

draft preliminary plan for

HEARST SAN SIMEON
STATE HISTORIC MONUMENT

Department of Parks and Recreation
State of California

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Theodore Osmondson and Associates
Landscape Architects - San Francisco

Preliminary Draft

GENERAL DEVELOPMENT PLAN
FOR
HEARST SAN SIMEON STATE HISTORICAL MONUMENT

State of California - The Resources Agency
Department of Parks and Recreation

Prepared under contract by:
THEODORE OSMUNDSON & ASSOCIATES
706 Sansome Street
San Francisco, California 94111

with:
ENVIRONMENTAL ASSESSMENT &
RESOURCE PLANNING
1816 Tribute Road
Sacramento, California 95815

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PURPOSE OF THE STUDY

In 1957 the Hearst Castle was transferred to the State by the Hearst Corporation and designated by the State as the Hearst San Simeon State Historical Monument. It was established to preserve this remarkable residence of one of its most outstanding citizens, William Randolph Hearst. The management policy for this area began and has continued to be an interpretation of its creation and use in the context of the historical period in which it was built.

In an effort to maintain this resource for the present and future enjoyment of the public, the State Department of Parks and Recreation has funded and supervised the development of this comprehensive Master Plan. This document will serve as the vehicle for communication of the intentions of the Department of Parks and Recreation to the public. In addition, the Master Plan will not only function as a guide for improving the physical character of the Historical Monument, but also aid the management, interpretive and maintenance functions of the area.

RECOMMENDATIONS

Plans: Village Center Scheme - Conceptual Plan B
Lone Tree Hill - Conceptual Plan A
China Hill - Tour Guide Building

The location of program elements that are depicted in this plan for the Village have been based on a thorough analysis of the existing conditions at the present Visitor Center and at San Simeon Village. Primarily, the visitor who comes to San Simeon to see the Castle is faced with a mechanized tour system that, although extremely efficient, has limited the visitor experience. It has failed to incorporate many existing features within the vicinity that directly relate to the Castle's creation and, therefore, the Hearst story. In addition, the facilities offered for public use are grossly inadequate and lack architectural significance that relates to the landscape and the Spanish heritage.

One area that became important to the Castle construction was the site where the treasures were stored before they were moved up to the hill. With the decline of the whaling activities at San Simeon Point, the center of life shifted to what is now San Simeon Village where these artifacts were temporarily housed. The Sebastian Store, once part of the whaling village, but moved to its present site in 1878, and a wooden warehouse constructed in 1872 for Senator Hearst's import/export business were the only structures present in the village when building materials for the Castle began arriving in 1919. The volume of materials that required storage necessitated the construction of additional warehouses since the shipments arrived much faster than they could be incorporated into the Castle by the architect, Julia Morgan and

her client, William Randolph Hearst. In addition, the number of employees required by this construction operation led to the building of employee residences within the village.

In order to include this historically significant area into the visitor experience, Plan B was developed. In general, improved visitor center facilities are relocated from their present position to the village to recreate the rush of human activity that once was part of the community.

Initially, the visitor center would be located in close proximity to the State Highway to provide an orientation point for the traveller. Confined to a landlocked parcel of the site that contains an existing stream, a unique building arrangement would be possible that provides an orientation feature for the visitor. The present visitor center would function, and therefore provide continuous revenue, until the new facility is constructed. With the abandonment of the existing center, the entire landscape east of the highway to the Castle would revert to the open character it once possessed when the Castle construction began.

The village, designated as a pedestrian plaza, would contain the restored historical buildings and supplementary facilities. These facilities would include visual interpretive presentations, museums, shops, interior displays and food services. They would be provided within the restored structures and within additional buildings constructed in a Spanish architectural style consistent with the Castle and other buildings in the area.

The parking lot has been relocated in an area of open grassland. Due to natural site features of topographic change and new plantings of trees

and shrubs, this parking zone would be screened from the highway. Additional plantings of trees and low, dense shrubs between the rows of vehicles would further screen the lot and add visual relief to the extensive, paved parking area. Overflow turf parking that would be for seasonal or overflow use only is designated within an area north of the present road. Vehicular traffic would be confined to these portions of the site except for service vehicles that would have access to the village proper.

In summary, the visitor would arrive at San Simeon village, park their vehicle and proceed to the visitor center. Following ticketing and information procedures, the visitor then has the opportunity of taking the tour bus trip to the Castle or taking a leisurely stroll through San Simeon village at which time the historical buildings and their facilities could be examined and enjoyed.

At the center, the visitor would have the opportunity to begin a new and significant tour of the Hearst Castle property not presently available. This tour would be created with the incorporation of Lone Tree Hill into the areas under State ownership. This site, containing an arbor walk, orchards, plantings of vines and ornamentals and extensive views of the countryside is an integral part of the Hearst story. With the upgrading of this site, in respect to the arbor walk and the plantings, the visitor would have the opportunity to examine the verdure that existed here during Hearst's time. In addition, it would be possible for the visitors to take a relaxed guided tour around the pergola area, and view the extensive Hearst ranch.

Finally, the tour guide building at China Hill is in dire need of improvement. Inadequate facilities and a lack of architectural significance also summarize the problems at this site where two trailers function as the main center for, at times, over 70 tour guides. The location of the guide center is critical to the operation and since its present location is preferred and few suitable areas exist on the hill, its current location can continue to be used with only minor regrading of the site.

In conclusion, since a primary goal of the study is to enlarge the scope and improve the quality of the visitor experience, both plans for San Simeon village and Lone Tree Hill were developed. These areas played an important part in the Hearst story and their implementation within the Master Plan for the Historical Monument would rekindle the human activity that once existed in these areas.

Stated even more briefly, the plan would accomplish the following.

1. Improve the visitor experience.
2. Expand the interpretation of the resource.
3. Include the entire historical corridor from San Simeon Bay to the Hearst Castle within the visitor experience.
4. Preserve the historical village structures for the use, understanding and enjoyment of the public.
5. Provide greater public access to the beach at San Simeon Bay.
6. Combine the Hearst Memorial State Beach and the visitor center area to facilitate management operations.
7. Define the focus of visitor activity to a recognizable destination.
8. Combine a recreational, educational and service-oriented facility for those waiting for the reserved Castle tours and for those not visiting the Castle.
9. Eliminate the unsightly existing State visitor center and parking lot located between the highway and the Castle.
10. Use an already existing developed and planted area of the coast for visitor facilities.

INTRODUCTION

Location

The Hearst San Simeon State Historical Monument lies on scenic Route 1 approximately midway between two metropolitan centers, San Francisco and Los Angeles. The site, located in San Luis Obispo County, is bounded on its inland side by the Santa Lucia Mountain Range and the Pacific Ocean to the west.

Consultant Team

In order to implement a development scheme for the lands under State jurisdiction that preserves and protects this unique area while providing for public use with maximum benefit, a consultant team was created following an extensive selection process.

The primary consultant, Theodore Osmundson & Associates, landscape architects and park planners of San Francisco, California provided design and planning services throughout the course of the study. In addition, to determine the environmental setting and constraints, Environmental Assessment and Resource Planning, Inc. of Sacramento, California was retained by the planning consultants to provide these services.

Therefore, the State Department of Parks and Recreation as the coordinating agency, along with the consultant team, has prepared this Master Plan report to present the State's concerns for the public use and enjoyment of the Hearst San Simeon State Historical Monument by present and future generations.

The Planning Process

The initial phase of any planning process is the generation of a series of goals that provide the overall direction for the study. From these goals, various objectives are developed that not only describe the tasks to be completed by the consultant team, but also, more importantly, accurately present the extent of the functional and environmental planning efforts initiated to accomplish the goals previously determined.

From an extensive review of the alternatives, with the constraints at hand, a comprehensive development scheme can be put forth based on the entire range of planning considerations this unique site and its supportive facilities demand.

Goals and Objectives

Goal 1: Preserve and protect the historical, cultural, and natural resources of the Castle and surroundings.

Objectives: A. Inventory physical resources from public and private sources.

B. Determine environmental and land ownership constraints to development and/or expansion of program elements.

C. Construct alternative planning proposals and determine their impacts.

Goal 2: Coordinate master plan proposal with State, County, and local Planning agencies and the Hearst Corporation.

Objectives: A. Analyze studies made or funded by the State of California or academic organizations.

B. Review the San Luis Obispo County Master Plan.

- C. Analyze private studies funded by the Hearst Corporation.
- D. Review related legislation.
- E. Review planning alternatives with the State and with the Hearst Corporation.

Goal 3: Enlarge the scope and improve the quality of the visitor experience.

- Objectives:
- A. Study organizational structure as related to the administration of the Historical Monument.
 - B. Analyze existing data on patterns of visitation.
 - C. Document and analyze existing facilities as to overall layout, circulation, relationship to adjacent properties, architectural design, and carrying capacities.
 - D. Study on and off site transportation patterns.
 - E. Study feasibility of planning alternatives in relation to management and budgetary constraints.

Goal 4: Create a vehicle for communication between Department of Parks and Recreation and the public.

- Objectives:
- A. Develop Master Plan brochure designating the planning alternatives and impacts.
 - B. Develop and select recommended plan.

Hearst Corporation

It should be noted that a very strong factor in planning for the future development of the Historic Monument depends heavily on the intentions of the Hearst Corporation, the original owners of the unit and the owner of all lands adjoining the Monument. The purchases of large tracts of land by Senator George Hearst, father of William Randolph Hearst, triggered the saga of the Hearst ownership of the vast lands and led to the creation of the fabulous and magnificent villa on the hill.

The Hearst Corporation continues to own 86,000 acres of land extending from San Simeon Creek along 16 miles of coastline to Ragged Creek and deep inland for much of the coastal range. Extensive cattle breeding is carried on here with more than 2,000 head of prime breeding stock maintained year round.

These lands, by being held in a single ownership, have been protected from random exploitation by the careful management of the Hearst Corporation. With the exception of the Hearst San Simeon State Historical Monument, the only other inholdings in the Piedra Blanca Rancho are the U.S. Government's Piedra Blanca lighthouse and the Sebastian Store in the town of San Simeon.

The beneficent effects of this nearly single ownership are very evident. Strip commercial development stops abruptly at the southern boundary of the Hearst property. The coastal and hilly lands northward and eastward are in a state similar to their condition when the Spaniard, Don Gaspar de Portola camped in the area in 1769. This unique state of the land offers an opportunity for historical preservation and interpretation of unparalleled value.

History of Site and Castle

The lands under Hearst ownership were first acquired by mining millionaire Senator George Hearst in 1865 when he purchased the original Spanish rancheros of Santa Rosa, San Simeon, and Piedras Blancas. These were formerly the mission lands of Mission San Miguel Archangel.

George Hearst's only son, William Randolph Hearst, loved California and was especially fond of "Camp Hill" on his father's ranch at San Simeon.

He had picnicked on this hill with his parents many times as a boy and continued to do so when he had acquired a family of his own. These outings grew in elaborateness until there was a huge circus tent, a cinema, and three guest tents each with four rooms and a bath, very close to the same layout as the present castle. In addition, a continual entourage of servants, chauffers, tutors, and nurses frequented the Castle grounds at this time.

The Castle

Hearst dreamed of building a castle on the hilltop as a showplace for his large and growing collection of antiques and art treasures. In 1919, under the direction of architect Julia Morgan, construction began on La Cuesta Encantada, or the Enchanted Hill, as he then called it.

Many difficulties were encountered during construction. In addition to the necessity of building a road up the mountainside, all materials had to be brought in by sea to a pier at the town of San Simeon. Here, several warehouses were built to store construction supplies and art treasures until they were needed.

Perhaps the most interesting problem involved in the building of the Castle was that of designing it around the collection of art treasures. For instance, the refectory, or main dining hall, had to be designed around an existing sixteenth century Italian monastery ceiling with life-sized carvings of the saints. Not only was the shape of the room determined by the antique ceilings, but also the building had to be especially constructed to support the weight of the heavy wood carvings.

Landscape Development

The exterior treatment of the Castle grounds and the surrounding 700 acres was generally a result of William Randolph Hearst's creative efforts. A devout conservationist, as was his mother Phoebe Apperson Hearst, Mr. Hearst did not permit the destruction of any of the existing trees. This led to the movement of many large specimens at great expense.

The planting of native and exotic species on the ranch, however, did not begin with Mr. Hearst. During the late 1800's when his father, Senator George Hearst, lived there, magnolia trees were shipped from Virginia to enhance the Hearst lands. In addition, eucalyptus, which were quite rare in the country at this time, were planted to provide timber for piers and shipmasts and to serve as windbreaks on San Simeon Point. Finally, Monterey Cypress were installed as a windbreak on the north side of the old ranch house.

As a result of Mr. Hearst's and his mother's love of roses, over 2000 rose bushes, encompassing approximately 50 different varieties were planted. Combined with the numerous azaleas, rhododendrons, citrus and fuchsia species introduced, these plantings produced an array of flower and fruit colors shaded, in many cases, by the existing and relocated live oak trees.

At no time during construction and use of the Castle were the grounds left untouched. Mr. Nigel Keep, a trusted friend, employee and advisor, was in full control of the tree planting. A pomologist, Mr. Keep planted between 6000 and 7000 trees of approximately 100 varieties over the course of 12 to 15 of his total 30 years of service. The constant procession of trees incorporated within the grounds, originating generally from the nursery

where Mr. Keep had been manager until 1919, necessitated an extensive landscape construction operation. Yet, much of the work was achieved by hand particularly the loading of planting soil onto trucks and the digging of plant pits.

The primary concern of Mr. Hearst, to create naturalized planting masses, was achieved even though in some cases non-native materials were grouped. The largest grove installed was on the borders of the reservoir on the hill south of the Castle where 6500 5' to 6' pines were planted.

Since Mr. Keep was a fruit tree expert or pomologist, he had the opportunity to incorporate his speciality at the site presently known as Lone Tree Hill. Along the pergola, constructed of a double row of concrete pillars with decorative concrete and wood lattice, grape vines were espaliered adjacent to the columns that would, with time, cover the lattice work atop the pergola walk. In addition, orchards of fruit and nut trees were located on Lone Tree Hill to provide for the Castle guests.

Mr. Keep continued his improvements by adding hundreds of citrus, pomegranate and oleanders to the areas along the entrance road.

In addition, annual, perennial and exotic flowers were grown in greenhouses to provide the plants for extensive beds of showy display that Mr. Hearst enjoyed during special events. It was common practice for 600 to 700 plants to be placed in a specific bed and then changed the following week. Also, many of these flowering plants were used within the Castle and guest rooms to adorn the already luxurious elements of the interior.

Finally, fresh vegetables were available from a 10 acre plot maintained by a full time staff in Poncho's Canyon. With the nearest source of such foods in San Luis Obispo, 45 miles away, this garden remained an important element of the extensive plantings within the Hearst Castle grounds.

Construction continued on the Enchanted Hill until Mr. Hearst's death in 1951. There were always changes and additions being made, and today the castle and grounds remain in a 90% state of completion.

State Acquisition

In 1958, seven years after the death of Mr. Hearst, a decision was made by the Hearst Corporation to donate the Castle and the surrounding grounds to the state of California in order to allow the public to experience the Enchanted Hill. The only principal stipulation of turning the property over to the public was that, as much as possible, the castle be maintained in the condition in which Mr. Hearst left it.

The present visitor's parking and bus staging area was formerly the airstrip for the Hearst's Piedra Blanca Rancho. It had been abandoned by the Hearst Corporation for a better facility to the north and was available for immediate use by the State with little development cost. An easement was allowed from the south end of the old runway to State Highway 1, and a connecting road installed. With the addition of a small visitor's building, restrooms, converted mobile home units for a food and gift concession, and a small automotive and roadway maintenance area, the park unit was ready for operation. With minor alterations, expansion, and improvements, the visitor facilities at the bottom of the hill continue to operate as originally established.

THE STUDY AREA

State Lands

As an operational unit under the Area Manager, the State lands within the boundaries of the Hearst property consist, in general, of the visitor center the access road, the Castle and its supportive facilities. Located on the hilltop just south of the Castle is the Area Manager's office with a staff that includes the chief ranger, maintenance superintendent and clerical help. Immediately east of the Castle are the maintenance facilities which include indoor and outdoor storage areas; a parking lot; carpentry, paint, welding and machine shops; and gasoline and diesel storage units. In addition, areas are provided within the indoor pool building at the Castle for the maintenance office, tool room, glass, electrical and paint storage, garden tools and housekeeping supplies for both the Castle and visitor center.

Located across the access road and entry to the Castle is the tour guide building. This area, known as China Hill, has been designated as the site for the office and lounge facilities for as many as 70 tour guides. It is comprised of two trailers, a restroom building, and an arbor structure.

Finally, at the base of the hill and in close proximity to Route 1 is the visitors center. This center includes parking for automobiles, recreational vehicles and buses; the Castle tour staging area; tour ticketing facility; restrooms; concessioner's building and a maintenance yard.

These lands under State ownership consist of approximately 130 acres in the immediate Castle area and 22 acres within the visitor center. Both are connected by a five-mile, 60 foot right of way which contains the two lane black-topped access road to the Castle.

Additional Resources in the Area

Hearst Castle has been placed in the public trust, is excellently maintained and has become a rewarding experience for hundreds of thousands of visitors annually. However, there are other areas nearby that are part of the Hearst story or provide facilities for use by the public during their visit to the Castle.

Lone Tree Hill

Northwest of the Castle just beyond China Hill lies Lone Tree Hill, a unique portion of the Hearst lands not included in the initial gift to the State. Far more significant than China Hill in respect to the history of the Castle and its grounds, this area was established by William Randolph Hearst as an arbor or pergola walk extending along the hill for approximately 1.3 miles.

During the periods when the Castle was filled with celebrated guests, they had the opportunity to remove themselves from the grounds and take a leisurely stroll along Lone Tree Hill, and experience extensive views of the surrounding hillsides, ocean, Castle and orchards of apple, fig, plum, olive, peach, apricot and walnut. In addition, the arbor itself displayed espaliered fruits and ornamentals throughout its entire perimeter.

Finally, as an example of the unsurpassed magnificence of the Castle domain, Hearst devoted substantial sums of money to establish and maintain on Lone Tree Hill, a collection of wild animals within a zoo located adjacent to the northern slope of the arbor walk. When the zoo was operational, it housed a collection of exotic animals otherwise found only in the wilds or

in sophisticated collections in the major cities of the world.

San Simeon

The period of the Spanish presence and later the whaling and agricultural pursuits which occupied the economic industry of the region's inhabitants, have left their mark on the area. But the whaling industry waned with time and the focus of life shifted from San Simeon Point to what is now the Village of San Simeon. Between the Bay and Route 1, this tiny community is an important part of the Hearst impact on the area.

The construction of the Castle depended on the Village and the wharf built by Senator George Hearst. With no adequate roads into the area, the easiest route was by sea. The wooden warehouse, built in 1872 by the senior Hearst to serve the export trade in agricultural products, was quickly taken over by the son with ambitions of building a residence which would rival any in the world. Additional warehouses were needed to hold the materials of construction and the fabulous decoration and furnishings of the Castle. This pier and holding facility with its access to the top of the hill were the last essential connection to the sea and the source of treasure in Europe. Without them, all would have been impossible.

Additional warehouses were built for storage purposes and "Haciendas" were constructed in the village to house the principal employees of the ranch. The school house attended by all the children in the area (including those of the Hearsts when they were on the ranch) was built and functioned for many years. Lesser structures for housing were erected. At its center was the community center, the Sebastian Store, which was moved from the whaling village on the Point in 1878. Remarkably, almost all of these

structures exist today. Yet none are within the boundaries of the State Historical Monument and few of the almost three quarters of a million visitors to the Castle each year are aware of this ocean-based anchor of the Hearst Castle corridor extending from the Enchanted Hill to San Simeon Bay.

State Facilities

In addition to supervising public visitation at the Castle, the Area Manager is responsible for the operation of a variety of park sites outside of the Hearst property limits. These areas include Santa Rosa Creek, an undeveloped beach site in Cambria; Leffingwell Creek, a day use area with picnic tables, barbecues and parking; Moonstone Beach; San Simeon Creek State Beach and William Randolph Hearst Memorial State Beach.

San Simeon Creek State Beach presently encompasses 40 acres, however, provisions have been made for future development of an additional 400 acres. At this overnight facility, there are 134 Class A camp sites, 17 acres of beach, 7 comfort stations, 25 picnic tables (15 non-standard), and parking for 155 vehicles, 110 of which are provided on unpaved areas. The recreation season at this facility, limited to the months of March through September, have use capacities set at 430 visitors at the beach and 150 visitors within the rest of the unit area. Finally, two miles of paved and 2.3 miles of unpaved roads for visitor access intersect the site.

William Randolph Hearst Memorial State Beach, on 5 acres, provides an 850' pier for sport fishing, concessioner operated fishing boats, a tackle shop and fish cleaning facility, 45 picnic sites, a 1 acre beach

area and parking for 125 cars. The recreation season is similar to that at San Simeon Creek, that is, from March to September it is open for public use.

THE PRESENT VISITOR EXPERIENCE

The visitor center is located just off U.S. Highway 1, 94 miles south of Monterey and 42 miles north of San Luis Obispo. Because of this, visitors must plan well in advance in order that they arrive on time for their reserved space on the tour. Not infrequently, people will arrive in the area well in advance of their tour, they picnic, sightsee, or even stay the night before in one of the motels in Cambria or camp at San Simeon Creek.

The public tours of the Castle are quite popular, running at full capacity on weekends, holidays and throughout the summer season. Visitors are urged to make reservations for specific tour times by the use of Ticketron, an electronic reservation service.

When the visitors arrive for a tour, they turn off the highway and drive up a short access road to a parking lot at the visitor center. The Castle, located on the hilltop, occupies all of the available buildable land. It can be reached only over a steep, winding road from the visitor center which has the only suitable land for parking a large number of visitor automobiles. These factors necessitate the operation of a shuttle bus system to the castle. All visitors must gain access to the Castle grounds by buses loading at the staging area next to the visitors' center. These buses and their drivers are leased from a concessioner but are under the direct management control of the Area Manger.

The center itself is an open air facility with a ticket office/information booth, restroom building and a display of photographs of the Castle, all under a single open sided loggia. There is also a concessioner-operated gift shop and food counter housed in a tandem coupling of modified mobile homes.

Once he has parked his car and taken care of any ticketing business at the Center, the visitor waits for his reserved space on the tour. The waiting area is outdoors, next to the bus loading area.

Because of the unique nature of the public resource, its great historical as well as monetary value and its susceptibility to possible vandalism and theft, public use hours are rigidly scheduled and controlled. Only one area of the Castle may be visited at a given time and the group is not only led by an experienced tour guide, but Tour #1 is followed by an additional person to assure that the group stays together and completes the tour promptly. These tour management techniques, carried out and perfected for several years, have allowed the maximum number of people to visit the Castle with minimum threat to the gardens, buildings and their priceless contents. This system has established the carrying capacity of the prime resource and consequently its immediate support facilities.

Three different tours are provided:

Tour #1: Gardens, pools, guest house, and main floor of castle.
1-3/4 hours, 52 people, one guide and one guard.

Tour #2: Upper floors of castle, 12 people, 1 guide, 1-3/4 hours.

Tour #3: North guest wing and guest house. 13 people, 1 guide,
1-3/4 hours.

Once on board the bus, the visitor experience begins with the bus driver giving a narrative about the Hearst family, the Hearst Ranch and the

Castle. The bus, which holds 52 people, unloads at the Castle below the Neptune pool where the tours begin. All the tours end near the indoor swimming pool where the bus loading area is located. The visitor is then driven back to the visitor center at the foot of the hill.

VISITATION STATISTICS

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
January	22,346	22,173	16,002	29,890
February	31,698	29,532	25,285	32,735
March	45,477	33,339	23,254	52,266
April	45,169	56,412	47,036	46,008
May	49,553	54,496	50,922	58,815
June	81,708	86,845	79,643	91,626
July	120,606	123,718	107,775	129,261
August	132,556	132,158	140,700	129,573
September	75,836	74,505	75,533	84,993
October	48,488	52,018	53,524	N/A
November	29,075	23,075	36,307	N/A
December	35,244	29,267	32,532	N/A
TOTAL	717,756	717,538	689,284	(657,032)

Analysis of Visitation Statistics

A seasonal comparison is indicated by a typical July or August week when the unit is serving approximately 4200 persons per day, each day of the week. On such a day 18 tour buses are operating, running 52 trips each. A typical week in January may find this number decreased to 3500 per week. Daily attendance during such a week will range from a low of 150 per day in midweek to 900 per day on weekends.

In the mid-winter months an average of four tour buses are operating daily.

The significant fact emerging from these figures is in the implications for carrying capacity and its effect on planning the size of visitor and parking facilities. At the visitor center space is needed, on a normal summer day, for up to 18 tour buses, 60 staff, and 525 visitor vehicles.

In addition, extra parking areas are needed to handle up to 700 cars, this space being provided along the entrance road and within unpaved areas of the site. The visitor facility must accommodate a maximum number of approximately 2000 people since at peak use, 1000 people are on tour at one time and about 1000 people are waiting, for periods of up to 2 hours, to go on their selected tour. Therefore, at peak periods, with an average of 3 people per car, the parking areas must accommodate 666 cars simultaneously.

Finally, several hundred visitors come into the center just to seek information or to buy tickets. Since they cannot purchase reservations, and no turn-around exists to facilitate vehicular traffic flow, these cars are temporarily stored in the available spaces further overloading the already strained parking facility.

PLANNING ALTERNATIVES

Introduction

The future development of the Hearst State Historical Monument can take one of many directions. This is inherent in any planning process which has a wide range of agencies and special interest groups having a concern or responsibility in the implementation of a Master Plan that is to satisfy the desires and needs of the public.

Based on the research and studies of the goals and objectives of the study and the existing conditions at the Historical Monument previously described, a series of Master Plan Alternatives were developed. The recommended plan has already been summarized, however, the following sections of the report describe, in detail, the analysis of each area and the problems presented by each. This will provide the substantiation for each alternative which was covered.

Visitor Center

Introduction

At the present time, as has been stated previously, the visitor arrives at the parking area in the family automobile or a public tour bus, waits up to 2 hours for his or her reserved place in the Castle tour bus, boards the bus when the scheduled time arrives and proceeds up the hill to the Castle entrance. During the trip, the bus driver informs the visitor of the history of the Castle and the ranch. Upon arrival at the entrance level, another guide takes over and leads the way through the particular tour which has been

chosen. The salient points of interest are explained and the visitor returns to the bus departure point to catch the bus back to the visitor reception area and his parked car. This is a very rewarding experience and few who take the tour are disappointed. However, there is a great deal more of interest at San Simeon and therefore the quality of the visitor experience as a whole can be considerably improved.

Analysis

The existing development was installed to bring the unit into immediate use with little advanced planning undertaken. Functionally, the reservation system, the areas of parking, the transporting of visitors to the Castle and their guidance through the gardens and buildings is handled efficiently. However, the center has little to offer the visitor in the way of amenity, entertainment, orientation or education despite the fact that there is usually considerable waiting time which could be used to advantage in expanding the visitor experience.

Parking

The current parking area is completely paved without trees, planted areas, well designed directional signs or other amenity. Within this area there is unrelieved glare from the paving and parked vehicles. Although a diagonal parking pattern is used, and arrows are painted on the pavement to direct traffic, the visitors remain confused and frequently disregard the traffic flow pattern. Areas are provided for tour buses and recreational vehicles, however, they are not clearly marked and lack strong identity. Consequently, recreation vehicles are found intermixed within the automobile

parking areas, Finally, overflow parking is in unfinished soil areas at the south end of the property and adjacent to the entrance road from Highway 1.

Ticketing Building and Restrooms

The ticketing building is open to the west, the direction of the prevailing winds, making this single shelter uncomfortable in inclement weather. It is constructed of steel frame and concrete block and needs frequent painting to protect the metal from the prevailing salt winds. The adjoining restroom wing is well built and well maintained, however, during the peak visitor season, with over 2000 paid visitors per day, the restrooms often have to be cleaned every two to three hours resulting in highly inconvenient (and uncomfortable) waiting by impatient visitors.

Castle Bus Staging Area

The buses to the Castle turn around, load and unload at two loading docks immediately behind or east of the ticketing building. These docks and the waiting areas are unprotected from sun and rain and the visitor must move from the shelter of the ticketing building to the buses, a distance of approximately 100 feet.

Concessioners Buildings

The concession for short order food and a small gift shop are located on the south side of the visitors' building quadrangle. The architectural character is bland and formless with conspicuous lack of grace, style and comfort. They are converted mobile homes and little can be done to improve their appearance.

Maintenance Area

The automotive and roadway equipment maintenance area is located at

the north end of the parking area and is concealed from the view of visitors by a six foot high board fence. It is located in the most pleasant area of the site, with large trees along its northern edge and fine views into the oak filled canyon immediately below it and northward across the Hearst property to the coastal plain and mountain range. Although it is highly desirable to have this facility in the parking area it preempts the area the highest amenity for a purely utilitarian purpose.

The maintenance area also suffers from a lack of storage space for housekeeping supplies. At least 50% more space is needed to meet the demands of the visitor center. This need is presently being met by storing supplies at the rear of the indoor pool building inside the castle.

DEVELOPMENT CONCEPTS - VISITOR CENTER

If the present visitors center site is retained, the existing facilities should be redesigned within the land area currently available to provide a more pleasing environment for visitors. Facilities for orientation and interpretation, a sheltered staging area for the tour buses, and a more orderly method of handling visitors and automobiles should be provided. In addition, structures should be used which better reflect the climate and heritage of the area. The following concepts reflect these needs.

Concept Plan A

To provide a more pleasant setting for the Visitor Center it should be moved from its present location to the area now occupied by the maintenance yard. This site is bordered on three sides by well established eucalyptus

trees and affords a view of the picturesque oak filled ravine and the coastal mountains beyond.

In this setting an architecturally integrated facility would be constructed providing a ticket office, restrooms, a small auditorium, interpretive displays, and concessioner facilities.

To reflect the character of the region the structures would be built in the California Mission style. This style was originally developed of native materials and is both handsome and functional. The heavy walls provide protection both from sun and rain while maintaining a feeling of relaxed outdoor living. It is also consistent with most of the major structures built by the Hearsts at their ranch, the Castle, and in San Simeon Village.

The staging area will continue to use a turn-around but a waiting area will be provided with protection from the elements by constructing an enclosed shelter with appropriate walls and roof.

The parking area will be broken into smaller units to reduce its visual impact and planted both to soften its appearance and to conceal it from the highway. Planting in curbed dividing areas will be low shrubs and high trunked trees to assure ease of surveillance for personal and property security.

A more orderly system of handling vehicles has been developed with well defined access and direction of travel. Special parking areas have been designated for both recreational vehicles and tour buses. The capacity has also been increased as it is expected that the improved facilities may prompt travelers to prolong their stay. In addition, an entrance station and turnaround is designated within this plan to facilitate vehicular traffic flows for those visitors who cannot get reservations.

The maintenance yard is moved to the opposite end of the site from the

visitors center to allow the parking areas to be as close as possible to the visitors center. Since visitors must pass this area on their way in, it will be fenced and screened with plantings.

Concept Plan B

In this proposal the visitors center would be improved by providing increased restroom facilities, a new structure for interpretive displays and programs, and a permanent building for the concessionaires. The facility would be planted with trees and shrubs to provide shade and protection from the ocean winds.

The parking lot will be reconstructed to allow for a better identification of routes by the user and it will be planted with trees and low shrubs to soften its appearance and screen it from the highway. An entrance station and turnaround, as described in Concept Plan A, is also provided within this alternative.

The Castle bus staging area will have an enclosed structure built to provide protection from the sun and other elements.

The maintenance yard has been relocated to the southern end of the parking area so that visitor parking can be concentrated as close as possible to the visitor center.

SAN SIMEON VILLAGE

Analysis

The village and San Simeon Point are not only part of early California history but are also a very important part of the Hearst impact on the area. As previously described, activity in the area shifted from the Point to what is presently the village when construction of the Castle was at its height. For it to have been left out of the whole story of the area when the opportunity for full scale preservation and interpretation presented itself, is an oversight of

the first magnitude.

The Sebastian Store, a colorful, wood frame structure constructed in 1852 and moved to its present location in 1878, has been designated as a State Historical Landmark. It has become the center of activity within the village now that the original use of the area has long passed. A provision has been made for some parking in a gravel area adjacent to the Store since a few visitors do, at times, stop for a refreshment. However, almost the entire village area has been closed to public use limiting the visitor to a short stay at the store.

Also located within the village are the warehouses. These historical remnants still contain some of the materials that were to be incorporated into the Castle on the hill. The warehouse built in 1878 is a wood frame building resembling a railroad freight station of the 19th century. This warehouse would be in need of repair and restoration before it would be safe for public visitation. There are three other warehouses nearby that appear to be in sound condition, however, they are in need of light repair. Yet the most structurally sound warehouse is the one of Spanish design located across from the Sebastian Store. This unique concrete structure with its Spanish style archway would also figure significantly in any future redesign of the Village area.

Four Spanish style houses were built by the Hearst Corporation in 1930 and through a continual maintenance program still function as residences for employees. These buildings are of a wood frame and stucco construction with barrel tile roofs and plantings of ornamentals within the patio areas.

The remaining structures within the village are the school, and apartment building adjacent to the store and a wood frame residence south of the store. The school has been preserved and, with limited maintenance of its exterior, presents a further example of time past. Yet the apartment, being a rather recent addition to the village contradicts the Spanish Style and would necessitate removal. Finally, the wood house appears to be in the worst condition of any structure in the village and without substantial historical significance that would aid its preservation, it seems that its restoration isn't warranted.

Traffic circulation within the area is limited to a two lane black topped road that is accessible from two points on Highway 1. This road through the village was once the main route for horse buggies that travelled from here to Cambria.

In general, the site presents an area of land that gently slopes from the highway to San Simeon Bay. Scattered throughout the site are mature stands of eucalyptus and Monterey cypress and extensive areas of open grassland. In addition, San Simeon Creek winds its way through the site and provides a focal point for orientation of public use to this natural amenity.

In conclusion, San Simeon village, an existing but neglected remnant of the early history of the area presents the opportunity to complete this historical picture of at least three periods in the American past that are uniquely preserved here, thusfar, by the sole ownership of the coastline by the Hearst Corporation.

Development Concepts - San Simeon

Since the events that led to and preserved San Simeon have passed, one would imagine that the village would slowly follow the same path of decline. Yet, experiencing this unique place makes it difficult not to sense the human efforts and movement that once enlivened this tiny community. Maybe it is this feeling of human effort or the fact that the local people who frequent Sebastian's Store seem to gaze out of the windows waiting for the next shipment of treasures to arrive so that the rush of activity may begin again. Whatever it may be, the village seems to beckon for a return to the time when people in activity gave San Simeon village its life.

However, with the location of the visitors' center and the very regimented tours of the Castle as presently organized, many visitors do not experience this unique feature. Therefore, in an effort to provide a visitors center that would have a strong relationship to the village and extend the tour substantially with respect to time and quality of experience, the following concepts have been developed.

In general, there are a limited number of program elements that can be manipulated in any development plan for the village. The immediate village would become pedestrian oriented with limited access for service vehicles. In addition, the Hearst Memorial State Park would simply require a stronger definition of automobile traffic from Highway 1 and pedestrian access from the village to permit day-use picnickers an opportunity to experience this historic site. Finally, the beach and the existing embankment require careful design treatment to minimize the impact of substantial visitors, therefore, controlled but more readily available access to the beach is necessary.

The unique features of the village particularly the historic structures, would, generally, remain in their present location with major emphasis placed on their restoration. In certain respects, public use would have to be controlled due to the limited capacity of some of these structures to handle large volumes of visitors. However, the warehouses provide excellent opportunities to present large scale displays and films further describing the Hearst story. These buildings easily lend themselves to this type of use with minor structural changes. In addition, concession facilities could be incorporated that may include a restaurant where the visitor could enjoy a fine meal and the views and cool breezes of San Simeon Bay.

The visitors center, parking areas, entries, and bus tour circulation can occur in various locations, yet there are physical considerations that suggest certain locations over others. In reference to the Castle tour bus circulation, it is important to limit conflicts with highway traffic, therefore, the bus access in both concepts is in close proximity to the Castle entry road via a vehicular underpass. The following summaries of the concepts describe two potential arrangements for the parking area and the visitors center.

San Simeon Village - Conceptual Plan A

Since the distant location of the existing visitor center from the highway creates difficulties of orientation for the traveller, Plan A reflects a solution to this by locating the facilities west of U.S. Highway 1 within an existing landlocked parcel. The creek traversing this parcel has been included in the

alternative development plan as an existing natural amenity to provide the potential for an interesting and unique building arrangement partially bridging the creek.

The present visitor center would function until this facility is constructed. With the abandonment of the existing center, the entire area east of the highway would become the unspoiled landscape it once was when the Castle construction began.

The natural site feature of topographic change and the planting of dense buffers of shrubs and trees present the opportunity to incorporate an extensive parking area that will be screened from the highway. The relocation of the existing schoolhouse that is required with this plan would help to create a more unified village and offer still another historical attraction. At present, the spatial definitions within the village are limited due to the distances between the structures. Relocation and/or reconstruction of all the historic buildings would better serve a tightly organized and integrated pedestrian zone. At the entrance to the parking area, a check station would be provided and a turnaround so that visitors who cannot buy tickets could easily exit and not conflict with the circulation within the parking area.

Within the village, auto traffic, with the exception of service vehicles would be excluded from the village area proper. Visual interpretive facilities available to the visitor might include museums and other educational display areas whose topics would concern the Spanish, Indian and/or whaling influences upon the San Simeon area. The basic facilities of restrooms, shops, ticket

sales and informational booths would be provided. Finally, the food services organized through a concessioner operation by the State and/or the Hearst Corporation, will be expanded and improved. The food offered might reflect the menus offered to guests at the Castle in its heyday.

San Simeon Village - Conceptual Plan B

Realizing the importance of a strong connection between the visitors center and the village center, Plan B was developed to locate the visitors center in close proximity to what would be the main core of the village (warehouse, store, and haciendas). In addition, taking advantage of the limited existing vegetation on the site, the visitors center would be incorporated within a striking area of mature Monterey cypress and eucalyptus. This would add immediate character to the building arrangement and provide shade, a factor missing at the present visitors center location.

As in Plan A, the parking lots would be confined to the grassland area since, for screening purposes, no other portion of the site provides that potential. It is also removed from the main pedestrian areas within what would become the main village complex. In addition, check station and turnaround would also be provided at the entrance to the parking area.

Conclusion

Any development scheme for this site has to come to terms with what would be a multitude of visitor interests. That is, some people may simply come to the area for the Castle tour and move on. Others may plan on an entire day of activities if they were available to them. The Village Conceptual

Plan gives the visitors who are unaware of the reservation system, an opportunity to experience a great deal of the Hearst story without seeing the Castle. At the present time, the structured visitor tour limits the visitors' experience. The conceptual plans just described for the village center provide the potential for an experience of Hearst San Simeon ^{in which} in one respect, there exists a mechanized tour through history via the Castle tours and, in another, the possibility to wander on one's own through the village and sense the events which, in the past, went into the making of Hearst Castle.

In addition, it would be possible to construct the new facility and, at the same time, make use of the present visitor center until the proposed village center is completed.

DEVELOPMENT CONCEPT - VISITOR CENTER/SAN SIMEON

One of the most noticeable problems at the existing center is the lack of a sufficient number of alternative activities for the visitor. Those who are waiting for their respective tour or those who are turned away at the gate for lack of reservations have little else to do after they have reached San Simeon. After coming to the Castle to experience its uniqueness, it is frustrating and unrewarding indeed to be unable to enter because of a lack of reservations.

The development concepts for the village previously described deal with this problem by incorporating San Simeon into the visitor facilities program. The following development concepts also examine the inclusion of the village into the scheme but in a context of using the present visitor center site as the primary area for visitor orientation, car parking and Castle tours. For those

who are, for any reason, turned away at the entrance to the visitor center, it would be possible for them to move to the village and participate in a tour of this site. The visitors who must wait for their Castle tour and those not visiting the Castle then have the opportunity to spend time at the village rather than remain in an exposed waiting area without the benefit of additional activity.

Visitor Center/Village - Conceptual Plan A

Conceptual Plan A depicts the redesign of the existing visitor center according to Concept Plan A for the visitor center described earlier. In addition, San Simeon is included with provisions for a small orientation center,

Specifically, the orientation center is located adjacent to the State Highway to provide a focal point for the traveller. In close proximity to the creek, the area affords a natural amenity for any building layout. The remaining land use areas are similar to those designated in Concept Plan A for San Simeon village.

Visitor Center/Village - Conceptual Plan B

Conceptual Plan B describes the redesign of the existing visitor center, however, the present site boundaries are not adhered to. This approach avoids the problems created by a plan that is restricted to a linear piece of property. In addition, this alternative presents the potential for incorporating the village and using the existing visitor center facility while the proposed center is constructed.

The plan for the center locates the primary facility in close relationship to the ravine, existing vegetation and bus and automobile parking. The maintenance

area remains in its present location so that it could be used during the construction period with expansion where necessary. A strong pedestrian tie is incorporated so that the visitor, while waiting for the tour to begin, has the chance to spend some time at the village. Access to this unique site would be via a pedestrian underpass under Highway 1.

Finally, this plan designates two acres for overflow parking adjacent to the major parking area. With the village included in the scheme, additional parking will be located in the open grassland adjacent to the highway.

LONE TREE HILL

Analysis

Lone Tree Hill, that hilltop north west of the Castle and just beyond China Hill, presents an area of the Hearst lands removed from the present visitor experience. Since the intensive maintenance program that once existed at this site has been abandoned, the plantings and condition of the arbor walk has depreciated. However, the site still retains its unique character with extensive views of the Castle, Hearst ranch, Pacific Ocean and surrounding hillsides.

Winding its way along the hill, the arbor walk, comprising a series of concrete columns, decorative concrete and 4" X 4" wood lattice enclosing a gravel path, extends for over one mile. Along its course, one becomes part of a series of changing experiences from intimate enclosures by existing eucalyptus and shrubs to open views and cool breezes from the Pacific Ocean.

The grades along the path are gentle and at certain locations where the grades are minimal and vegetation is sparse, it is possible to gain access to the entire Lone Tree Hill site. Within this area, additional experiences exist that include views of the orchards, Monterey and Italian Stone pines, and feelings of enclosure within areas of the site where extensive views of the countryside are again possible.

Adjacent to the walk and accessible from this walk along an additional gravel path is the zoo. Although the exotic animals are no longer present, the zoo ^{appears} ~~does appear~~ to be in reasonably sound structural condition. This facility was, at one time, an important part of the Hearst Castle experience for the guests. At the present time, the visitor is limited to a quick view from the tour bus as it winds its way from the Castle to the visitor center at the bottom of the hill.

Conceptual Plan A - Lone Tree Hill

In contrast to the intensive plans for the visitor center and the village area, the treatment of Lone Tree Hill as seen in Plan A is very passive. However, since the site would be open to large volumes of visitors, it would be necessary to incorporate various design treatments to minimize the impact of their use and re-establish the character that was present on the site during William Randolph Hearst's time.

From the entry designated on the plan, the visitor would disembark on a guided vehicular tour of the Lone Tree Hill area. Along the pergola planting a drip irrigation system would be installed to recreate the condition

of the plantings of vines and ornamentals that existed here. Additional plantings would be included to upgrade those portions of the site where the lack-of maintenance has hindered continuous growth. The irrigation system would also be used to improve the condition of the orchards since a primary purpose of the site was the cultivation of the fruit and nut trees.

In addition, various locations for viewing the countryside from the pergola area have been established. These areas were determined based on an examination of the slopes, vegetation, sun, wind exposures, views and distances along the arbor. Finally, portions of the site that provide other striking views and are easily accessible from the main route without substantial grading are incorporated into the Plan to further enhance the visitor appreciation of the area.

The re-establishment of Lone Tree Hill as the attraction it once was would increase the visitor's experience, and yet any conflicts with the existing tours would be eliminated by improving this site. With Plan A, the entire zoo could be seen and explained in more detail than the present brief stop and view from the tour bus on the main road.

During the present tour, the bus driver has the responsibility of introducing the visitors to certain phases of the Hearst story. Mention is made of the extent of the Hearst Ranch, however, from no particular point during the tour can the visitor see the expanse of this land area. Therefore, the incorporation of this site into the lands under State ownership and its inclusion within the tour system, would provide an opportunity for the visitor to see just how far this ranch extends.

Finally, the presentation of an additional tour for the visitor would solve a series of other problems that have been realized during the course of this study.

Many times, California residents who have seen the Castle tours earlier bring guests to the Historical Monument so that they might see this unique site. With this tour, these visitors would have the chance to examine another area of the Hearst lands rather than be confined to a tour of the Castle which they have already experienced. The transfer of Lone Tree Hill to the State would, in addition to the incorporation of the village area, complete the entire Hearst story for the visitor.

CHINA HILL

Analysis

An additional site that is part of the study and under State ownership is that portion of China Hill where the tour guides' building is located. The structure is far from adequate to handle the seventy tour guides who use the area. Constructed of two trailers in combination with a restroom building, the structure does not meet the quality of design of special needs exemplified by the neighboring Castle.

Established as a temporary facility but seemingly becoming permanent with time the use of the site has been extended to the point where exterior spaces are minimal. There are limited provisions for parking on a gravel surface and outdoor amenities are restricted to an arbor shade structure and a few plantings. The site at present could sustain expansion with minor grading to incorporate the facilities that are necessary.

CONCLUSION

Since the creation of the parks and recreation ethic in the United States, the challenge to the land planning process has been one of providing continuous

expansion of the Park system dealing with the increasing numbers of people and their leisure time along with retaining the environmental quality of the system. Without this latter quality, the purpose for which each park or recreation area was established would no longer exist. The Hearst State Historical Monument is certainly no exception.

Initially, the nature of the planning process was primarily one of assessment. This assessment involved the consideration of existing conditions within the area in respect to environmental quality, adjacent land uses and present human use. Based on these preliminary studies, planning proposals were generated that deal with expanded and improved use of the State lands so that activities would continue which benefit public needs and desires while preserving the quality of the environment that exists within these sites.

One of the primary goals of this study has been to enlarge and improve the scope of the visitor experience at the State Historical Monument. This would be accomplished with the implementation of the recommended plan developed during the course of this study and described herein. However, few comments have been made up to this point concerning what the future may bring in respect to the prime resource, the Hearst Castle.

The Castle presents a unique problem for public visitation. It is administered by the State Department of Parks and Recreation, but the contents of the monument are more similar to those found in a museum.

A museum, however, is designated for public visitation. The displays are protected from the public, aisleways are provided for circulation, and the whole facility is designed for the accommodation of large numbers of people.

The Castle was never built as a museum. It was a private residence which was decorated with one man's private art collection. The art treasures are unprotected from the hands of curious visitors and many parts of the circulation system would require the visitor to come into close contact with centuries old furniture and tapestries. In addition, many of the passageways and stairways are not wide enough to accommodate large numbers of people. The Castle is not a museum, but instead, it is an artifact containing many art treasures. The only practical way that the public could be allowed to see the Castle with the greatest understanding, is through controlled and guided tours.

From the analysis of visitor use, and the subsequent development of a series of recommendations to expand and improve visitor experience, the present and proposed tour system indicates that the carrying capacity of this resource has been reached. Further tours of the Castle or an increase in the numbers of visitors included in the tour will hinder the preservation of the treasures that exist here for public appreciation.

APPENDICES

A. VISITOR CENTER STATISTICS

(Present Development)

I. Enclosed Structures

A. Ticket Booths	84 sq. ft.	
B. New comfort station	600 sq. ft.	
C. Old comfort station	<u>700 sq. ft.</u>	

TOTAL	1,384 sq. ft.	1,384 sq. ft.
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II. Roofed Areas, open sides

	3,975 sq. ft.	3,975 sq. ft.
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III. Unroofed walks, patios, etc.

	82,685 sq. ft.	82,685 sq. ft.
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IV. Parking Areas

A. Paved	98,400 sq. ft.	
B. Unpaved	<u>49,920 sq. ft.</u>	

TOTAL	148,320 sq. ft.	148,320 sq. ft.
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V. Public Roadway (2700 l. ft.)

	64,800 sq. ft.	64,800 sq. ft.
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TOTAL MAINTENANCE AREA		<u>301,164 sq. ft.</u>
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VI. Miscellaneous

- A. Planters
- B. Benches
- C. Garbage cans
- D. Service area - 150' x 180'
- E. 19 small and medium signs, 1 large sign

List of Out Buildings - Hilltop

1. Building #1 - Main Office
Width, 24'; length, 60'; Floor space, 1440 sq. ft.
Construction: Frame building, redwood siding
Roof: Composition
Floor: Wood, covering asphalt tile
Foundation: Poured concrete with piers
Basement: Storage - 11' x 13'; Floorspace - 143 sq. ft. slab
Offices: 3
Lounge: 1
Restrooms: 2
2. Building #2 - Head Groundsman's Office
Width - 17'; length - 52'; floor space - 884 sq. ft.
Construction: Frame building, redwood siding
Roof: Composition
Floor: Wood with linoleum covering
Rooms: 4
Restrooms: 1
Shower: 1
Foundation: None - cribbed
3. Building #3 - Recreation and Pool Room
Width - 17'; length - 52'; floor space - 884 sq. ft.
Construction: Frame with redwood siding
Roof: Composition
Floor: Wood covered with asphalt tile
Foundation: None
Rooms: 2
4. Building #4 - Ranger Quarters
Width - 17'; length - 52'; floor space - 884 sq. ft.
Construction: Frame with redwood siding
Roof: Composition
Floor: Wood covered with asphalt tile
Foundation: Poured concrete and piers
Rooms: 4
Baths: 1
5. Building #5 - Hearst Barracks
Width - 17'; length - 52'; Floor space - 884 sq. ft.
Construction: Frame with redwood siding
Roof: Composition
Floors: Wood with linoleum covering
Room: 4
Baths: 1-1/2
Foundation: Poured concrete and piers

6. Building #6 - Firehouse 1 and 2
Firehouse #1: 26' x 19-1/2' - 507 sq. ft.
Firehouse #2: 20-1/2' x 52' - 1066 sq. ft.
Total Floorspace Area: 1,573 sq. ft.
Construction: Frame with redwood siding
Roof: Composition
Floor: Slab construction
Stalls: 3
Offices: 1
7. Building #7 - Vehicle Garages
Width - 24' ; length - 90' ; floor space - 2,160 sq. ft.
Construction: Frame with redwood siding
Roof: Composition
Floor: None
Units: 11 - vehicle storage and equipment
8. Building #8 - Vehicle and Plumbing Shop
Width - 26-1/2' ; length - 138' ; floor space - 3,657 sq. ft.
Stalls: Vehicle storage - 3
Rest Rooms: 1
Store Room: 1
Shops: 2
Wash rack: 1
TOTAL: 8 units
Construction: Frame building with redwood siding
Roof: Composition
Floor: Slab construction
9. Building #9 - Carpenter Shop
Width - 20' ; length - 69-1/2' ; Floor space - 1,390 sq. ft.
Rooms: 2 - Carpenter and Welding Shops
Construction: Frame building with redwood siding
Roof: Composition
Floor: Raised slab construction
10. Building #10 - Lumber Storage
Width - 16' ; length - 113' ; floor space - 1,808 sq. ft.
Units: 6 lumber and gardening supply storage
Construction: Frame building with redwood siding
Roof: Cedar shingles
Floor: Slab composition
11. Building #11 - Hearst Radio Building
Width - 12' ; length - 18' ; floor space - 216 sq. ft.
Construction: Frame building with redwood siding
Floor: Slab construction
Roof: Cedar shingles
Rooms: 2

12. Building #12 - Guide Center
Two buildings - One trailer, one roof canopy and screen
Width - 8' ; length-16' ; floor space - 128 sq.ft. ; total for two = 256 sq. ft.
Construction: Frame building with 1/2" plywood siding
Roof: Composition
Floor: Slab construction

List of Public Buildings - Hilltop

- I. "A" House (6,891 sq.ft. floor space, total)
- A. Lower Floor: Floor space - 3,479 sq.ft.
Floor: Marble and tile
Rooms: 4
Bath Rooms: 2
Kitchens: 1
 - B. Upper Floor - Floor sapce 2,762 sq.ft.
Floor: Marble & tile
Rooms: 6
Bath rooms: 2
 - C. Basement - floor space - 408 sq.ft.
Floor: Marble
Rooms: 2
Bath rooms: 2
Vestibule: 1
 - D. Storage and Utility - floor space 242 sq.ft.
 - E. Construction: Poured concrete
 - F. Roof: Spanish tile
 - G. Floors: as noted above
- II. "B" House (5,160 sq.ft. total floor space)
- A. First Floor - total floor space - 3,360 sq.ft.
Rooms: 6
Bath rooms: 4
 - B. Construction: Poured concrete
 - C. Roof: California or Spanish tile
 - D. Floors: Clay tile and travertine in vestibule

E. Basement: storage and utility area - 30' x 60' ; 1,800 sq.ft.

F. Floor: concrete

III. "C" House (5,226 sq.ft. total floor space)

A. First Floor - total floor space - 3,450 sq.ft.

Rooms: 6

Bath rooms: 4

B. Construction: Poured reinforced concrete

C. Roof: California or Spanish tile

D. Floors: Clay tile

E. Towers: - floor space - 374 sq.ft.

Rooms: 2 - 17' x 11' ; 187 sq.ft. each

Bathrooms: 2

Floors: Ceramic tile

F. Basement - floor space - 982 sq. ft.

Bath rooms: 2

Floors: Travertine marble

G. Storage and Utility - basement area - 420 sq.ft.

Floor: concrete

IV. Castle Building

A. First Floor - Main Building

Floor space: 10,229 sq.ft.

Rooms: 6

Bathrooms: 2

Floors: Teakwood, travertine, mosaic

B. Doges, Decks and Duplexes

Floor space: 6,503 sq.ft.

Rooms: 10

Bathrooms: 8

Floors: wood, marble, travertine

C. Second Floor, Library, Cloisters and Della Robbia

Floor space: 5,744 sq.ft.

Rooms: 7

Bathrooms: 8

Floors: wood, marble, travertine

- D. Third Floor - Gothic Suite and Study
 - Floor space : 4,636 sq.ft.
 - Rooms: 6
 - Bathrooms: 3
 - Floors: Marble

- E. Fourth Floor - Celestial Suite and Tower Stairways
 - Floor space: 3,673 sq.ft.
 - Rooms: 3
 - Bathrooms: 2
 - Floors: wood, concrete and marble, carpeting

- F. Second Floor and Stairways - New Wing
 - Floor space: 5,685 sq.ft.
 - Rooms: 5
 - Bathrooms: 3
 - Floors: tile and travertine

- G. Third Floor - New Wing
 - Floor space: 4,913 sq.ft.
 - Rooms: 5
 - Bathrooms: 3
 - Floors: tile and travertine

- H. Fourth Floor - New Wing
 - Floor space: 3,562 sq.ft.
 - Rooms: 4
 - Bathrooms: 3
 - Floors: tile and marble

- I. Main Building and New Wing Totals (excluding all basements)
 - 1. Floor space: 44,945 sq.ft.
 - 2. Number of main rooms: 46
 - 3. Number of bathrooms: 32
 - 4. Number of closets: 77
 - 5. Construction: steel reinforced poured concrete
 - 6. Roofs: Spanish or California tile and copper
 - 7. Floors: teakwood, travertine, marble, mosaic, clay and ceramic tile

J. Total all Main Structures

Floor space: 69,258 sq.ft. (including service wing)
more than there are in a football field

Total number of rooms: 193 (including service wing)

Total number of bathrooms: 56

Hearst State Monument Inventory Index - (interior of structures)

A - B - C House - New Wing - Main Building*

Ceilings - 104	Closets - 93
Floors - 106	Baths - 43
Windows - 666	Cold water faucets - 66
Fireplaces - 41	Hot water faucets - 64
Electric outlets - 602	Toilets - 46
Electric Switches - 324	Lavatories - 47
Wall heaters, electric - 97	Showers - 43
Wall heaters, portable	Bath tubs - 16
Wall heaters, steam - 60	Doors - 509
Light fixtures - 738	Drapery - 362
Bulbs - 1,601	Tapestries - 30
Hallways - 32	Miscellaneous wall hangings - 118
Rugs - 166	
Rug pads - 166	
Sofas - 40	
Chairs - 509	
Varguenos - 43)	
Cassones - 33) - 194 total	
Chests - 118)	
Wood tables - 147)	
Iron tables - 11)	
Marble tables - 32) - 201 total	
Metal tables - 2)	
Miscellaneous tables - 9)	
Beds - 50	
Lamps - 263	
Pictures - 174	
Statuary - 203	
Mirrors - 188	
Miscellaneous metal objects - 576	
Miscellaneous objects - 1,846	

* Does not include Service Wing, Roman or Neptune Pool, or out buildings.

HISTORIC BUILDING SURVEY

Hearst San Simeon SHP

NAME OF UNIT

December 4, 1970

DATE

San Luis Obispo County

LOCATION

Pergola Area

NAME OF STRUCTURE

BUILDING NUMBER

BRIEF DESCRIPTION OF STRUCTURE:

This area consists of 24" o.d. hollow concrete columns 11' 4" high spaced 10' apart in width and 12' apart lengthwise with an 8" x 14" x 19' cross beam supported by two columns forming an arch. There are 5 sections to this pergola; section #1 has 102 arches; #2, 83 arches; #3, 58 arches; #4, 96 arches and #5 has 90 arches. These arches are tied together lengthwise by 2 ea. 4" x 6" x 16' and 6 ea. 4" x 4" x 16' redwood runners in the space between the arches in section #1 and part of sections #4 and #5. The remainder of #5 is connected by 2" x 4" x 16' Douglas fir material. Approximately 4 miles of 8' wire fences encloses the hilltop area.

#1 critical stabilization

RECOMMENDED CONDITION CLASS

COST ESTIMATES:

Stabilization only	\$ 2,000.00
Restoration only	\$ 58,000.00
Combined projects	\$ 60,000.00

SUMMARY:

Approximately 10% of the redwood covered area and all of the Douglas fir covered area is in need of replacement. Eight sets of arches are in immediate need of bracing to prevent their toppling.

Drainage system needs attention to prevent further loss and the fence and cattle guards should be repaired to prevent damage to the plants within the area by deer, Tar goats, zebras and cattle.

Richard R. Reber

PREPARED BY

B. Guidelines and estimate for renovation of the landscape aspects of the Hearst Pergola Area (Rough Draft)

Prepared by: Department of Parks and Recreation
State of California - The Resources Agency
December 4, 1970

1. The absence of care has rendered useless the fruit trees in the orchards, the grapevine at the columns, and the espaliered plants between the columns, with few exceptions.

Remove all existing fruit trees in the orchard areas with the exception of the olive trees and a few selected exceptions.

Replant with selected bare root nursery stock in proper season.

Blast planting holds to insure fractures in the subsoil.

Replant with suitable imported topsoil.

Remove existing grapevines (with few exceptions) and replant with 1 year cuttings bare root in proper season.

Remove existing espaliered plant material (with few exceptions).

Replant with plant material from 5-gallon containers.

Select specimens that have espalier capabilities. Adjust the species to the local site. The Eucalyptus area would require special consideration.

It would be desirable to include an establishment clause in the above planting contract.

Estimate for plant material, labor of replacment planting and establishment and training maintenance:

858 Bareroot grapevines

848 5-gallon plants for espalier training

1000 1-gallon plants for bank areas

\$42,000

2. The original installation of the 7-wire support for the espalier trained plants was very poorly designed. Time has emphasized this fact. Also much of the wire has lost its galvanized coating. Remove the existing 7-strands of wire and stakes. Install new wire by securing a redwood 2" X 4" to the columns for the purpose of fastening the wire.

858 2" X 4" X 7 RW

1716

41,622 Lin. ft. #10 galv. wire

Replace and install

\$ 6,500

3. The drainage which was accomplished by gutters and culverts are filled with mud from slides and buildup of material. This has channeled water down the promenade of the pergola causing loss of up to 20" of soil in places. The condition of the pergola center area ranges from dusty to muddy because no surfacing has been applied. Handwork will be necessary to clean out and alter the gutters on either side of the pergola promenade. The same applies to the culverts and spillways. The soil lost in the pergola promenade must be replaced.

Surfacing of this area with appropriate material will not only increase its use but reduce maintenance.

See engineers estimate

4. A water source sufficient to satisfy the peak demand in July and August should be of first priority in negotiation of and restoring this area. Perhaps a 2 million gallon storage reservoir to accumulate water during off season plus the connecting

See engineers estimate

5. The absence of care has permitted weed and uncontrolled brush growth particularly on the banks above and below the pergola level. Forty-five acres adjacent to pergola promenade will require brushing weed control and renovation pruning and some replanting.

Mostly labor \$12,000

6. The animal control fence and cattle guards outside the State property line does not function as such. Deer, cattle, zebra and Tahr goats come into the garden areas to browse now. They would be particularly troublesome in establishment of new fruit trees. This problem should be resolved at time of negotiation.

See engineers estimate

7. Equipment and tools:

Rototiller	Mower
Truck (1ton)	Tools
Portable - electric generator	

8. Labor for maintenance:

2 full-time maintenance men

Additional labor during establishment period if not covered in contract.

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Wilsey, Ham and Blair Consultants, Piedra Blanca Rancho A comprehensive
Development Program, San Francisco, & Los Angeles, California

Resources Consulted:

Cultural Resources Section, California Department of Parks and Recreation
California Historical Landmarks
California Points of Historic Interest
National Register of Historic Places

I. BIOLOGICAL RESOURCES AND ECOSYSTEMS

A wide variety of plant and animal life occurs between the coastal waters of San Simeon Bay and the Hearst Castle, atop the upper ridge at about 1,600 feet elevation. For purposes of discussion this region has been divided in this report into seven major classifications or associations. Each exhibits characteristic flora and faunal members as a result of varying local environmental conditions such as temperature, rainfall, underlying soils, slope characteristics and general exposure. The seven associations are coastal waters, coastal shoreline, grassland, riparian-woodland, oak-woodland, coastal scrub and the upper ridgetop or Hearst Castle grounds.

A. Coastal Waters.

The open waters of San Simeon support a variety of marine fishes. Ocean fishing is popular in the area, primarily during the summer months, when party boats operate out of the San Simeon Bay. Bottom fish are the primary catch of the open water fisherman, however, King salmon, white seabass, bonito, albacore, and barracuda are occasionally taken (Calif. Fish and Game, 1973). Major fish species caught by skiff fishermen launching from San Simeon beaches include ling cod, blue rockfish and olive rockfish.

Another recreational use of the coastal waters at San Simeon is shore angling. Fishing is conducted where public access is provided along the coastline. San Simeon State Beach is popular with anglers after surf perch, greenling and cabezon. Angling is also popular off the San Simeon pier, which is operated by the State Department of Parks and Recreation. The 850 foot pier, jutting into San Simeon Bay, provides good fishing, with an average annual use of 86,350 visitors (Calif. Fish and Game, 1973).

I. BIOLOGICAL RESOURCES AND ECOSYSTEMS

B. Coastal Shoreline.

The coastal zone along San Simeon is evenly divided between sandy beach and rocky headlands. Aside from its recreational uses, the sandy beaches provide feeding and nesting requirements for a variety of shorebirds such as the long-billed curlew, semi-palmated plover, American golden plover, black-belted plover, western sandpiper and least sandpiper. The rocky shoreline provides suitable habitat for a myriad of intertidal invertebrates which inhabit quiet tide pools or cling to surf beaten rocks. The flora and invertebrate fauna of the intertidal region occurs in well established zonal communities. The zonal arrangement is associated with tidal levels but may be altered by local wave action. The uppermost intertidal zone or splash zone provides suitable habitat requirements for animals such as the rock and beach louse. The lower zones receiving more frequent tidal inundation, supports in descending order, limpets, fucus, California mussel, ochre star, purple urchin, purple shore crab, surfgrass and giant green anemone. A comprehensive discussion of the zonation and complexity of seashore life is presented by Ricketts and Calvin, 1962.

The San Simeon coastline is within the southern boundary of the California Sea Otter Game Refuge which encompasses approximately 100 miles of coastline in Monterey and San Luis Obispo Counties. The refuge was established by the State of California for the preservation of the sea otter, once threatened by over exploitation for its valued fur. The refuge was established to control illegal shooting of otters from the shoreline. The refuge establishes a fire arms closure from Highway 1 to the high tide line along the 100 mile refuge boundary. Since the enforcement of the closure, otter populations have steadily increased. Otters are now commonly observed in offshore kelp beds around the San Simeon area.

I. BIOLOGICAL RESOURCES AND ECOSYSTEMS

C. Grassland.

Gentle sloping grassland plains extend inland from the shoreline bluffs to the upper coastal mountains in the San Simeon region. The grasslands are generally open with few trees or shrubs. Exceptions occur along creek bottoms where tree stands and shrubs are common. Extensive tree and shrub cover is also present around the San Simeon Point area.

The grasslands of the San Simeon area provide productive open cattle range. Condition of the range suggest that sound, long-range management of the land has been maintained over decades of use. Although native grasses and forbs still occur in the region, naturalized European annuals are abundant. The forage value of the introduced grasses and forbs are high. Commonly occurring species include bur clover filaree, plantain, wild oats and vetch. A few of the other plants common to the San Simeon grassland region include California poppy, pimpernel, wild hyacinth, buckwheat chickweed and foxtail.

A wide variety of wildlife, as well as domestic stock, favor the grassland community and all occupy important trophic or nutritional levels in the natural environment. Arthropods such as spiders, beetles, grasshoppers and other forage on grassland plants, decaying animal tissue and each other. They are in turn preyed upon by higher animals. Lizards inhabiting the San Simeon area include the western fence lizard, western skink and alligator lizard. Rocky outcroppings, fallen trees or fence posts offer shelter for these species. Snakes common to the area are the ringneck snake, western racer, gopher, terrestrial garter and rubber boa; the Pacific rattlesnake is also found. Grassland snakes also frequent rodent burrows in addition to rocky outcrops and other surface debris.

The grassland community shows a limited diversity of bird species, due in part to the lack of shelter from predators.

I. BIOLOGICAL RESOURCES AND ECOSYSTEMS

Examples of common ground-nesting species are the meadowlark, savannah sparrow, killdeer and grasshopper sparrow. The grassland habitat is important to avian species which, though roosting and nesting elsewhere, are dependant upon the abundance of seeds and arthropods. Raptors such as the red-tailed hawk, American kestrel, and great horned owl depend upon the grassland to provide suitable hunting territory for their diet of rodent and small birds.

Mammals in the community are represented by many species of rodents including the meadow mouse, harvest mouse, deer mouse, pocket gopher and ground squirrel. Most feed on grassland vegetation, but some feed on insects also. Terrestrial predators which hunt the grassland in search of prey include the badger, grey fox and coyote. A small herd of zebras, introduced onto the Hearst Ranch years ago, also range on the open grassland.

D. Riparian Woodland

The riparian-woodland association occurs along major canyon bottoms in the San Simeon mountains and lower foothills where adequate water is available. Vegetation along the upper tributaries, which have only seasonal surface water supplies, consists of various willow species nearest the channel beds and gooseberry, wild rose and poison hemlock bordering the outer margins. These areas also support elderberry and California laurel. Along the lower creek margins California laurel becomes dominant over the willow species. In major drainages with year round surface water flow, larger tree species, including western sycamore, bigleaf maple and red alder, are common. Poison oak grows in profusion beneath the canopy of the larger trees. A wide variety of other shrubs and forbs are found in the dense creekside thickets.

The riparian-woodland provides one of the most important terrestrial wildlife habitats in the San Simeon region. It

I. BIOLOGICAL RESOURCES AND ECOSYSTEMS

offers not only an abundant supply and variety of quality in wildlife foods, but also interlacing escape cover and essential water supply.

Birds which forage on the myriad of insects and seeds in the area include rufous-sided towhee, hooded oriole, Wilson's warbler, hermit thrush, chickadee, scrub jay, black phoebe and rufous hummingbird. Upland game is also abundant in some regions, consisting of valley quail, mourning doves, gray squirrels and brush rabbits. The opossum, striped skunk and raccoon are common mammalian inhabitants of the lush riparian-woodland. The raccoon forages on insects, berries, fish and amphibians found along the creekside. Black-tailed deer are commonly found in the understory browse of the riparian-woodland, other large mammals such as the gray fox and coyote are occasional visitors.

E. Oak-Woodland.

The oak-woodland community occurs along slopes of the foothill and mountain region and is usually associated with high water tables and faulting zones. It is characterized by stands of coast and canyon live oaks with an undergrowth of herbaceous plants, especially grasses, and scattered low shrubs. The oak-woodland community usually occurs as a narrow band of trees along the major drainages but always above the creek bed or riparian zone. The oaks require subsurface water supplies but not the amount present in the drainage bottoms. Understory plants include those common in the grassland and riparian-woodland association.

The major faunal inhabitants of the oak-woodland, in addition to those mentioned under the grassland section, are those animals which forage on acorns and insects which normally infest the live oak. Some of the more common animals found in this region include the black-tailed deer, California ground squirrel, acorn woodpecker, rufous-sided towhee and white-breasted nuthatch.

I. BIOLOGICAL RESOURCES AND ECOSYSTEMS.

F. Coastal Scrub.

The coastal scrub association occurs on the steep, drier mountain slopes of the coastal range at mid and upper elevations. Shrubs are the dominant plant types in these regions. Most common species are chaparral broom, coast sagebrush and bush monkey flower. The strongly aromatic sage (*Salvia* sp.) is also very common. A number of lupine species are found on the border of the coastal scrub association, near the grassland community. Other common forbs in the region are the purple flowered wild hyacinth and the golden California poppy.

The assemblage of low to medium height shrubs which make up the coastal scrub association are mostly hardy individuals, able to survive extended periods of dry weather. They usually grow where soils are shallow and rocky and where ground moisture is limited.

The shrub growth of the coastal scrub provides valuable feeding habitat for the two species of deer in the San Simeon area. Black-tailed deer are fairly abundant in the region and share feeding territory with Sanbar deer, introduced on the Hearst Ranch from Asia many years ago. Common birds occurring in this region include valley quail, California thrasher, mockingbird, scrub jay and western bluebird. Other animals inhabiting rocky outcrops include rubber boa, western skink and alligator lizard.

G. Upper Ridge

Atop the upper ridge overlooking the San Simeon coastline lies the Hearst San Simeon State Historical Monument and estate grounds. In creating the mansion, Mr. William Randolph Hearst not only brought to the San Lucia Mountains a potpourri of cultural design but also flora and fauna from all parts of the world. Hundreds of exotic plants were cultivated in the area beginning in the 1920's. Though some plants have not survived, many

I. BIOLOGICAL RESOURCES AND ECOSYSTEMS.

still remain and are described in The Enchanted Gardens of Hearst Castle by Boulian. Although the center of the landscaping efforts was the immediate castle area, plantings of trees and shrubs extend on the main ridge crest for over a mile to the northwest. Lone Tree Hill, now circled by the visitor tour, remains as a notable landscape feature. This area also contains remnants of animal enclosures that once held lions, cheetahs, monkeys and other exotic wildlife kept on the Hearst Estate.

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II. PHYSICAL RESOURCES

A. Climate.

The San Simeon area is characterized by uniform temperatures. The monthly mean temperatures at Piedras Blancas, based upon twenty years of record, ranged from a little under 52°F. in January and February to a little more than 57°F. in September. The temperature extremes for this same period range from a low of 29°, which occurred in February, to highs of 85° occurring in October, November and December.

The reason for the highest temperatures appearing in the fall instead of July or August is the common occurrence of fog and on-shore winds during the summer months, which become less frequent in the fall and winter.

Prevailing winds during most of the year are on-shore winds from the northwest or west. The typical storms entail winds from the southwest.

The rainfall at Piedras Blancas averaged 18.90 inches per year over a twenty-year period. Of this total, 76 percent fell during the months of December through March, and only about 1 percent fell during the months of June through September.

In a typical storm, the precipitation rate will increase markedly with elevation. The rainfall at an elevation of 1,000 feet may be 25 to 50 percent greater than at Piedras Blancas (elevation 18 feet). At the 3,000-foot elevation, the rainfall will probably be two to four times that of Piedras Blancas.

On the average, there is precipitation of one-tenth inch or more 32 days per year at Piedras Blancas. ?

B. Hydrology

Streams in the San Simeon area are intermittent, that is,

II. PHYSICAL RESOURCES

they are usually dry in the late summer and fall. The largest stream in the San Simeon area is Arroyo de la Cruz, which empties into the ocean about 6 or 7 miles northwest of the village. Twenty-three years of runoff record are available for this stream, representing the runoff from about 41 square miles of watershed above the gaging station. The average annual runoff during this period represents a depth of about 1.5 feet over the entire watershed. The maximum seasonal runoff was 114,246 acre-feet and the minimum - 4,790 acre-feet.

During the 23 years, there was an average of nearly four months per year during which there was no flow. There were two years with six months of no flow and one year with only one month and one year with only two months without flow.

The Arroyo de la Cruz watershed extends inland to the summit of the Coast Range and includes areas with elevations above 3,500 feet. Because the precipitation rate increases significantly with increased elevation, this stream would be expected to produce a greater annual runoff than streams with smaller watersheds at lower average elevations.

Santa Rosa Creek, near Cambria, has been gaged for 16 years, and has a watershed of about 12.5 square miles above the station. The average runoff at this station represents a depth of about 0.9 feet over the watershed. The maximum seasonal runoff was 21,894 acre-feet and the minimum - 846 acre-feet.

The smaller watersheds close to the Hearst San Simeon State Monument will have lower average watershed elevations and will have correspondingly less depth of annual runoff.

The smaller watersheds will also dry up at least as early in the year as Arroyo de la Cruz, except where there are springs to maintain some flow. These spring-fed flows will be very small.

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Spring flows in the area tend to increase during the wet years and decrease during dry years. Records from two springs developed many years ago for the Hearst Ranch and Castle showed a range in flow rates from 20,400 gallons per day to 272,000 gallons per day during the period from 1947 through 1957.

C. Geology

The general geologic setting of the San Simeon Area of interest in this investigation consists primarily of Paleocene and Mesozoic sedimentary rocks (Knoxville?), and Quaternary stream alluvium in thin and narrow bands along the creek bottoms. Franciscan formation and ultrabasic rocks (primarily serpentine) underlie a considerable part of this general area also. The general regional structure trends northwest-southeast and faults form many of the formational contacts.

Paleocene and Mesozoic Sediments, referred to here as the Knoxville formation, consists of brown-to-tan medium-to-coarse grained arkosic sandstone which is commonly massive and of medium hardness. Moderately weathered outcrops are fairly common in steep ridge and slope areas. Bedded within the sandstone there are lesser amounts of conglomerate and some mudstone. The Franciscan formation contains hard and fine-grained graywacke sandstone, with some siltstone and shale, and also chert. Few confirmed Franciscan outcrops were noted, however, Franciscan float material, usually chert, occurs from place to place.

Outcrops of serpentine, which is intrusive into the Franciscan, are lacking in the explored areas, although sparse float specimens were seen. It is possible that serpentine underlies certain of the deeply weathered slopes encountered.

A number of major faults strike northwesterly across the area of investigation, near the foot of the hills. Several of these can be considered active, as evidenced in numerous places

II. PHYSICAL RESOURCES

by linear seeps and sag ponds, and disoriented surface drainage. In addition, a number of smaller faults were mapped on a local basis, and there are undoubtedly others that could be mapped by more detailed study of the area.

The Quaternary alluvium occurs in the bottoms of the creeks, forming relatively thin and narrow deposits. Consisting of gravel, sand, silt, and clay, the alluvium tends to be pervious. On the other hand, within this sequence throughout much of the lower portions of the Arroyo Laguna and Oak Knoll Creeks, there is a very dense and impermeable blue clay zone which continues far downstream. It appears that this clay was deposited by a lake formed when creek waters were dammed and prevented from flowing out by a restriction in the lower part of the stream system. Such restriction was probably caused by faulting displacement. Composite alluvial sediments tend to thicken somewhat downstream and widen with the stream flood plains.

D. Soils.

The soils of the San Simeon area vary from nearly level, poorly drained alluvial deposits to steeply sloping residual soils formed from in-place weathering of a range of bedrock types.

These soils are described in the "General Soil Map - Coastal Part of San Luis Obispo County, California," 1973, prepared in preliminary form by the U.S. Soil Conservation Service.

Narrow strips along Arroyo Laguna and Oaks Knoll Creek are Clear Lake Association soils with slopes of 2 percent or less.

The Soil Conservation Service described them as follows:

"The soil of this association occurs on nearly level valleys that have slow surface drainage. It is developed from fine sediments of sedimentary rock sources. It is very deep, poorly drained and has little or no erosion hazard. Drained areas are used for cropland and

II. PHYSICAL RESOURCES

undrained areas are used for pasture.

Clear Lake Soils have natural, dark gray, very hard, granular and coarse prismatic, clay surface layers and calcareous, grayish brown, mottled, very hard, prismatic, clay subsoils. When dry, the soil develops wide cracks from the surface down into the subsoil.

Clear Lake soils occur on about 90 percent of the association. The remaining 10 percent consists of marsh areas or Bayshore soils."

The coastal shelf from Oaks Knoll Creek to San Simeon Creek is made up of Tierra association soils with slopes from 2 percent to 9 percent. They are described as follows:

"The soils in this association occur on gently to moderately sloping terraces or low hills. Tierra soils are formed from old alluvial deposits of mixed origin. These soils have medium to rapid runoff, very slowly permeable subsoils and high erosion hazard. Many areas have been cultivated and are moderately eroded. They are used for dryfarm grain and a few areas are used for irrigated cropland. The remaining areas are used for pasture.

Tierra soils have medium acid, gray, massive, hard sandy loam surface layers; dark grayish brown, slightly acid, prismatic, very hard, dense clay subsoil over old mixed alluvial sediments. Depth to dense clay subsoil is between 16 and 22 inches.

Tierra soils occur on about 85 percent of this association. The remaining 15 percent is made up of terrace breaks, drainageways and inclusions of other unnamed claypan soils."

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The slopes of the hills from the coastal shelf nearly to the Castle have Los Osos-Lodo association soils, with slopes ranging from 9 percent to 30 percent and described as follows:

"The soils in this association occur on rolling to moderately steep hills. They are developed in place from shale or fine grained sandstone bedrock. The cover is annual grasses, forbs and scattered oak trees. Erosion hazard is high. They are used mainly for range although a few areas are used for dryfarm grain or hay.

Los Osos soils have medium acid, brown, blocky, hard clay loam surface layers; brown, slightly acid, blocky, very hard, silty clay subsoils over moderately hard shales or sandstone at depths of 36 to 60 inches. Lodo soils have neutral brown, granular, slightly hard clay loam surface layers; neutral, brown, blocky, slightly hard, slightly finer textured subsoils over hard shale or fine grained sandstone at depths of 8 to 20 inches.

Los Osos soils occupy about 50 percent and Lodo soils about 30 percent of this association. The remaining 20 percent is composed of Nacimiento or Diablo soils."

The area of the Castle and behind the Castle to Pine Mountain, as well as the Arroyo de la Cruz Canyon contain Diablo-Montara association soils, with slopes from 15 percent to 75 percent.

They are described as follows:

"These soils occur on moderately steep to very steep hills and mountains. They are developed on basic igneous bedrock. The natural vegetation of Diablo soils is annual grasses, forbs and scattered oak trees. Brush, sparse grass and scattered trees occur on the Montara soils. Erosion hazard is moderate to high. They are

II. PHYSICAL RESOURCES

used mainly for range.

Diablo soils have moderately alkaline, very dark grayish brown, granular, hard clay surface layers; calcareous, dark brown, blocky, very hard clay subsoils over partially decomposed shale or sandstone bedrock. Depth to bedrock ranges between 30 and 48 inches. Montara soils have neutral, very dark grayish brown, granular, hard clay loam surface layers; mildly alkaline, very dark grayish brown, blocky, hard clay loam subsoils over olive, fractured serpentine bedrock. Depth to bedrock ranges between 10 and 20 inches. Rock outcrops are common.

Diablo soils occur on about 40 percent and Montara soils on about 35 percent of this association. The remaining 25 percent consists of small valleys, rock land and other unnamed brown or gray moderately fine or fine basic igneous soils."

III. HISTORIC AND CULTURAL RESOURCES

Human history and culture is divided rather distinctly into two periods in the San Simeon area, as in much of California. The time spans, however, are far from equal.

The Indian existence in the area certainly dates back 5,000 years and some evidence indicates it may extend back as much as 10,000 years. However, any history of this culture written by direct observation dates back only four centuries or so, after the advent of Europeans into the area. In a relatively short period after the Spanish arrived, most of the Indian culture either changed radically or disappeared entirely.

The evidence of the Indian culture is then largely a matter of archeological interpretation, while the customs and occurrences-after Europeans arrived are matters of written historical records.

A. Archeology

The study area was inhabited by members of the Chumash people, linguistically affiliated with Hokan-speakers. Chumash held the coast from Estero Bay south to Malibu Canyon as well as several of the channel islands. Predominately, the Chumash were a coastal people with inland boundaries being generally the ranges that divided coastal drainages from those of the Central Valley (Kroeber 1925).

Subsistence was oriented to the marine resources, which were bountiful. The diet was augmented by hunting, and the gathering of available seeds and acorns which grow where the water supply is adequate to support arboreal growth. The people were more truly maritime than most other California natives and constructed boats capable of reaching the islands of the channel areas.

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III. HISTORIC AND CULTURAL RESOURCES

Inland from the coast the area becomes quite arid with few perennial stream courses. Aridity increases to the east, as intervening mountain ranges create a rain-shadow effect successively diminishing water content of storm clouds. Settlement was naturally dependent upon reliable water sources and population was concentrated near the coast, with low density of occupation in the interior lands.

The coast itself was less hospitable from Point Conception north and had correspondingly fewer inhabitants than southern reaches of the territory.

Chumash houses were reportedly large, reaching up to 50 feet in diameter, and were hemispherical in shape. In construction poles were set in a circle, bent over, and tied at the top. Tule mats or thatch were then placed over the poles (Kroeber 1925).

Chumash mortuary practices differed from neighboring tribal groups, as burial was the common method of disposal. Shoshoean and Salinans cremated the dead, while Yokuts both cremated and buried. Shell beads are common grave offerings.

Stonework of fine quality was produced by the Chumash. Access to steatite deposits in the south, especially on the channel islands, encouraged development of expertise in manufacture of bowls and other items. Shell inlay or mosaic with asphalt cementum was not uncommon.

Spanish explorers considered the Chumash one of the most highly developed people of California and superior to other California tribes (Kroeber 1925).

B. Historic Period.

The first European contact with the Chumash was by the Spanish explorer, Juan Rodriguez Cabrillo, in 1542. The southern territory was visited and journals record many village sites. However, the San Simeon area was not explored, as a safe

III. HISTORIC AND CULTURAL RESOURCES

harbor was not found. Don Gaspar de Portola was the first white man to reach the San Simeon area; he camped near what is presently Pico Creek and at Arroyo de Laguna.

In 1797, Mission San Miguel Arcangel (SRL-326) was founded 30 miles inland from the coast and mission lands included the area of San Simeon. Coastal lands were utilized for cultivation and for stock grazing. After secularization in 1836, three ranchos were created from former mission lands; Santa Rosa, Piedras Blancas, and San Simeon, which was granted to Jose Estrada (Lamb and Lamb 1971).

A whaling station was built by 1852 on San Simeon Point and the colony eventually reached 45 buildings. Russian fur traders hunted in the immediate area, but did not establish permanent settlements.

Subsequent to the droughts of the 1860's, adverse conditions forced the rancheros to sell their extensive lands and San Simeon, Santa Rosa, and Piedras Blancas were purchased in 1865 by Senator George Hearst.

Several historical features are in the area of San Simeon. The Sebastian Store (SRL 726) is the oldest store building along the northern coastline of San Luis Obispo County (Hoover and others 1970). The frame ranch house built shortly after 1865 by Senator Hearst is on Arroyo del Puerto and still serves as ranch headquarters. Here was planned the La Cuesta Encantada (The Enchanted Hill) created and built by William Randolph Hearst during the years from 1919 to 1947.

In 1958, following the death of William Randolph Hearst, the Hearst Corporation presented the Castle and approximately 125 acres of land to the State of California (SRL 640 - Hearst-San Simeon State Historical Monument). This was intended as a memorial to William Randolph Hearst and his mother, Phoebe Apperson Hearst, and is now open to the public for tours.

III. HISTORIC AND CULTURAL RESOURCES

In addition to the above, the lighthouse at Piedras Blancas, built in 1974 by the U.S. Government, is of historic note. It and the Sebastian Store were the only exceptions to Hearst ownership in the San Simeon area (Lamb and Lamb 1971). Several other historic landmarks are in adjoining areas and communities. The William Randolph Hearst Memorial Park, also on land donated by the Hearst Estate, is adjacent to the beach and southeast of the Sebastian Store. The park was originally operated as an overnight campground, but later became a day-use area.

IV. EXISTING UTILITIES

Utilities at the Hearst San Simeon State Historical Monument include water, which is locally supplied and electricity, which is supplied by a large public utility. Some wastewater is disposed of locally, but the major portion is exported to a nearby community. Solid waste is handled primarily by a commercial service company, with some assistance by state personnel.

There are no natural gas supplies to San Simeon, but butane and propane are marketed by tank truck and in small pressure tanks.

A. Present Water Supply.

The Hearst San Simeon State Historical Monument obtains water from the Hearst Corporation supply system. Under the terms of the grant deed for the Monument property to the State, the State is entitled to an amount not to exceed 20,000 gallons per day, non-cumulative, nor to exceed one-third of the amount which can be safely withdrawn from the reservoirs.

The Hearst Corporation water supply is obtained principally from Chisholm and Phelan springs, located about four miles east of the Castle. Minor amounts are obtained from a spring in the upper Broken Bridge Creek watershed, about one and one-half miles south of the Castle, and additional water is obtainable from a well near the Piedras Blancas (Hearst) Ranch headquarters. The system is shown in Figure IV-A-1.

Historically, the monthly average flows from Chisholm and Phelan springs have varied from nearly 300,000 gallons per day

IV. EXISTING UTILITIES

In a wet year to just over 20,000 gallons per day in a dry year.¹ The well near the Ranch headquarters has been pumped at about 40 gallons per minute, or 58,000 gallons per day, but it is doubtful that this production could be maintained over a long period during a very dry year.

The water from Chisholm and Phelan springs flow to the reservoirs southeast of the Castle through steel pipe. There are collector lines from the two springs to a junction box. The Chisholm line is nearly 4,000 feet and the Phelan line a little more than 2,000 feet.² These lines are apparently 1-inch and 4-inch diameter, but no confirmation or breakdown of lengths was found.

The pipeline from the junction box below the springs to Reservoir No. 1 is about 15,000 feet and the diameter is 2-inch.

Reservoir No. 1 is a rectangular concrete structure of 450,000 gallon capacity. The roof blew off of this structure during the 1974-75 winter season.

The water goes through a chlorinator between Reservoir No. 1 and Reservoir No. 2, which is a round, covered concrete structure with 1,500,000 gallon capacity. A 4-inch diameter galvanized steel pipeline goes from Reservoir No. 2 to the Castle grounds, a distance of about 7,500 feet.

From a memorandum report to the Hearst Corporation by A. Hoopley, Consulting Engineer, 1957. Data are from the period 1947 through 1957.

Some pipeline diameters and lengths were taken from a survey map done by Charles P. Porter, Licensed Surveyor, San Luis Obispo (undated). Other data were obtained from notes of a field inspection by Randy Harris, California Department of Parks and Recreation.

IV. EXISTING UTILITIES

The pipeline from Reservoir No. 2 to Reservoir No. 3 totals about 10,400 feet. The report by Harris¹ indicates that the size varies approximately as follows, starting from Reservoir No. 2:

<u>Diameter in Inches</u>	<u>Length in Feet</u>
6	800
5	4,600
2	600
2-1/2	400
2	4,000

Harris also noted some particular problems at the following locations, indicated by the distance in feet from Reservoir No. 2:

<u>Distance in Feet</u>	<u>Pipeline Condition</u>
280	Unsealed slip joint
860	Hole in upper side; leaks during low use periods.
1560	Unsealed slip joint
2340 to 3200	Pipeline perforated at many points; leaks especially badly during periods of low demand.

1. From notes of a field inspection by Randy Harris, California Department of Parks and Recreation.

IV. EXISTING UTILITIES

<u>Distance in Feet</u>	<u>Pipeline Condition</u>
3360	Leaks during low use periods.
3560 to 3620	Deteriorated supports at gully crossing.
4100	Bad leak at Dresser coupling
4420	"Bandaide" patched hole leaking.

A small flow of additional water is captured from springs just south of the pipeline about midway between Reservoir No. 2 and Reservoir No. 3. This flow is carried down the hill in 2-inch diameter galvanized steel pipe and enters the other system near Reservoir No. 3.

Reservoir No. 3 is a rectangular concrete structure with a frame roof which holds 500,000 gallons. Any overflow from this reservoir goes into a pond formed by earth embankments. Because the piping is available to return water into the system from this pond, it is designated as Reservoir No. 4, with a probable capacity of somewhere near one million gallons. This supply probable has not been used for many years, because there is no provision for re-chlorination.

The approximate elevations of key points in the water system are as follows:

Chisholm and Phelan Springs	2,850+
Reservoirs No. 1 and No. 2	1,800+
Castle grounds	1,600+
Reservoir No. 3	270±
Reservoir No. 4	250±
Visitor Center	120+

IV. EXISTING UTILITIES

In summary the average monthly flows in the critical late summer and fall months may drop to 20,000 gallons per day or less in dry years, so the firm yield is not great. Much of the pipeline in the system is very old; the leakage is excessive at present and replacements will be necessary in the near future.

B. Electricity.

The San Simeon area is served electricity by the Pacific Gas and Electric Company. A substation near Cambria is connected to the rest of the PG&E system by a 70,000 volt transmission line, thus making available power from sources as far away as the Columbia River and Southern California. The San Simeon area is served from the Cambria substation by a 12,000 volt distribution line and the Hearst San Simeon State Historical Monument is served through two transformer banks and meters; one at the Visitor Center and one at the Castle.

C. Sanitation.

Sewage at the Castle is disposed of through septic tanks. The volume is not great and no major change is needed, although additional facilities will be required if the Pergola area is developed for resting and picnicking.

The discharges from the Visitor Center and Hearst County Park are pumped to treatment plant of the San Simeon Acres Community Services District, about three miles southerly of the Visitor Center. This plant provides secondary treatment, with an ocean outfall.

Flows during the peak season are about 25,000 gallons per day from the Visitor Center and 15,000 gallons per day from Hearst County Park. This volume of flow would not justify a new, State-owned treatment plant, either from the standpoint of

IV. EXISTING UTILITIES

economics, or for possible recovery and re-use of wastewater.

The State should work with the Community Services District to assure the proper degree of treatment and adequate capacity at their plant.

D. Solid Waste.

Solid waste from the Castle is hauled by State personnel to the Cambria dump. As of May, 1975, the San Luis Obispo Garbage Company started an interim contract to haul solid waste from the Visitor Center for disposal at their dump. State personnel occasionally take some waste to the Cambria dump when the Garbage Company gets behind.

The weekly volume of waste is about 5 cubic yards from the Castle and a little more than 20 cubic yards from the Visitor Center.

V. FUTURE WATER REQUIREMENTS

The operation of the State Historical Monument now requires an average of more than 70,000 gallons per day during the late summer and a maximum-day use of 140,000 gallons is reported by State personnel. This obviously exceeds the terms of the Hearst Corporation grant deed and may exceed the total available supply, if a series of dry years occurs.

The water requirements for operation of the Monument are very likely to increase in the future. The Hearst Corporation has indicated a willingness to allow the State the use of the so-called "Pergola" area, the long ridge extending westward from the Castle. If this area does come under State operation, there will be substantial new requirements for landscape watering.

There also should be more landscaping, trees and shrubery at the Visitor Center, whether it remains at the present location or is moved. This would again add to the water requirements.

It is concluded that with landscape water at the Pergola and Visitor Center added, the water requirement could more than double, and that a dependable supply of about 160,000 gallons per day during the late summer months should be provided. The seasonal distribution of the requirements would be about as follows:

January	30,000 gallons per day	July	160,000 gallons per day
February	36,000 gallons per day	Aug.	150,000 gallons per day
March	57,000 gallons per day	Sept.	131,000 gallons per day
April	100,000 gallons per day	Oct.	91,000 gallons per day
May	134,000 gallons per day	Nov.	42,000 gallons per day
June	153,000 gallons per day	Dec.	32,000 gallons per day

V. FUTURE WATER REQUIREMENTS

About 70 percent of the supply would be required at the Hilltop and 30 percent at the Visitor Center.

If no landscape watering is done at the Pergola, but the landscaping is developed at the Visitor Center, the water requirements would probably be about as follows:

January	20,000 gallons per day	July	110,000 gallons per day
February	25,000 gallons per day	Aug.	103,000 gallons per day
March	39,000 gallons per day	Sept.	90,000 gallons per day
April	69,000 gallons per day	Oct.	63,000 gallons per day
May	92,000 gallons per day	Nov.	29,000 gallons per day
June	105,000 gallons per day	Dec.	22,000 gallons per day

About 55 percent of this requirement would occur at the Castle and grounds.

VI. SUPPLEMENTAL WATER SOURCES

There are no potential new water sources on the State lands at the Hearst San Simeon State Historic Monument. The geologic formations at both the Visitor Center and the Enchanted Hill are very unlikely to yield useful amounts of water. A well was reportedly tried at the Visitor Center, resulting in a "duster", which is to be expected at that site.

There is also no prospect in the foreseeable future that imported water will be available from either the State Water Project or San Luis Obispo Water Agency.

There is a considerable amount of waste from the Hearst springs during the wet seasons. Some additional useful water could be developed by providing carryover storage, but if the State intended to use this supply, the terms of the grant deed from the Hearst Corporation would have to be modified.

Any potential source of supplemental water that exists would require some agreement by the Hearst Corporation if it was to be exploited.

A. Other Groundwater Potential

The probability of obtaining the required additional water supply for this project from groundwater sources is dependent on the availability of creek channel accumulations of Quaternary alluvium deposits with sufficient permeability and carry-over storage capacity. Available creek flows for percolation recharge would be more than adequate in all potential alluvium well areas. Although there are reportedly wells drilled into bedrock in this general region containing small supplies of groundwater from fracture systems, joints and other openings, this source is spotty and unpredictable and cannot be considered for new supplies of any magnitude.

The total annual water requirements for the state operation, including the Castle and the Visitor Center may range from about 75 acre-feet per year with the present Castle grounds and an improved Visitor Center to more than 100 acre-feet per year with the addition of some watering at the so-called "Pergola" area.

VI. SUPPL. WATER SOURCES

On this basis, the maximum month would require average flows ranging from 75 gallons per minute (gpm) to 110 gpm and peak rates of use would range from 150 gpm to 220 gpm.

Along the coast south of San Simeon there are wells in stream alluvium in or near lower Big Pico Creek which reportedly have capacities of 100 to 200 gallons per minute. It is not established that these capacities could be sustained over any period of time. Also, stream deposits in that area exceed those in the area under investigation.

Within the investigation area for this study there are several existing wells. Just east of the Hearst Ranch headquarters an old well was rehabilitated and re-equipped by the State as a stand-by water supply to back up the main spring source historically used for the Hearst Castle facilities. This well is centrally located in the alluvial flood plain adjacent to Arroyo del Puerto at the confluence of its main tributary. This area appears to contain a significant accumulation of stream alluvium; however, its depth and specific makeup is unknown. Although this particular area probably contains as favorable accumulation of groundwater storage as exists in the general area, calculations using rough hydrogeologic approximations indicate that underground usable storage capacity there is probably very small in relation to supplementary water needs.

Along Arroyo Laguna and Oak Knoll Creeks there are several old stock wells which have been abandoned. Just above Highway 1, where conditions are probably more favorable, an old well was reportedly tested at more than 50 gallons a minute, but sustainability of this rate for more than short periods is doubtful.

A further consideration in evaluating underground storage capacity along the Arroyo Laguna-Oak Knoll Creek system would be the thickness, as well as the permeability and storage effects from a southerly point far upstream. This must be assumed to be a restriction on groundwater storage capacity of these already limited deposits.

Therefore, it is tentatively concluded that, although the total project water requirement might be available exclusively from groundwater in this general area, it could be accomplished only by the use of a number of smaller wells located in special, scattered areas. These well area prospects would have to be carefully investigated for both well pumping capacity and underground storage capacity, involving constructing field test wells and conductance of pumping tests. Four to six potential sites would probably have to be explored. Two major problems to be anticipated are that locations for optimum well development may also have the highest flood risk, and the use of several wells at set scattered locations will entail high costs of transmission facilities, both for electrical pumping power and for the water produced.

If a groundwater source does exist, it would be unlikely to yield much more water than will be required for the State operation. This resource would be very valuable to the Hearst Corporation, and would not be readily replaced if sold or granted to the State.

B. Surface Water Storage Potential

The major excess water in the San Simeon area is the winter runoff in streams. These streams are all intermittent; that is, there is little or no flow during several months of the summer and fall. The only means for developing a new, dependable water source is to provide storage to catch winter runoff and conserve it for use throughout the year.

A reconnaissance study was made at several potential locations for dams and reservoirs on the Hearst Corporation Rancho Piedras Blancas. The reconnaissance included preliminary evaluation of topographic features and geologic conditions, vegetative and wildlife resources, and historic and archeologic values.

A discrepancy in names for creeks should be noted. The 1910 Geological Survey topographic map (San Simeon 7-1/2 minute quadrangle) shows Oak Knoll Creek emptying to the ocean about

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one and three-fourths miles northwest of San Simcon and Arroyo Laguna emptying into Oak Knoll Creek about one and one-fourth miles from the beach. The highway bridge between the confluence of the two streams and the beach is identified as crossing Arroyo Laguna, implying that Oak Knoll Creek ends at the confluence.

In the following discussions, the U.S. Geological Survey map is accepted as correct and it is assumed that Oak Knoll Creek ends at the ocean and Arroyo Laguna ends where the two streams join.

There are no records of runoff for any of the seven watersheds studied so the volumes of water available were estimated by using a factor times the records of monthly runoff volume from Arroyo de la Cruz. The drainage area for Arroyo de la Cruz is much larger than any of those streams studied, so the estimated runoff was reduced by the ratio of the watershed areas. In addition, the average elevation of all of the watersheds studied was less than that of Arroyo de la Cruz, so the estimates of monthly runoff were further reduced to allow for a lesser expected depth of runoff.

The monthly volumes of runoff in acre-feet from Arroyo de la Cruz for the period of record are shown in Table VI-B-1. Monthly runoff volumes for each of the watersheds studied was estimated by using a factor times the runoff from Arroyo de la Cruz. The average annual depth of runoff from Arroyo de la Cruz was about 1.5 feet during the period of record. Because of relatively lower average elevations of the watersheds, the runoff depths from the potential project areas studied were assumed to range from 0.5 feet to 0.7 feet. The Arroyo de la Cruz watershed totals about 26,400 acres, while those of the potential projects range from 320 acres to 4,050 acres.

Research of existing archeological records disclosed that there were eight previously recorded sites in the areas of possible impact from the potential water storage projects. No historical features were noted within project boundaries, but

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Table VI-B-1
 Monthly runoff in Acre-Feet
 Arroyo de la Cruz

WATER YEAR*	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1951	0	36	145	81	22	32	8	8	0	0	0	0
52	0	0	341	594	62	232	38	10	2	0	0	0
53	0	0	221	327	20	36	49	17	4	0	0	0
1954	0	1	0	78	140	169	68	23	5	1	0	0
55	0	0	32	71	39	14	27	26	5	0	0	0
56	0	0	438	354	131	31	22	16	3	0	0	0
1957	0	0	0	11	102	42	29	51	9	0	0	0
58	0	0	46	90	393	382	342	20	7	1	0	0
59	0	0	0	18	174	14	2	1	0	0	0	12
1960	0	0	0	61	256	24	10	4	0	0	0	0
61	0	4	3160	2690	987	608	94	3	0	0	0	0
62	0	881	7720	4920	40970	7020	1050	336	75	0	0	0
1963	1150	2	4390	19070	22840	6170	9390	2120	737	116	14	0
64	0	10290	557	4220	661	601	908	153	0	0	0	0
65	0	2190	9330	18430	1820	3230	6940	894	279	28	0	0
1966	0	14020	6310	6310	5400	1000	279	82	1	0	0	0
67	0	1100	32020	13400	3390	10870	9820	2500	566	152	9	0
68	0	0	41	708	1720	1860	446	8	0	0	0	0
1969	0	0	2110	70700	31570	6000	2950	634	260	22	0	0
70	0	0	3310	17340	2070	4840	543	97	4	0	0	0
71	0	7340	10510	2790	633	931	338	105	16	0	0	0
1972	0	0	6750	494	1740	109	6	0	0	0	0	0
73	0	7030	419	25280	23820	12680	2090	665	301	21	0	0

* October 1 through September 30.

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several are located in adjacent areas. A letter confirming these findings was requested from Historic Preservation Section, California Parks and Recreation.

The potential dam sites and reservoir areas were investigated on foot in the field on April 24 and 25, 1975. Known archeological sites within the project zones and those adjacent to possible impact areas were relocated, where possible, to check present condition. As new sites were located they were plotted on U.S.G.S. topographic maps and assigned temporary accession numbers commencing with EA-1. Site survey forms were filled out to be submitted to Cultural Resource Section, California Parks and Recreation for inclusion in the permanent record system maintained by that agency. In addition, site survey forms were transmitted to the San Luis Obispo County Archeological Society and permanent numbers were assigned through them.

Twelve new sites were located during the field survey, except that EA-7 (SLO-AS-246) may be the previously recorded site SLO-246, which was not otherwise located. Four of the sites are above the probable high water levels of the potential projects and two sites, EA-7 (SLO-AS-246) and EA-12 (SLO-AS-725), are downstream of and remote from the projects.

It is recommended that the area of survey, be nominated to the National Register of Historic Places. The number of sites included, as well as the apparent significance of several sites suggests that the area contains research potential for interpretation of California's prehistoric period of human occupation.

The preliminary analyses of the potential projects has been based upon existing topographic data from the U.S. Geological Survey quadrangle maps, with a scale of 1:24,000 (1 inch = 2,000 feet), and a contour interval of 40 feet. Obviously, the quantity estimates could not be refined to an extent that would allow accurate cost estimates for the projects. An order-of-magnitude cost is given for one project, and the others are merely compared to this yardstick.

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The seven project sites studied are identified as Sites A through G in Figure VI-B-1.

1. Site A

The dam for Site A would be located on Arroyo Laguna a little more than a mile above the confluence with Oak Knoll Creek. The stream bed elevation at this point is between 100 and 110 feet, and the reservoir capacity is estimated as follows:

<u>Water Surface Elevation in Feet</u>	<u>Capacity in Acre-Feet</u>
105	0
130	500
140	1000+

a. Hydrology: The watershed area above Site A is about 1,630 acres, all lying at relatively low elevation. The annual depth of runoff was assumed to be about 0.5 feet and the monthly volumes were computed using a factor of 0.020 times those of Arroyo de la Cruz. This yielded an average water-year runoff of 820 acre-feet.

b. Geology: The left and right dam abutments are similar and consist of tan, medium-to-coarse grained sandstone, with only shallow weathering. The rock is massive and appears relatively consistent throughout the site. An average of about 3 feet of stripping would be required to get to sufficiently fresh rock on the upper slopes and about 10 feet on the lower slopes. In the creek channel area, overburden thickness is estimated to reach about 25 feet. An apparently active fault parallels the creek immediately northeast of the present channel. Another active fault, similarly oriented, passes about 800 feet west of the creek.

c. Vegetation, wildlife and scenic values: Vegetation in the Arroyo Laguna Canyon above dam Site A is generally of the grass-land type, utilized principally for cattle grazing. The area has high forage value with common grasses being bur clover, filaree, plantain, wild oats and vetch. Bordering either side of the incised creek channel are heavy thickets of willow species (Salix sp.).

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These thickets follow the main creek channel from the dam site upstream beyond the anticipated reservoir level. A narrow band of forbs, including gooseberry and poison hemlock border the outer margins of the thickets. Few trees other than willow occur within the boundaries of the Site A dam and reservoir area.

Thickets bordering the Arroyo Laguna provide moderate riparian habitat for a variety of wildlife species, principally songbirds and upland game. Available water and dense creekside vegetation combine to support a myriad of insects which, in turn, provide a food supply to the avian life. Forbs and catkins of willows also provide browse for local populations of black-tailed deer and the introduced Asian species of Sambar deer.

In summary, Site A supports grassland vegetation with riparian growth along the main creek channel. Creekside vegetation provides the most important wildlife habitat in the area which is utilized by a variety of species. This area is, however, of lesser value in terms of supporting a varied wildlife community than the riparian habitat further downstream.

d. Archeology: No archeologic sites were found in the area which would be affected by the Site A project.

e. Comparative site evaluation: Site A is relatively high on Arroyo Laguna, with a relatively small contributing watershed mostly at low elevation. Compared to downstream sites, a large volume of storage would be required for an equivalent dependable annual yield.

The damsite does not include a particularly good spillway site, so construction costs would be relatively high for a given volume of storage.

There would be no impacts on historic or archeologic sites, and the impacts on vegetation, wildlife and scenic values would be moderate.

2. Site B

The dam for Site B would be on Arroyo Laguna about one-fourth mile above the confluence with Oak Knoll Creek. The watershed area would be about 2,350 acres and would include a

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tributary reaching significantly higher elevation than upper Arroyo Laguna.

The left abutment of the dam would tie to a hill with a saddle behind it, providing an excellent spillway site.

The streambed elevation at the dam site is about 70 feet and the reservoir capacity would be about as follows:

<u>Water Surface Elevation</u> in Feet	<u>Capacity in Acre Feet</u>
70	0
90	400
100	850
110	1,550

a. Hydrology: Because of a tributary from the east which reaches relatively high elevations, the average depth of annual runoff above Site B is assumed to be 0.60 feet. The monthly runoff for this project was estimated by using a factor of 0.035 times the Arroyo de la Cruz runoff. This yielded the following estimates for runoff from water years 1951 through 1973:

Maximum	4,000 acre-feet
Average	1,430 acre-feet
Minimum	168 acre-feet

The estimated total inflow during the critical, low-flow years from 1958 through 1962 is plotted as a mass curve in Figure VI-B-2. Lines representing uniform withdrawal rates are also plotted as a means of estimating storage requirements to assure various yield rates. The maximum vertical distance appearing between the reservoir inflow mass curve and a line representing a given withdrawal rate is the required storage. Where the withdrawal line jogs upward, spill from the reservoir is indicated. The diagram indicates the following possible yield rates:

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<u>Reservoir Capacity</u>	<u>Dependable Annual Supply</u>
300 acre-feet	400 acre-feet
1,000 acre-feet	700 acre-feet
1,700 acre-feet	880 acre-feet

The uniform withdrawal rate is actually not reasonable; the real use of water is heaviest in the summer and fall when the inflow is at a minimum. The safe yields on that basis would be somewhat less, but a more precise analysis is not justified by the available data.

b. Geology: The left abutment consists of tan, massive, medium- to coarse grained sandstone, with shallow weathering. The apparent strike is North 45° West and dip is 45° Northeast. An estimated average of about 3 feet of stripping would be required for the upper slope and 10 feet or so on the lower slope to reach a firm rock footing.

The right abutment is weak and, at least partially underlain by serpentine or other weak rock elements. It is deeply weathered without outcrops. Fragmentary float rock of Knoxville sandstone, some Franciscan graywacke sandstone, serpentized rocks, and a few miscellaneous types were noted in the locality. The lower abutment slope is broken by a bench which is virtually inaccessible due to intense brush cover. This slope segment has the appearance of a massive slide. However, available poor quality aerial photographs indicate that it is probably a fault sliver against the major fault which runs along the creek channel at this point. Therefore, considerable excavation would be required on the right abutment for a dam at this location, tentatively estimated as 200 to 300 feet back from the creek channel at the lower levels. Upper slopes may require 30 to 40 feet of stripping to reach firmer rock. If serpentine bedrock is encountered, additional measures may be required.

As noted above, a major fault, reportedly active, follows the creek channel through this damsite. The apparent fault segment, or sliver in the right abutment is related to this

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northwest trending fault and a smaller fault crossing from the northeast a short distance upstream.

Beneath the stream channel, overburden is estimated to extend to a maximum depth of about 30 feet.

A good topograph spillway for a reservoir here exists east of the left dam abutment in the form of a natural saddle in the hill ridge. Although not confirmed in the field, this feature may be related to faulting, which should be investigated if this site is given further consideration.

c. Vegetation and wildlife: Vegetation in the Arroyo Laguna canyon from dam site A to dam site B is mainly a grass-land type bordered by oak-woodland. The creek itself is bordered by riparian stands of willows, with California laurel occurring at lower elevations. The grassland area is dominated by plantain, filaree and bur clover. These areas provide forage for cattle and small rodents. Raptors, including the great horned owl and red-tailed hawk hunt this area for their prey of small mammals.

A narrow riparian growth of willows is present at the upper end and extends through the area, widening slightly downstream. This vegetation provides moderate value wildlife habitat. The reservoir level anticipated for site B would encroach upon the canyon and live oaks of the oak-woodland association. These trees extend down to the probable reservoir level from the ridges on either side, although more trees would be involved on the west than on the east. Representative wildlife species supported in the oak-woodland include black-tailed deer, California quail, acorn woodpecker and white-breasted nuthatch.

Dam construction and water storage in this area would eliminate existing riparian habitat and reduce dependent wildlife populations. Some oaks occurring along the southwestern boundary of the reservoir, and a few on the northeasterly boundary would be lost due to root crown inundation. These losses, however, would be relatively minimal.

d. Archeology: There are two archeologic sites near the reservoir area of the Site B project. EA-5 (SLO-AS-719) is located north of the flats adjoining the northwest bank of an unnamed tributary of Arroyo Laguna, the site is a bedrock mortar station. A large angular boulder on the slope below the existing barns has a single pit ground into a flat surface. Measurements of the pit are 16 centimeters (cm) by 15cm by 7.5cm in depth. There are no associated artifacts or midden. EA-6 (SLO-AS-720) is a single mortar pit in the flat surface of a bedrock outcrop. The outcrop is located on a gentle terrace slope east of the channel of Arroyo Laguna Creek. The hills rise abruptly behind the site and are mantled with a heavy growth of oaks. Measurements of the pit are 15cm by 16cm by 7cm in depth. There are no other associated artifacts and cultural deposit is lacking.

These sites are both above probable reservoir levels and are not particularly sensitive to damage from other causes. Measurements and photos of the pits have been taken and are recorded in the permanent files.

e. Comparative site evaluation: The right abutment of the Site B damsite would require extra stripping to remove unsuitable material, and would possibly require special foundation treatment. The gap to be dammed is relatively narrow and the reservoir capacity to dam-height ratio is good. An ideal site for a spillway appears to be available in a saddle just east of the damsite.

As previously stated, there has been no subsurface investigation, and quantity estimates are based 40-foot interval contours. Very rough, preliminary estimates indicate that the cost for the dam, spillway and outlet works for this site, with a reservoir capacity of about 850 acre-feet, would be in a range from \$250,000 to \$300,000. This estimate does not include any transmission pipeline for delivery of water.

The 850 acre-foot capacity reservoir would probably provide a safe annual supply of 500 to 600 acre-feet.

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There would be a few losses of oak trees along the lower fringe of the oak-woodland on the canyon sides above the reservoir, and a few trees would be lost at the left dam abutment. The reservoir would destroy all of the grassland and riparian growth along the canyon bottom for about one and one-half miles. Cattle pasture and wildlife pasture in this area would be lost, but the scenic aspects of the oak-woodland area along the canyon sides would not be seriously damaged.

There would be no loss of historic or archeologic resources.

1. Site C

The dam for this project would be on Oak Knoll Creek about 1,000 feet below the confluence of Arroyo Laguna. The watershed area above this point is about 3,600 acres and, because it includes upper Oak Knoll Creek, lies at a higher elevation than the Arroyo Laguna watersheds.

Both abutments of the dam would tie into high, steep hillsides, so excavation of a spillway would be difficult and costly.

The streambed elevation at this point is about 60 feet and reservoir capacity behind the dam would be about as follows:

<u>Water Surface Elevation</u>	<u>Reservoir Capacity</u>
60	0
80	350
90	900
95	1,300

a. Hydrology: With the relatively high elevations of the Oak Knoll Creek watershed included, the average annual depth of runoff above Site C was assumed to be 0.70 feet. The factor used to adjust Arroyo de la Cruz flows was 0.063, indicating probable runoff data for this project as follows:

Maximum Water Year Runoff	7,200 acre-feet
Average Water Year Runoff	2,580 acre-feet
Minimum Water Year Runoff	300 acre-feet

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b. Geology: The right abutment is composed of tan, medium-to-coarse massive sandstone, with minimal surficial weathering. About 5 feet of stripping would be required in the upper slope and 10 to 15 feet in the lower slope to reach sound rock footing.

The left abutment is indicated to be composed of similar sandstone but is quite deeply weathered. There is a lack of outcrops and overburden is estimated to be 20 to 30 feet deep.

Beneath the stream channel area, overburden probably ranges to the order of 30 feet. A fault passes from west to east through the site; no evidence was noted to indicate whether or not it is active.

c. Vegetation and Wildlife: The area encompassed by the reservoir for Site C includes extensive riparian woodland vegetation. Higher and more frequent water flows in both Arroyo Laguna and Oak Knoll Creek support large tree species, including western sycamore, bigleaf maple, California laurel and red alder. Posion oak and a profusion of other shrubs and forbs thrive beneath the canopy of these tall trees.

The riparian-woodland occurring in the Site C canyon area provide one of the most diverse and important terrestrial wildlife habitats in the region. It offers abundant and varied wildlife foods along with interlacing escape cover. The list of wildlife supported by this type of habitat is long and includes avian representatives, small and large mammals, reptiles, amphibians and fish species.

Both abutments at the damsite have heavy woodland growth consisting mainly of live oak, which grades into sycamore and riparian vegetation near the stream sides.

Construction of a dam and reservoir at Site C would result in a substantial loss of riparian-woodland habitat and its associated wildlife fauna. The diversity and density of biotic resources in this area is unequalled in other drainages in the immediate San Simón region.

d. Archeology: There are a number of archeologic sites that would be affected by the Site C project. A major village site,

previously recorded as SLO-309, is located on a terrace south of Oak Knoll Creek above the confluence of Arroyo Laguna. The area exceeds 90 meters by 300 meters and the depth may be more than 1.5 meters. The midden is dark colored and has a heavy constituent of shell and chert flakes. The site must be considered significant, and present erosion and disturbance are minimal. Rodent activity and cattle grazing constitute the major intrusions.

SLO-311, another previously recorded site, is a small shell midden (50 meters by 30 meters) which does not appear to have great depth. Shell and flakes in the deposit appear quantitatively lower than at SLO-309. This site is on the same terrace as SLO-309 but further upstream.

SLO-310 is a large deep site, previously recorded, which is contained on a shelf along the northwest side of Oak Knoll Creek just below the potential dam site. The condition of the site is good, although rodent disturbance is apparent and trees have intruded onto the midden.

A bedrock mortar site, identified as EA-1 (SLO-715) is located in a sandstone outcrop in the channel of Oak Knoll Creek about 400 feet above the confluence of Arroyo Laguna and Oak Knoll Creeks. There are more than 14 pits and it is likely that more exist, covered by the stream gravels. The outcrops are below high water flow, as the mortar pits are filled by gravel, sand and cobbles. The largest of the pits, on the south side of the creek, measures 41cm by 23cm and is 39cm in depth. Use probably coincided with periods of habitation at site SLO-309, which is located immediately south on the terrace.

EA-2 (SLO-AS-716) is a very small site, 15 meters by 20 meters, location is in a eucalyptus grove east of SLO-309 on the same terrace. The two sites are separated by about 25 meters of culturally sterile soils. The midden is a lighter color than at SLO-309 and appears to have a lower constituent shell content. Flakes are primarily of chert. Some historic disturbance is noted, as debris is scattered over the site surface and a concrete trough is on the northern edge. The eucalyptus trees have

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disturbed large areas of the site and the roots of fallen trees have displaced portions of the cultural deposit.

EA-3 (SLO-AS-717) appears to be a surface scatter of flakes, angular waste, and thermal fractured rock, and several fragments of cobble pestles. The location is on the south bank of Oak Knoll Creek, upstream 25 meters from SLO-311. Shell fragments are low in numerical quantity and there is no apparent midden deposit. The site was probably a temporary campsite or special use area.

EA-4 (SLO-718) is located on the south slope of a prominent hill rising above the terrace at the confluence of Oak Knoll and Arroyo Laguna Creeks. The slope faces the ocean and overlooks a dry ravine dissecting the rolling grasslands which dip towards the beaches. There is no shell and the artifact scatter is primarily of chert flakes. Several small, circular (two meter diameter) depressions were found, but it could not be determined if these were housepits. Flakes are associated with the depressions and appear to be more numerous than in other areas surrounding the circular features. The soils are brown, high in clay, and there is no midden buildup.

All of the sites except SLO-310 and EA-4 (SLO-AS-718) would be inundated by the reservoir if a dam were built at Site C. SLO-310 is very close to the damsite and would be destroyed during construction unless very special measures were undertaken to protect it. EA-4 (SLO-AS-718) is well above the reservoir level and away from the construction area, so should not be disturbed.

Destruction of these sites would be detrimental to knowledge and interpretation of California's prehistoric period. SLO-309 and SLO-310 are large and highly significant sites with considerable depth of deposits and are especially important.

If a project at Site C is to be considered, it is recommended that testing be done by a qualified archeologist to further evaluate the significance of the sites affected.

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Based on analysis of data, the archeologist would then make specific recommendations for further disposition of the sites. This testing should include SLO-309, SLO-310, SLO-311, EA-2 (SLO-AS-716), and EA-3 (SLO-AS-717). EA-1 (SLO-AS-715), the bedrock mortar site should have the pits cleared, measured, and photographed for the permanent record.

e. Comparative site evaluation: A project at Site C would yield considerably more water than the Site B project, but the costs would be at least twice as much, due partly to the difficulty of constructing a spillway. The destruction of trees would be excessive, destroying significant scenic values as well as wildlife habitat. This destruction would occur at the damsite and along the canyon sides in the reservoir area.

The Site C project would also impact significant archeologic resources, probably necessitating very costly recovery operations to avoid destruction of the material.

The additional water yield would not justify selection of the Site C project.

4. Site D

The dam for the Site D project would be on Oak Knoll Creek a little more than 1,000 feet above Highway 1. The topography at this location is more favorable for construction of a spillway than at either Site A or Site C, but not as good as at Site B.

The watershed area above this site is about 4,050 acres and includes the high areas of Oak Knoll Creek as well as the lower Arroyo Laguna.

The streambed elevation at the damsite is about 25 feet and the potential reservoir capacity is as follows:

<u>Water Surface Elevation</u>	<u>Reservoir Capacity</u>
25 feet	0 acre-feet
50 feet	300 acre-feet
60 feet	650 acre-feet
70 feet	1,150 acre-feet

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a. Hydrology: The average annual depth of runoff from the watershed above Site D was assumed to be 0.70 feet. The factor used for adjustment of Arroyo de la Cruz flows was 0.071, yielding the following figures for runoff estimates:

Maximum water year	8,100 acre-feet
Average water year	2,900 acre-feet
Minimum water year	340 acre-feet

A mass curve analysis of potential reservoir yields similar to that presented for the Site B project indicates the following:

<u>Reservoir Capacity</u>	<u>Dependable Supply</u>
700 acre-feet	500 acre-feet per year
650 acre-feet	750 acre-feet per year
1,150 acre-feet	1,060 acre-feet per year

b. Geology: Available field time did not permit a full reconnaissance of this damsite; however, the area was traversed. No outcrops were observed. In the right abutment suitable foundation bedrock could be expected with perhaps 20 feet of stripping; the steeper left abutment appears to be less weathered and should require 10 to 20 feet of stripping to reach firmer rock.

The creek channel beneath the site is indicated to have on the order of 30 to 40 feet of alluvial deposits. A fault trending east and west passes 100 to 200 feet upstream of the site, but should have no important bearing on its merits.

c. Vegetation and Wildlife: Vegetation encompassed by reservoir site D includes both the riparian-woodland and oak-woodland types. The riparian community borders the Oak Knoll Creek and extends up the Arroyo Laguna. This association is characterized by a canopy of sycamore, bigleaf maple and California laural. A dense growth of various shrubs and forbs forms the understory. The oak-woodland occupies the slightly higher canyon slopes in this area. The transition between the two community types is subtle, noticeable by a change in floral species types rather than difference in total density.

Construction and water storage at damsite D would result in

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a substantial loss of important riparian-woodland habitat. Wildlife dependent upon this habitat would similarly be lost since the habitat created by the reservoir would not provide suitable food or shelter for the displaced individuals.

d. Archeology: Two previously recorded sites were relocated in the field at points which would be inundated by the Site D project. A site identified as SLO-304 is on a flat south of the creek where it bends on a northwest-southeast axis. Erosion by the stream has been extensive and large portions of deposit are exposed. Heavy amounts of shell and flakage lie on gravel bars below the terrace and a deep gully has cut across one portion of the site. This site number is inconsistent with site survey forms obtained from Cultural Resource Section, California Parks and Recreation. The number has been designated for another area in San Luis Obispo County and the matter of site numbering should be resolved in the records.

The second relocated site is SLO-310, near the Site C dam location, which would be destroyed by construction with project C, or inundated by project D. This site is described in Section VI-B-3, Site C.

SLO-307. This large site was not relocated during the recent field survey. The dense cover of grasses and forbs perhaps obscures the surface signs of cultural deposit, but no evidence of midden could be seen in the creek bank. Erosion and collapse of channel banks is intense and cultural debris covers the gravel bars along the creek bottom. However, the originally reported size of the site does not justify a premise of total destruction in the nine years since the date of recording. The site or portion of it, are probably still extant on the west bank of the creek.

SLO-304? This site number is inconsistent with site survey forms obtained from Cultural Resource Section, California Parks and Recreation. The number has been designated for another area in San Luis Obispo County and the matter of site numbering will have to be resolved later.

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The site is on a flat south of the creek where it bends on a northwest-southeast axis. Erosion by the stream has been extensive and large portions of deposit are exposed. Heavy amounts of shell and flakage lie on gravel bars below the terrace and a deep gully has cut across one portion of the site.

SLO-308. The site was not relocated at the mapped area. Stream channel banks did not show midden deposit in the walls and the site may lie to the northeast of the recorded place. This previously located site SLO-308, if it exists at the location indicated on maps, would also be inundated by this reservoir.

SLO-310. This is a large, deep site contained on a terrace at sharp bends of the creek channel. Condition of the site is good although rodent disturbance is apparent and trees have intruded onto the midden.

SLO-246. Another previously recorded site, identified as SLO-246, appears from the record to be located near the damsite. However, no evidence of the site was found at that location. A large shell midden was located on the top of an exposed hill northwest of Oak Knoll Creek. It is likely that this is SLO-246, but changes in the highway alignment may have made it impossible to accurately determine location point of the previously recorded site. However, the site description fits well

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with that of EA-7. The site will not be impacted by any of the proposed project. It has been resubmitted as EA-7 (SLO-AS-246).

EA-1 (SLO-AS-715), the bedrock mortar site above the confluence of Arroyo Laguna with Oak Knoll Creek would probably also be inundated by a project at Site D.

If a project were to be built at Site D, test units should be excavated at SLO-304, and SLO-308 if they can be relocated. EA-1 (SLO-715) should be cleaned up and measured and photographed for the record.

e. Comparative site evaluation: Construction costs at Site D, should be similar to those at Site B; perhaps even slightly less for a given yield.

The impacts on vegetation, wildlife and scenic values would be substantially greater than for Site B. Extensive bands of riparian vegetation would be inundated, along with many large live oak and sycamore trees.

Excavation of at least two archeologic sites would probably be required to prevent their destruction; the number could be as many as four. This could add substantially to the project costs.

5. Site E

This project would be located on Arroyo del Puerto, with the damsite just west of the existing Visitor Center, about 2,000 feet northerly from Highway 1. The topography is such that the dam would be relatively high in relation to the reservoir storage capacity and the excavation of a spillway would be relatively expensive.

The streambed elevation at the damsite is about 40 feet and the reservoir capacity would be about as follows:

<u>Water Surface Elevation</u>	<u>Reservoir Capacity</u>
40	0
70	150
80	300
90	500

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The watershed area above the damsite is about 1,800 acres, including some at relatively high elevation.

a. Hydrology: The average annual depth of runoff above Site E is assumed to be 0.70 feet, and a factor of 0.031 times Arroyo de la Cruz amounts was used to estimate the volumes of runoff.

Maximum water year runoff	3,540 acre-feet
Average water year runoff	1,270 acre-feet
Minimum water year runoff	148 acre-feet

The combination of limited reservoir capacity and low runoff volumes in dry years would probably indicate that the project would not be dependable for more than 250 to 300 acre-feet per year.

b. Geology: Both abutments at this site are composed of tan, medium-to-coarse sandstone, which occurs massively with minimum weathering. An average of about 2 feet of stripping on the upper slopes and about 6 feet on the lower slopes would be required to expose adequate foundation rock. Beneath the creek channel, alluvial overburden appears to reach depths of 10 to 20 feet.

c. Vegetation: Vegetation occurring within reservoir of Site E varies from a grassland type occurring along the anticipated upper water level perimeter to riparian-woodland in Arroyo del Puerto bed. The westernmost grassland slopes are currently being used as closed pasture. Grasses in the area are of lesser forage value than found in the Arroyo Laguna drainage, showing signs of heavier utilization. The riparian-woodland association along Arroyo del Puerto is also of lesser value in terms of wildlife forage and cover. Although sycamore, California laurel and bigleaf maple are present, the understory is only moderately dense and does not extend beyond the immediate creek banks. The importance of this area to wildlife is considered moderately high.

The loss of vegetation and wildlife habitat due to construction of a dam at Site E would be considerable but not

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in the same order of magnitude of either Site C or D. Due to its proximity to the Hearst Ranch Complex, this area shows a higher degree of human disturbance and effects of heavier grazing utilization.

d. Archeology: A previously recorded site lying within the potential area of inundation was relocated in the field. This site, identified as SLO-145, lies on a terrace upstream from the confluence of the two creek branches. The site forms a distinct mound and the midden is very dark in color. Shell fragments are abundant, as are lithic flakes. Rodent disturbance is moderate in extent, but numerous mounds dot the site surface.

Three newly discovered sites also lie within the area of inundation. The first, EA-8 (SLO-AS-721), is the remnant of a small, shallow shell midden on the south bank of Arroyo del Puerto, immediately west of the confluence of the two creek branches. A thin midden stratum containing shell fragments and a few flakes is visible in the eroded side of the creek bank. There is no sign of the midden on top of the bank, and rodent burrows show no cultural debris. It is probable that the site was originally restricted in size and has been nearly removed by erosion of the bank.

EA-9 (SLO-AS-722) lies 100 meters downstream from SLO-145 on a terrace between the two branches of Arroyo del Puerto creek. Consistent with other sites in the area, it is a dark midden with thermal fractured rock, chert flakes, and a high frequency of shell fragments. Rodent intrusion is moderate, but the site appears to be in good condition. The areal extent is approximately 30 meters by 30 meters.

EA-10 (SLO-AS-723) is located on a narrow terrace above the west bank of the north branch of Arroyo del Puerto. The area is surrounded by dense arboreal growth with several trees on the cultural deposit. The soil is dark in color and has a moderate quantity of shell fragments as constituent. A few fragments of ground stone tools and thermal fractured rock are scattered on the site surface. The site may have been originally

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larger but stream erosion appears to have cut into the west edge. The present extent of the cultural deposit is approximately 10 meters by seven meters.

A fourth new site, EA-11 (SLO-AS-724) is located at about the 115 foot elevation on a hillslope 300 meters west of Arroyo del Puerto. The only evidence of cultural debris is a few flakes and shell fragments, primarily in rodent mounds. Soil is dark but not appreciably different from surrounding soils. The areal extent of this site is unknown, as dense vegetation obscures the ground surface. This site would not be affected by a project because it is above the level of potential inundation.

Construction of this project would damage or destroy SLO-145, EA-9 (SLO-AS-722) and EA-10 (SLO-AS-723). EA-8 (SLO-AS-721) has already been destroyed by natural stream erosion. - If a project is to be constructed at Site E, the affected sites should be test excavated by a qualified archeologist. Evaluation of the sites' significance would allow preparation of a research design for further mitigative salvage, if required.

5. Comparative site evaluation: A project at Site E would entail high costs per unit of dependable water supply and would not be suitable for a supply very much in excess of state needs. Costs for an optimum project would probably be about equal to those for Sites B and D.

Impacts on vegetation and wildlife would be moderately high, and the loss of large trees would probably be especially critical because of the proximity of the Ranch headquarters and the Visitor Center.

The costs for preservation of archeologic material could be quite high.

6. Site F

The dam site for this alternative would be located on Broken Bridge Creek, about 2,000 feet northeasterly from Highway 1. There is a small, existing earthfill dam at this

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site, partially washed out on the downstream side next to the spillway.

The streambed elevation at the damsite is about 80 feet and the reservoir capacity would be about as follows:

<u>Water Surface Elevation</u>	<u>Reservoir Capacity</u>
80	0
110	100
130	350
140	550

The watershed area is about 450 acres, reaching fairly high elevations.

The topography at the site is not especially favorable for spillway construction.

a. Hydrology: The average yearly runoff depth from the watershed is assumed to be 0.70 feet and the estimated monthly runoff was computed using a factor of 0.008 times the Arroyo de la Cruz runoff. The results indicate the following:

Maximum water year runoff	910 acre-feet
Average water year runoff	330 acre-feet
Minimum water year runoff	38 acre-feet

A mass diagram analysis indicates the following dependable yields for reservoirs at this site:

<u>Reservoir Capacity</u>	<u>Dependable Yield</u>
140 acre-feet	125 acre-feet per year
480 acre-feet	232 acre-feet per year

The dam heights above streambed to provide the indicated storage capacities would be about 45 feet and 55 feet, respectively, including 5 feet of freeboard. The lower dam would entail higher spillway costs.

b. Geology: A small dam exists at this site, impounding a very limited pond behind it. Part of the dam is formed naturally by a very large rock mass outcropping on the right abutment and extending part-way across the stream. This outcropping provided some water impoundment in itself and was obviously the site of natural groundwater seepage as well.

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If a dam were constructed here it would be sited immediately upstream of the present dam.

The right abutment is immediately upstream of the very large rock outcrop, which consists of siliceous shale on the west, changing to sandstone and siltstone in the dam section. Massive, moderately weathered sandstone crops out some 100 feet upstream of the dam. The damsite abutment being considered in the intervening stretch lies in a bedrock recession containing a substantial depth of alluvium, as well as the shell-mound accumulations of an ancient Indian campsite. This interval would have to be stripped up to 40 feet or more to reach firmer rock, probably sandstone.

The left abutment of the present dam has been disturbed by a fault which strikes east-west and contains broken rock debris and gouge. This fault passes just downstream of the rock mass on the right abutment. The fault zone extends an estimated 10 to 15 feet upstream of the existing left dam abutment, where massive sandstone is encountered. A new dam abutment at this point would require an estimated 10 to 15 of stripping to reach firmer bedrock. The top of this abutment is more deeply weathered, perhaps to depths of 30 feet, or more.

Beneath the stream channel just upstream of the existing dam, the overburden is quite deep because it includes siltation behind the existing dam. Therefore, to reach suitable dam foundation rock, excavation would have to be quite deep to as much as 50 or 60 feet beneath the channel.

c. Vegetation and Wildlife: Vegetation around the existing impoundment is principally the grassland type with few trees or shrubs. Some oak and California laurals occur at the upper end of the project reservoir site along the western drainage slope. The understory beneath these trees is not dense, probably due to cattle grazing in the area. Old tree snags are found along the drainage channel bed at the uppermost edge of the existing reservoir site.

Construction of a larger reservoir site in this area would result in the loss of principally grassland habitat. Some trees along the uppermost reservoir shoreline would be lost due to

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inundation of root crowns. In summary, however, the loss of vegetation and wildlife habitat with construction of the new reservoir would be minor.

d. Archeology: A previously recorded archeologic site, identified as SLO-349, is located above the right abutment at the damsite. The site has sustained severe damage by prior construction of the small existing dam. Portions of the midden have been cut away and bulldozer cuts mark the upper slopes. Two bedrock mortar outcrops are associated and several of the mortar pits are deep; more than 15cm. The upper areas of the site on the hilltop are in good condition and there appears to be considerable depth to the cultural deposit. The deposit appears to have originally exceeded three meters in depth and covered an area larger than 100 meters by 80 meters. The site remnant should yield material useful to interpretation.

A previously unrecorded site was discovered south of the damsite. The site is on the hillslope east of Broken Bridge Creek and adjacent on the north to Highway 1 (Cabrillo Highway). It appears to be a surface scatter of lithic flakes and cores. Soils are light brown with no shell content and there does not seem to be a midden buildup. The site was probably a chipping station or workshop. It would not be affected by the project.

Construction of this project on Broken Bridge Creek would further impact SLO-349, which appears to have cultural depth and significance. If this site is to be used, test units should be excavated and a research design developed to mitigate further loss of data from this site.

e. Comparative site evaluation: The project at Site F would entail a high cost for both dam and spillway per unit of reservoir capacity. In addition, considerable additional costs may be entailed to preserve the archeologic material at the right abutment.

The project would be very unlikely to provide a dependable water supply in excess of state requirements.

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7. Site G

Site G is on a small, unnamed drainage between Broken Bridge Creek and the existing Visitor Center. The dam would be just north of the southeasterly end of the Visitor Center parcel. The drainage area above the damsite is about 320 acres. Potential reservoir capacity is about as follows:

<u>Water Surface Elevation</u>	<u>Reservoir Capacity</u>
40 feet	0
70 feet	100 acre-feet
90 feet	400 acre-feet

The average annual runoff into this site would not be more than 200 acre-feet and the minimum will probably be 25 acre-feet or less. This project could only be used to supply the state requirements, and would require a diversion from Arroyo del Puerto in less than average years.

No field investigation of this site was made, but there are probably no serious problems with geology, archeology, or vegetation and wildlife.

The height of dam required to achieve a given reservoir capacity is large, and the spillway site is far from ideal.

This project would probably have a high cost per unit of dependable yield.

8. Site H

Site H is on Arroyo del Puerto about 3,500 feet above the Hearst Ranch headquarters, just below the confluence of a southerly fork. This site was taken under consideration after the field work was completed and no study has been made of vegetation and wildlife, geology or archeology.

Based upon the U.S. Geological Survey topographic maps, the available storage capacity would be about as follows:

<u>Elevation in Feet</u>	<u>Storage Capacity in Acre-Feet</u>
165	0
180	30
190	100
200	200
210	330
220	500

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The site offers a relatively efficient reservoir storage versus height ratio, but there is no obvious spillway location. It is not known whether there may be geologic difficulties.

The watershed area above the damsite is 1,240 acres, including a substantial proportion at relatively high elevations.

Based on a rough correlation with Arroyo de la Cruz, this watershed will have an average annual runoff of about 900 acre-feet, with the minimum in the order of 100 acre-feet and maximum over 2,500 acre-feet.

The potential firm annual yield was analyzed graphically, giving the following approximate results:

<u>Annual Yield</u> <u>Acre-feet Per Year</u>	<u>Required Storage</u> <u>Acre-Feet</u>
100	75
200	160
300	300
400	450
500	800

A reservoir at Site H would drown out a number of large sycamore trees and other smaller growth. It is not known whether any rare or endangered species of vegetation or wildlife would be affected, or whether archeological resources are within the area.

9. Transmission From Surface Storage

It has been assumed that, if any water storage project is built on either Arroyo Laguna or Oak Knoll Creek, the supply for the state will be released down the stream to a diversion and pumping plant near Highway 1. The transmission pipeline will follow the right-of-way along Highway 1 and the entrance road to the Visitor Center.

The available supply from the Hearst Corporation is more than adequate for the potable water requirements, so the new supply would be kept separate and not be treated.

Additional landscape watering supplies will eventually be

VI. SUPPL. WATER SOURCES

needed at the Castle, so the capability for lifting water up the hill will be required.

The existing pipeline from the upper reservoir to the Visitor Center cannot be used for two reasons:

1. It will be needed to bring the supply of potable water down the hill to the Visitor Center.
2. The pipeline would not stand the high pressure required to push water up the hill.

It is assumed that a new pipeline will be installed, following the road from the Visitor Center to the Castle and over to the 1.5 million gallon storage tank.

The upper springs would flow into the smaller storage tank and only flow which would otherwise be wasted will be mixed into the non-potable system.

Preliminary cost estimates for the necessary facilities include the following:

Oak Knoll Creek diversion, lump sum	\$15,000
Oak Knoll Creek pumping plant, lump sum	10,000
Transmission pipeline, Oak Knoll Creek to Visitor Center (8") 19,300 feet at \$15	292,500
	\$317,500
Transmission pipeline Visitor Center to Castle and to upper reservoir 31,600 feet at \$18	\$568,800
Highhead pumping plants, lump sum	15,000
	\$583,800

Note that these estimates do not include any revisions or additions to local piping at either the Visitor Center or the Castle. There is also no allowance for electrical power lines to the pumping plants.

Transmission facilities from Site H on Arroyo del Puerto to the Visitor Center would be much less than from an Oak Knoll Creek or Arroyo Laguna project. Facilities to transmit water to the hilltop would be somewhat less, and the lift would be about 140 feet less. It is assumed that the water

VI. SUPPL. WATER SOURCES

would be released down Arroyo del Puerto, to be picked up at the hilltop access road for transfer to the hilltop, and picked up at the closest point in the creek for the Visitor Center.

The costs for major facilities are estimated as follows:

Visitor Center diversion, lump sum	\$15,000
Low-head pumping plant, lump sum	5,000
1000 feet of 6-inch pipeline at \$15	<u>15,000</u>
	\$35,000
Hilltop diversion, lump sum	\$15,000
High-head pumping plants, lump sum	15,000
28,000 feet of 6-inch pipeline at \$15	<u>420,000</u>
	\$450,000

10. Summary of Reservoir Sites

Sites A and B, on Arroyo Laguna would not entail any archeological impacts, and would have only moderate impacts on vegetation and wildlife. Although there is a geological problem at the right abutment of Site B, the more favorable topography, including a nearly ideal spillway site, and the larger and higher elevation watershed indicate that the cost for a given yield would be less than at Site A.

Site C would be relatively expensive because of no good location for the spillway and would entail severe impacts on archeology, vegetation and wildlife. The additional water that would be available would not justify the project as compared to Site B.

Site D would require a longer dam than Site B and the spillway would be more costly. This site would also entail relatively severe impacts on vegetation and would inundate several archeological sites. The additional water would probably not justify the increased costs and adverse impacts.

Site E would entail severe impacts on vegetation in an area immediately adjacent to the Visitor Center and the Piedras Blancas Rancho headquarters. The project is not otherwise attractive enough to justify these impacts.

A Site F project would be very expensive in terms of the

VI. SUPPL. WATER SOURCES

dependable yield, and would impact a large and important archeological site. This project should not be considered further.

A reservoir at Site G would only be useful for storage of water diverted from some other source. The watershed is too small to yield a significant dependable supply.

Site H was not considered during the field studies, but appears to have some very favorable aspects. Although the topography is not very favorable for spillway construction, the site otherwise develops a comparatively large storage volume per unit of dam height. The area and elevations of the watershed indicate that a significant new water supply could be developed.

A reservoir at Site H would inundate a number of large sycamore trees and some smaller growth. It is not known whether there are archeological sites in the project area. This site should certainly be given further study if a reservoir is to be considered.

C. Increased Storage with Hearst Springs

A substantial portion of the annual flow from Chisholm and Phelan Springs goes to waste, because the major portion of the flow occurs in the winter and spring, when water use is low, and the flow is lowest during the late summer and fall, when water use is high.

Storage of excess flows during the winter and spring could provide a much larger useful supply. However, the total annual flows from the springs vary depending on the rainfall for the seasons, so the development of the maximum dependable supply would require some storage to carry over excess flows in wet years for use in dry years.

If the Hearst Corporation modified the terms of the grant to the State, several courses of action could be taken to provide for State needs.

1. Meeting Existing Hilltop Requirements

The existing water requirements at the Castle and grounds apparently reaches a maximum of about 60,000 gallons per day

VI. SUPPL. WATER SOURCES

in a critical month and probably totals 12 to 13 million gallons per year. If leakage in pipelines from the springs to the hilltop reservoirs is stopped, this requirement could be met entirely from the springs, even in critically dry years. The present hilltop reservoir capacity would probably be adequate, would not allow any excess flow during critical months for use at the Visitor Center and by the Hearst Ranch.

2. Expanded Hilltop Requirements

If the Pergola area is developed such as to entail landscape watering, meeting the increased requirement with the existing spring supply would depend entirely on storage in the dry months of critical years. Depending on the magnitude of the new requirements, an additional 3 to 5 million gallons of reservoir capacity on the hilltop would be required. Additional carryover storage would also be required for the Hearst Ranch and the Visitor Center, but this could be at a lower elevation.

3. Visitor Center and Hearst Ranch

Assuming that the requirements on the hilltop are met entirely from the existing spring supplies, service from this same source to the Visitor Center and the Hearst Ranch would depend completely on additional storage, which could be at a lower elevation.

Assuming the requirements on the hilltop are not increased, but the Visitor Center use is expanded by landscaping, the additional storage requirement might be 5 to 6 million gallons. If the requirements for landscape watering in the Pergola area are added at the hilltop, the additional storage requirement would be in the order of 10 million gallons in addition to that on the hilltop.

4. Storage Possibilities

The costs of reservoir structures such as underground concrete are enough that, to provide the volume needed to fully utilize flows from Chisholm and Phelan springs for service to the hilltop, Visitor Center, and Hearst Ranch, the expenditure would exceed the cost of a dam and reservoir in a natural canyon. A project such as could be built at Site H would

VI. SUPPL. WATER SOURCES

provide this storage plus a major new source of water supply for the San Simeon area.

D. Improvement of Chisholm and Phelan Springs.

Dr. Clarence A Hall, Professor of Geology at University of California, Los Angeles has recently completed a study of geology in the San Simeon area.

One of the features he studied carefully was a series of ancient volcanic necks or plugs which form a line of peaks through the area behind the Hearst Castle. Pine Mountain, where the Phelan Spring is, and an un-named peak to the northwest, where the Chisholm Spring is, are part of this series.

Dr. Hall reports that these necks are formed of dacite, which is intruded through Franciscan melange and Jurassic ophiolite. The dacite is highly fractured and appears to infiltrate and percolate water readily. The melange and ophiolite are, for the most part, relatively impervious. He notes that these springs, as well as similar springs on other peaks in the series, appear at or near the contact with Franciscan rock.

According to Dr. Hall's theory, these springs are flowing water which has percolated from the rainfall on the peaks. During the winter and spring seasons the fractured dacite is saturated to a level well above the springs and high flows occur. In the late summer and fall, the volcanic rock has been drained to near the elevation of the springs and the flow rates decrease markedly.

From these observations and deductions it follows that, if the fractured dacite could be penetrated at a level lower than the springs, there would be a greater volume of stored water available to use during the dry season and, if this stored water was used, there would be a greater capacity to capture a new supply during the next wet season. If the lower tap or taps were controlled, the water could be withdrawn to match the requirements and no surface storage would be needed.

This potential cannot be fully evaluated at this time, but it certainly merits consideration.

VI. SUPPL. WATER SOURCES

A more detailed exploration of the area and further study of the theory would be the first step, but the final evaluation could only be made after some test drilling.

VII. ON-SITE TRANSPORTATION

Consideration has been given in past studies to alternative modes of transportation from the Visitor Center to the Castle. These included the use of an aerial tramway or a funicular railway.

The aerial tramway would entail a large investment and would inevitably detract from the scenic value, whether the view was up from the coast or down from the Castle.

A funicular railway would also require a large investment and would detract from the scenic value. Although a route might be selected which would hide most of the railway when viewed from below, it would be impossible to hide it entirely from viewers at the Castle.

Both the aerial tramway and the funicular railway would require additional right-of-way through Hearst Corporation lands and the funicular railway would form a barrier to the movement of cattle and other animals.

The present system of contracting for bus service over the existing road is working reasonably well and is very economical. On a busy day, more than 4,000 people are transported up to the castle and back at a cost of about \$1,200, making the cost less than 30 cents per person.

The school busses now used for transportation are far from ideal for this service, but are probably the best that can be expected while the service contract is only of one year duration. If a long-term contract could be provided, so that amortization of an initial investment could be assured, it should be possible to obtain busses more suitable for this use.

There is evidence of some trouble with earth slides on the road from the staging area to the Castle.

VII. ON-SITE TRANSPORTATION

Although these slide areas are a constant maintenance problem throughout the year and are an excessively high cost item, the problem areas are localized. With competent engineering design of the drainage effecting them, upkeep could be greatly minimized. Most of the road is in good condition and requires only general maintenance to keep it in good repair.

VIII. SIGNIFICANT LEGISLATION

Several legal and legislative actions place actual or potential constraints on land use, development and operations in the San Simeon area. Any plan for the State Historical Monument must obviously consider these policies and constraints.

A. Special Legislative Budget Provisions.

The terms of the grant of the Hearst San Simeon State Historical Monument property from the Hearst Corporation to the State of California stipulated some constraints on the use of revenues from the Monument operations. As a result of these constraints, the items in the State budget acts providing support for the Department of Parks and Recreation include specific amounts which can only be used for operation of the Hearst Monument. It is further directed in the budget acts that any revenues from the Monument in excess of the operating budgets be transferred to a special account in the General Fund available only for appropriation by the Legislature for maintenance and capital outlay at the Hearst Monument.

B. San Luis Obispo County Planning.

The Open Space Plan for San Luis Obispo County, prepared by the Planning Department and adopted by the County June 12, 1972, designates the San Simeon peninsula and the beach area to the northwest as "Scenic Restrictive." This is in recognition of the high resource value and ecological sensitivity of the area.

San Simeon village and Hearst County Park are zoned as recreational land, and the balance of the adjacent area is designated as "Non-open Space", which would allow for urbanization. The latter designation results from a development plan presented

VIII. SIGNIFICANT LEGISLATION

by the Hearst Corporation some years ago and subsequently approved by the County. Revocation of that approval has been proposed recently and little opposition to the proposal was voiced in a public hearing. It is possible that a much more restrictive designation for this area may be adopted by the County in the near future.

C. California Coastal Zone Conservation Act.

The Coastal Conservation Commission was established by an initiative measure approved by the California voters November 7, 1972.

The act established a policy for the State declaring that the coastal zone is a valuable Natural resource, belonging to all of the people and existing as a delicately balanced ecosystem. It cites the permanent protection of the remaining resource as a matter of paramount concern to present and future residents of the state and nation. It states that it is the policy of the state to preserve, protect and, where possible, to restore the resources of the coastal zone for the enjoyment of current and succeeding generations.

It directs that the coastal zone will be studied and a California Coastal Zone Conservation Plan be developed. It further directs that a permit zone be established and development within this zone be consistent with the Plan.

The Act creates the California Coastal Zone Conservation Commission and six regional coastal zone conservation commissions to implement the policies and provisions.

The coastal zone includes the California coast along the Pacific Ocean from the seaward limit of state jurisdiction, to the crest of the nearest mountain range, with some special limitations in Los Angeles, Orange and San Diego Counties.

VIII. SIGNIFICANT LEGISLATION

The permit zone extends from the seaward limit of state jurisdiction to a line 1000 yards landward from the limit of mean high tide. There are a few special exceptions to this definition, but none affect the San Simeon area.

In conformity with the purposes of the Act, work has proceeded toward development of a California Coastal Zone Conservation Plan and a Preliminary Coastal Plan in draft form for review and hearing was issued in March of 1975.

One of the basic tasks of the study was identification of the existing resources in the coastal zone. Figure VIII-C-1 shows the assessment of the San Simeon area as presented in the Preliminary Coastal Plan. It will be noted that much of the area immediately adjacent to the ocean is classified sensitive marine biological area. The steeper slopes away from the coastal shelf are nearly all classified as potentially hazardous to public safety.

The entire coastal zone from Cambria to the Monterey County line is designated as a special study area. Special objectives for the area include the following:

- Protect the sand dunes and freshwater marsh adjacent to Point Piedras Blancas.
- Maintain the coastal shelf between Point Piedras Blancas and San Simeon as scenic and open area.
- Maintain the special community character of San Simeon Village.
- Protect the freshwater marsh and adjacent upland wildlife area at Arroyo de la Cruz.
- Protect the San Simeon Creek estuary adjacent to the State Park from over-use.
- Maintain the scenic and open space area between San Simeon Village and San Simeon Acres, south of Pico Creek.

VIII. SIGNIFICANT LEGISLATION

D. New Legislation for Historical Resources.

A new bill was introduced in the California Assembly in April, 1975, to improve the regulations for protection and preservation of historical resources, including archeological material and sites. This bill, introduced by Assemblyman Arnett, is summarized by the Legislative Counsel as follows:

"Under existing law, the State Historical Resources Commission has certain powers and duties with respect to the protection and preservation of historical resources, such as conducting a statewide inventory and maintaining comprehensive records of historical resources, establishing criteria for the recording and preservation of historical resources, and recommending statewide historical resources plans to the Department of Parks and Recreation, including a list of historical resources projects on a priority basis. "Historical resources," for such purposes, includes archaeologically significant objects and sites. The department has responsibilities with respect to historical resources, including the administration of historical units of the state park system. The State Park and Recreation Commission is empowered to classify or reclassify a unit of the state park system, including historical units, and to approve the department's resource management plan and general development plan for the unit.

This bill would require the State Historical Resources Commission to develop criteria and methods for determining the significance of archaeological sites, for selecting the most important archaeological sites, and for determining whether the most significant archaeological sites should be preserved intact or excavated and interpreted; and to develop

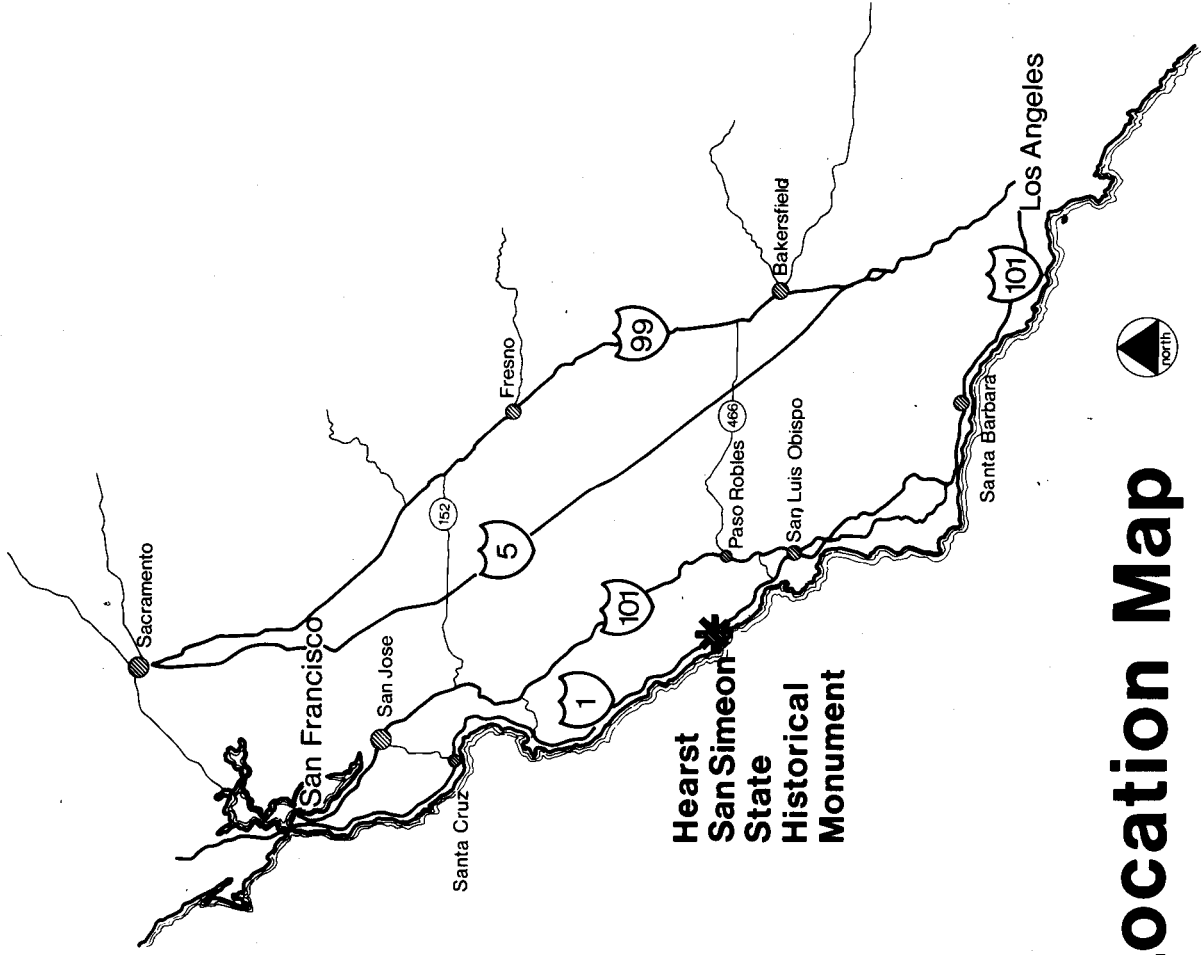
VIII. SIGNIFICANT LEGISLATION

guidelines for the reasonable and feasible collection, storage, and display of archaeological specimens.

The bill would specify that historical units of the state park system may include areas to preserve archaeological objects and sites.

The bill would require the Chairman of the State Historical Resources Commission to serve as an ex officio member of the State Park and Recreation Commission."

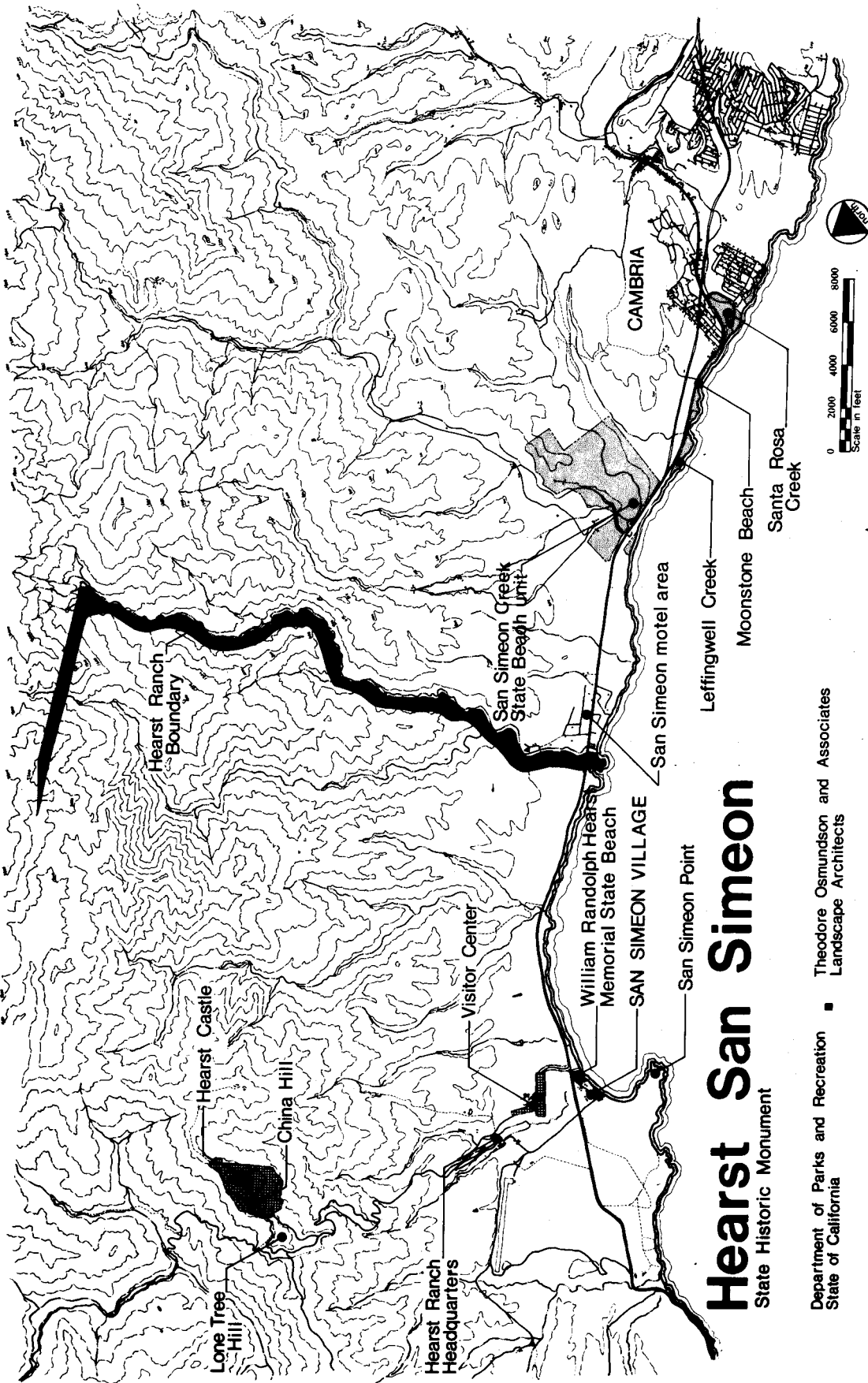
As of July, 1975, this bill was proceeding smoothly through the legislature and it is presumed that it will pass easily.



**Hearst
San Simeon
State
Historical
Monument**

Location Map







Hearst San Simeon

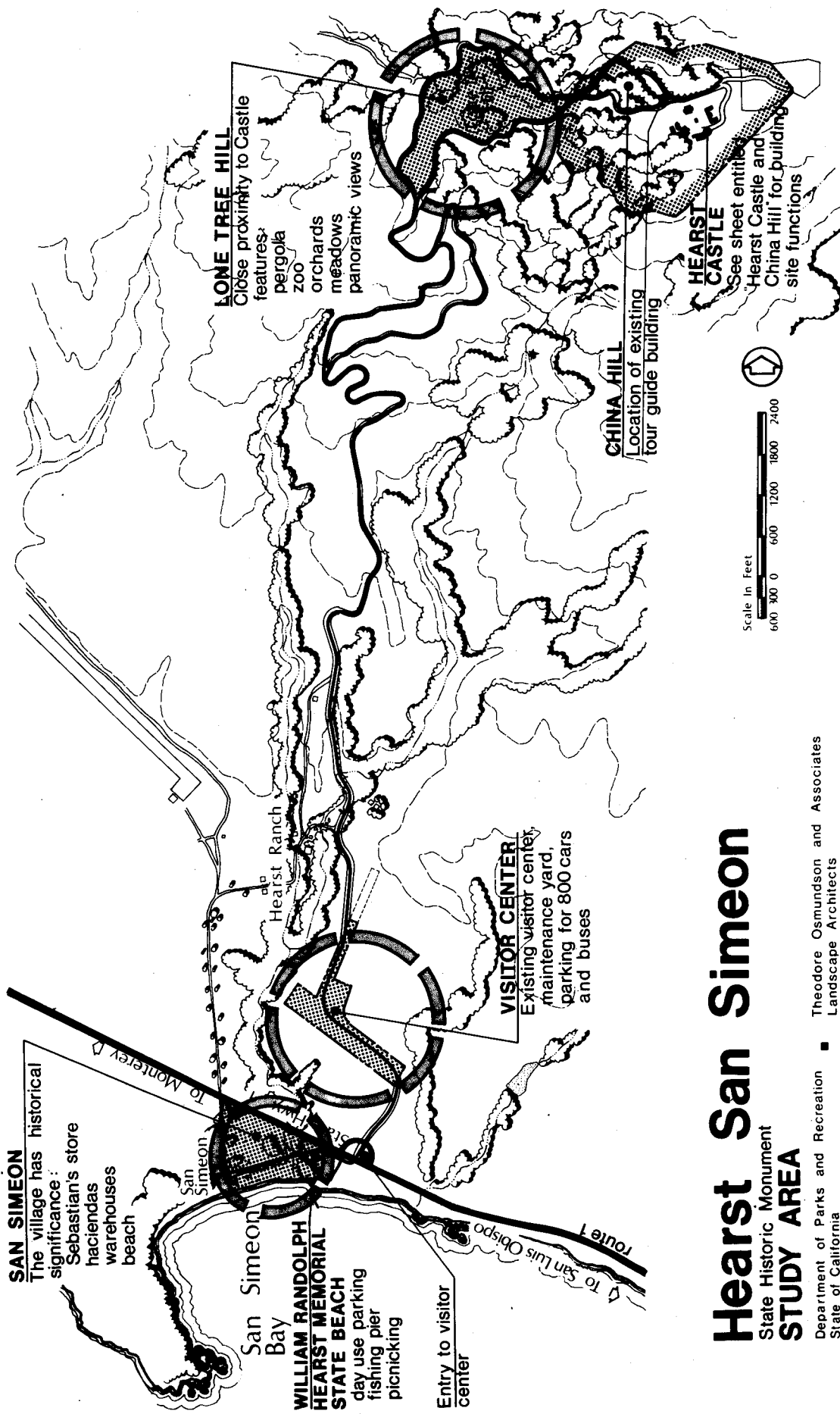
State Historic Monument

Department of Parks and Recreation
 State of California

Theodore Osmundson and Associates
 Landscape Architects

 Scale in feet
 0 2000 4000 6000 8000

 Hearst San Simeon State Historic Monument

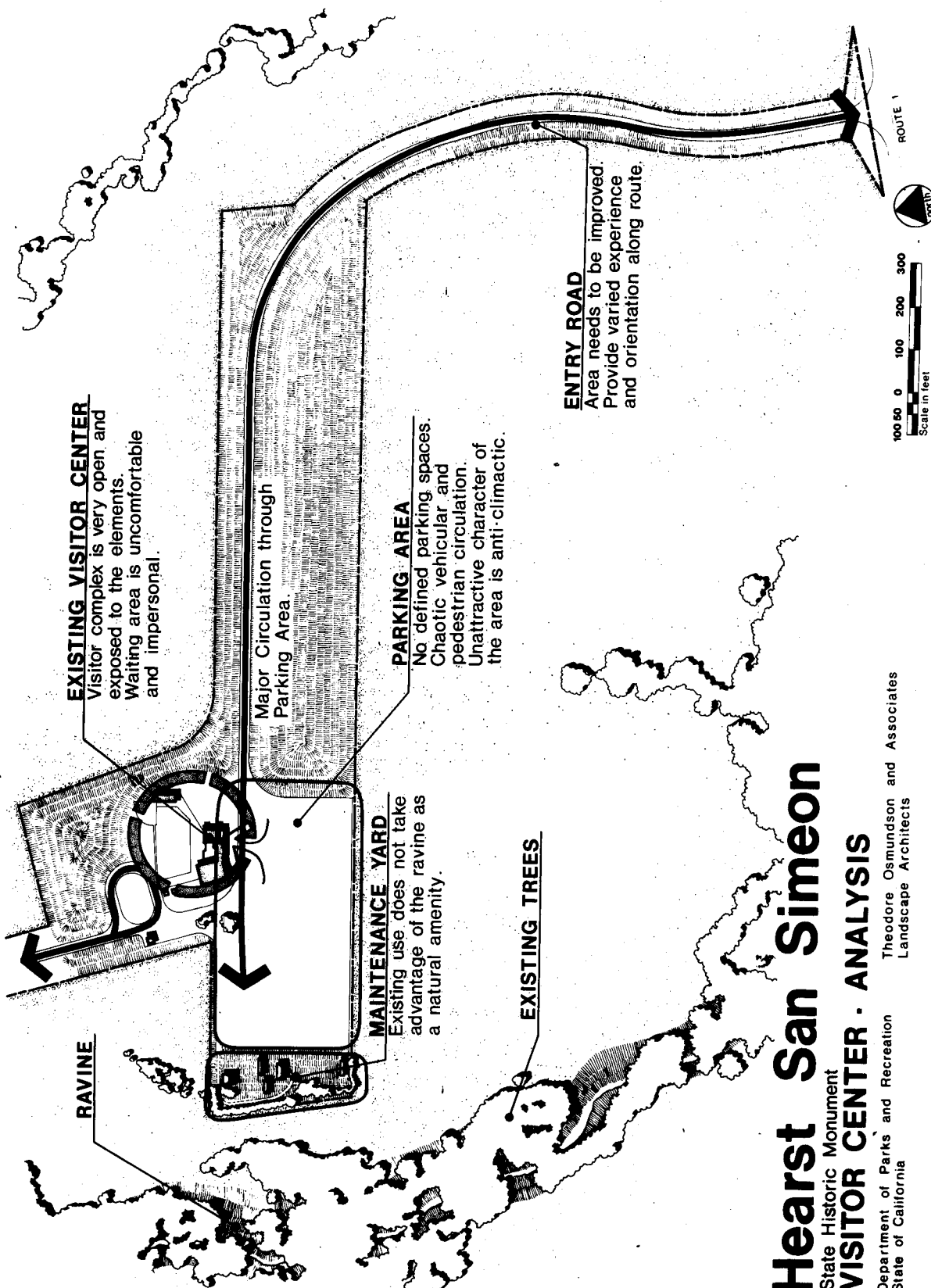


Hearst San Simeon

State Historic Monument
STUDY AREA

Department of Parks and Recreation
State of California

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EXISTING VISITOR CENTER
 Visitor complex is very open and exposed to the elements. Waiting area is uncomfortable and impersonal.

Major Circulation through Parking Area.

PARKING AREA
 No defined parking spaces. Chaotic vehicular and pedestrian circulation. Unattractive character of the area is anti-climactic.

MAINTENANCE YARD
 Existing use does not take advantage of the ravine as a natural amenity.

EXISTING TREES

ENTRY ROAD
 Area needs to be improved. Provide varied experience and orientation along route.

RAVINE

Hearst San Simeon

State Historic Monument

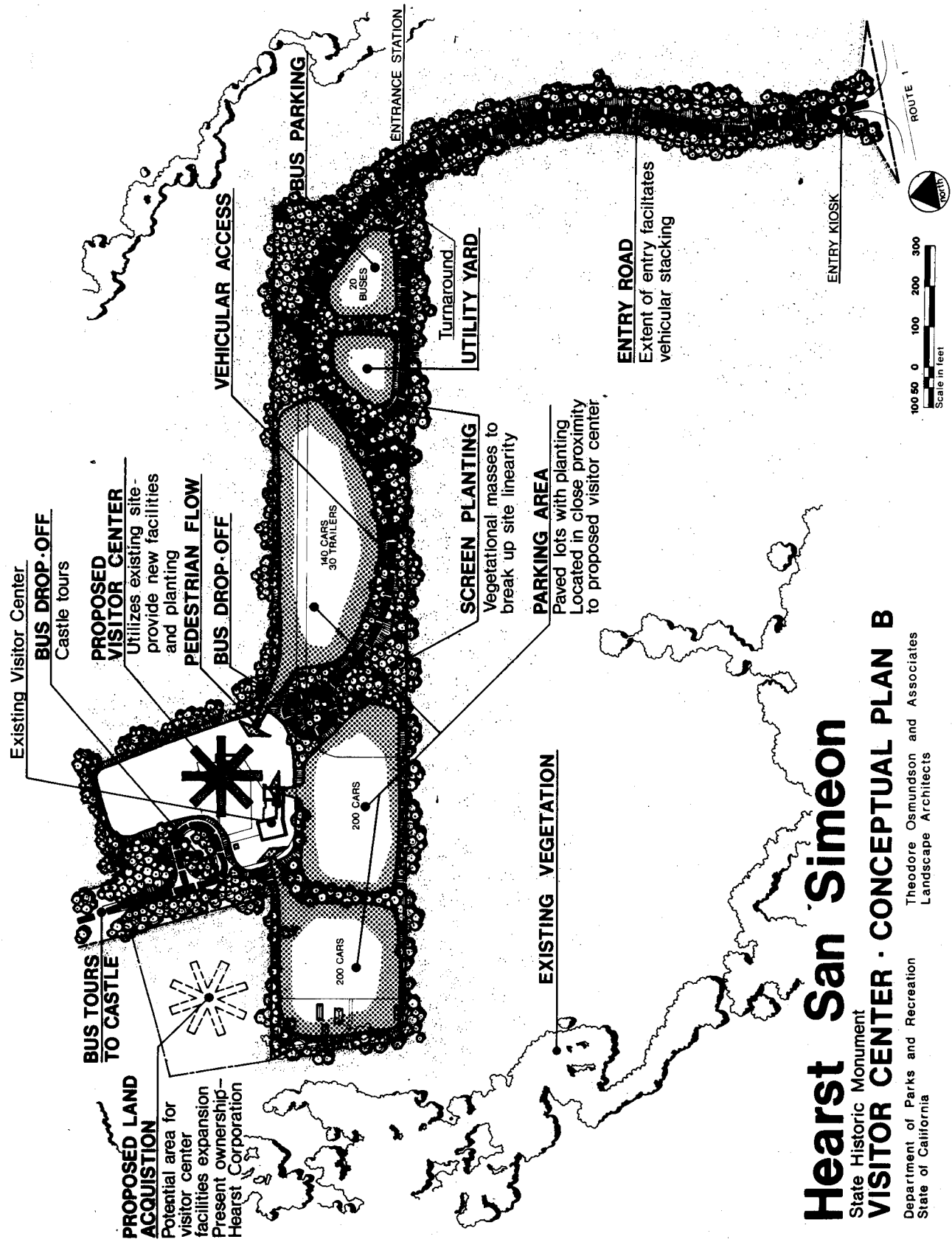
VISITOR CENTER - ANALYSIS

Department of Parks and Recreation
 State of California

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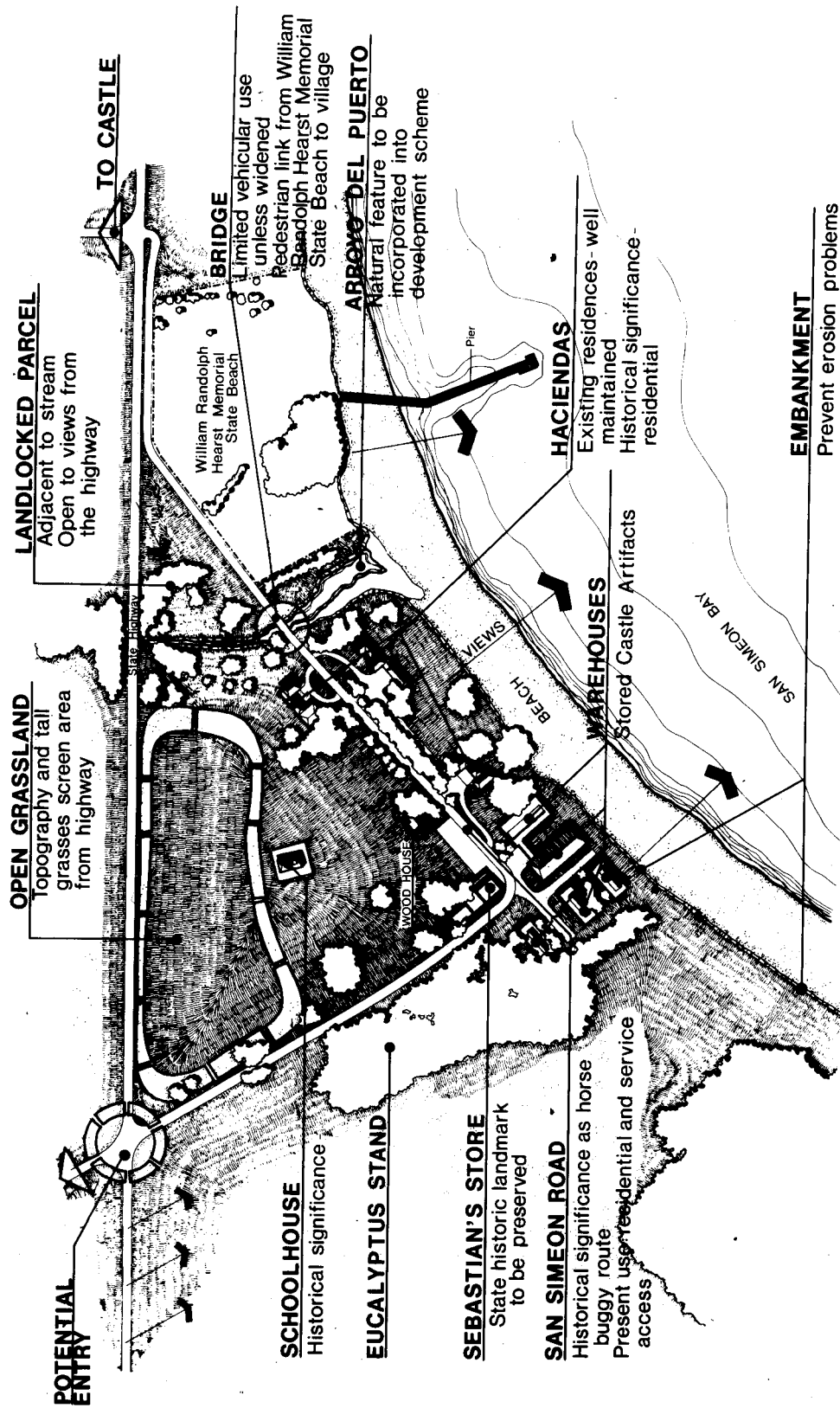
ROUTE 1



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VISITOR CENTER - CONCEPTUAL PLAN B
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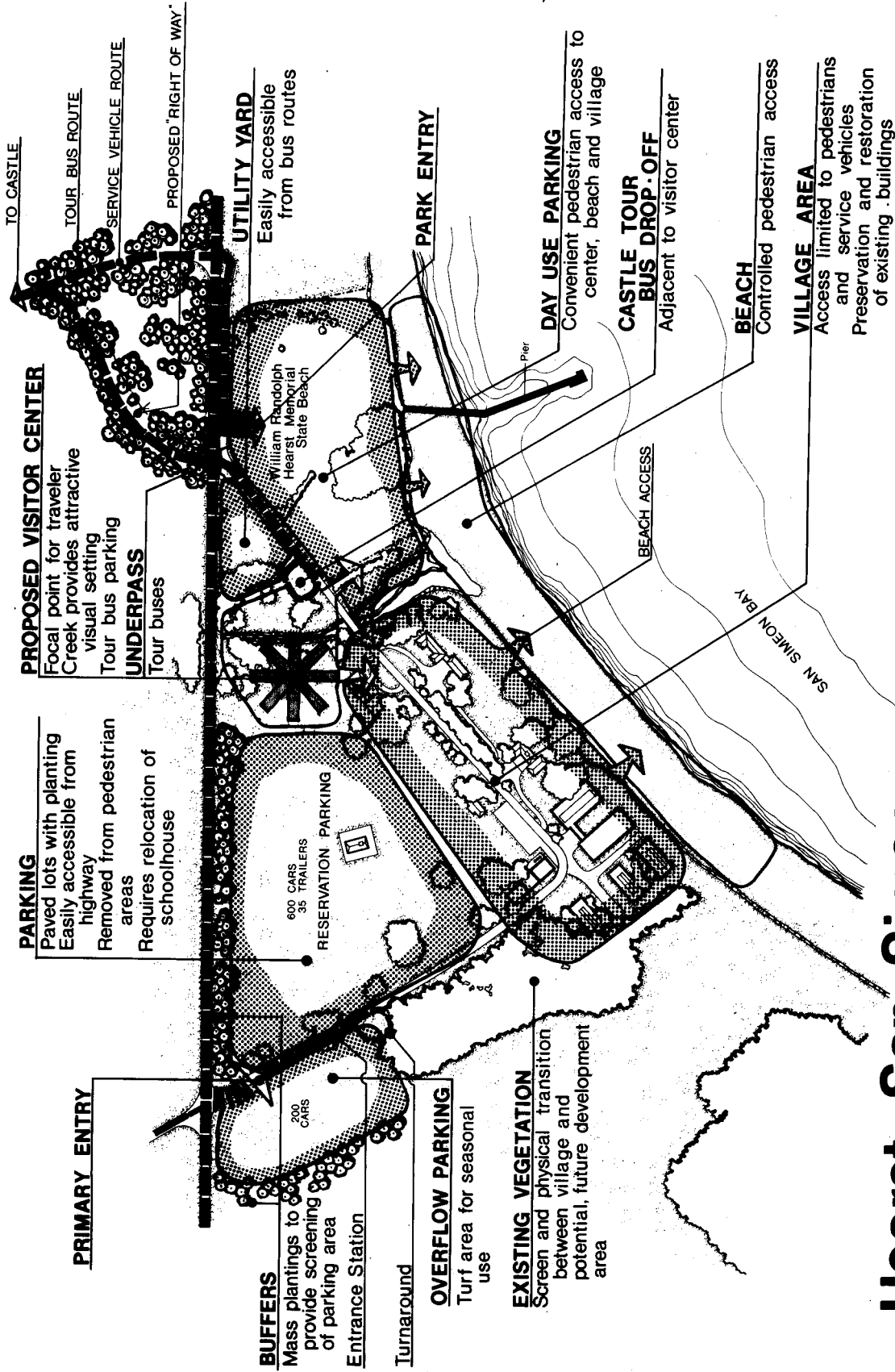
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SAN SIMEON VILLAGE - ANALYSIS

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TO CASTLE

PROPOSED VISITOR CENTER

Focal point for traveler
Creek provides attractive
visual setting
Tour bus parking
Tour buses

PARKING

Paved lots with planting
Easily accessible from
highway
Removed from pedestrian
areas
Requires relocation of
schoolhouse

PRIMARY ENTRY

BUFFERS

Mass plantings to
provide screening
of parking area
Entrance Station

TURNAROUND

OVERFLOW PARKING

Turf area for seasonal
use

EXISTING VEGETATION

Screen and physical transition
between village and
potential, future development
area

UTILITY YARD

Easily accessible
from bus routes

PARK ENTRY

DAY USE PARKING

Convenient pedestrian access to
center, beach and village

**CASTLE TOUR
BUS DROP-OFF**

Adjacent to visitor center

BEACH

Controlled pedestrian access

VILLAGE AREA

Access limited to pedestrians
and service vehicles
Preservation and restoration
of existing buildings

600 CARS
35 TRAILERS
RESERVATION PARKING

200
CARS

William Randolph
Hearst Memorial
State Beach

Pier

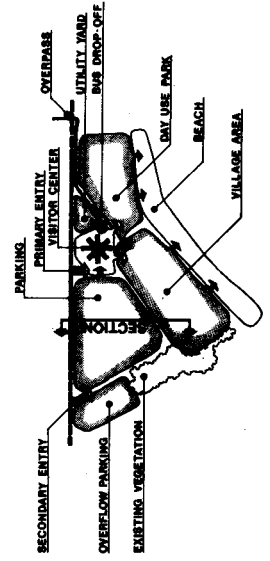
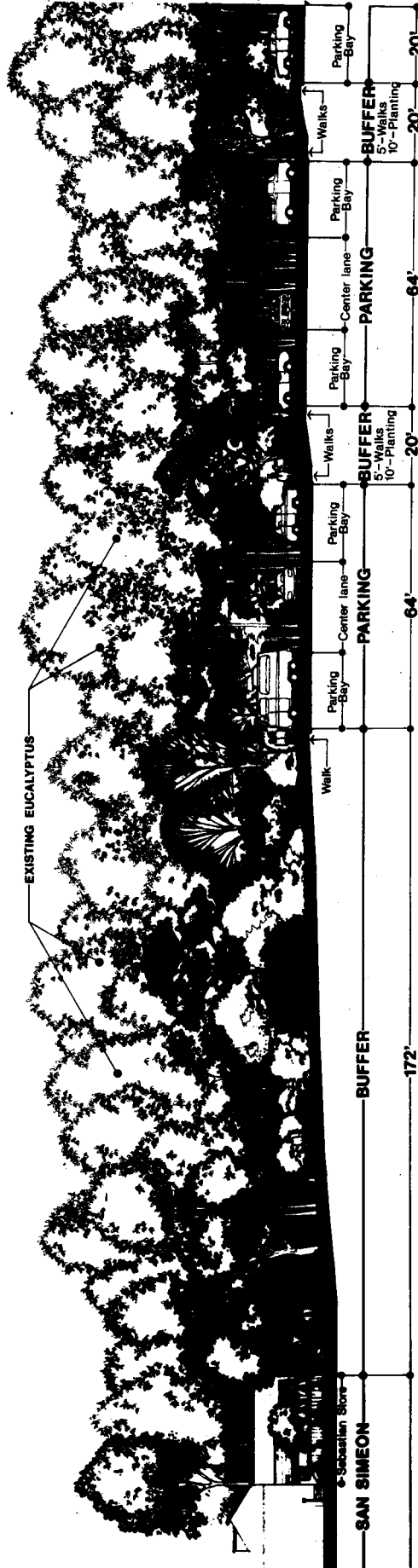
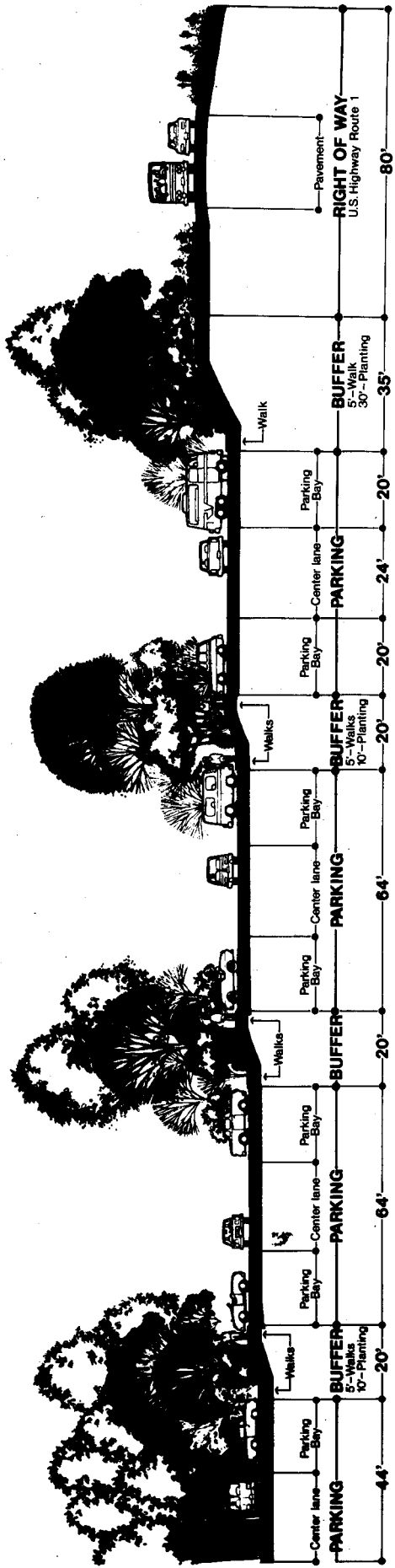
BEACH ACCESS

SAN SIMEON BAY



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State Historic Monument
SAN SIMEON VILLAGE - CONCEPTUAL PLAN A
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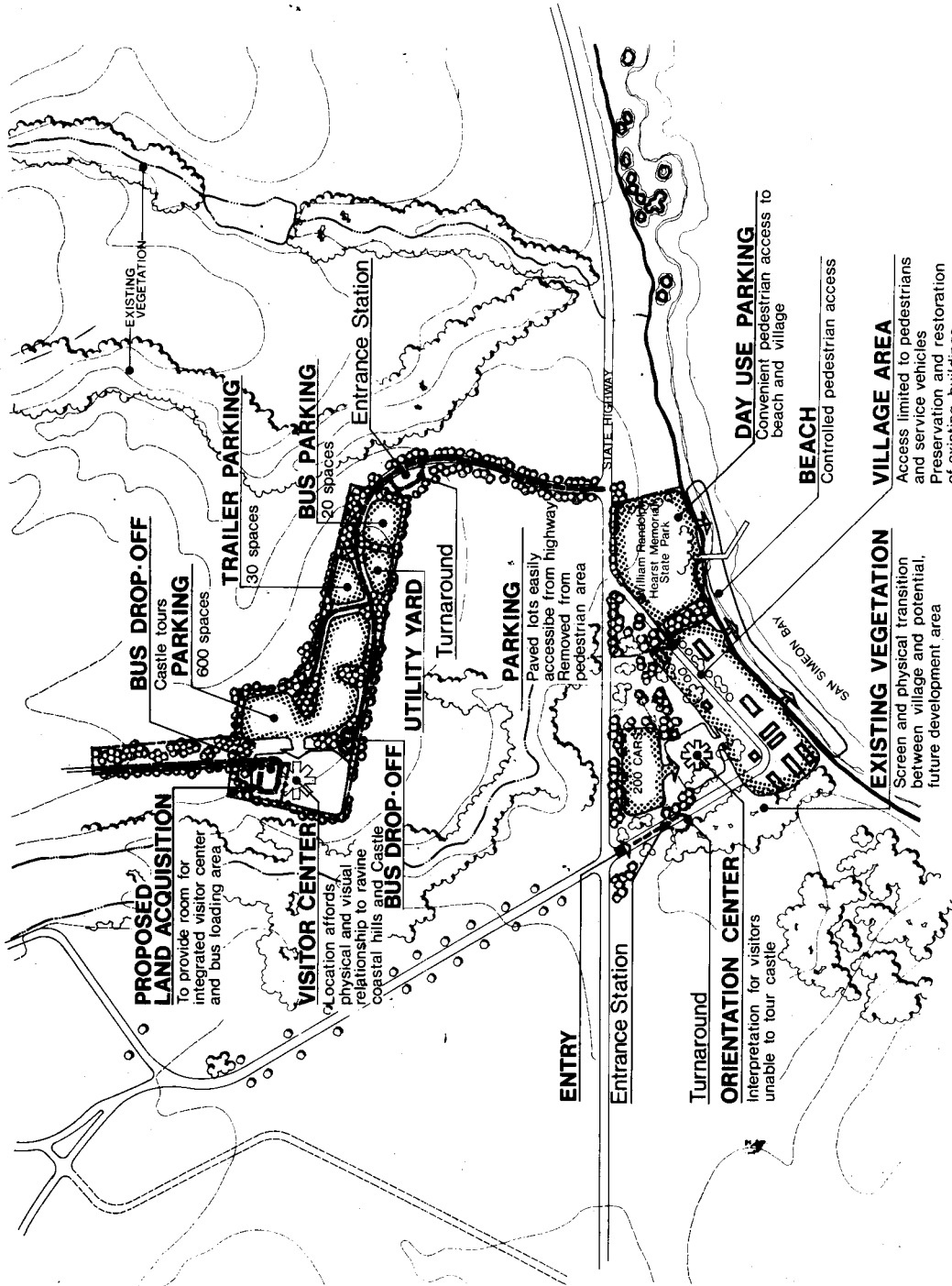
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SECTIONS
Parking Area

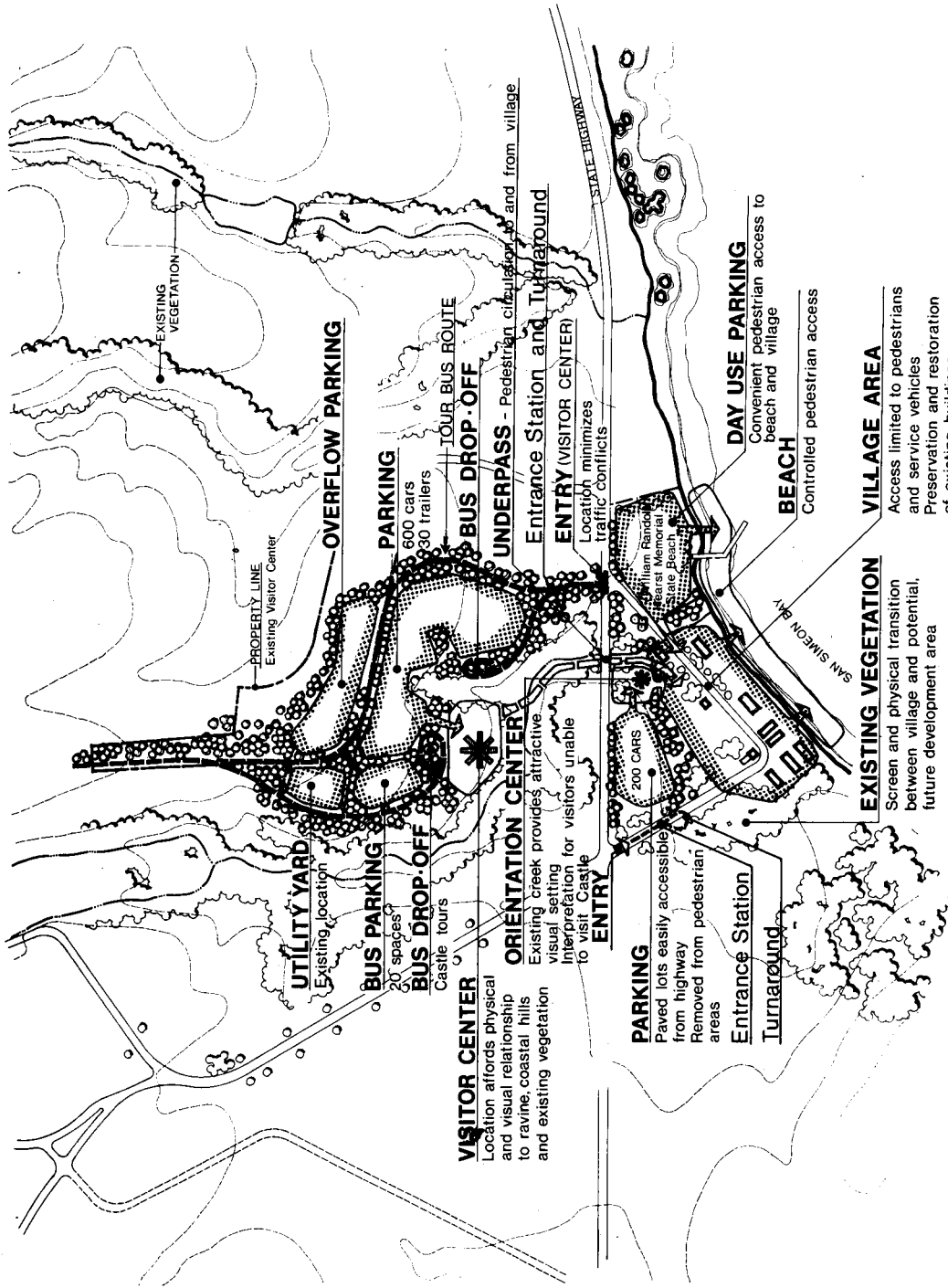
SCALE: 1" = 10'-0"
Horizontal and Vertical Scales

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State Historical Monument
SAN SIMEON VILLAGE - CONCEPTUAL PLAN A
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VISITOR CENTER/VILLAGE-CONCEPTUAL PLAN A
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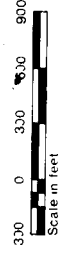
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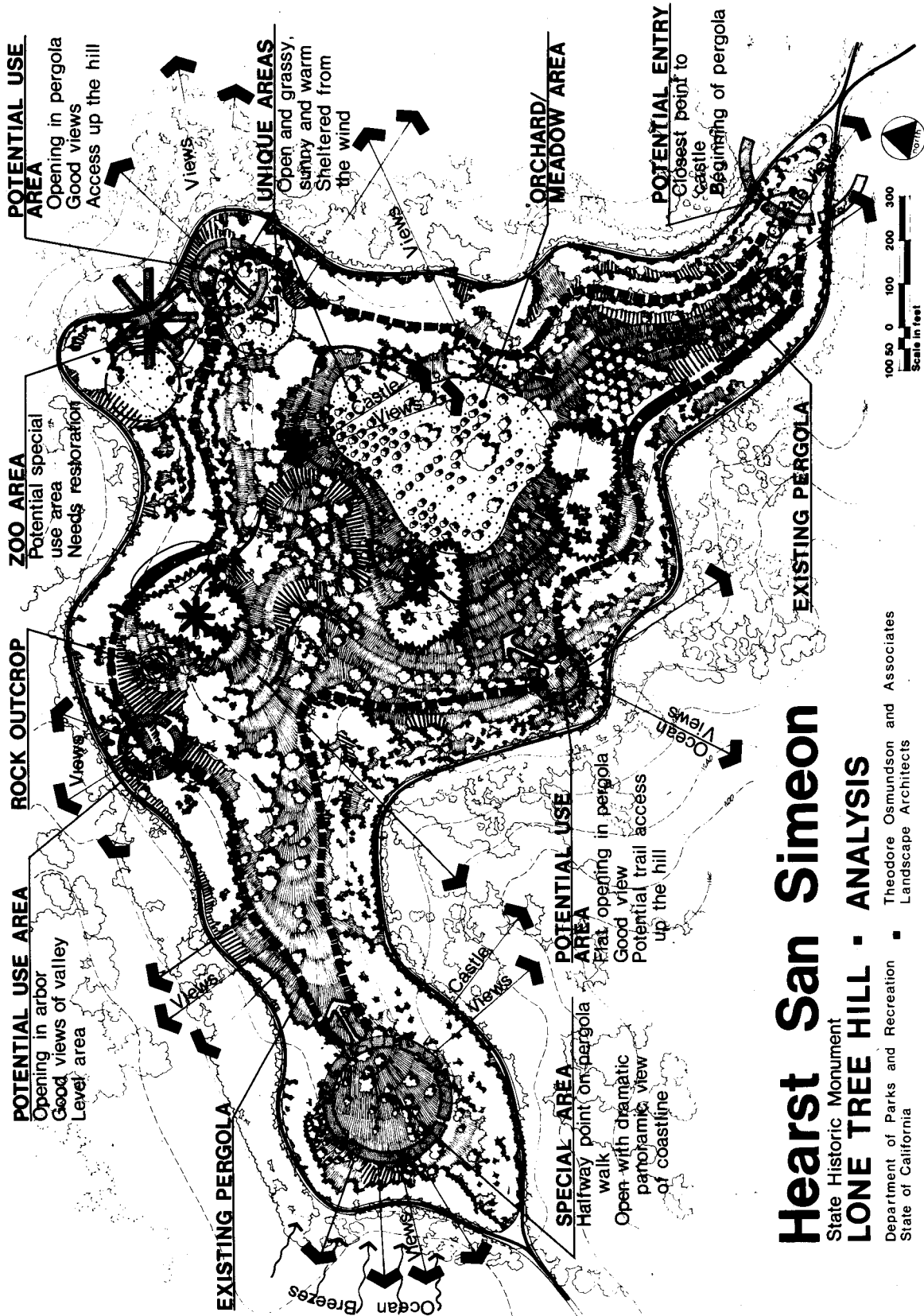
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VISITOR CENTER/VILLAGE-CONCEPTUAL PLAN B

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State of California

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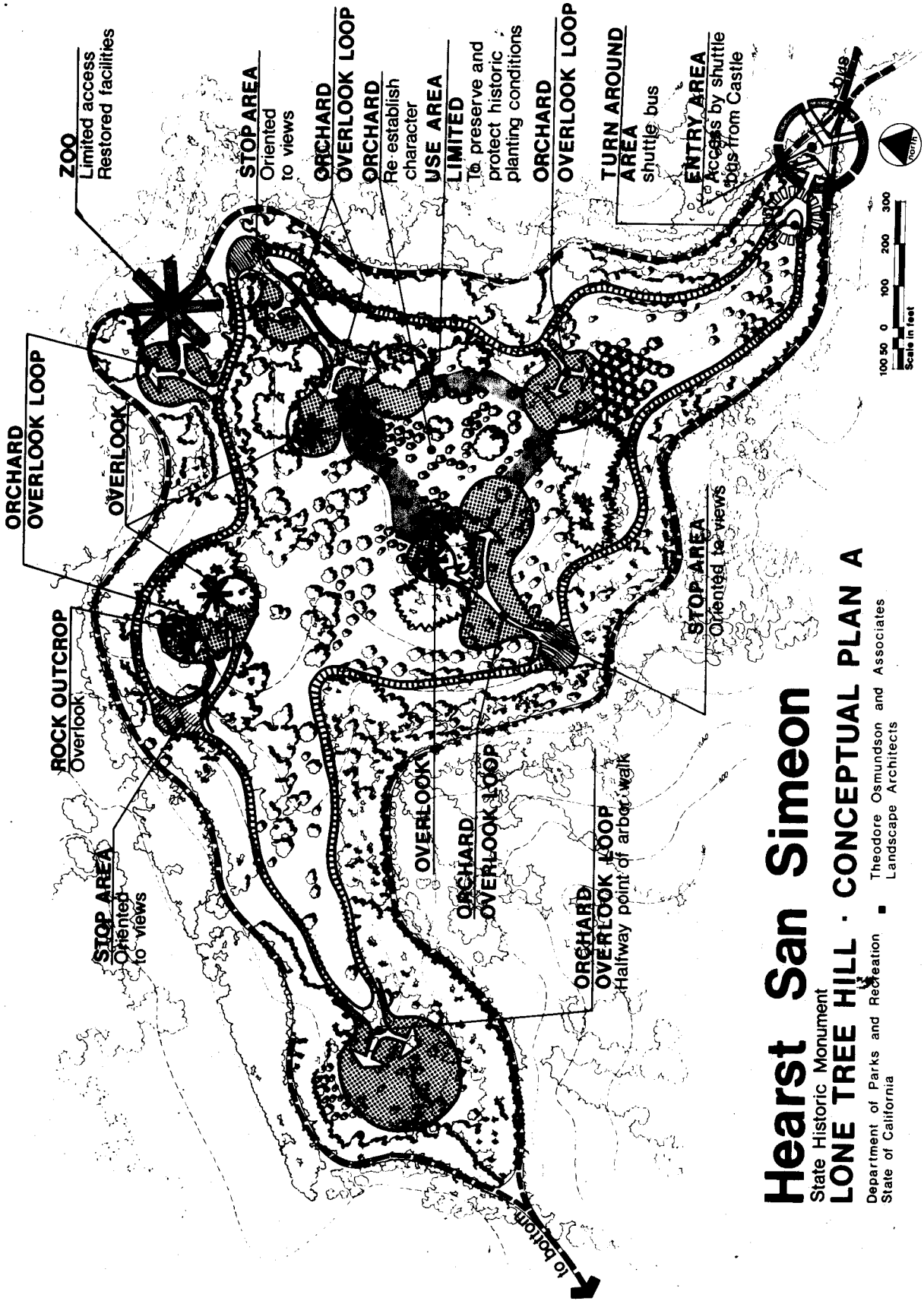
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LONE TREE HILL - ANALYSIS

Department of Parks and Recreation
State of California

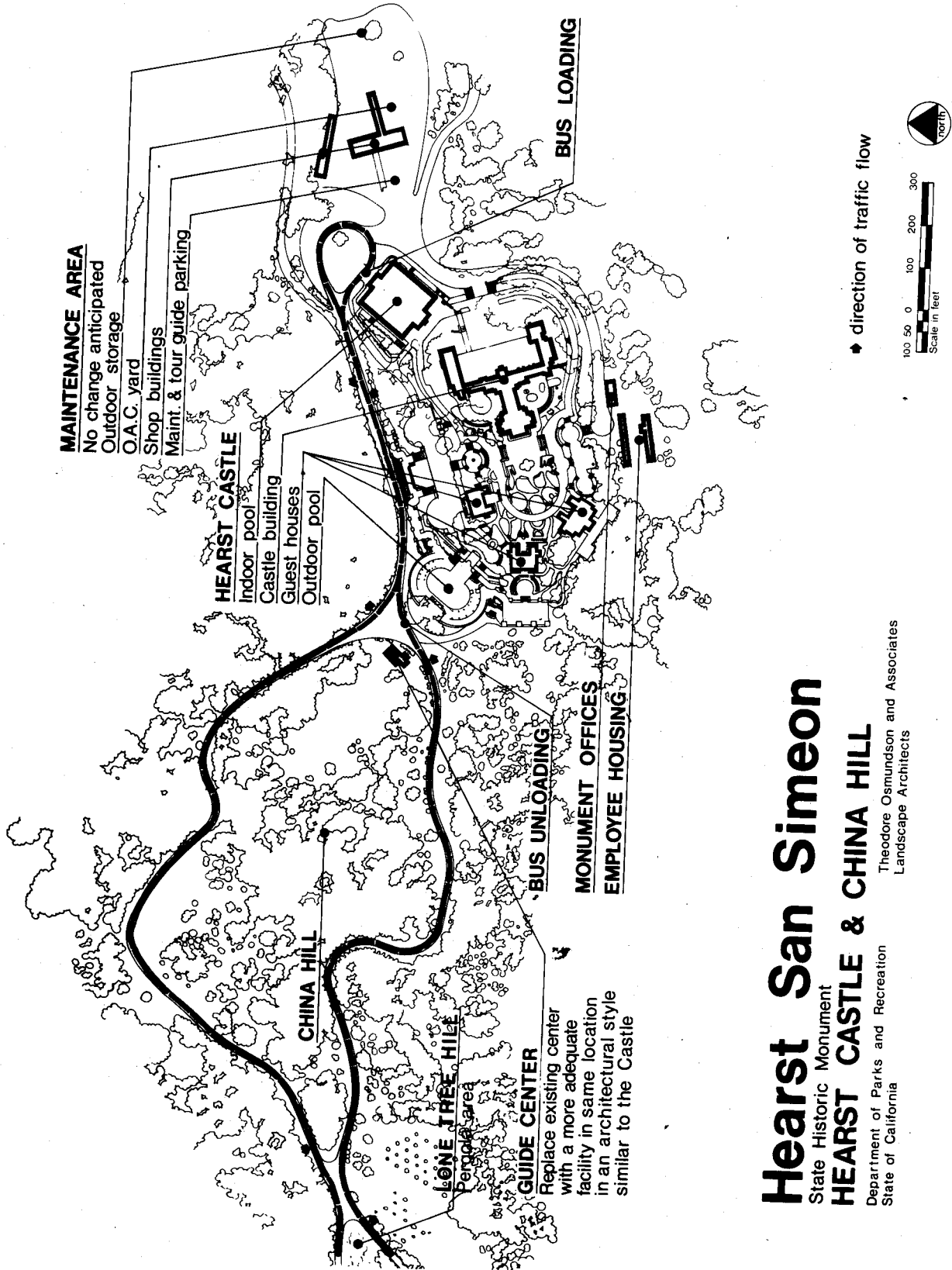
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Potential Access At High Point *Potential Access At High* *Potential Use Area*



Hearst San Simeon
 State Historic Monument
LONE TREE HILL · CONCEPTUAL PLAN A
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 State of California



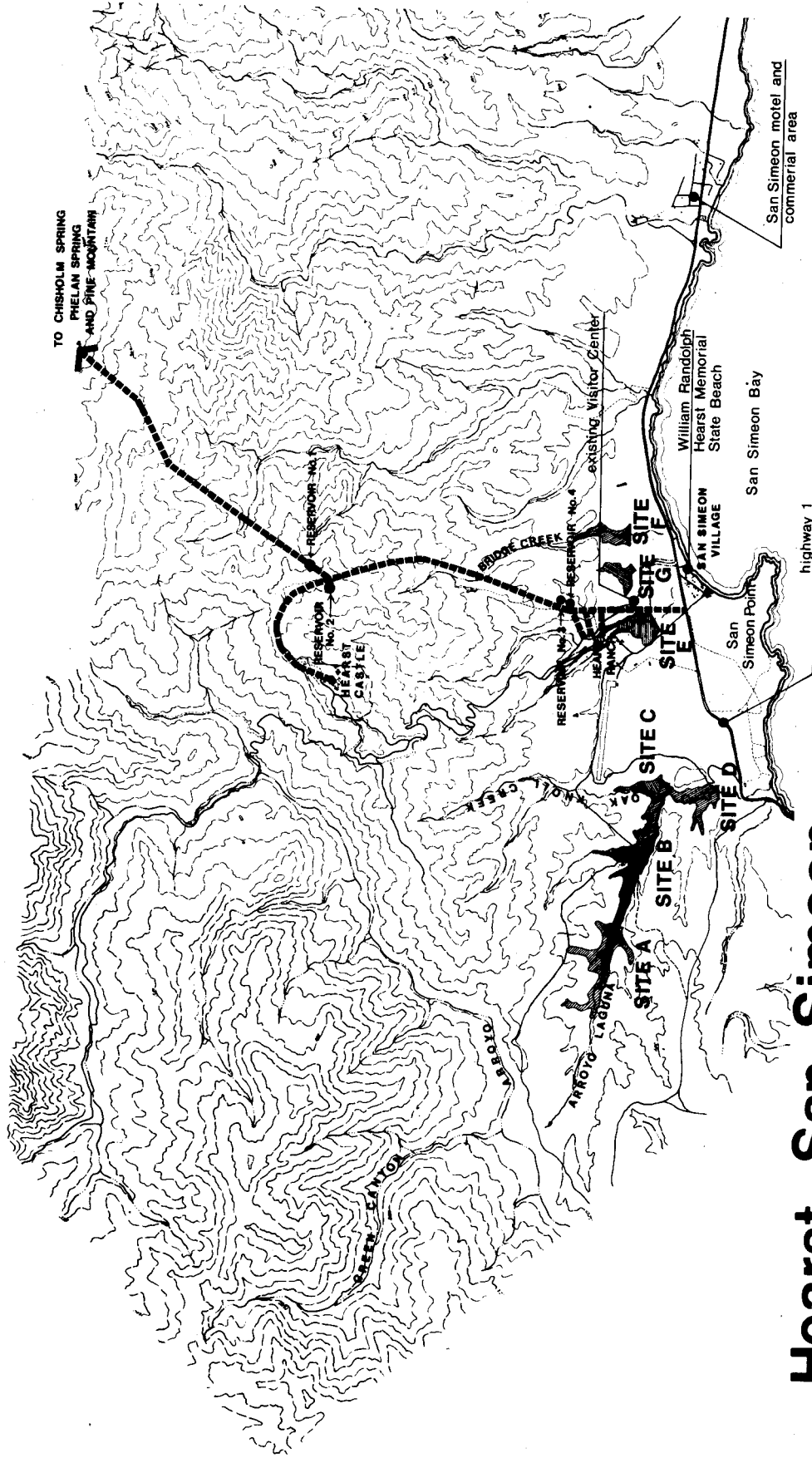
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State Historic Monument

HEARST CASTLE & CHINA HILL

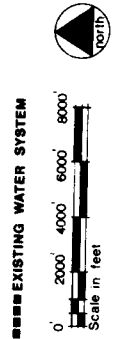
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Hearst San Simeon
 State Historic Monument
POTENTIAL WATER STORAGE SITES
 Department of Parks and Recreation
 State of California

- Theodore Osmundson and Associates
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- Environmental Assessment and Resource Planning



San Simeon motel and commercial area

San Simeon Bay

William Randolph Hearst Memorial State Beach

SAN SIMEON VILLAGE

San Simeon Point

highway 1

existing Visitor Center

RESERVOIR No. 4

RESERVOIR No. 3

RESERVOIR No. 2

RESERVOIR No. 1

POUDRE CREEK

ARROYO LAGUNA

GPK MICHO

BROYD CREEK

HEARST CASTLE

TO CHISHOLM SPRING PHEASANT SPRING AND PINE-MOUNTAIN

SITE A

SITE B

SITE C

SITE D

SITE E

SITE F

SITE G

