built in 1842  
and used as a home by Juan  
Felipe Pena and Manuel Ca-  
beza Vaca on a portion of  
their 10 league square grant  
from the Mexican Govern-  
ment.

### Used By Fremont

Historians say there are in-  
dications the adobe was used  
by John C. Fremont during  
his expedition to California  
and that he held General  
Mariano Guadalupe Vallejo  
captive in the home over-  
night.

Idle for the last several  
decades the adobe was de-  
teriorated by weather until  
the south wall collapsed last  
summer.

County Supervisors D. A.  
Mowers of Vacaville and W.  
F. Geheen of Vallejo, Solano  
County purchased the home  
last year and have turned it  
over to the Solano County  
Historical Society for restora-  
tion and preservation as an  
historical monument.

### Given Plastic Coat

The historical society re-  
cently completed installation  
of black plastic coating to  
cover the adobe and protect  
it from further rain damage  
until such time as funds can  
be raised and plans completed  
for restoration.

The adobe is readily visible  
from Highway 40 and daily is  
viewed by thousands of mo-  
torists. Location of a roadside  
rest at the old home has been  
suggested by interested  
groups and may be incorpo-  
rated with plans to make the  
historical spot a museum and  
monument.

The Vacaville parlor of the  
Native Daughters of the  
Golden West erected a plaque  
listing the home as an his-  
torical monument September  
18, 1955.

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THE CASA DE PENA PARK WHEN IT IS FULLY DEVELOPED WILL BE A HISTORIC GEM THAT WILL BE KNOWN THROUGHOUT THE STATE. IT WILL GIVE VISITORS ARRIVING IN CALIFORNIA FROM THE NORTH AND EAST THEIR FIRST VISTA INTO THE COLORFUL MEXICAN ERA IN CALIFORNIA'S PAST. IT WILL PROVIDE THE RESIDENTS OF THE VACAVILLE AREA AS WELL AS THOSE OF SOLANO COUNTY WITH A USEFUL PARK RADIATING PRIDE IN THEIR HERITAGE AND WILL AT THE SAME TIME PROVIDE EDUCATIONAL AND RECREATIONAL FEATURES FOR FUTURE GENERATIONS.

Proposed program  
establishment of F  
Society in cooperati  
Lions Club, and th

  
case

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## *casa de adobos*

*Of Juan Felipe Pena*

Proposed program of restoration of the Casa de Pena and the establishment of Pena Park by the Solano County Historical Society in cooperation with the Vacaville Rotary Club, Vacaville Lions Club, and the Vacaville Soroptimist Club.



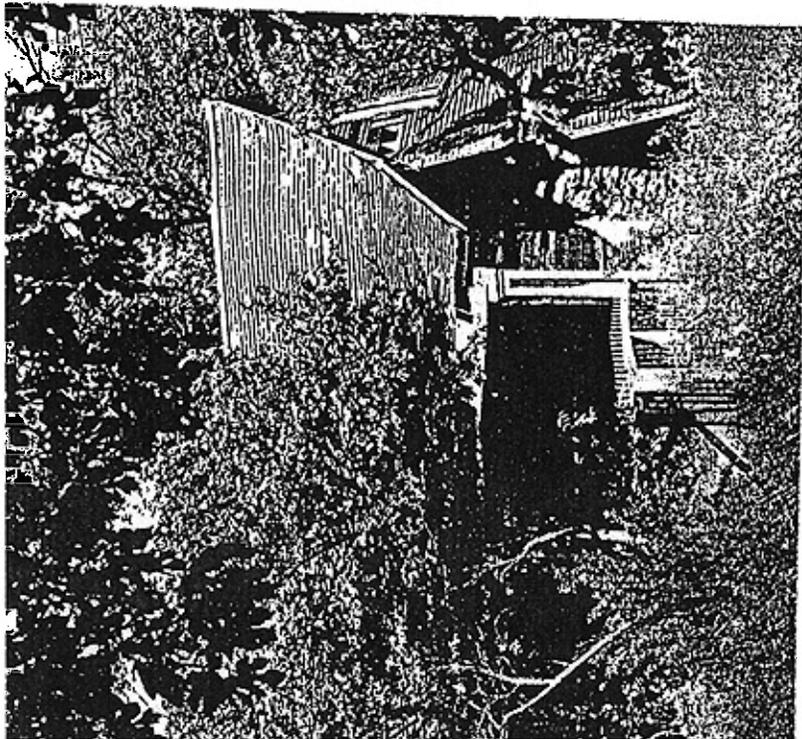
## THE PROPOSAL TO CREATE PENA PARK

The Solano County Historical Society has as an objective the restoration of the historic Casa de Pena and the creation of a Pena Park on the one and one-half acre site it now owns.\* The Society is of the opinion that this can best be accomplished by cooperation of the public, service organizations, the City of Vacaville, the County of Solano, and the California Medical Facility.

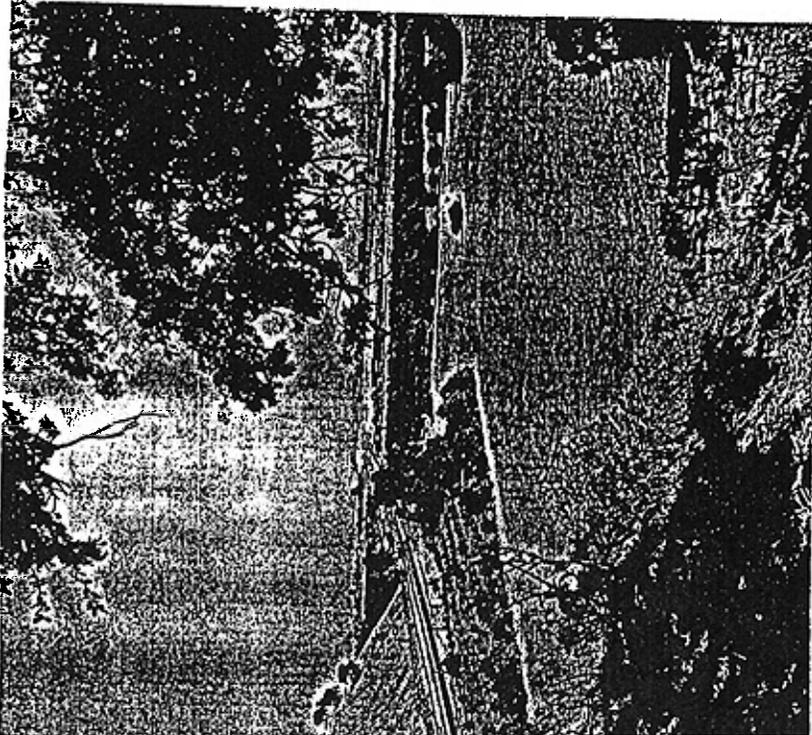
The Society believes that if it grants the land, creates community support, and secures sufficient funds from public subscriptions that the City of Vacaville will find it feasible to establish Pena Park as a city park.

The proposed budget to restore the Casa de Pena and create Pena Park on the surrounding land is \$10,000.00 per year for three years. The Society proposes to raise by public subscription a minimum of \$3,333.00 per year for a total of \$10,000.00. A pioneer monument will be erected in the park and placed thereon will be the names of Solano County pioneers who are nominated by the persons and organizations that have contributed funds for the restoration of the Casa de Pena and the creation of Pena Park.

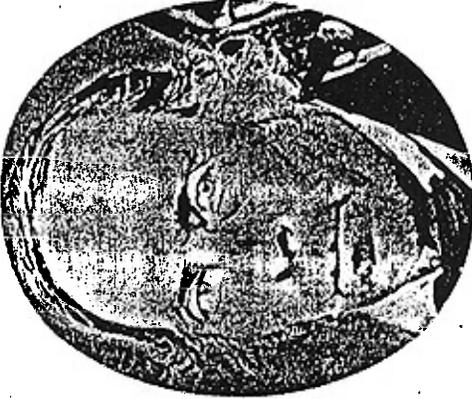
\* This property was granted to the Solano County Historical Society by Mr. and Mrs. Delbert Mowers and Mr. William Goheen.



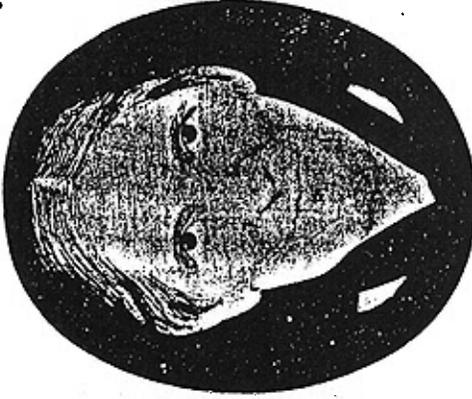
PENA, LAGOON VALLEY



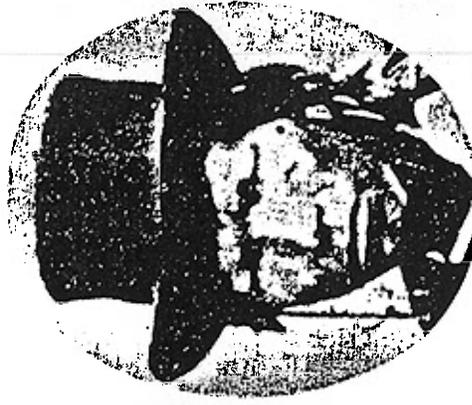
Hills behind the adobe can be seen Highway  
alley and, on a clear day, the Sierra Nevada



Senior  
Juan Felipe Pena

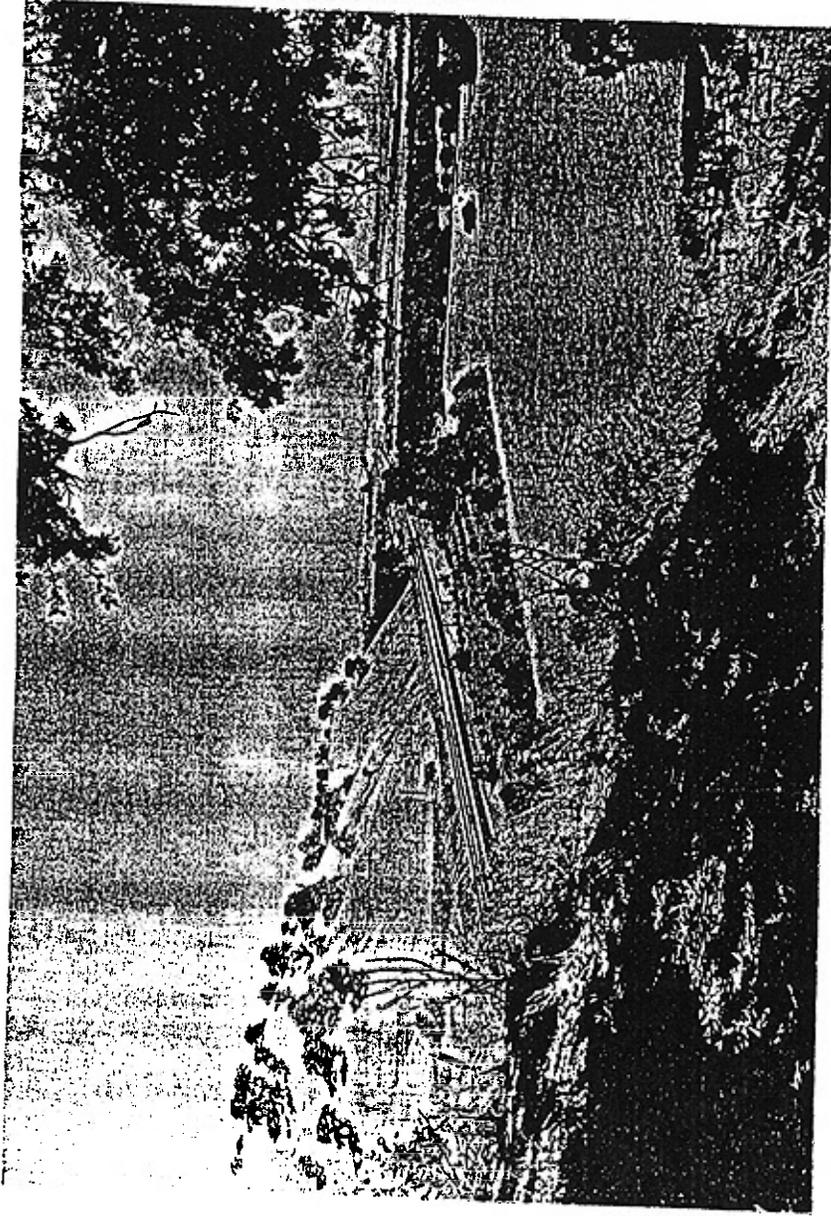


Senora  
Juan Felipe Pena

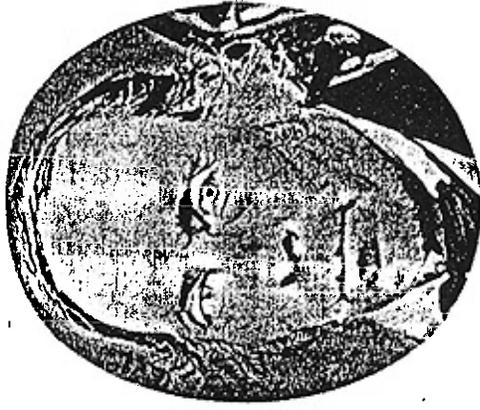


Indian  
Ranchero help \*

\* The Pena and Vaca families brought stock to their Rancho de Los Potos from their previous home in Sante Fe, New Mexico. Legend says that this "Apache" Indian accompanied them on this journey to their new California home.



From the crest of Pena Hills behind the adobe can be seen Highway 40, Vacaville, Sacramento Valley and, on a clear day, the Sierra Nevada Mountains.



Senior  
Juan Felipe Pena

Jua

\* The Pena and Vaca families b  
their previous home in Sante Fr  
Indian accompanied them on t

## HISTORIC BACKGROUND OF THE PENA PARK AREA

The first settlers of European ancestry to come to what is now Solano County were Juan Felipe Pena and Juan Manuel Vaca. They arrived on August 15, 1841, in Laguna Valley southwest of the present City of Vacaville and shortly commenced construction on their homes. The Casa de Pena still stands today! It is therefore the oldest structure in Solano County and can correctly be classed as one of the first homes in Solano County, and the only one which remains from the Mexican Era.

However, the history of Pena Park does not begin with the arrival of Vaca Pena, but rather goes back to the time when the Indians first established a village in the proposed park area and continuously inhabited it for 1,000 years. Today the remains of this 1,000 years of primitive culture have been only slightly explored.

The area in and around Pena Park continued to make history after the arrival of Vaca and Pena. Almost concurrent with their arrival was the establishment of the overland route from Sonoma (and later Benicia) and Sutter's Fort that passed near the adobe. U. S. Highway 40 crosses and recrosses this old immigrant route from Cordelia to four miles east of Vacaville. Well established is the fact that the Bear Flag Revolters in 1846 stopped overnight at the Casa de Pena with their 'Prisoner of

War," General M. G. Fremont was encou

Then came the go the coast and the inte the world and was like crest of the ridge beh view of the "end of 1860s a young boy by in Lagoon Valley and way to the Pacific Met With the Hoe" was to

The old pear orch planted in the 1880 - 9 producing half the frui

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War," General M. G. Vallejo, while en route to Sutter's Fort where Gen-  
eral Fremont was encamped.

Then came the gold rush and this route became a vital link between  
the coast and the interior of California. "Gold 1849" was heard around  
the world and was likewise inscribed by a gold seeker in a boulder on the  
crest of the ridge behind the Casa de Pena when he obtained his first  
view of the "end of the rainbow"—Sierra Nevada Mountains. In the  
1860s a young boy by the name of Edwin Markham grew to manhood  
in Lagoon Valley and for a while passed the Casa de Pena daily on his  
way to the Pacific Methodist College in Vacaville. Years later "The Man  
With the Hoe" was to make Markham a world renowned poet.

The old pear orchard adjacent to the proposed Pena Park site was  
planted in the 1880 - 90s at a time when the Vacaville fruit district was  
producing half the fruit of California.

Therefore the area in and around the proposed Pena Park, consisting  
of the Casa de Pena, the Indian village site, the inscription rock at "Min-  
ers View," the old trail that became U. S. 40, the historic moments like  
the overnight commandeering of the adobe by the Bear Flag Revolters,  
the "neighbor's boy" who wrote in later years "The Man With the Hoe"  
and the old fruit orchard make this site historically significant not only  
to the County of Solano but to the State of California.

P1. Other Identifier: 5956 Cherry Glen Road

\*P2. Location:  Not for Publication  Unrestricted

\*a. County Solano

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

\*b. USGS 7.5' Quad Fairfield North Date 1951, photorevised 1980 T \_\_\_\_\_; R \_\_\_\_\_; \_\_\_\_\_ ¼ of Sec \_\_\_\_\_; \_\_\_\_\_ B.M.

c. Address 5956 Cherry Glen Road City Vacaville Zip 95688

d. UTM: (give more than one for large and/or linear resources) Zone \_\_\_\_\_; \_\_\_\_\_ mE/ \_\_\_\_\_ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

APN 127-040-030

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This 7.39 acre parcel includes two residences (**Photograph 1**) and two sheds (**Photographs 2 and 3**) that are surrounded by remnants of an apricot orchard. All buildings are located in the southern portion of the property which is bounded on the north by Cherry Glen Road and the south by Interstate 80. The oldest building on the parcel is a circa 1890s modified National Folk style residence that is topped by a composition shingle pyramidal hip roof with narrow eaves. The two-story building is clad in shiplap wood siding and included a mixture of original one over one double hung wood windows and aluminum sliding windows. At least two additions have been constructed on the east and west sides. The one story western addition extends the length of the house and is topped by a hip roof. Field surveyors did not have access to the property and the eastern addition was not visible from the public right of way. The secondary residence is located just west of the main house. This building is two stories tall and roughly square shaped. (See Continuation Sheet)

\*P3b. Resource Attributes: (List attributes and codes) (HP 33) Farm/Ranch

\*P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)



P5b. Description of Photo: (View, date, accession #) Photograph 1, overview, camera facing south

\*P6. Date Constructed/Age and Sources:  
 Historic  Prehistoric  Both  
Circa 1890s and 1950s, historic documentation, photographs

\*P7. Owner and Address:  
Keiming & Emilie Yen  
PO Box 70751  
Sunnyvale, California 94086

\*P8. Recorded by: (Name, affiliation, address)  
Toni Webb  
JRP Historical Consulting Services,  
1490 Drew Ave, Suite 110,  
Davis, CA 95616

\*P9. Date Recorded: July 2003

\*P10. Survey Type: (Describe)  
Intensive

\*P11. Report Citation: (Cite survey report and other sources, or enter "none.") JRP Historical Consulting Services, "Historic Resource Evaluation Report: Lagoon Valley Project, Vacaville, Solano County, California"

\*Attachments:  None  Location Map  Sketch Map  Continuation Sheet  Building, Structure, and Object Record  Archaeological Record  
 District Record  Linear Feature Record  Milling Station Record  Rock Art Record  Artifact Record  Photograph Record

Other (list) \_\_\_\_\_

**BUILDING, STRUCTURE, AND OBJECT RECORD**

Page 2 of 5

\*NRHP Status Code 6

\*Resource Name or # (Assigned by recorder) Map Reference # 6

B1. Historic Name: Hill Farm; Salvador Lopez/Annie Nunes Farm

B2. Common Name: \_\_\_\_\_

B3. Original Use: Farm B4. Present Use: Farm

\*B5. Architectural Style: National Folk / Ranch

\*B6. Construction History: (Construction date, alteration, and date of alterations) Ca. 1890s, secondary residence – ca. 1950s, outbuilding – 1970s

\*B7. Moved?  No  Yes  Unknown Date: \_\_\_\_\_ Original Location: \_\_\_\_\_

\*B8. Related Features: secondary residence, sheds

B9. Architect: unknown b. Builder: unknown

\*B10. Significance: Theme n/a Area n/a

Period of Significance n/a Property Type n/a Applicable Criteria n/a

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

This farm complex does not appear to meet the criteria for listing in the National Register of Historic Places, nor does it appear to be a historical resource for the purposes of CEQA. This 7.39-acre farm was once part of a larger 172 acre tract, which included the Manuel Vaca adobe, purchased by John Wesley Hill around 1860. Hill and his wife, both natives of Missouri, resided in the old Vaca adobe, raising cattle and farming the land while bringing up their six children. As with many of the farms in the Lagoon Valley in the late 1880s and early 1890s, Hill's land, which by 1890 had been subdivided into at least two parcels, was covered in orchards by 1888. In 1892, a devastating earthquake rocked the Vacaville region. The old Vaca adobe was destroyed and the Hills constructed a new wood frame home, described on this form, not far from the remains of the old adobe. Hill's health was failing by the turn of the century, and two of his youngest children, Portia and John Jr., remained at home, helping to care for the family farm. John Hill died at the age of 82 in his home in 1908, two years after the death of his wife Ann. His youngest daughter, Portia inherited the property where the family house was located. While Portia, a dressmaker by trade, was renting the family farm to Charles Van Pelts and his family by 1910, she remained in the family home as a boarder. By the early 1920, the farm had been subdivided a few times, and the remaining 28 acres of the family property, including the Hill home, was sold to Spanish immigrants Salvador and Mary Lopez. (See Continuation Sheet)

11. Additional Resource Attributes: (List attributes and codes) \_\_\_\_\_

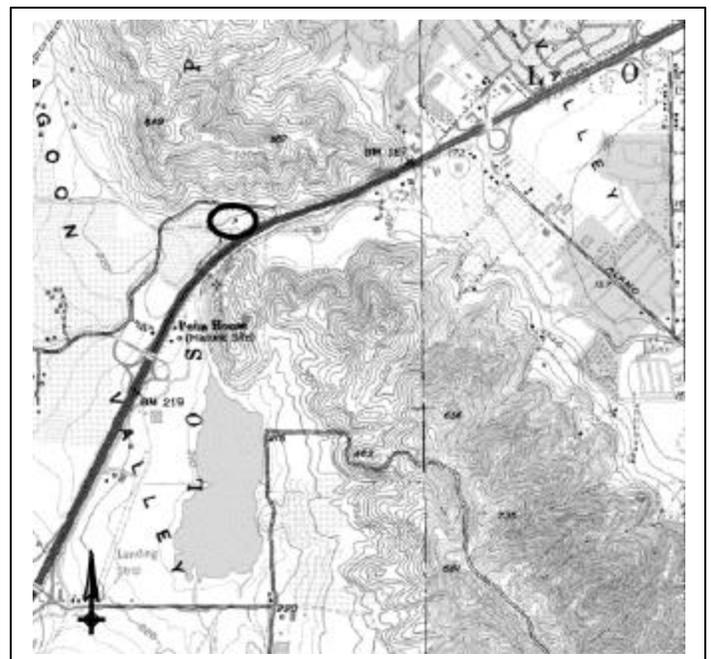
\*B12. References: See footnotes in section B10.

B13. Remarks:

\*B14. Evaluator: Toni Webb

\*Date of Evaluation: July 2003

(This space reserved for official comments.)



### P3a. Description (continued):

The first floor is sheathed in horizontal wood siding while the second level is clad in stucco siding with vertical dog ear siding decorating the gable ends. Fenestration includes aluminum sliding windows. This building was likely constructed in the 1950s. The two sheds are sited west of the residences and both were likely constructed in the 1970s. These buildings are shown in **Photographs 2 and 3**.

### B10. Significance (continued):

The Lopez family continued to farm the apricot orchards into the 1940s and by 1948, title to the Lopez farm was held by their daughter, Annie Lopez Nunez. At that time, the property included a barn and a chicken house along the east side of Laguna Creek, near the new alignment of US40. It was likely Nunez who constructed the subsequent secondary residence probably in the early 1950s. By the mid-1940s the dry-farmed fruit industry in the Vacaville region had significantly declined because of the overuse of soil and the growing competition from the irrigated fruit regions in the state. As with many of the orchards in the region, by 1952, most of the orchard on the Lopez-Nunez farm had been uprooted and today only a few trees remain.<sup>1</sup>



Lopez Farm, circa 1930s, showing John Hill's 1890s residence (middle right), SR40 (far left) and Cherry Glen Road (right foreground). (T2771, Neat Tate Collection, Vacaville Heritage Council)

Research conducted for this project revealed little information about the Lopez or Nunez families and while the existing 1890s house was constructed by John Wesley Hill, an early pioneer in Solano County and Lagoon Valley, it does not appear that Hill, Lopez or Nunez made significant contributions within their respective fields (Criterion B) nor does the complex appear to be significant within the agricultural development of the Lagoon Valley or

<sup>1</sup> Edward J. Wickson, *The Vacaville Early Fruit District of California, California Illustrated, No. 1* (San Francisco: California View Publishing Company, 1888) 71; US Population Census, Solano County, Vacaville Township, 1870, 1900, 1920 and 1930; *Vacaville Reporter*, "Death Ends Long Illness," May 22, 1908 and "Portia Hill, Pioneer, Passes Away at her Home in Oakland," April 18, 1941; Kristin Delaplane, "Tracing Ranch Ties Through Generations," *Echoes of Solano's Past*, online at <http://www.thereporter.com>, accessed on July 7, 2003; E. N. Eager, *Official Map of the County of Solano, California* (San Francisco: Britton & Rey, 1890, 1909, 1915 and 1925); California Department of Transportation, As-Built Plans for State Route 7, Contract # 0-10TC34, Sheets 10 and 11, May 7, 1948; University of California Davis Aerial Collection, Solano County, 1937, 1952, 1957, and 1962.

**B10. Significance (continued):**

Solano County (Criterion A). Additionally, although this land once was owned by Manuel Vaca however, there are no extant buildings from his period of occupation. None of the buildings or structures appear to be important examples of their type, period, or method of construction (Criterion C). All have been altered by additions, replacement siding or windows thus damaging their respective historic integrity. In rare instances, buildings themselves can serve as sources of important information about historic construction materials or technologies (Criterion D); however, these buildings are otherwise documented and do not appear to be a principal source of important information in this regard. This property has also been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and the property does not appear to meet the significance criteria as outlined in these guidelines.

Page 5 of 5

\*Resource Name or # (Assigned by recorder) Map Reference # 6

\*Recorded by Toni Webb \*Date July 2003  Continuation  Update

**Photographs (cont):**



**Photograph 2.** Metal shed, camera facing south.



**Photograph 3.** Wood shed, camera facing south.

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**TECHNICAL APPENDIX M**

Archeological Survey for the  
Lagoon Valley Project

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**Archaeological Survey for the  
Lower Lagoon Valley Project  
Vacaville, Solano County, California**

*By:*  
Eric Wohlgemuth and Jeff Rosenthal, *Far Western*  
Mary Maniery, *PAR Environmental Services, Inc.*

July 2003

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**SITE LOCATIONS ARE CONFIDENTIAL  
NOT FOR PUBLIC DISTRIBUTION**



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**Archaeological Survey for the  
Lower Lagoon Valley Project  
Vacaville, Solano County, California**

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## EXECUTIVE SUMMARY

This report documents a cultural resources investigation for the City of Vacaville's Lower Lagoon Valley Project (03-003), Solano County, California. The applicant, Triad Communities, is proposing an 840-acre residential development and an 88-acre business park. Approximately 1.7 mi of off-site utility corridors will be needed to service the new community as well as a new sewer line. This study was conducted in compliance with the California Environmental Quality Act (CEQA) in support of the Environmental Impact Report (EIR) being prepared for the project.

This investigation was conducted by Far Western Anthropological Research Group, Inc., (Far Western) for EIP Associates (EID). The study was under the overall supervision of Kelly R. McGuire, M.A. and field studies and report preparation were directed by Eric Wohlgemuth, Ph.C., and Jeffrey Rosenthal, M.A. The evaluation of historic-era archaeological resources was conducted by Mary Maniery, M.A., of PAR Environmental Consultants (PAR). This report addresses both prehistoric and historic-era archaeological resources contained within the project area. Investigations of the historic buildings and other features of the built environment were conducted by JRP Historical Consultants (JRP) and are reported in a separate technical document (2003).

Primary work tasks associated with this investigation included a complete archival review of previous archaeological studies in Lagoon Valley; record search of the Northwest Information Center of the California Historical Resources Information System; and field inventory of the project area. Fieldwork associated with this study was conducted in May and June 2003.

This investigation documented a total of 14 archaeological sites within the project area. Of these resources, eight are recommended not eligible to the California Register of Historic Resources (CRHC) and no further management actions are recommended. The remaining six sites are viewed as eligible or likely eligible to the CRHR. Depending on the final routing of proposed utility and sewer corridors, project-related impacts will potentially disturb or destroy portions of these sites. These sites, their locations within the project area, and the proposed treatment measures associated with each are listed below.

<i>Site</i>	<i>Location</i>	<i>Treatment Measures</i>
š CA-SOL-43	Utility Corridors	Test Excavation
š Demetrio Peña Adobe	Utility Corridors	Resource Monitoring
š CA-SOL-324	Sewer Option 1	Pre-Trenching and Data Recovery
š CA-SOL/H Peña Adobe	Sewer Option 2	Resource Monitoring
š CA-SOL-270 Cook Site	Sewer Option 2	Pre-Trenching and Data Recovery
š Manuel Peña Adobe	Sewer Option 2	Resource Monitoring

As a group, these sites constitute highly significant cultural resources. The Peña Adobe complex is associated with the early Mexican-era occupation of this region of California. Several of the prehistoric sites (CA-SOL-324 and SOL-270) contain expansive habitation middens with documented cemeteries and human remains. Treatment measures proposed include: resource monitoring in suspected areas of archaeological sensitivity; test excavations to confirm site boundaries; and mechanical pre-trenching and limited archaeological test excavations of project utility/sewer corridors located within highly sensitive archaeological sites. This report also presents procedures for the unanticipated discovery of cultural resources, as well as the discovery of human remains, during project construction.

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#### APPENDICES

Appendix A.	Site Records.
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## INTRODUCTION

This report documents a cultural resources inventory conducted by Far Western Anthropological Research Group, Inc., (Far Western) for EIP Associates (EIP) environmental consultants, in support of an Environmental Impact Report (EIR) for the City of Vacaville's Lower Lagoon Valley Project (03-003). The applicant, Triad Communities, is proposing a residential development on 840 acres and a business park on 88 acres in Lagoon Valley, in the City of Vacaville, Solano County (Figures 1 and 2). Triad plans to construct approximately 1,300 homes, a golf course, and neighborhood commercial centers. In addition to these plans, approximately 1.7 mi of off-site utility corridors will be needed to service the new community, as well as a sanitary sewer. Currently, two alternative sewer routes are proposed, Force Main Option 1 and Gravity Option 2, each 0.6 mi long.

This study was conducted in compliance with the California Environmental Quality Act (CEQA). CEQA requires that public agencies that finance or approve public or private projects must assess the effects of the project on significant cultural resources. Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance. CEQA Guidelines define a significant cultural resource as "a resource listed or eligible for listing on the California Register of Historical Resources" (CRHR; Pub. Res. Code Section 5024.1).

Primary work tasks associated with this investigation included a complete archival review of previous archaeological studies in Lagoon Valley; record search of the Northwest Information Center of the California Historical Resources Information System; and field inventory of the project area. Fieldwork associated with this study was conducted in May and June 2003.

This investigation was under the overall supervision of Kelly R. McGuire, M.A. and field studies and report preparation were directed by Eric Wohlgemuth, Ph.C., and Jeffrey Rosenthal, M.A. The evaluation of historic-era archaeological resources was conducted by Mary Maniery, M.A., of PAR Environmental Consultants (PAR). This report addresses both prehistoric and historic-era archaeological resources contained within the project area. Investigations of the historic buildings and other features of the built environment were conducted by JRP Historical Consultants (JRP) and are reported in a separate technical document.

The structure of this report closely follow guidelines set forth in *Archaeological Resource Management Reports (ARMR): Recommended Content and Format* (Office of Historic Preservation [OHP] 1990). It begins with a review of the environmental, prehistoric, ethnographic, and historic context of the Lagoon Valley area. Lagoon Valley, and specifically the project area, contains a rich and varied historic and prehistoric heritage exemplified by the Peña Adobe and the Cook Site (SOL-270), the latter a deeply stratified, prehistoric habitation site dating to the Upper Archaic period. Lagoon Valley may have also been the location of the Patwin ethnographic village of *Malacas*. After detailing the results of the record search and outlining survey methods, the report then presents the results of the field inventory. These findings are organized by project location: Subdivision and Business Park Parcels; Utility Corridors; as well as Sewer Options 1 and 2. The identified resources are then evaluated with respect to their CEQA significance. Treatment and mitigation measures are proposed for those resources listed or eligible for listing on the CRHR and where significant project effects are likely to occur. Procedures for the unanticipated discovery of cultural resources and human resources during project construction are also provided. An appendix of project site records is contained at the end of the report.

## ENVIRONMENTAL SETTING

Lagoon Valley is a small, elongated valley trending north-northwest by south-southeast, measuring 4.5 mi in length, and up to 1.5 mi wide. The valley is narrow (< 0.5 mi) on the northern end, broadening to the south where the current project area is located. Elevation of the valley bottom ranges from 360 ft above mean sea-level (amsl) at the southeastern end to 190 ft amsl at the northern end where Laguna Creek exits the valley

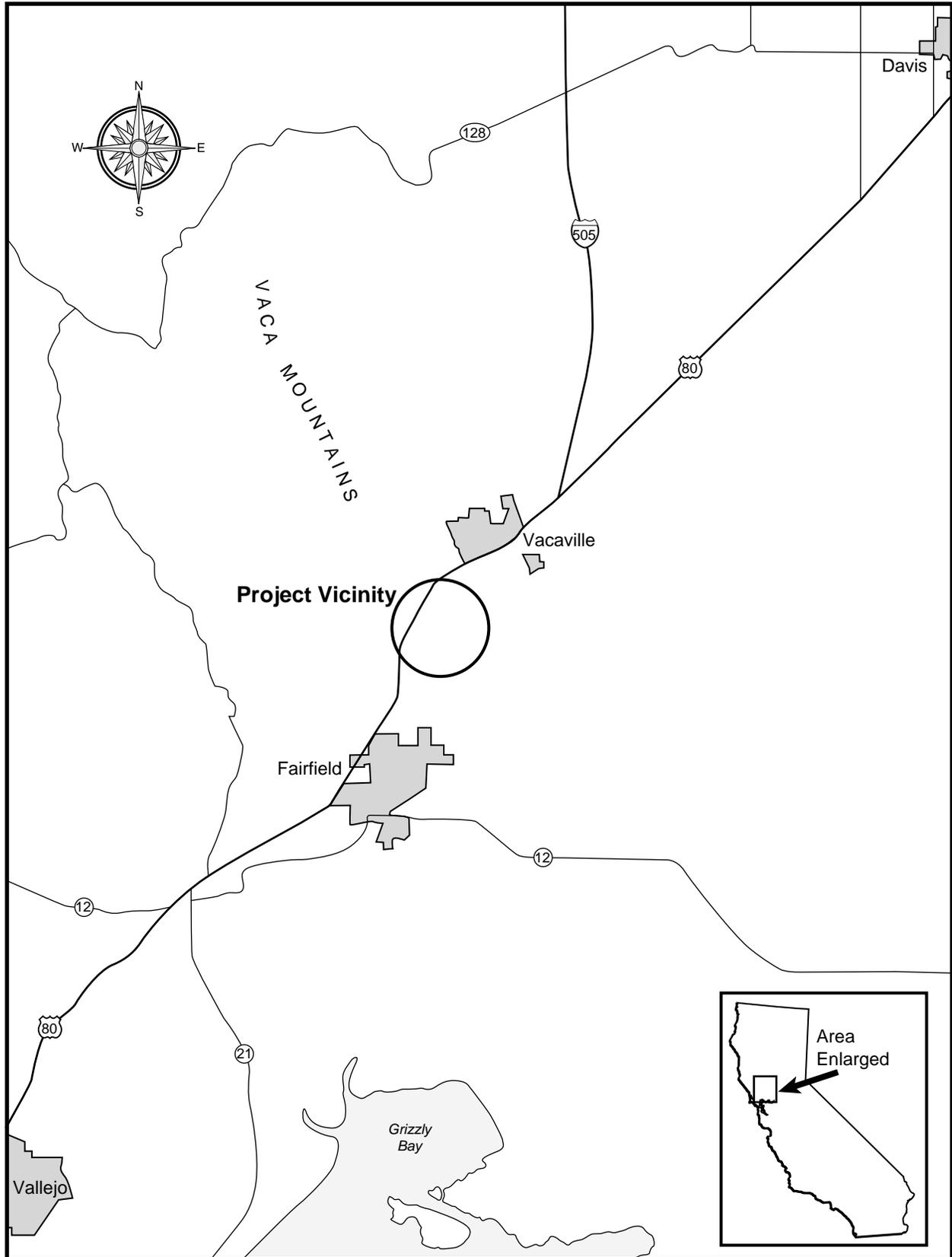


Figure 1. Project Vicinity.

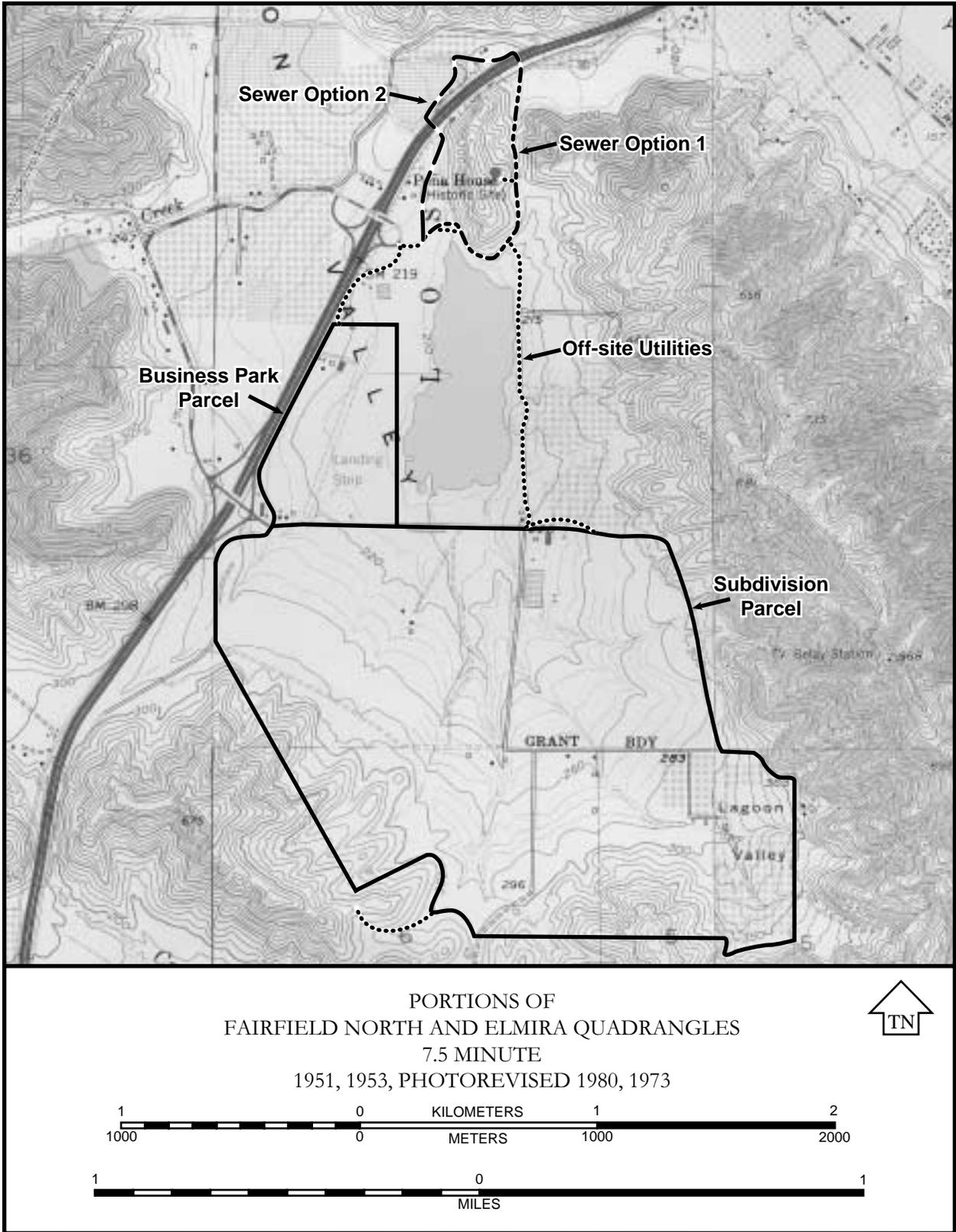


Figure 2. Project Location and Activities.

toward Alamo Creek and Vaca Valley. Surrounding hills to the east reach elevations of 800-900 ft, while the Vaca Mountains to the west rise steeply to a height of 2,891 ft at Mt. Vaca. To the south, bounding hills reach an elevation of only 400-675 ft. Access to and from Lagoon Valley is relatively easy, however, with narrow, barely perceptible divides between it and upper Vaca Valley to the north, Fairfield and Suisun Valley to the southwest, and lower Vaca Valley to the east.

The climate is typical Mediterranean, with warm, dry summers and cool, wet winters. Average minimum and maximum temperatures in adjacent Vacaville are 39 °F and 56 °F in January, and 56 °F and 91 °F in July. Annual precipitation averages 24.5 in, with over 86% falling between November and March (National Climatic Data Center 2003). Lagoon Valley, located immediately north of the Sacramento-San Joaquin Delta, is a windy place much of the year, particularly at the exposed southern end where the subdivision and business park parcels are located and tree cover is sparse.

Water sources in Lagoon Valley include several small, mostly seasonal creeks, as well as the shallow laguna now diked and dammed as Lagoon Valley Reservoir. Laguna Creek, the axial drainage of the valley with a drainage basin up to 1,700 ft elevation, probably carried water year-round prior to impoundments and diversions. Streams in the southern end of the valley appear to run dry in summer and carried no flows when fieldwork was conducted late in May 2003.

Lagoon Valley is formed by uplifted hills and mountains composed of sandstone and greywacke bedrock dating to the Late Cretaceous. Pleistocene and Holocene fan deposits and undifferentiated alluvium occurs in the gently sloping valley bottom (Graymer et al. 2002). East of Lagoon Valley Reservoir, fan deposits dating to the Late Pleistocene (Qpf) cover much of the northeastern portion of the project area, encompassing what is now the site of the Hines Nursery (Figure 3). Similarly, the bulk of the project area, in the open southern portion of Lagoon Valley, is composed of undifferentiated early or middle Pleistocene alluvium (Qoa). Younger sediments are found to the north, where Holocene basin deposits (Qhb) define the former extent of the laguna (now constrained by dikes). To the west of the laguna and mostly north of Interstate 80 (I-80), much of the valley floor is blanketed by Holocene fan deposits and undifferentiated Holocene alluvium (Qha). Younger, Holocene-age sediments also extend north, making up the entire floor of the elongated northern arm of the valley (Bates 1977; Sowers et al. 1995). Buried archaeological sites have been identified in Holocene-age landforms throughout central California (Rosenthal et al. 2003), and at least two previously identified prehistoric sites in Lagoon Valley are completely or partially buried by Holocene alluvium (i.e., SOL-270 and SOL-324), suggesting other buried deposits may be present in the region. The large areas of Pleistocene alluvium in the southern portion of the valley are not likely to yield buried archaeological deposits, as these landforms developed long before human occupation in central California.

Soils in Lagoon Valley vary with the age and type of geological substrate listed above. The more productive, deeper soils are found on the Holocene alluvium in Cherry Glen and along Laguna Creek. These include soils of the Brentwood and Yolo series. Soils formed on the Pleistocene fans and Holocene basin deposits are more clayey, have much lower rates of percolation, and are agriculturally less productive. The former include soils of the Rincon and San Ysidro series, while the latter include soils of the Capay, Clear Lake, and Pescadero series (Bates 1977; Graymer et al. 2002).

Plant communities of Lagoon Valley include valley grassland and northern oak woodland. The valley bottom portion of the subdivision and business park parcels is predominately grassland, with valley oaks on the wetter north-facing slopes of the surrounding hills. Poorly developed riparian communities line the intermittent streams along the southeastern reach of the valley floor. The riparian strip includes valley and coast live oaks (*Quercus lobata* and *Quercus agrifolia*), willow (*Salix* sp.), elderberry (*Sambucus mexicana*), and native walnut (*Juglans californica*). More productive oak woodland and riparian zones can be observed growing on Holocene alluvium along Laguna Creek to the north. Formerly, the grassland was probably an open bunchgrass prairie. Prior to reservoir construction, the laguna would have been lined with water-loving tules (*Scirpus* sp.), cattail (*Typha latifolia*), and rushes (*Juncus* sp.) and would have been a productive zone for waterfowl and fish. The pre-contact environment would have also included deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*), elk (*Cervus* sp.), rabbits (*Sylvilagus* sp.), quail (*Callipepla californica*), doves (*Zenaidura macroura*), and other species typical of the drier foothill oak woodlands.

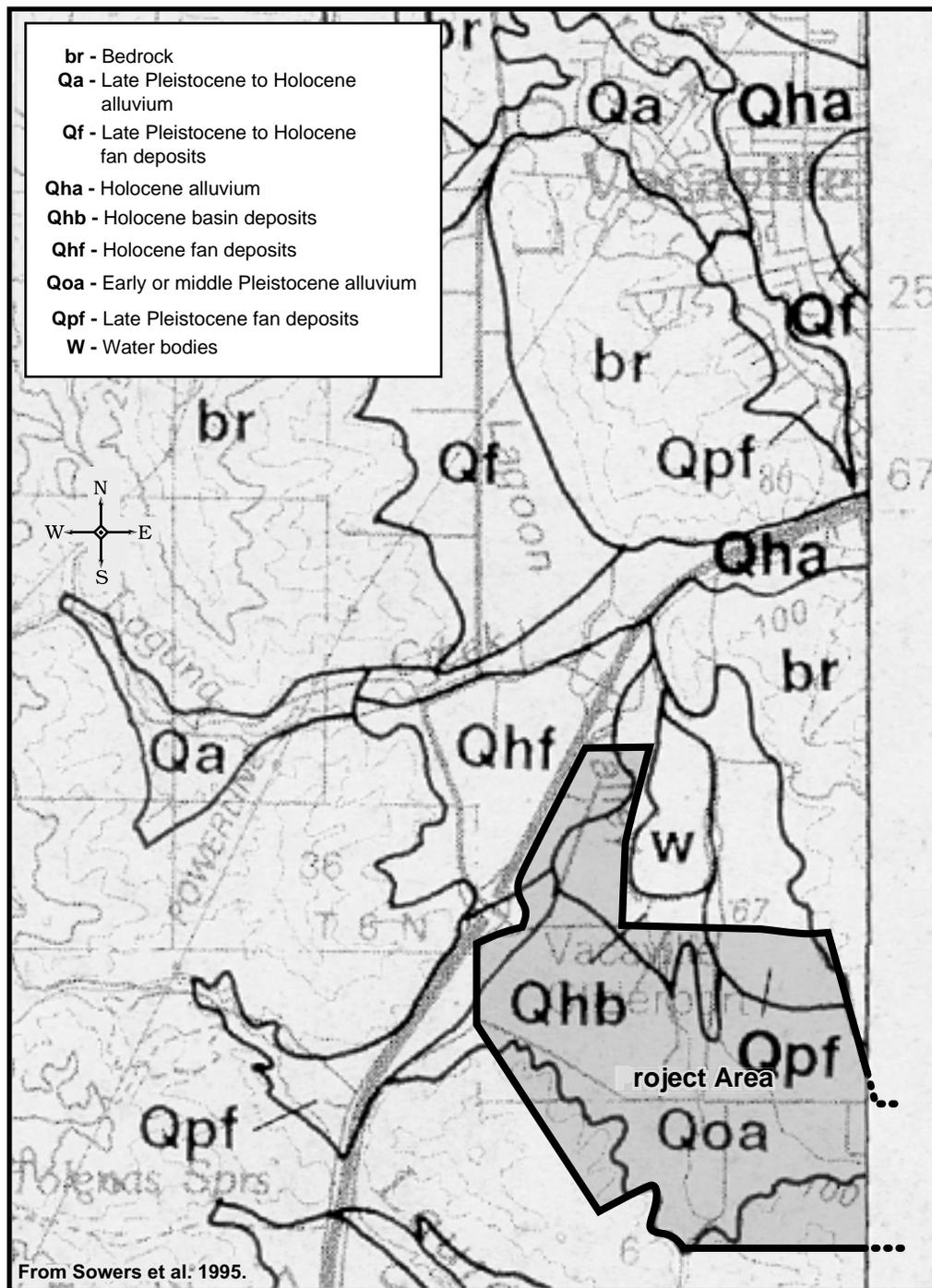


Figure 3. Geologic Units.

Lagoon Valley has been considerably modified by agriculture and grazing since it was settled in the 1840s. Today, the grassland is thoroughly dominated by exotic Eurasian weeds, notably medusa head, foxtail barley, dock, cress, and filaree. Occasional historical fruit trees observed during fieldwork are remnants of extensive early twentieth century orchards.

## CULTURAL SETTING

Cultural context for the project area includes a general discussion of central California archaeology, followed by a brief review of local ethnography and history. The reader is referred to the accompanying report by JRP for detailed historical consideration.

### CENTRAL CALIFORNIA ARCHAEOLOGY

Lagoon Valley lies at the very southern end of the North Coast Ranges, located between two of the most studied archaeological districts in central California: San Francisco Bay and the Sacramento-San Joaquin Delta. Many of the earliest and most influential studies in central California archaeology occurred in these neighboring regions. Although the record of prehistoric human occupation in Lagoon Valley is not well understood, at least two important excavations have occurred in the valley (McGonigle 1964; Palumbo 1964; see the *Previous Archaeological Investigations* section on page 8).

The following discussion focuses on cultural assemblages from a sequence of time periods in Solano and neighboring counties to the south, providing a brief summary of culture history for the region surrounding Suisun Bay. The time periods have been modified from those of Fredrickson (1974) in accordance with recent findings by Meyer and Rosenthal (1997).

#### Lower Archaic (10,000 to 6000 BP)

The oldest archeological component found so far in the bay-delta region of central California derives from the Los Vaqueros Reservoir area in eastern Contra Costa County. Two sites at the reservoir (CCO-637, and -696) have recently produced artifact assemblages and human burials dated between 9,870 and 6,600 years ago (Meyer and Rosenthal 1997, 1998). These cultural deposits were buried at depths between 2 and 4 m below the surface in alluvial fan/floodplain sediments along Kellogg Creek.

The combined Lower Archaic assemblage at Los Vaqueros included handstones and millingslabs, cobble-core tools, and a wide-stemmed obsidian projectile point. At least three human burials date to this time period, one of which was buried under a stone cairn. Small but diverse floral and faunal assemblages indicate that a variety of animal and plant species were utilized. Large nuts (acorns [*Quercus* sp.] and wild cucumber [*Marah* sp.]) and berries (manzanita [*Arctostaphylos* sp.]) were the dominant plant resources. Obsidian from both the North Coast Ranges and eastern Sierra Nevada was utilized. Overall, the Lower Archaic assemblage from Contra Costa County appears to have affinities with assemblages assigned to the Borax Lake Pattern in the North Coast Ranges and “Millingstone Horizon” assemblages to the south.

#### Initial Middle Archaic (6000 to 4500 BP)

With the exception of isolated human burials (Henn et al. 1972), extensive early Middle Archaic deposits were not encountered in the bay-delta region until 1996 when Meyer and Rosenthal (1997, 1998) identified them during the Los Vaqueros Reservoir project. Site CCO-637, located in a small valley, included deeply buried components found in an alluvial fan adjacent to Kellogg Creek. The site deposit was contained in a buried soil and included a diverse assortment of habitation debris, several human burials, and residential and processing features.

Several characteristics of this important deposit, including exclusive use of the mortar and pestle, suggest that this assemblage may be affiliated with the Berkeley Pattern, previously placed no further back in time than the Terminal Middle Archaic or Early Period (Fredrickson 1974). Among the distinctive artifacts associated with

this component was one of the oldest dated shell bead lots in Central California (4160 BP) and a unique type of pestle apparently used with a wooden mortar (Meyer and Rosenthal 1997).

### **Terminal Middle Archaic (4500 to 2500 BP)**

A number of buried sites in Contra Costa and Solano counties date to the Terminal Middle Archaic period, including CCO-637 and -696 at Los Vaqueros Reservoir (Meyer and Rosenthal 1997, 1998); CCO-308 in the San Ramon Valley (Fredrickson 1966); and SOL-315 (Wiberg 1992) and SOL-391 (Wohlgemuth and Rosenthal 1999) in Green Valley, several miles west of Lagoon Valley. In addition, a surface site dated to this period sits on a hillside overlooking the southern side of San Pablo Bay (CCO-474/H). Initial use of the shell mound sites along San Francisco Bay also appears to have begun during the Terminal Middle Archaic (Banks and Orlins 1985; Broughton 1997; Lightfoot 1997). The Terminal Middle Archaic is equivalent to the Early Period in Dating Scheme B of Bennyhoff and Hughes (1987), the earliest time period covered by that scheme.

All of the Terminal Middle Archaic sites in Solano and Contra Costa counties have produced human remains and most contain intact burials. A variety of artifacts are associated with this time period including side-notched and stemmed projectile points, rectangular abalone ornaments, shaped and unshaped mortars and pestles, and rectangular *Olivella* shell beads (Fredrickson 1966; Meyer and Rosenthal 1997). Of interest, the vibrant Windmill Culture is well dated in the lower Sacramento Valley during this period, but no evidence of its distinctive mortuary pattern has been discovered in Solano County.

Obsidian from the North Coast Ranges and eastern Sierra was utilized (Jackson 1974; Meyer and Rosenthal 1997; Waechter 1992; Wiberg 1996); however, in Solano county, obsidian from a source in the northern Napa Valley was used almost exclusively to make the majority of tools and formed the bulk of the manufacturing residue at these sites (Wiberg 1992). Nut and berry crops (i.e., acorn, manzanita, and pine nut) appear to be the primary plant resources targeted during this time period. Along the bayshore, marine shellfish species were an important subsistence resource (Banks and Orlins 1985; Waechter 1992), as were marine fishes and mammals (Broughton 1997; Simons 1992). Interior sites include a similar assortment of faunal resources, although freshwater fish, shellfish species, and terrestrial mammals were used exclusively.

### **Upper Archaic (2500 to 1300 BP)**

Upper Archaic deposits are found throughout the lowland valleys of the Coast Ranges and along the shores of San Francisco and Suisun bays. These sites are typically located near freshwater streams and many have been found in buried contexts (Banks and Orlins 1979, 1981, 1985; Cook and Elsasser 1956; Fredrickson 1966, 1968; Hammel 1956; Heizer 1950; Holman and Clark 1982; Lightfoot 1997; Meyer and Rosenthal 1997; Waechter et al. 1995). The Upper Archaic is equivalent to the Early/Middle Transition and the Middle Period in Dating Scheme B (Bennyhoff and Hughes 1987).

Upper Archaic sites are typically composed of well-developed midden deposits containing hundreds of human burials and residential features, reflecting long-term residential villages. The earliest Upper Archaic sites contain classic Berkeley Pattern assemblages, characterized by a well-developed bone tool and ornament industry, numerous saucer and saddle-shaped *Olivella* shell beads, abalone ornaments and pendants, and unshaped and well-shaped mortars and pestles. Projectile points are typically shouldered lanceolate forms, although side-notched and stemmed points also occur, along with large lanceolate-shaped bifaces. Burials are typically placed in a flexed position with strict orientation patterns identified at different sites (c.f., Fredrickson 1973). In Solano County, obsidian from the Napa Valley appears to have remained an important tool stone.

Subsistence remains indicate that acorns and other large nuts and seeds were an important part of the diet, with a growing emphasis on small-seeded resources (Meyer and Rosenthal 1997; Wohlgemuth 1998). Faunal assemblages continue to reflect either marine or terrestrial species, depending on the location of the site (Broughton 1997; Fredrickson 1966, 1968; Meyer and Rosenthal 1997; Wiberg 1992); however, during the Upper Archaic, marine shellfish first occur in appreciable amounts in interior valley sites (Fredrickson 1966, 1968).

## Emergent Period (1300 to 200 BP)

The Emergent Period is equivalent to the Middle/Late Transition and the Late Period in the Dating Scheme B chronology (Bennyhoff and Huges 1987). As the Emergent Period began, the Meganos culture appears to have retreated to the southern Delta region (Bennyhoff 1968). The distinctive cultural pattern of the Emergent Period, the Augustine Pattern, is marked by the appearance, for the first time, of small arrow-sized projectile points, beautifully trimmed show mortars, flanged pestles, flanged steatite pipes, and chevron-designed bird-bone tubes.

Emergent Period deposits have been documented from most interior valleys and bayshore locations, as well as from upland contexts, where habitation and task-specific sites have been reported (Atchley 1994; Baker 1987; Banks and Orlins 1979; Bramlette 1989; Fredrickson 1966, 1968; Holson et al. 1993; Lillard et al. 1939; Meyer and Rosenthal 1997; Wills 1994). Buried sites dating to the Emergent Period have been found in some of the interior valleys (Fredrickson 1966; Meyer and Rosenthal 1997; Wiberg 1996), although most of the recorded sites have surface manifestations. Typically these sites are well-developed midden deposits containing both cremated and intact human burials, and residential features, including house floors.

It was also during the Emergent Period that bedrock mortar milling stations were first established in the Bay Area, beginning around 1,300 years ago (Meyer and Rosenthal 1997). Portable mortars and pestles continued to be used, although smaller specimens were preferred. Changes in the size of these tools may have been in response to the dramatic increase in the use of small-seeded plant resources (Meyer and Rosenthal 1997). *Olivella* and clam shell disc beads are frequently found with Emergent Period burials and in midden deposits. Manufacturing debris has been found, suggesting that at least some of these beads were made locally (Meyer and Rosenthal 1997; Wiberg 1996). Obsidian from the Napa Valley was used almost exclusively, arriving in the form of small, un-modified pebbles or large flake blanks, later made into serrated arrow points (Meyer and Rosenthal 1997; Wiberg 1996).

Large mammals appear to have taken a more prominent role in the diet as did small-seeded resources, as mentioned above. Marine shellfish and marine fishes were moved inland in much larger quantities during the Emergent Period (Baker 1987; Fredrickson 1968; Meyer and Rosenthal 1997). Large villages composed of hundreds of people are thought to have been located in the Delta region while smaller hamlets composed of one or two extended families were located in many of the smaller valleys.

## Previous Archaeological Investigations in Lagoon Valley

Archaeological studies have been conducted at three prehistoric sites located along Laguna Creek on the eastern side of Lagoon Valley, including SOL-30/H, -270, and -324. Although, extensive excavations were carried out at SOL-30/H and -270 during the 1960s, these sites were studied at a time when many components of modern archaeological research were unavailable (e.g., obsidian sourcing) or were not commonly employed (e.g., radiocarbon dating, paleobotanical studies, faunal analysis) As a result, collections from these sites still have the potential to add significantly to our understanding of regional prehistory. Site SOL-324 was studied quite recently (Jones and Stokes 2001), but still holds considerable research potential, as excavation and analysis was of limited scope.

### *SOL-30/H*

The prehistoric component at site SOL-30/H, located around the Peña Adobe, was investigated in 1963-1964 prior to widening of Highway 40 (now I-80). The work was conducted by members of the Central California Archaeological Foundation (CCAF), in cooperation with the state Division of Highways and the State Division of Beaches and Parks (Palumbo 1964). A total of 29 5-x-5-ft units were excavated (Palumbo 1964). Palumbo reports that the main prehistoric deposit was originally a low, 2-3-ft-high mound located just southeast of the Adobe. Her excavations however, focused on an area to the northwest, now under I-80. No human remains were discovered at SOL-30/H, but four residential features, extensive dietary remains, and a rich artifact assemblage was identified. Materials recovered from these excavations suggest SOL-30/H dates predominately to the Emergent Period, Phase 2, or post-AD 1600. Slaymaker (1990) has subsequently suggested that the site may be the location of the ethnographic village of *Malacas*.

## SOL-270

The Cook site, SOL-270, was also excavated in 1963 and 1964 by CCAF and the University of California, Davis (UC Davis), in anticipation of highway widening (Brown 1964; McGonagle 1964). The site is north of I-80 and south of Laguna Creek, but originally extended into the route of the modern highway. Much of the site appears to be naturally capped by a thin stratum of recent alluvium, disguising the full extent of the site deposit at the surface. More than 40 5-x-5-ft units were excavated at SOL-270, most of them in Locus A, east of a tributary to Laguna Creek. In contrast to SOL-30, numerous human burials were excavated from SOL-270, as well as a variety of residential features, dietary debris, and an abundance of other artifacts, including over 1,400 shell beads. Temporally diagnostic artifacts from the site indicate SOL-270 was used at least sporadically over the last 2,000 years (McGonagle 1964). Four radiocarbon dates recently obtained from *Olivella* shell beads collected in 1964, indicate that most of the human graves are relatively old, dating between 100 BC and AD 185 (Table 1).

Table 1. Radiocarbon Dates from SOL-270

FEATURE	MATERIAL DATED	CAL BP <sup>a</sup>	1-SIGMA BP	I.D. NUMBER
Burial 13	G3 - bead	1765	1815-1703	CAMS-82183
Burial 6	G2a - bead	1902	1957-1859	CAMS-82184
Burial 15	G2a - bead	2101	2144-2034	CAMS-82185
Burial 2	F2b - bead	2069	2127-1996	CAMS-82186

Note: <sup>a</sup> Corrected for reservoir effect using Delta R of 225 ± 25. Dates from Groza 2002.

## SOL-324

Site SOL-324 is located south of I-80, just east of a prominent hill that forms the eastern boundary of SOL-30/H and the Peña Adobe Park. Prior to highway construction, Laguna Creek ran adjacent to or bisected the site. SOL-324 was recorded in 1965 when human remains and other prehistoric materials were discovered in a bulldozer cut on the west side of an unnamed seasonal creek (McEachern 1965). Recently, a portion of the site was excavated prior to construction of a floodwater detention basin for the City of Vacaville. Like SOL-270, SOL-324 is buried beneath culturally sterile alluvium and lacked any surface indication. Extensive backhoe trenching and one hand-excavated control unit revealed a thin occupation midden (ca. 40 cm thick), with human remains, flaked and ground stone tools, and dietary debris (Jones and Stokes 2001). Obsidian hydration measurements suggest the site dates to the Emergent Period, post-AD 1000.

## ETHNOGRAPHY

Several ethnohistorical and ethnographic accounts provide descriptions of the native inhabitants of the southern Sacramento Valley (Bennyhoff 1977; Kroeber 1925, 1932; Maloney 1943, 1944; McKern 1922, 1924; Powers 1877). When Europeans first entered central California, the area west of the Sacramento River and north of Suisun Bay (including the entire valley as far north as Princeton, Colusa County) was occupied by a series of linguistically and culturally related tribelets. These groups had no common name, collective identity, or political unity, but did speak dialects of the same historically related language. This linguistic similarity led Powers (1877) to call the groups “Patwin,” a term each group used in reference to themselves (Johnson 1978:350; Powers 1977:218). The Patwin are Wintuan speakers, along with their neighbors, the Nomlaki and Wintu. The Wintuan language is part of the larger Penutian language family which also includes Miwok, Maidu, Coastanoan, and Yokuts.

### Political and Social Organization

The Patwin were organized into tribelets consisting of a primary village and several smaller associated villages. Each village was under the direction of a chief who attained his office through paternal descent. When the chief had no son or the son was determined incompetent, a new chief was chosen by the village elders. The village chief was mainly responsible for organizing economic and ceremonial activities:

The most commonly exercised powers of the chief were of an economic character. He was the commissioner of wild crops, acquainted with the local centers of supply, and versed in the proper times for harvesting. Nut, fruit, and seed producing localities belonging to the village were conveniently divided into sub-areas by the chief. These he assigned, during harvest time, to various families. That is to say, each family has its own 'picking grounds,' reassigned each season in accordance with the relative sizes of the various families involved. [McKern 1922:244]

The chief was also responsible for organizing and directing communal activities such as hunts and other tasks in which the entire community was involved. When a sufficient quantity of meat was acquired it was brought to the chief who distributed it among the villagers based on need. Ceremonial activities were also under the direction of the chief who, in consultation with the village elders, decided on "what ceremony should be held, what days should open and close the procedure, and what guests should be invited" (McKern 1922:246). At such events it was the duty of the chief to welcome the guests and provide them with gifts.

Social organization among the Patwin was divided by McKern (1922) into three groupings based on familial ties. These include the paternal family, the family social group, and the household. The paternal family was the most inclusive unit and included the patriarch, his brothers and sisters, his sons and daughters, his siblings, sons and daughters, and so on. The family social unit was made up of all members of the paternal family except the headman's married sisters, those female family members whose husbands had established their own households, and those married men who reside with their wife's family. The latter exception lasted until the married male had acquired enough wealth to establish his own household, at which time he was once again under the direction of the paternal headman. The last social group defined by McKern was the household. The household was comprised of that portion of a family living under one roof and was often composed of a man, his wife, his unmarried offspring, and his married daughters, and their husbands and children (McKern 1922:239-240).

Certain families within Patwin society were said to possess special knowledge, charms, and rituals, which allowed them to excel at ceremonial, occupational, shamanistic, or official pursuits (Johnson 1978: 354; McKern 1922:247). While the methods of carrying out these pursuits were no different than those employed by non-specialist families, the special knowledge, rituals, and charms of the "functional family" are said to have given them an advantage. Such pursuits are described by McKern and include fishing, arrow making, goose and duck hunting, obtaining salt, making baskets, leading ceremonial activities, and performing shamanistic duties, among others:

The functional family cannot be regarded as a professional group since the activity in which it specialized did not assume the place of sole or even chief occupation. Only at times was the individual member engaged in the traditional family activity. Commonly he [or she] was engaged in all the general pursuits of life customarily followed by the other village inhabitants. [McKern 1922:255]

While pursuit of the family specialty was not an everyday activity, as evinced by this quote, membership in a functional family provided the individual with specific status which was known and acknowledged. Those families who had no functional specialty were said to have had lower social prestige (McKern 1922:247).

## **Villages and Structures**

Numerous village locations are reported for the Patwin (Johnson 1978:Figure 1). In the Sacramento Valley, villages were located along the Sacramento River and all major tributaries that drain the eastern and southern slopes of the Coast Ranges, including Putah, Ulatis, and Suisun Creeks. As described by Kroeber:

The valley people evidently had their permanent villages on the river itself—that is, in the marsh belt—but appear to have left this during the dry half of the year to live on the adjacent plains, mostly by the side of tributaries. [Kroeber 1925:354]

McKern reports that:

A period of time extending from midsummer well into the fall season was in this manner spent away from the village by the majority of its inhabitants. [McKern 1923:17]

The permanent winter village was usually organized such that the chief's house was at the center and the dance house rested at either the northern or southern margins of the community. The sweat house, or sudatory, was either to the west or east of the dance house with its door facing the dance house. The menstrual hut lay as far away from the ceremonial dance house as possible, usually at the opposite end of the village. Family dwellings were not arranged in any particular grouping and any vacant spot within the village was considered suitable for house construction (McKern 1923).

Permanent houses were typically of the semi-subterranean type and usually sheltered more than one household, each occupying their own side of the dwelling. Characteristically, Patwin houses were greater than 20 ft in diameter and had only one door which faced either east or west. A fire pit was located at the center of the house between the two main support beams under a smoke hole left open in the earthen roof. Temporary shelters were often occupied seasonally when families were away from the permanent winter village. These simple constructions, primarily used as shelter from the summer sun and infrequent rains, were little more than a brush covered shed composed of four corner posts and a flat roof (McKern 1923).

### Subsistence

A variety of animals were taken by the Patwin including deer, pronghorn, elk, rabbit, and various species of fish and birds. Deer, ducks (*Aythya* spp.), geese (*Anserini*), quail, and mud hen were caught in various nets. Fish species including chub (*Scomber japonicus*), salmon (*Oncorhynchus* sp.), sturgeon (*Acipenser* sp.), hardhead (*Mylopharodon conocephalus*), trout (*Salmo* sp.), and steelhead (*Oncorhynchus mykiss*) were also taken with nets. Decoys were used to hunt ducks and deer. Dear head decoys were worn by a hunter so that he could approach or attract his prey, at which time the animal was speared or shot with an arrow. Other animals, including most raptors and carnivores were not eaten but hunted for their feathers or pelts which were used in ceremonial regalia or for utilitarian purposes.

Salt was extracted from "salt grass" by burning the grass and then collecting the residue which appeared as a blackish "cake." Tobacco was collected from along the river and smoked in a long wooden pipe (Kroeber 1925:280). The Sacramento Valley plain yielded numerous plant species which were collected for their seeds, among these were sunflower (*Helianthus* sp.), clover (*Trifolium* sp.), red maids (*Calandrinia ciliata*), and a yellow flower (Johnson 1978:355). Acorns were a staple among the Patwin and were harvested from the Valley Oak, leached in a sand basin, pulverized, and baked into bread in a leaf-lined pit. Freshwater mussels (*Anodonta californiensis*) were collected from along the banks of major streams, as were blackberries (*Rubus ursinus*), wild grapes (*Vitis californica*), and during the proper season, tule roots. Brodiaea bulbs were also collected seasonally and either baked or boiled.

### Lagoon Valley

Lagoon Valley was under control of the *Malacas* tribelet (Powers 1877:281), whose principal village may have been located at the present site of the Peña Adobe, recorded as archaeological site SOL-30/H (see SOL-30/H on page 20). Mission register data assembled by Slaymaker (1985) show that *Malaca* natives were baptized at Mission San Francisco de Asis (San Francisco) in 1815-1821, at Mission San Francisco Solano (Sonoma) in 1823-1824, and at Mission San Jose in 1826-1832. Mission records show the *Malaca* were intermarried with the *Ululato* of Ulatis Creek, the *Tolenas* of upper Suisun Valley, and the *Suisun* who dwelt along Suisun Bay, all closely related southern Patwin tribelets speaking similar dialects (Slaymaker 1985).

## HISTORY

A thorough historical context is provided in a companion report by JRP. The following discussion is only intended as brief review of the major themes and individuals prominent in the history of Lagoon Valley.

Historical use of Lagoon Valley began in 1842, with the construction of Peña Adobe by Juan Felipe Peña. The Adobe was the headquarters of the Los Putos land grant, deeded in 1842, to Peña and Juan M. Vaca. The Los Putos grant extended as far north as Putah Creek, encompassing 44,386 acres. (The Peña Adobe, restored in 1962 and listed on the National Register of Historic Places in 1972, still stands, and is the centerpiece of Peña Adobe Park, owned by the City of Vacaville.) By the mid-1840s, Peña and Vaca were grazing as many as 2,000 head of cattle on the rancho.

By the 1870s, two additional adobes had been constructed: Jose Demetrio Peña's Adobe was located at or near the present site of the Ranchotel, while Manuel Peña's Adobe was located north of the present route of I-80. During this time, wheat and livestock production were the primary economic pursuits in the valley, lasting until the 1880s. In 1884, Eliza Buckingham purchased a portion of Jose Demetrio's property and began extensive orchard planting that made Vacaville famous for fruit production in the late nineteenth and early twentieth centuries. Buckingham established large tracts of apricot and peaches to supplement the pears, figs, and walnut previously planted by Demetrio Peña. By the turn of the last century, Lagoon Valley was known for its cherry orchards, primarily located at the northern end of the valley.

Following World War I, the orchard industry declined due to drought and unfavorable economic conditions brought on by the Great Depression. The old families, such as the Peñas and Buckinghams, began to subdivide and sell off their land beginning in the 1920s. By the early 1950s, the orchards that once covered most of Lagoon Valley south and east of I-80 were gone, and much of the region reverted to pasture land.

## RECORDS SEARCH RESULTS

An archaeological records search was conducted at the Northwest Information Center of the California Historical Resources Information System in May 2003. The records search was inclusive of the entire Lagoon Valley, extending from the valley bottom to the crest of the surrounding hill slopes. The location of all archaeological studies and recorded archaeological sites were transferred to a portion of the Fairfield North and Elmira 7.5' topographic quadrangles and copies of all associated records and reports were obtained. In addition, the Native American Heritage Commission was also contacted and requested to search the Sacred Lands files for any information on the project area. No sacred sites or other traditional cultural properties were identified. A thorough historical records research was also conducted by JRP, and relevant information on the study area was provided to Far Western.

Sixteen archaeological studies have occurred within Lagoon Valley (Table 2). These include 11 inventories ranging in size from less than one acre to more than 2,000 acres, four test excavations, and two substantial data recovery excavations. As a result of this work, a total of 26 archaeological sites have been identified within Lagoon Valley (Table 3), including 21 prehistoric sites (81%), 2 historical sites (8%), and 3 sites with both prehistoric and historical components (11%). Of the prehistoric sites, the most common (n = 10; 48%) are isolated bedrock mortar outcrops lacking associated archaeological deposits. Habitation middens are the next most frequent prehistoric site type (n = 9; 43%), with (n = 3) and without (n = 6) associated bedrock mortars. One isolated human burial, a petroglyph panel, and a lithic scatter with associated bedrock mortar, make up the remainder of the prehistoric sites.

The three sites with historical and prehistoric materials include an isolated bedrock mortar associated with historical structures and debris (SOL-326/H), a lithic scatter also associated with historical structures and debris (SOL-331/H), and the site of Juan Peña's Adobe (SOL-30/H) which includes a prehistoric habitation midden and associated bedrock mortar outcrop. The only historical sites identified in the records search include an abandoned National Guard shooting range (P-422) and structural remains associated with a small domestic dump (P-423), both located on the slopes east of the valley.

In addition, historical research by JRP determined that the remains of two nineteenth century adobes likely occur in or adjacent to the project area. The site of Manuel Peña's residence is thought to lie just north of I-80 and Laguna Creek, while the site of Demetrio Peña's abobe is in the general vicinity of the modern Ranchotel.

Table 2. Previous Archaeological Studies within Lagoon Valley.

REPORT CITATION	REPORT NUMBER	OVERLAPS PROJECT AREA	PROJECT SEGMENT	QUAD SHEET
<i>INVENTORIES</i>				
Slaymaker (1990)	S-12183	Yes	All	Fairfield North
Archaeological Planning Collaborative (1979)	S-5134	No	-	Fairfield North
Sheeders (1980)	S-5155	No	-	Fairfield North
True (1980)	S-5170	No	-	Fairfield North
Gaumer (1975)	S-6120	No	-	Fairfield North
Holson and Hager (1987)	S-9124	No	-	Fairfield North
Allen (1996)	S-19572	No	-	Fairfield North
Drake (1977)	-	Yes	All	Fairfield North
Chavez (1979)	S-5130	No	-	Elmira
Western Zooarchaeological Research (1998)	S-20455	No	-	Elmira
<i>TEST EXCAVATIONS</i>				
Slaymaker and Griset (1990)	S-12184	Yes	Sewer Option 2	Fairfield North
Slaymaker (n.d.)	S-12302	Yes	Sewer Option 2	Fairfield North
Griset and Slaymaker (1992)	S-15384	Yes	Sewer Option 2	Fairfield North
Jones and Stokes (2001)	S-24090	Yes	Sewer Option 1	Fairfield North
<i>DATA RECOVERY EXCAVATIONS</i>				
Palumbo (1964) and Brown (1964)	S-12757	Yes	Sewer Option 2	Fairfield North
McGonigle (1964)	-	Yes	Sewer Option 2	Farfield North

Table 3. Previously Recorded Archaeological Sites in Lagoon Valley.

OUTSIDE OF CURRENT STUDY AREA		IN OR ADJACENT TO CURRENT PROJECT AREA	
SITE NUMBER	DESCRIPTION	SITE NUMBER	DESCRIPTION
SOL-37	Bedrock Mortar	SOL-30 (Peña Adobe)	Habitation Midden with Bedrock Mortar
SOL-41	Human Burial	SOL-39	Bedrock Mortar
SOL-44	Bedrock Mortar	SOL-40	Bedrock Mortar
SOL-47	Habitation Midden	SOL-42	Bedrock Mortar
SOL-48	Habitation Midden with Bedrock Mortar	SOL-43	Habitation Midden
SOL-49	Habitation Midden with Bedrock Mortar	SOL-270 (Cook Site)	Habitation Midden
SOL-50	Cupule Petroglyph	SOL-324	Habitation Midden
SOL-51	Habitation Midden		
SOL-52	Bedrock Mortar		
SOL-53	Habitation Midden		
SOL-54	Bedrock Mortar		
SOL-326/H	Bedrock Mortar, Historical Structures and Debris		
SOL-331/H	Lithic Scatter, Historical Structures and Debris		
SOL-332	Bedrock Mortar and Lithic Scatter		
SOL-333	Bedrock Mortar		
SOL-338	Bedrock Mortar		
P-421	Bedrock Mortar		
P-422	National Guard Shooting Range		
P-423	Historical Foundation and Dump		

### Sites and Studies within the Current Project Area

Virtually the entire project area, including utility and sewer corridors, has been previously studied (Drake 1977; Slaymaker 1990). Drake (1977) surveyed much of the southern half of Lagoon valley in 1977 as part of his graduate research at UC Davis. Although no survey report was prepared for this work, site records and a map of the survey area are on file at the Northwest Information Center. As well, in conjunction with an

earlier iteration of the current project, Slaymaker (1990) surveyed the bottom of Lagoon Valley south and east of Interstate 80, encompassing almost the entire proposed subdivision and business park parcels, as well as most of the area crossed by the current sewer and utility corridors.

These studies identified six prehistoric sites, and one prehistoric and historical site, the Peña Adobe (SOL-30/H; see Table 2). No archaeological sites were recorded by Slaymaker (1990) or Drake in the subdivision area, but the proposed sewer and utility corridors encroach or are adjacent to several archaeological sites. These include prehistoric sites SOL-270 and -324 near I-80, the historic and prehistoric site of SOL-30/H, and an additional prehistoric occupation site, SOL-43, recorded on a low knoll along the eastern shore of Lagoon Reservoir. In addition, three bedrock milling stations (SOL-39, -40, and -42) are recorded at the base of the hill, north of the Lagoon Valley reservoir, and east of Peña Adobe Park.

As discussed in the background section, substantial data recovery excavations were undertaken at the Cook Site (SOL-270) and at the site of the Peña Adobe (SOL-30/H) between 1963 and 1964 (Brown 1964; McGonigle 1964; Palumbo 1964), and test excavations occurred in 2001 at SOL-324 (Jones and Stokes 2001). A series of other test excavations have also taken place in the vicinity of SOL-30/H and -270. As a follow-up to pedestrian survey, Slaymaker and Griset (1990; Griset and Slaymaker 1992; Slaymaker n.d.) excavated a series of hand- and power-auger borings along proposed utility and sewer corridors (some of which follow the same routes proposed for the current project) that passed near the recorded boundaries of these sites. Auger borings placed along the southern edge of SOL-30/H identified prehistoric and historical material, while borings placed along the eastern edge of this site revealed no cultural debris. These latter auger holes follow the same corridor as the currently proposed route of Sewer Option 2. Although augering east of the SOL-30/H boundary revealed no prehistoric cultural debris, an auger hole drilled in the lawn south of Peña Adobe produced cultural materials to a depth of 3 ft.

A series of additional auger holes were excavated by Slaymaker and Griset (1990; Griset and Slaymaker 1992) on the west side of I-80 directly opposite to SOL-30/H and along the western edge of SOL-270, west of Laguna Creek. The borings adjacent to SOL-30/H were negative, but those placed west of SOL-270 encountered a significant amount of prehistoric material buried from one to six feet (30 to 200 cm) below the modern surface. The auger holes indicate SOL-270 extends well beyond the recorded boundary and continues an undetermined distance to the west, encompassing a portion of the site referred to by Griset and Slaymaker (1992) as Locus B. This portion of SOL-270 would be bisected by the proposed route of project Sewer Option 2.

## METHODS

As described above, almost the entire subdivision had been previously surveyed by Drake (1977) and Slaymaker (1990). Each investigator demonstrated a capacity for finding and recording prehistoric sites, but no historical sites were identified as a result of these earlier efforts. Pre-1950s topographic quads and air photos clearly show historical buildings and other structures no longer present in the study area, and it was assumed that remains of these structures exist, but had not been formally recorded.

## SUBDIVISION AND BUSINESS PARK PARCELS

As a result of the earlier surveys, current reconnaissance of the proposed subdivision and business park parcels was carried-out at a relatively wide transect interval. Approximately 770 acres were surveyed by a three-to-four-person crew walking parallel transects spaced at no more than 60-m intervals. The Hines Nursery portion, which comprises over 160 acres in the northeastern reach of the subdivision (Figure 4), was not examined due to extensive disturbance and inadequate surface visibility. This entire parcel has been graded, filled, and covered in gravel. As the survey was conducted between May 27-29 and June 24, 2003, a lush growth of annual weeds and grasses thoroughly covered most of the study area, and ground surface visibility was minimal except in specific localities.

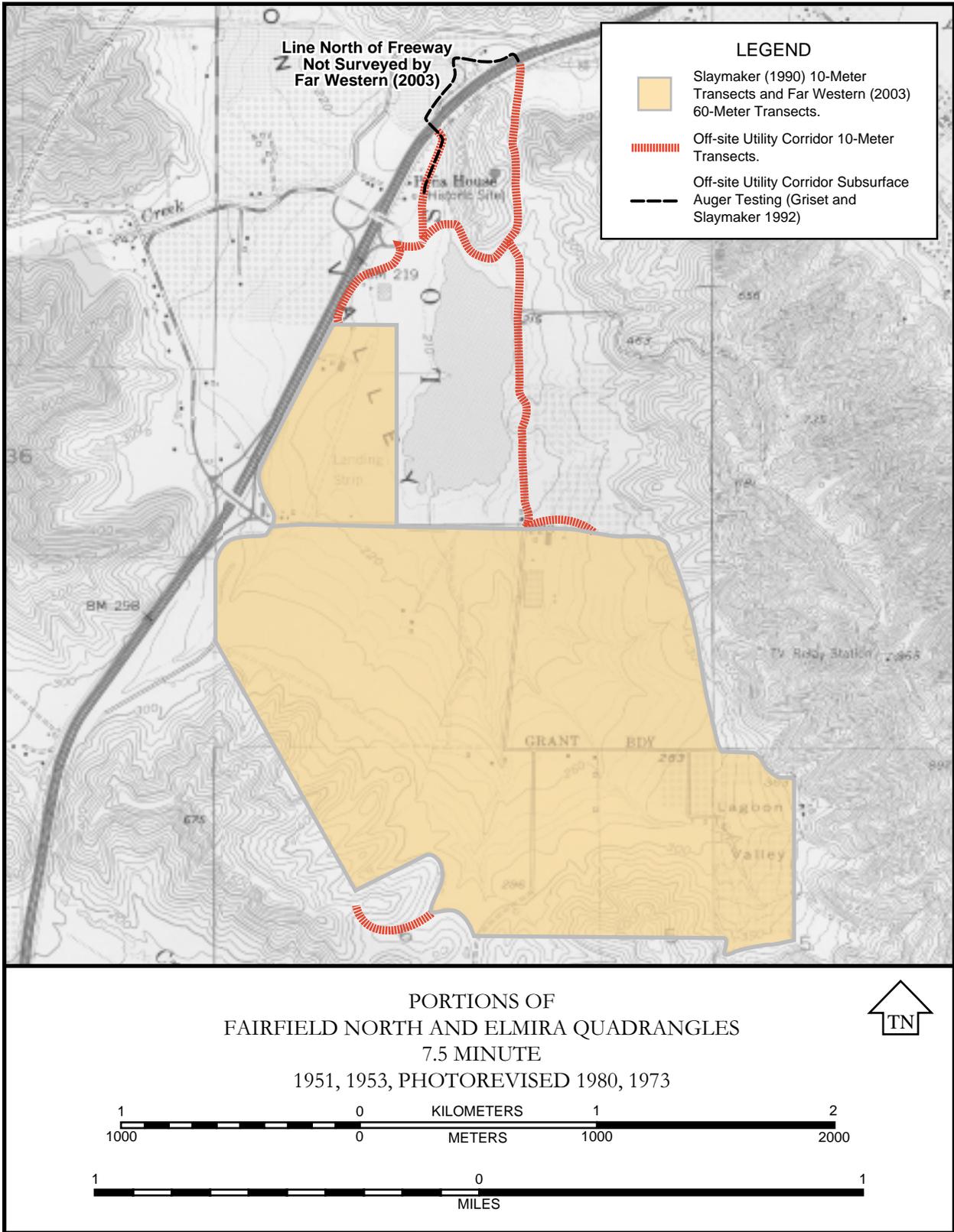


Figure 4. Survey Coverage.

## UTILITY AND SEWER CORRIDORS

Utility and sewer corridors outside the subdivision were surveyed by a two-person crew on June 9, 2003. Most of the corridors were very well-defined through information received from the City of Vacaville, and follow existing roads or bicycle trails (Figure 4); these corridors were surveyed using 10-m transects. The portion of Sewer Option 2 north of the interstate was not surveyed due to access issues.

## SITE RECORDING

Sites were recorded using standard Department of Parks and Recreation (DPR) forms, following OHP's criteria. Newly identified sites were tracked with field designations, prefaced with the letters LV (for Lagoon Valley) and numbered in the order encountered (e.g., LV-1, LV-2). Several field sites were later collapsed into one or two larger sites. Each field site was plotted on a USGS topographic quadrangle and a high-resolution map of the project area. Photographs were taken of each site and a hand-drawn sketch map prepared. Historic sites were recorded only if demonstrably older than 45 years in age. Ditches, stock ponds, and water conveyance systems were noted and given a field designation, but are addressed as part of the built environment in the accompanying report by JRP.

## RESULTS

Five archaeological sites and one isolated find were recorded in the subdivision and business park parcels (Table 4). Four of these sites are historical, while the fifth is an isolated boulder milling feature. Five other previously recorded prehistoric sites and one prehistoric and historical site lie on or adjacent to utility or sewer corridors (Table 4). In addition, background research (conducted by JRP), indicates that the remains of two other nineteenth-century Peña family adobes may occur within the business park parcel and one of the proposed sewer corridors (Figure 5). No evidence of these resources, however were observed during the survey. Records for newly recorded sites, and updates for previously documented sites can be found in Appendix A.

Table 4. Archaeological Sites within the Current Project Area.

SITE NUMBER	DESCRIPTION
<i>SUBDIVISION PARCEL</i>	
Isolate 1	Chert biface fragment in road gravel
LV-3H	Concrete foundation, and surface depression from the Killingsworth Ranch
LV-4H	Foundations and other remains from Vacaville Fruit Company facilities
LV-7	Bedrock outcrop with one mortar cup
<i>BUSINESS PARK PARCEL</i>	
LV-12H	Several depressions, introduced plantings, and portion of airstrip from Vacaville Gliderport
LV-13H	Driveway, several depressions, and landscape plants from Vacaville Gliderport
<i>UTILITY CORRIDORS</i>	
SOL-43	Midden with ground stone fragment and obsidian flakes
Demetrio Peña Adobe	Site of early adobe, no archaeological evidence identified
<i>SEWER OPTION 1</i>	
SOL-40	Bedrock outcrop with 10 mortar cups
SOL-42	Bedrock outcrop with a single mortar cup
SOL-324	Buried site with human remains, flaked and ground stone tools, and dietary remains
<i>SEWER OPTION 2</i>	
SOL-39	Bedrock mortar, could not be relocated
SOL-30/H (Peña Adobe)	Site of Juan Peña Adobe and prehistoric midden containing flaked and ground stone tools, shell and bone artifacts, and dietary remains
SOL-270 (Cook Site)	Partially buried midden containing human graves, residential features, flaked and ground stone tools, shell and bone artifacts, and dietary remains
Manuel Peña Adobe	Site of early adobe, no archaeological evidence identified

Figure 5. Cultural Resource Locations. CONFIDENTIAL

## SUBDIVISION AND BUSINESS PARK PARCEL CULTURAL RESOURCES

Three historical archaeological sites and one prehistoric isolate were identified in the subdivision parcel, including sites LV-3H, -4H, -7, and Isolate 1. In the business park parcel, the current survey identified two historical sites including LV-12H and -13H. Based on historical research, it is also possible that remains of the Demetrio Peña Adobe and ranch complex exists within the northern portion of the business park. This area of archaeological sensitivity is discussed below as part of the resources associated with sewer and utility corridors.

### LV-3H

Site LV-3H is located in the north-central portion of the subdivision parcel. This site was part of Juan Peña's 287 acres of the Rancho Los Potos through the second half of the nineteenth century. By 1909, it was owned by the Lawrences - Lagoon Valley fruit farmers and neighbors of the Peña's. William Lawrence died in 1915, leaving the property to his wife. When she died in 1924, her estate was left to her daughters. One of the daughters, Mabel L. Killingsworth, built a home on the land that includes site LV-3H and continued to operate the family fruit farm with her sister, Elsie Chandler. Mabel also ran stock on her property. Mabel's husband, Wiley, was a realtor. It is unknown when the Killingsworths moved away and sold the property.

A review of the historical maps and photographs of the project indicates that this site represents the Killingsworth residence and was likely built in the mid-1920s. It is not depicted on the 1915 USGS map. A 1937 aerial photograph indicates that two structures were present at that time. USGS maps from the 1940s show four structures at this location. By 1951, the site contained two residences and a barn (USGS 1951), a configuration that continued into the 1970s.

Today there are few physical reminders on site of the Killingsworth homestead. One concrete slab foundation, rocks and concrete fragments, and a large depression were noted during the field visit. The slab foundation is only 12 ft<sup>2</sup> and may have been associated with a windmill or outbuilding. The aerial photographs dated 1937 and 1952 indicate a driveway leading to the complex, mature trees, and cultivated garden area next to the house, a barn, and several buildings; however, no evidence of these features remain on the ground. The land between the features and surrounding the site appears to have been disced and is disturbed. No artifacts were found on the surface.

### LV-4H

Site LV-4H is located in the central area of the subdivision parcel, west of an abrupt bend of Lagoon Valley Road. This property was held by the Hartleys, a prominent fruit farming family, until at least 1915. Clement Hartley, president and manager of the Vacaville Fruit Company, owned many large parcels in Lagoon and Vaca valleys, planted with orchards that were crucial for the operation of their fruit company. Based on United States Census records, he did not live on the property.

Archaeologically, the site is represented by two loci. Locus 1 consists of the remains of four structures. Two foundations are made of tile, shell, and concrete and the other two are comprised of evenly spaced concrete and wood footings. These foundations correspond to three metal-roofed structures depicted in this location on the 1937 and 1952 aerial photographs. The buildings are not visible on the 1957 aerial and appear to have been removed by that time. Based on the photographs and archaeological remains, these were likely farm-related structures (barns or packing sheds?) rather than residential dwellings. The structures were built on the north edge of a large fruit orchard and were most likely associated with the Vacaville Fruit Company venture.

Locus 2 is depicted on the aerials as a small compound with several outbuildings to the east and at least one mature tree. It is likely that this locus represents the remnants of a dwelling and associated outbuildings. Feature 1 of Locus 2 is a subterranean concrete feature with steps leading down into it. This feature is most likely a root cellar that was under a portion of the house. Based on the tanks contained inside the feature, it was last used for water storage.

## LV-7

Site LV-7 is an isolated prehistoric boulder mortar in a small, flat-bottomed canyon along the southwestern margin of the subdivision area. The mortar cup is situated in a pre-existing solution cup, and is only slightly worn by grinding, clearly reflecting limited use. Oak trees are uncommon in the site vicinity, suggesting that seeds of the surrounding grassland community may have been processed in addition to or instead of acorns.

## LV-12H

Site LV-12H is located along Rivera Road in the northwestern corner of the business park parcel. In the early 1880s, Eliza Buckingham purchased this parcel, part of the Lagunita Rancho's 377-acre fruit farm, from the Peña family. Buckingham died in 1915 and left the land to her son, Thomas. Thomas, followed by his son, Walter, lived on a portion of the ranch into the 1940s, continuing the family fruit farming business. By the late 1940s, the property included a café and playground to accommodate the tourists traveling down the highway. The 1948 As-Built plan for the adjacent highway depicts the site as containing a eucalyptus windbreak, with three large structures north of the windbreak and three to the south. The three northern structures included a stucco café building, chicken house, and probable shed with scattered walnuts. The southern structures consisted of a fruit packing facility and two probable sheds, surrounded by a pear orchard. The Buckingham's appear to have sold the land in the early 1950s.

By 1952 the property was part of the Shady Grove Airport, a private field. By 1962 it was included in the AOPA Airport Directory as the Vacaville Airport, listed as operated by George Kotsotas with a single, paved 2,000-ft-long runway. The airport appears on the 1967 Sacramento Sectional Chart with a 2,100-ft-long runway (Freeman 2003; Mayes 2003).

In 1971, David Williams began using the site for gliders under the name Vacaville Soaring. By 1980 the runway had lengthened to 2,700 ft and the site also had a small hangar at the west end of the northern runway. In 1982, the glider association became known as Vacaville Aeronautics, or Vac-Aero. A 1983 photograph of the Vacaville Gliderport, as it came to be known, showed at least 19 gliders and single-engine planes on the field. In 1984, the field was taken over by Dr. Mayes and renamed Lagoon Valley Soaring. The popularity of gliding at the site reached its high in the 1980s with 11,000 tows, or gliding trips, per year taking off from the site. Dr. Mayes died in a bi-plane accident at the site in 1988, leaving his son, Rex Mayes, to operate the port. In 1991, Rex moved the operation to Williams, where it operates now under Valley Soaring Association. By 2000, the runway had deteriorated and no buildings remained at the site (Mayes 2003).

Today the most obvious remnant of the pre-airport site is the row of eucalyptus trees. No evidence remains of the fruit packing facility south of the trees. Several depressions, mature plum, walnut, rose and oleander plants, and a sparse scatter of artifacts mark the locations around the removed stucco café building. An asphalt area east of the mature trees likely represents the north end of the paved landing strip that was a feature of the site for nearly 40 years.

## LV-13H

Site LV-13H is located at the northeast corner of Rivera and Lagoon Valley roads. Until 1912, this site was part of a larger 50-acre tract of land owned by Charles H. and Anna Steinmetz. Charles passed away in 1901 and Anna remarried. After her death in 1912, the parcel was divided into three equal shares between Anna's second husband, William Richardson, and her two grown sons. The site is located on the parcel left to William Richardson. Richardson sold his land by 1925 and it remained planted in orchards until the mid-twentieth century. It appears to have become part of the Shady Grove Airport by 1952 (see discussion for LV-12H). Today, the site is characterized by a clothesline, several depressions, an old driveway, and landscaped plants including roses, agaves, and an apple tree.

## Isolate 1

Isolate 1 is located along the north side of Lagoon Valley Road, in imported gravel along the road shoulder. It is a chert biface margin. It is clearly out of archaeological context, and may have been brought in with gravel from Cache Creek (Robert Harr, personal communication).

## SEWER AND UTILITY CORRIDOR CULTURAL RESOURCES

Six prehistoric sites and one prehistoric and historical site have been previously recorded along the route of proposed utility and sewer corridors. No new sites were identified as part of the current study. Four sites were originally recorded by Tony Drake in 1977 and appeared to be on or adjacent to utility or sewer corridors, including SOL-39, -40, -42, and -43. Three of these sites were relocated and re-recorded as part of the current survey (i.e., SOL-40, -42, -43); SOL-39 could not be found in its mapped location. In addition, the Juan Peña Adobe and prehistoric occupation site, SOL-30/H, occurs along a proposed sewer corridor, as do prehistoric sites SOL-270 and -324. As noted above, one of the sewer options also passes near or through the location of the mid-nineteenth century adobe complex associated with Manuel Peña. Although no remains of this Adobe were observed during the survey, it is possible that buried structural remains or other related features occur within the proposed sewer corridor.

### CA-SOL-30/H

Site SOL-30/H is the site of the standing Peña Adobe and also includes a substantial Late Prehistoric occupation midden. Sewer Option 2 crosses through the eastern side of the recorded site boundary. Currently, the site is a county park. I-80 lies immediately northwest of the Adobe, while the area to the south and east is covered in lawn and a paved parking area.

#### *Prehistoric Component*

The northern portion of the prehistoric midden was investigated by Palumbo in 1963-64 in advance of highway improvements and is now either destroyed or remains partially intact beneath the roadway. A brief reconnaissance of the park revealed obsidian debitage, burnt bone, and a small corner-notched, obsidian arrowpoint in a planter just north of the Adobe. A large sandstone boulder with two mortar cups is located in the lawn area in front of the Adobe (apparently moved from another location) and a small garden on the grounds of the park incorporates several bowl mortars and mortar fragments, as well as other groundstone pieces. Although a portion of this site has previously been investigated, no attempt was made to identify the full extent of the prehistoric deposit (Palumbo 1964). An auger test by Slaymaker and Griset (1990) identified prehistoric and historical debris along a gravel driveway south of the Adobe, but the authors felt the material was likely redeposited. No other investigations have attempted to define the boundaries of this site.

#### *Historical Component*

Juan Felipe Peña and his family received a Mexican land grant named Rancho Los Potos and settled the Peña Adobe site in the 1840s. The family was among the earliest settlers of European ancestry in the region. Local Native Americans built the Adobe house using bricks made from Lagoon Lake mud, as well as imported redwood. The Adobe remained in the Peña family until 1957 when it was sold to Solano County and made into an historic park. The Adobe building was restored beginning in 1962 and is being maintained. The Adobe was listed in the National Register in 1972 and is a registered California State Historical Landmark (No. 543).

During restoration activities, archaeological excavations took place to document the Peña occupation. Artifacts recovered during this work included alcoholic beverage containers, toys, clothing fasteners, kitchen goods (tablewares, cooking implements and containers, condiment bottles), medicinal and cosmetic products, and leisure activity items such as a jew's harp and tobacco pipes. These artifacts are housed on site in a museum adjacent to the Adobe (Delaplane 1995). The location of the excavations is unknown, but likely was centered very close to the Adobe.

## SOL-270

Site SOL-270 lies north of I-80 and was not visited during the current study; access to the site could not be obtained. The route of proposed Sewer Option 2 bisects the western edge of SOL-270. As described in the background section, this site includes a substantial prehistoric midden deposit containing numerous human graves and other residential features. Auger testing by Griset and Slaymaker (1992) indicates that the western portion of the deposit (Locus B), west of Laguna Creek, is capped by recent, culturally sterile alluvium and lacks surface indications. Like SOL-30/H, the boundaries of this site have not been defined. Information obtained during the auger test indicates the archaeological deposit continues an undetermined distance west, beyond the recorded site boundary (Griset and Slaymaker 1992).

## SOL-324

Site SOL-324 is a buried prehistoric site located south of I-80 and west of SOL-270. As currently proposed, Sewer Option 1 would cross the western edge of this site. SOL-324 was recently tested by Jones and Stokes (2001) and contains a variety of prehistoric habitation debris and human remains. Although the site was visited during the current survey, the deposit is buried by approximately 180 cm of alluvium and no surface evidence was identified. Previous work at the site identified the eastern and northern boundaries of the deposit, but the western boundary remains undefined. SOL-324 was recommended eligible for listing on the NRHP in 2001 (Jones and Stokes 2001).

## SOL-40

Site SOL-40 was recorded as a bedrock milling station composed of 11 mortar cups. The site is located on a gentle slope, uphill and 30 m east of a paved bicycle trail and rock-lined ephemeral drainage, about 100 m northeast of two large City of Vacaville water tanks. The trail and drainage run north along the east side of the large hill east of the Peña Adobe. Current examination of the 40-m-long sandstone outcrop could only locate 10 mortar cups. Three separate examinations, including the current one, failed to identify any additional cultural material at this site (Drake 1977; Slaymaker 1990). The proposed route of Sewer Option 2 passes just west of the outcrop.

## SOL-42

Site SOL-42 was recorded as a single mortar cupule in a bedrock outcrop. It is located about 50 m southeast of the City water tanks and about 20 m west of the bicycle trail. The mortar cupule is situated on a small sandstone boulder, shows little wear, and was probably used for a short time. Like SOL-40, several site visits over the last 25 years have revealed no artifactual remains at this site and no additional cultural materials were observed during the current study. Sewer Option 2 is located just to the east of this site.

## SOL-43

Site SOL-43 was recorded as an occupation site on a knoll on the east edge of Lagoon Valley Reservoir. Obsidian debitage, faunal bone, and possible hammerstones were noted by Drake. The site is part of developed City of Vacaville park facilities, including a Frisbee golf course and tree plantings. Ground surface visibility was poor, but obsidian debitage was noted during the current survey. The recorded boundaries of the site are confined to the knoll-top, which lies approximately 20-30 m west of the paved access road and utility corridor for the current project. The boundaries of this site however, are poorly defined.

## SOL-39

Site SOL-39 was recorded by Drake as a boulder mortar, with three cups, 450 ft northeast of the Peña Adobe. As with Slaymaker's experience (1990), this site could not be relocated during the current study. Slaymaker (1990) speculated the boulder had been moved in front of the Peña Adobe. However, only two mortar cups are present on the boulder which currently sits on the lawn east of the Adobe.

## Peña Family Adobes

Background research by JRP identified two areas that may contain remains of former Peña family Ranch complexes. These include the locations Jose Demetrio Peña's Adobe at or near the present location of the Ranchotel and Manuel Peña's Adobe north of I-80. As defined by JRP, undiscovered features associated with these complexes may be found in two zones of archaeological sensitivity, one in the northern portion of the business park parcel and the other along the proposed route of Sewer Option 2. No evidence of these two adobes was observed during the current investigation. The area of concern for these resources is indicated as archaeologically sensitive zones on Figure 5.

## CULTURAL RESOURCE SIGNIFICANCE

For private projects approved by public agencies, CEQA requires that the lead agency (here the City of Vacaville) assess the effects on cultural resources. CEQA requires evaluation of project impacts only if the resource is considered significant. Historically significant resources must be listed on or eligible for listing on the California Register of Historical Resources (CRHR). Eligibility of a resource to the CRHR is determined with reference to one or more of the following criteria:

1. it is associated with events that have made a significant contribution to broad patterns of local or regional history, or the cultural heritage of California;
2. it is associated with the lives of persons important to local or California history;
3. it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. it has yielded, or has the potential to yield, information important to the prehistory or history of the local area or California.

Eligible resources must not only meet one or more of these criteria, but must also retain sufficient historical character to be recognizable as cultural resources and to convey the reasons for their significance. If a resource has lost its historical character, it may still have sufficient integrity to be listed on the CRHR if it retains the potential to yield significant scientific or historical information or specific data [Public Resource Code 4852(c)].

## PREHISTORIC ARCHAEOLOGICAL SITES

Four prehistoric archaeological sites located within or immediately adjacent to project utility corridors have been determined eligible or appear eligible for listing in the CRHR, including the prehistoric component at SOL-30/H, -43, -270, and -324 (Table 5). Four other prehistoric sites (LV-7, SOL-39, -40, -42) and one isolate (Isolate 1) do not appear to be eligible for listing in the CRHR.

### Eligible Sites – SOL-30/H, SOL-270, SOL-324

Previous test excavations at SOL-324 resulted in the site being recommended eligible to the National Register of Historic Places (NRHP) under criterion D, and hence would also be recommended eligible to the CRHR, a finding consistent with its capacity to yield information important to the prehistory of Solano County and California. Similarly, previous excavations at sites SOL-30/H and -270 have shown each to be substantial prehistoric residential deposits with a rich assemblage of artifacts, ecofacts, features, and in the case of SOL-270, human remains. Both have clearly yielded and can continue to yield information important in local and state prehistory, and are likely eligible to the CRHR.

Table 5. Site Eligibility and Recommended Treatment.

SITE	ELIGIBLE/LIKELY ELIGIBLE	NOT ELIGIBLE	TREATMENT
<i>SUBDIVISION PARCEL</i>			
Isolate 1	-	X	None
LV-3H	-	X	None
LV-4H	-	X	None
LV-7	-	X	None
<i>BUSINESS PARK PARCEL</i>			
LV-12H	-	X	None
LV-13H	-	X	None
<i>UTILITY CORRIDORS</i>			
SOL-43	X	-	Test Excavations
Demetrio Peña Adobe	X	-	Monitoring
<i>SEWER OPTION 1</i>			
SOL-40	-	X	None
SOL-42	-	X	None
SOL-324	X	-	Pre-Trenching, Data Recovery
<i>SEWER OPTION 2</i>			
SOL-39	-	X	None
SOL-30/H (Peña Adobe)	X	-	Monitoring
SOL-270 (Cook Site)	X	-	Pre-Trenching, Data Recovery
Manuel Peña Adobe	X	-	Monitoring

#### Potentially Eligible Site – SOL-43

Very little is known about the nature of SOL-43 along the eastern shore of Lagoon Valley Reservoir, but this site also appears to include a residential deposit containing stone artifacts, stone working debris, and dietary remains. The presence of diverse archaeological materials suggests the site has the potential to yield important information in Solano County and California prehistory, and thus, may be eligible to the CRHR.

#### Not Eligible Sites – SOL-39, SOL-40, SOL-42, and LV-7

The four bedrock milling stations (LV-7, SOL-39, -40, -42) and the biface, Isolate 1, do not meet the criteria for the CRHR or will not be affected by the proposed project. SOL-39 could not be relocated and does not appear to be within the current study area. Sites LV-7, SOL-40, and -42 are isolated bedrock mortar outcrops. Lacking any associated prehistoric cultural material, these three sites have very little potential to contribute to an understanding of local or state prehistory (beyond that obtained as part of the current recording) and are not considered eligible for the CRHR. Similarly, Isolate 1 was found in imported gravel road-base and thus appears to be out of its original archaeological context. Further, in the absence of associated cultural deposit, the isolated biface adds little to our understanding of local or state prehistory. Consequently, Isolate 1 is not considered eligible for the CRHR.

#### HISTORICAL ARCHAEOLOGICAL SITES

One historical archaeological site located along Sewer Option 2 is likely eligible for the CRHR (SOL-30/H, the Peña Adobe). Historical research also suggests other potentially eligible historical features associated with two other Peña family adobes may be present within the business park parcel and Sewer Option 2 (Table 5). Four other historical archaeological sites located within the subdivision and business park are considered not eligible for the CRHR (LV-3H, -4H, -12H, and -13H).

## Potentially Eligible Sites – The Juan Peña Adobe (SOL-30/H) and Other Peña Family Residences

The Peña Adobe at SOL-30/H is a significant historical resource, listed on the NRHP (in 1972) and designated a State Historical Landmark (No. 543). As such, the Adobe is clearly eligible to the CRHR. Project plans call for placement of a sewer pipe east of the Adobe through what is now an open lawn. According to project plan maps, the pipe will go through an area where a building once stood and will pass very close to another building location. Neither building is standing nor are there foundation remnants or other archaeological features on the surface to indicate their exact location within the adobe property.

Research by JRP did not reveal the date of construction or function of these buildings. However, early records, newspaper articles, and personal reminiscences regarding the property indicate that the Peña's had barns, a blacksmith shop, workshops, and bunkhouses for their laborers on site. The razed buildings identified on early maps could have been used for any of these purposes.

The subsurface foundations of buildings (if present) would offer limited information regarding construction details, layout and design of the Peña complex, or architectural details to add to the existing database of mid-nineteenth century ranch life by the Californios and would likely not qualify for inclusion in the National or California Registers.

Intact trash deposits contained in hollow fill features (wells, privies, etc.) or as sheet refuse could be present anywhere in the area surrounding the Adobe and its outbuildings. These deposits could have great potential to address ongoing research domains regarding pre- and post-gold rush ranch life in California, interaction of the Californio's with Euro-American populations in the region, self-sufficiency of the isolated pioneer family, use of Native Americans in the early ranching operations, and other topics. Given the early age and cultural association of the ranch, it is likely that undisturbed subsurface trash deposits would qualify under Criterion D for the NRHP and under Criterion 4 of the CRHR and would be considered significant resources for the purposes of CEQA.

In addition to features associated with the extant Peña Adobe, there exists the possibility that unidentified archaeological resources associated with two other Peña family adobes and associated ranch complexes exist within the business park parcel or along the corridor for Sewer Option 2. If foundations or undisturbed subsurface trash deposits associated with these complexes are discovered in the project area they also have the potential to contribute important information on a poorly documented era in California history, and thus, would likely be eligible for the CRHR.

## Not Eligible Sites – LV-3H, LV-4H, LV-12H, and LV-13H

Site LV-3H is the location of the Killingsworth ranch. The Killingsworth family was one of many local orchardists and ranchers involved in the regions' vast fruit industry during the first half of the twentieth century. The ranch, built in the 1920s, was one of many constructed in the first few decades of the twentieth century during a time when many large land holdings and estates were being subdivided into smaller parcels and developed as small ranchettes. As such, this site does not represent a unique or outstanding trend in local history, nor was the Killingsworth family exceptionally important to the development of the Vaca or Lagoon valleys. There are no intact architectural features. As such, this site does not meet criteria 1, 2, or 3 of the CRHR.

Site LV-4H appears to be the remains of outbuildings associated with the Hartley orchards. Mr. Hartley owned many parcels used by the Vacaville Fruit Company in Lagoon and Vaca valleys and likely had packing sheds, equipment storage facilities, and irrigation-related structures in strategic locations around the fruit orchards. The remnant fruit trees, aerials, historic maps depicting large non-residential structures on site, and foundation remains are consistent with the use of Locus 1 for fruit-related purposes. There is no record of the residences of Locus 2; however, it is probable that a foreman, fruit ranch manager, or employee of Mr. Hartley's lived near the vast orchards, perhaps at this location.

While associated with the local fruit industry, this site does not represent a unique or outstanding trend in local history. Mr. Hartley raised fruit on many parcels in the region and did not live at this location. There are no architectural features on site that retain the intended architectural design of the structures. As such, this site does not criteria 1, 2, or 3 of the CRHR.

The houses, trees, outbuildings and associated features that once characterized this site were removed and no associated trash features were identified, severely limiting the archaeological research potential of the site. The integrity of the site has been compromised by the removal of the buildings and related features, cattle grazing, discing, and agricultural practices. Therefore, it does not appear to meet criterion 4 of the CRHR and does not qualify as an historic property for the purposes of CEQA.

Sites LV-12H and -13H appear to be related to the airport operations, dating from around 1950 to circa 1991, although LV-12H had a café on site in the 1940s and perhaps as early as 1915. Both sites have terracotta sewer pipe and electrical conduit, indicating they were plumbed and well lit. A bathtub on LV-13H and toilet tank fragments at LV-12H also supports this assumption. Observed artifacts (glass, ceramics, linoleum flooring, plastic, rubber) are consistent with a mid-twentieth century occupation. The clothesline, household related items, and driveway indicate that LV-13H may have served as a residence. LV-12H was the airport headquarters and included a café, hanger buildings, office, and playground. Remnants of the airstrip are present on this site.

The airport facility in Lagoon Valley served the Vacaville region for over 40 years as a private airstrip. In later years the glider operation provided a tourist attraction and brought business into the area, contributing to the economic development and expansion of post World War II Vacaville. The glider operation still exists and company records, photographs of the Lagoon Valley site, and oral history information are available, decreasing the importance of the archaeological record to interpret the air history context of the region.

Both sites have been damaged extensively by bulldozing and recent discing. The recent activity has disturbed up to 12 in of soil, removed all weedy vegetation, and scattered fragments of glass, ceramic and other artifacts across a wide area. The ground disturbance has compromised the integrity of both sites and they do not appear to meet CRHR criteria, nor are they considered significant resources for the purposes of CEQA.

## PROJECT EFFECTS AND MANAGEMENT RECOMMENDATIONS

The Lagoon Valley Project has the potential to affect six significant or potentially significant cultural resources, including three prehistoric sites (SOL-43, -270, and -324), one prehistoric and historical site (SOL-30/H, the Juan Peña Adobe); and two historical sites (Manuel Peña and Demetrio Peña adobes). As no significant archaeological or historical sites are present in the subdivision parcel, project activities in this area will have no effect on significant cultural resources. Project activities in the business park and along utility corridors, however, may cause substantial adverse change to significant cultural resources, and constitute an adverse effect on the environment as per CEQA Section 15064.5. Specifically, construction of either proposed sewer line option, as currently routed, will impact either prehistoric site SOL-324 (force main option 1) or SOL-270 (gravity option 2). Sewer line Option 2 also has the potential to effect significant prehistoric deposits or historical features associated with the Peña Adobe at SOL-30/H, or similar features associated with the Manuel Peña ranch complex. In addition, construction along utility corridors may impact a potentially significant prehistoric deposit at SOL-43, located east of Lagoon Valley Reservoir, or undiscovered historical features associated with the Demetrio Peña Adobe, thought to be located in the business park parcel.

Unavoidable project impacts to significant cultural resources will require several management approaches to mitigate these effects. These approaches include: resource monitoring in suspected areas of archaeological sensitivity; test excavations to confirm site boundaries; and mechanical pre-trenching and limited archaeological test excavations of project utility/sewer corridors located within highly sensitive archaeological sites. Also outlined are procedures for the unanticipated discovery of cultural resources, as well as the discovery of human remains, during project construction.

## ARCHAEOLOGICAL MONITORING

Sewer Option 2 will require excavation of trenches along the eastern side of site SOL-30/H. This corridor has been previously tested with auger borings and intact prehistoric deposits were not encountered (Griset and Slaymaker 1992; Slaymaker and Griset 1990). Nevertheless, there is a distinct possibility that

features associated with the Peña Adobe complex occur along the proposed utility route. As there is no surface indication of such features, and large sections of the proposed sewer route are currently paved, it would be logistically difficult to determine if significant features are present prior to excavation of the sewer trenches. Consequently, it is recommended that excavation of the corridor be monitored by a qualified archaeologist in the event that buried historical features are encountered. There is also a slight possibility that intact prehistoric features exist along this corridor and these resources should be considered during monitoring as well.

Historical research indicates that the remains of two other Peña family adobe residences may be located somewhere within the northern portion of the business park parcel or along the northern stretch of Sewer Option 2. As the areas thought to contain these resources are prohibitively large, and no evidence of these adobe buildings is currently visible at the surface, it is recommended that all ground disturbing activities within the archaeologically sensitive zones indicated on Figure 5, be monitored by a qualified historical archaeologist.

Should an intact deposit or feature be uncovered during monitoring at SOL-30/H or in archaeologically sensitive zones, work in the immediate vicinity should stop and the find assessed as to its legal significance. Any significant historical features or other deposits should be hand excavated and sampled using accepted archaeological standards. Any foundation remnants should be mapped, photo documented, and recorded prior to removal. The location of all finds should be recorded on project plans and documented using GPS technology.

### TEST EXCAVATIONS AT SOL-43

The boundaries of site SOL-43 are located just 20-30 m from the proposed utility corridor running along the east side of Lagoon Valley Reservoir. The boundaries of this site are based on surface observations and there is a strong possibility that subsurface deposits extend into the proposed utility corridor. It is recommended that a series of hand-excavated surface transect units be excavated between the recorded site boundary and the utility corridor to determine if intact cultural deposits are present. If such deposits exist in the proposed corridor, a 1-x-2-m control unit should be excavated to determine if the deposit represents a significant resource under CEQA. If the site deposit does not appear significant, no further management is required. If, on the other hand, a significant deposit is encountered, data recovery excavations should be conducted immediately following conclusion of the test excavation. This work should include the excavation of additional 1-x-2-m control units (up to 6 m<sup>3</sup>) and collection of column samples for flotation processing to recover plant macrofossils and small faunal remains. The site should be mapped, unit profiles described, and the location of all control units recorded using GPS technology. All materials recovered during the test and data recovery excavations should be analyzed and a research report prepared following guidelines set forth in *Archaeological Resource Management Reports: Recommended Content and Format* (OHP 1990).

### DATA RECOVERY EXCAVATION FOR SEWER LINE IMPACTS

Depending on the sewer line option which is ultimately chosen, either SOL-270 or -324 will require data recovery excavations if project plans cannot be altered to avoid these sites. Both sites are known to contain human remains and both are buried by recent, culturally sterile alluvium and lack surface indicators. To minimize the overall impact to these sites, archaeological investigations should be confined to the area of direct impact for sewer line construction.

It is proposed here that the sewer trench be pre-excavated with a backhoe by a qualified archaeologist in order to identify residential features, human graves, and other intact cultural deposits. If human burials or cultural features are encountered, trenching should stop, and the burial or feature should be excavated in a controlled manner and thoroughly recorded consistent with current archaeological standards. Non-feature site deposits should also be sampled through the hand excavation of columns retrieved from trench sidewalls and/or from control units placed in the trench bottom. All hand-excavated sediments and soils should be processed through 1/8-in mesh screen, with a minimum of 10 m<sup>3</sup> of site deposit sampled in this manner. Flotation samples excavated from trench sidewalls should also be obtained to recover fine-grained faunal and floral remains.

The location of the sewer trench and any features or burials encountered during excavation should be mapped using GPS technology. Trench side walls should be thoroughly examined and recorded by a qualified geoarchaeologist and a site map should be prepared. All recovered materials should be analyzed, including radiocarbon and obsidian hydration dating, and a thorough research report prepared documenting the results of the investigation. This report should minimally follow guidelines set forth in *Archaeological Resource Management Reports: Recommended Content and Format* (OHP 1990).

## UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

Section 15064.5 of CEQA requires lead agencies (here the City of Vacaville) to make provision for accidental, unanticipated discovery of historical resources, including those determined eligible for listing on the CRHR, during construction. CEQA requires that these provisions include an immediate evaluation of the find by a qualified archaeologist, and, if the find is determined to be a significant cultural resource, the lead agency make available contingency funding and a time allotment sufficient to allow for avoidance or appropriate mitigation measures.

In the event that such historical resources are discovered during project construction, it is recommended that construction work in the vicinity of the find cease until the find has been evaluated and a course of action decided upon. A physical barrier (e.g., exclusionary fencing) should be erected to prohibit potentially destructive activities from occurring and/or visitation and potential vandalism by unauthorized personnel. Project-related activities and access to the location should be prohibited until the City of Vacaville is notified otherwise.

A qualified archaeologist should be notified to make a preliminary assessment of the discovered resource. Following this assessment, the City of Vacaville and the applicant should be given written notice to alert them of the situation. In coordination with the City and the applicant, the archaeologist should evaluate the potential significance of the find and recommend what treatment measures, if any, are appropriate.

It is recommended that the qualified archaeologist conduct the evaluation of the discovered resource following these considerations:

- CRHR criteria for evaluation should be applied to determine if the resource is significant.
- The evaluation should be conducted in following a research design consistent with that found in *Guidelines for Archaeological Research Designs* (OHP 1991).
- The City and the applicant (or at their request, the qualified archaeologist) should consult with the appropriate Native American tribal groups during the evaluation and treatment phases.

To expedite the review process after fieldwork is completed, it is recommended that the qualified archaeologist prepare a brief management summary report for the City and the applicant which describes and assesses the significance of the discovered resource, including a discussion of the methods and criteria used to determine significance. If the resource is deemed eligible for inclusion in the CRHR, the report will detail avoidance and/or treatment recommendations.

It is recommended that a comprehensive research report, detailing the results of any archaeological evaluation and/or data recovery treatment activities associated with the unanticipated discovery, be prepared by the qualified archaeologist, and submitted to the City and the applicant no later than 360 days after the completion of any field studies associated with this effort. The comprehensive research report should follow guidelines set forth in *Archaeological Resource Management Reports: Recommended Content and Format* (OHP 1990).

## THE DISCOVERY OF HUMAN REMAINS

Section 7050.5(b) of the California Health and Safety Code requires that if human remains are found in any location other than a dedicated cemetery, excavation is to halt in the immediate area, and the county coroner is to be notified. Within 48 hours of notification, the coroner is required to examine the remains and

make an assessment of their origin. If the coroner makes a determination that the remains are those of a prehistoric Native American, Section 7050.5(c) of the Health and Safety Code requires that the coroner notify the Native American Heritage Commission (NAHC) within 24 hours of identification. Under Section 5097.98 of the Public Resources Code, the NAHC is required to immediately notify the person it believes to be the Most Likely Descendant (MLD) for purposes of consultation. With permission of the legal landowner(s), the MLD may visit the site of discovery and make recommendations regarding the treatment and disposition of the remains and any associated funerary objects (HSC 5097.98). This should be completed within 24 hours of the MLD's notification.

It is the policy of the State of California that any Native American remains and/or grave goods not immediately reburied will be repatriated (PRC 5097.991). Final disposition of the remains, however, may include re-interment or placement within a state approved curation facility if requested by the MLD.

If a satisfactory agreement for the final disposition of the remains cannot be reached, either of the parties may request mediation by the NAHC (PRC 5097.94[k]). In the event that mediation fails, with appropriate dignity, the landowner or their representative must re-inter the remains and any associated items on the property in a location not subject to further disturbance (PRC 5097.98[b]).

In the event that human skeletal remains or material thought to be human remains are encountered during project construction, work will be halted in the general vicinity of the finds and the City and the applicant immediately notified. If possible, all finds will be preserved in place and protective measures implemented to safeguard the remains from further disturbance or vandalism. Following protection of the finds, the following steps will be implemented:

1. The City and the applicant will immediately retain a qualified cultural resources specialist to assess the remains and determine whether they are human. If the find is determined to be non-human and non-archaeological, then no further consideration is necessary and construction may resume. If the find is determined to be non-human, but archaeological, then the procedures described in the Unanticipated Discovery section outlined above should be followed. If the find is determined to be human;
2. The Solano County Coroner and representatives of the lead agency, here the City, and applicant will be simultaneously notified. The cultural resources specialist or physical anthropologist will work with the Coroner to determine whether the remains are prehistoric Native American or are of more recent origin. If the remains are found to be of recent origin, then the discovery becomes a police issue. If the remains are determined to be Native American;
3. The NAHC will be notified by the Coroner. Although it is the Coroner's responsibility to notify the NAHC, a representative of the City will also contact the NAHC and verify that the notification was made.

Following notification, City will consult with the selected MLD and provide the opportunity within 24 hours for the MLD to visit the site of discovery. The City will work with the MLD to arrive at a satisfactory plan for treatment and final disposition of the remains. The preferred resolution will be to preserve the remains in place and to avoid further project-related impacts. If preservation in-place is not a viable option, in consultation with the MLD, the City will develop an appropriate plan for the recovery and documentation of the remains and any associated grave goods. This plan will be implemented along with an Unanticipated Historic Properties evaluation to determine the CRHR significance of the discovery and any associated archaeological deposit.

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**TECHNICAL APPENDIX N**

Biological Resources  
Lagoon Valley Property

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**BIOLOGICAL RESOURCES  
LAGOON VALLEY PROPERTY**

**SOLANO COUNTY**

Submitted to:

Triad Communities  
1095 Hiddenbrooke Parkway  
Vallejo, California 94591

Prepared by:

LSA Associates, Inc.  
157 Park Place  
Pt. Richmond, California 94801  
(510) 236-6810

LSA Project No. TRI330

**LSA**

September 23, 2003

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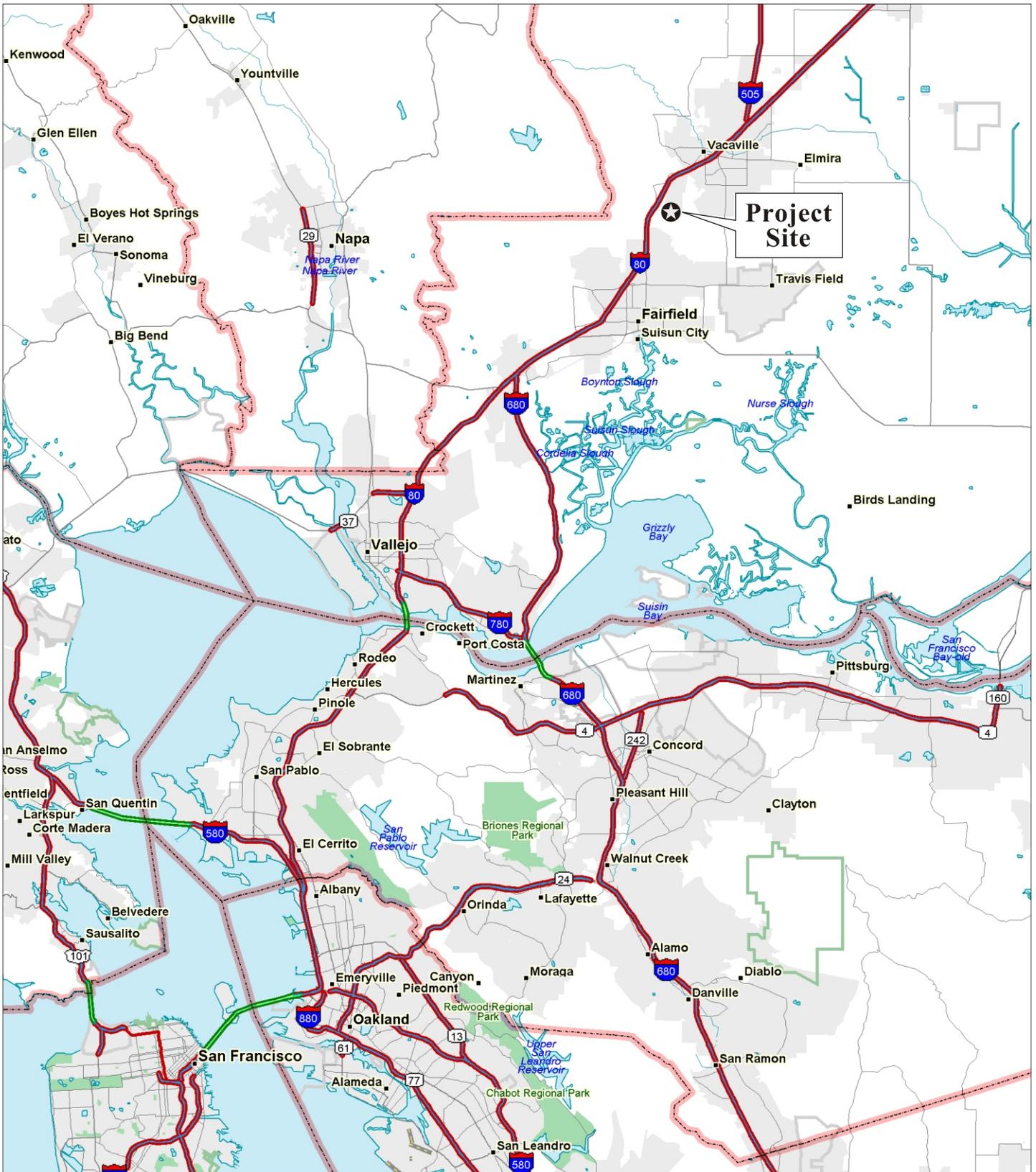
## INTRODUCTION

This report presents the results of a reconnaissance-level biological survey conducted by LSA Associates, Inc (LSA) on the Lagoon Valley residential/commercial property in Solano County. The survey was conducted to determine the presence/absence of sensitive plant communities/habitats, to evaluate the potential for occurrence of special-status plant and animal species, to determine if potential U.S. Army Corps of Engineers (Corps)/California Department of Fish & Game (CDFG) jurisdictional areas are present, and to assess potential impacts of development on biological resources on the site.

The report will: (1) describe pertinent regulations, (2) describe survey methods, (3) describe existing biological resources observed on the site, (4) discuss potentially occurring special-status species, and (5) make recommendations, including whether additional biological surveys are necessary prior to development.

## PROJECT LOCATION

The Lagoon Valley property is located in the City of Vacaville in Solano County, California (USGS Fairfield North and Elmira 7.5 minute quadrangles, Township 6N, Range 1W in an unsectioned area and Township 5N, Range 1W in portions of sections 5 and 6). The site is bordered to the west by Interstate-80 and undeveloped City of Vacaville lands, to the east by undeveloped City of Vacaville lands and private ranches, to the north by the Ranchotel Horse Center and Lagoon Valley Regional Park, and to the south by undeveloped land. Figures 1 and 2 show the regional location and site boundaries, respectively.



LSA

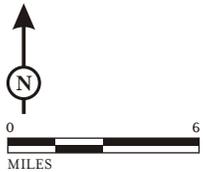


FIGURE 1

Lagoon Valley  
Regional Location

SOURCE: ©2002 DELORME. STREET ATLAS USA® 2003.