## Th 13a

## STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY DETERMINATION

$$
\begin{array}{lr}
\text { Consistency Determination No. CD-047-97 } \\
\text { Staff: } & \text { JRR-SF } \\
\text { File Date: } & 4 / 11 / 1997 \\
\text { 45th Day: } & 5 / 26 / 1997 \\
\text { 60th Day Extended To: } & 11 / 7 / 1997 \\
\text { Commission Meeting: } & 11 / 6 / 1997
\end{array}
$$

## FEDERAL AGENCY: FOREST SERVICE

DEVELOPMENT LOCATION:

Sycamore Canyon Road and Pfeiffer Beach, Big Sur, Los Padres National Forest, Monterey County (Exhibit 1)

DEVELOPMENT DESCRIPTION:

Reconstruction of existing parking lots, construction of restroom, boardwalk, entrance kiosk and turn around, gate, revegetation of disturbed areas, and implementation of traffic management plan (Exhibit 2)

## SUBSTANTIVE FILE DOCUMENTS:

1. CD-080-95, Consistency Determination by Forest Service for rehabilitation of Pfeiffer Beach Day Use Area.
2. Pfeiffer Beach Day Use Rehabilitation Project, Environmental Assessment, June 1997.
3. Sycamore Canyon Road/Pfeiffer Beach Transportation Analysis, September 1996.
4. Biological Opinion for the Pfeiffer Beach Rehabilitation Project, Monterey County, California (1-8-95-F-33), U.S. Fish and Wildlife Service, July 3, 1995.

## EXECUTIVE SUMMARY

The Forest Service submitted a consistency determination for the rehabilitation of existing deteriorated recreational support facilities at Pfeiffer Beach in Big Sur. Specifically, the proposed project includes construction of a boardwalk from the parking area to the beach, relocation and expansion of bathrooms, repaving of existing parking areas and access roads, construction of an entrance kiosk and turn-around, restoration of one of the overflow parking areas (reducing the amount of parking), and implementation of a traffic management plan. Based on public comments and a re-evaluation of the project, the Forest Service modified its consistency determination to make the following commitments: 1) a single stage transportation management proposal that includes signage on Highway 1 and posting an attendant to enforce the sign; 2) construction of a turn around lane on Sycamore Canyon Road just below Highway 1; and 3) implementation of the transportation plan before the re-development of the recreational facility. Finally, the Forest Service proposes to monitor the effectiveness of its transportation management efforts.

The Commission previously objected to the Forest Service's consistency determination for the infrastructure and facilities improvements described in that project (CD-080-95), because the improvements to the recreational support facilities in the area would have the effect of drawing more people to the beach, and thus, add to an already serious traffic problem. This existing problem interferes with the public's ability to get to the shoreline and represents a public safety issue because emergency vehicles may have difficulties accessing this area during peak recreation periods. In objecting to the previous consistency determination, the Commission found that, without traffic management, the improvements would increase the traffic problem in a manner inconsistent with the access policies of the California Coastal Management Program (CCMP). As a result of that objection, the Forest Service agreed to prepare a transportation plan for Sycamore Canyon Road, the only access road to Pfeiffer Beach. The Forest Service has completed that transportation plan and has incorporated the recommendations of that plan into this consistency determination. Additionally, the proposed project reduces the number of designated parking spaces, but the reduction is necessary to protect natural resources and the carrying capacity of the beach and Sycamore Canyon Road. Thus, the Forest Service has modified the proposal, as requested by the Commission under Section 30214 of the Coastal Act, to address critical transportation impacts and manage access in a manner taking into account the various site's constraints and unique features. Therefore the proposed project is consistent with the access and recreation policies of the CCMP.

The project benefits habitat resources because the boardwalk will direct people away from those areas containing those sensitive resources. The project is consistent with the water quality policies of the Coastal Act, because the Forest Service will re-pave the overflow parking lot using "best management practices" to direct runoff away from the stream, and thus mitigate for an existing source of water quality degradation. Additionally, the boardwalk will reduce erosion into the stream. Finally, the traffic management program will reduce habitat impacts associated with indiscriminate parking. Therefore, the project is consistent with the habitat and water quality policies of the CCMP.

## STAFF SUMMARY AND RECOMMENDATION:

## I. Project Description.

The Forest Service proposes to reconstruct two parking areas within the Pfeiffer Beach Day Use Area facility, providing up to 65 vehicle parking spaces and supporting approximately 195 people at one time. The Forest Service will restore the remaining existing overflow lot to natural conditions. The Forest Service proposes to repave the existing Pfeiffer Beach connector road and construct a boardwalk from the main parking lot to the beach and an entrance kiosk with a turn around lane and gate. Additionally, the project includes the removal of the existing two-unit vault toilet, construction of a new four unit restroom, a host site trailer pad, an information kiosk, a bike rack, and an entrance gate and the installation of a public phone. Additionally, the project includes implementation of a traffic management plan for Sycamore Canyon Road.

Based on public comments and a re-evaluation of the project, the Forest Service modified its consistency determination to make the following commitments: 1) a single stage transportation management proposal that includes signage on Highway 1 and posting an attendant to enforce the sign; 2) construction of a turn around lane on Sycamore Canyon Road just below Highway 1; and 3) implementation of the transportation plan before the re-development of the recreational facility (Exhibit 3). Finally, the Forest Service proposes to monitor the effectiveness of its transportation management efforts.

## II. Status of Local Coastal Program.

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the CCMP, the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has partially incorporated the Monterey County LCP, including the Big Sur Segment, into the CCMP.

## III. Federal Agency's Consistency Determination.

The Forest Service has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

## IV. Staff Recommendation:

The staff recommends that the Commission adopt the following motion:
MOTION. I move that the Commission concur with the U.S. Forest Service's consistency determination.

The staff recommends a YES vote on this motion. A majority vote in the affirmative will result in adoption of the following resolution:

## Concurrence.

The Commission hereby concurs with the consistency determination made by the Forest Service for the proposed project, finding that the project is consistent to the maximum extent practicable with the California Coastal Management Program.

## VI. Findings and Declarations:

The Commission finds and declares as follows:

## A. Public Access and Recreation Resources. Section 30210 of the

 Coastal Act provides that:In carrying out the requirement of Section 4 of Article $X$ of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse

Section 30213 of the Coastal Act provides that:
Lower cost visitor and recreational facilities shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred.

Section 30214 of the Coastal Act provides that:
(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:
(l) Topographic and geologic site characteristics.
(2) The capacity of the site to sustain use and at what level of intensity.
(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.
(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.
(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article $X$ of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article $X$ of the California Constitution.
(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

Section 30221 of the Coastal Act provides that:
Ocean front land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be
accommodated on the property is already adequately provided for in the area.

Section 30223 of the Coastal Act provides that:
Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30252 of the Coastal Act provides that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30252 of the Coastal Act provides that:
The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision of extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of on-site recreational facilities to serve the new development.

Section 30253 of the Coastal Act provides, in part, that:
New Development shall:
(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30254 of the Coastal Act provides, in part, that:

Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

The Big Sur segment of the Monterey County's LCP policy 4.1.3.A.5 provides, in part, that:

Sycamore Canyon Road ... should be maintained at a level that resident and visitor traffic can safely be accommodated. Improvements to the width or alignment of these roads shall only be approved when negative visual and environmental impacts will not result and where the improvements will not adversely impact adjacent residents. Pedestrian access shall be provided where feasible. Priority uses shall not be precluded on these roads by non-priority developments.

Big Sur LCP policy 4.2.3 provides that:
Consideration should be given to regulating vehicular access to Pfeiffer Beach on Sycamore Canyon Road during peak periods. A temporary gate at Highway l operated by the parks and Recreation Department is a possible approach. A shuttle service between Pfeiffer Big Sur State Park and Pfeiffer Beach should also be considered.

1. Character of the Area. Because of the very special nature of the Big Sur Coast, the Commission has concerns about any activity that will affect the character of this area. If the pristine and natural character of this portion of the coast is significantly degraded, it would change this unique recreational resource. Therefore, the Commission is evaluating the Forest Service's proposed project for its effect on the character of the Big Sur Coast.

Although the overall character of the Big Sur coast is a wild and natural shoreline, the Forest Service has already improved the Pfeiffer Beach area to enhance the recreational experience. There are existing paved parking and restrooms. The development proposed by the Forest Service includes reconstruction of the paved parking, an increase in the size of the restrooms, and the addition of a boardwalk. This development is consistent and compatible with the character the existing developed recreational facilities at Pfeiffer Beach. Additionally, the project will reduce the number of parking spaces from 85 to 65 and strictly limit access to the area based on parking capacity. Thus, the project will reduce overcrowding, eliminate the need to park vehicles in non-designated areas, and prevent over use of the beach. By reducing the number of cars and visitors, the Forest Servicehas responded to the above-cited LCP planning mandateds to consider the area's carrying capacity and will improve the character of the area.
2. Facilities Improvements. The Forest Service proposes to improve existing access facilities at Pfeiffer Beach. These access improvements include re-constructing the existing parking areas, relocation and expansion of bathrooms, and construction of a kiosk, turn around, gate, and boardwalk. These improvements support recreational use of this beach. The bathroom expansion and relocation is necessary to meet existing demand. Additionally, the existing location of the restrooms prevent adequate ventilation and the new location will improve the ventilation of these facilities. The boardwalk will improve access to the beach while minimizing impacts to habitat resources. There are sensitive habitat areas and archaeological sites near the beach access trail. The boardwalk will unobtrusively focus pedestrian traffic away from sensitive areas. Additionally, the boardwalk will reduce erosion and compaction occurring at the beach trail. Finally, both the bathroom and boardwalk will improve coastal access for persons with disabilities. Finally, re-constructing the existing parking areas will improve parking in the area. The main parking lot is in a deteriorated condition and in need of repaving. Additionally, there are two existing overflow parking lots without striping. Disorganized parking in these areas is chaotic and increases the traffic problems in the area. The Forest Service will eliminate one of these overflow areas and pave and stripe the remaining lot. Thus, the project will reduce existing parking and organize the remaining overflow lot in a manner that will eliminate one of the factors contributing to the traffic problem.
3. Traffic. The Coastal Act protects public access resources from impacts associated with increases in traffic and requires management access opportunities in a

CD-047-97
Forest Service
Page 9
manner that takes into account, among other things, public safety. Increases in traffic congestion make it more difficult for the public to drive to coastal recreation areas, and thus can interfere with public access to the shoreline. The Big Sur Coast LCP expresses the need to reserve limited highway capacity for recreational traffic and minimizes nonpriority uses that would use up traffic capacity. Additionally, the LCP also identifies a serious traffic issue concerning Sycamore Canyon Road, the only access road to Pfeiffer Beach. The LCP states that:

> Sycamore Canyon Road, a private one-lane road over which the U.S. Forest Service holds easements for public access to Pfeiffer Beach, is carrying traffic during peak use periods that exceeds its safe capacity. This is leading to conflicts between recreational and residential traffic.

In reviewing the earlier consistency determination for the facilities' improvement portion of this project, the Commission found that it would improve the recreational facilities at Pfeiffer Beach and would draw more people to Pfeiffer Beach. Thus, the project would increase traffic on Sycamore Canyon Road. This increase in traffic would further exacerbate congestion on an already unsafe road and interfere with the ability of emergency vehicles to get into the area. Therefore, the Commission found that that project would affect traffic by allowing it to further exceed the road's safe capacity. Additionally, the Commission found that the traffic impacts generated by that project were inconsistent with the access policies of the Coastal Act. The Commission also found that the project would be consistent with the CCMP if the Forest Service prepared and implemented a transportation plan for Sycamore Canyon Road as part of the project.

The Forest Service recently completed a transportation analysis for Sycamore Canyon Road (Exhibit 4). The study is the product of a team made up of representatives of the Forest Service, Coastal Commission, Caltrans, California Department of Parks and Recreation, Monterey County, and the public. In that study, the analysis team concluded that "the road appears to handle the traffic demand most of the time, but there are about 50 days per year where the peak demand exceeds the prudent capacity of the road." (Transportation Analysis, page 18.) The transportation plan describes the service level of Sycamore Canyon Road as follows:

- Road is at Service Level A (ideal traffic movement) $70 \%$ of the time ( 255 days)
- Road is at Service Level B 14\% of the time (52 days)
- Road is at Service Level C $14 \%$ of the time (49 days)
- Road is at Service Level D (worst traffic congestion) 2\% of the time (9 days)
(Transportation Analysis, page 18.)
The study concludes that the maximum number of vehicles that the road can reasonably accommodate is 150 vehicles per hour in both directions. (Transportation Analysis, page 16.) The study includes the following conclusion concerning road capacity:

> To remain within the acceptable traffic service level range, the peak allowable capacity should not exceed 120 VPH [Vehicles Per Hour] (both directions).
> However, the Analysis Team recommends that service Level "A" should become the goal in order to maintain the quality experience level while driving from Hwy. 1 to Pfeiffer Beach, and to facilitate multiple modes of travel, such as hiking and biking.
> To meet this goal, the maximum allowable traffic flow should be no more than 40 VPH (Westbound) or 80 VPH (both directions). (Emphasis added, Transportation Analysis, page 19.)

The study also concludes that parking capacity rather than road capacity is the major factor adversely affecting traffic. In evaluating the relationship between parking and traffic, the plan contains a conclusion that states:

> Based on the empirical data that is available, the Analysis Team recommends that the capacity of the parking facility is between 45 and 87 spaces ....
> The lowest level of development (45 parking spaces) would assure that the driving experience from Hwy. I to Pfeiffer Beach, becomes part of the recreation experience, and make the road more inviting to hiking and biking use. (Transportation Analysis, page 19.)

Despite the recommendations within the Transportation Study, the Forest Service proposal allows for 65 parking spaces, which will reduce the existing capacity by 20 spaces. This level of use will generate a maximum traffic level of approximately 100 VPH, which is higher than the ideal goal recommended in the study. This level of use is less than then maximum capacity of the road ( 120 VPH ) identified in the analysis, and thus within the carrying capacity of the road. The Forest Service believes that the parking capacity provides a balance between the recreational experience of the Sycamore Canyon Road and maximizing public access to the shoreline. Since the level of use proposed by the Forest Service ( 100 VPH ) is less than the maximum capacity of the road ( 120 VPH ), the project will not adversely affect access to the coast. In fact, the project will reduce road use and improve access to the shoreline. Therefore, the Forest Service's decision to increase the level of use over the ideal level recommend in the transportation analysis will not adversely affect coastal resources.

CD-047-97
Forest Service
Page 11

To ensure that vehicular use does not exceed road capacity, the Transportation Analysis includes consideration of the following traffic management alternatives.
A. Convert Sycamore Canyon Road to hike/bike trail
B. Discourage use of private vehicle and encourage use of shuttle
C. Improve Sycamore Canyon road to County standards and encourage county to maintain it;
D. Minimum intervention/two stage approach
E. Install fully automated controls.

The team used fifteen criteria to rate the alternatives. Based on this rating process, the team selected alternative $D$ (minimum intervention/two stage approach) as the preferred alternative. The Forest Service modified the alternative to have it fully implemented in a single phase. This alternative includes a manually operated wood sign near the intersection of Highway 1 and Sycamore Canyon. The sign will inform the public whether the road is open or closed depending on the availability of parking spaces. Additionally, the Forest Service will enforce the sign's restrictions by stationing an additional employee near the intersection of Highway 1 and Sycamore Canyon Road. The Forest Service also modified this alternative to include a turn around lane on Sycamore Canyon Road, just west of Highway 1. Finally, the Forest Service agreed to implement the transportation plan before constructing the recreational facilities improvements (Exhibit 3). This traffic management alternative also requires continued monitoring of traffic on Sycamore Canyon Road. If monitoring demonstrates that this alternative fails to adequately manage traffic, the Forest Service will reconsider other alternatives identified in the plan.

The Commission finds that the proposed project will improve traffic conditions on Sycamore Canyon Road, and thus improve public access to the shoreline. Currently, the Forest Service does not manage parking or traffic in this area. The Forest Service estimates that the site currently has the parking capacity of 87 vehicles. However, the Forest Service has data indicating that as many as 154 cars have parked in the area, which results in indiscriminate parking creating traffic congestion and pedestrian safety concerns. Additionally, the unmanaged parking causes environmental impacts such as soil compaction, increased erosion, and vegetation trampling. The proposed project will reduce the parking capacity from 87 vehicles to 65 and strictly enforce vehicular access to Sycamore Canyon Road based on parking capacity. These measures will significantly reduce the traffic impact and improve public access to the shoreline.
4. Parking. The proposed project results in a reduction in currently available parking. At Pfeiffer Beach, there is an estimated parking capacity of 87 vehicles. Additionally, the Forest Service allows indiscriminate parking to occur at any area that will accommodate a vehicle. The indiscriminate parking has resulted in as many as 154 vehicles parking within the Pfeiffer Beach facility. The proposed project will reduce the designated parking capacity to 65 vehicles and, through vehicular access management based on parking capacity, eliminate the practice of indiscriminate parking. Since there is no other road access or parking facilities for Pfeiffer Beach, the project will reduce the overall number of cars that will be able to gain access to the only parking area during peak periods, and thus reduce ability of the public to get to the shoreline.

Sections 30210 and 30214 of the Coastal Act allow the Commission to consider access management measures that are necessary to protect the carrying capacity of the beach or other natural resources. The Forest Service proposes the reduction in parking for several reasons. First, and primary, the current parking situation results in significant traffic delays during peak periods. The traffic delays interfere with access to the shoreline, as well as interfering with access by emergency vehicles and local residents.

Additionally, the purpose of the parking restrictions is, in part, to protect natural resources and maintain the carrying capacity of the beach. The indiscriminate parking results in significant habitat impacts. People park in any area able to accommodate a vehicle regardless of habitat impacts. Sycamore Canyon contains sensitive habitat areas including riparian and stream resources and endangered species habitat. The uncontrolled parking results impacts to most of these habitat areas. The measures proposed by the Forest Service to manage indiscriminate parking are necessary to protect habitat resources.

The Forest Service has also determined that the existing improved parking capacity of 85 vehicles may allow for public use of Pfeiffer Beach at a level greater than the carrying capacity of that beach. Considering the size and expected public use of this beach, the Forest Service determined the recreational carrying capacity of Pfeiffer Beach is 215 people at one time (EA, page 11). Current transportation data suggests an average of three people per vehicle for traffic into Pfeiffer Beach (pers. comm. William Metz, USFS). If the Forest Service maintains current levels of designated parking, then a maximum of 261 people could use the beach at one time. This maximum use would exceed the Forest Service estimated carrying capacity of 215 people at one time. Considering this data, the reduction in parking is also necessary to maintain the carrying capacity of the beach.
5. Conclusion. In conclusion, the Commission finds that the proposed improvements will support public access to the shoreline and recreational use of the
coastal zone. Additionally, the proposed improvements will not affect the visual and recreational character of Pfeiffer Beach or the Big Sur Coast. These improvements will benefit public use of Pfeiffer Beach by improving the infrastructure and other facilities and enhancing handicapped access. Additionally, the Forest Service proposes to manage traffic, as directed by the Commission and mandated under Section 30214, to address critical transportation issues and improve access in a manner taking into account the various site's constraints and unique features. Finally, the proposed parking restrictions are necessary to protect coastal resources, including access to the shoreline, beach carrying capacity, and habitat resources. Therefore, the Commission finds the project consistent with the access and recreational policies of the CCMP.
B. Water Quality. Section 30231 of the Coastal Act provides that:

> The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Past management practices of the Forest Service have adversely affected water quality of Sycamore Creek. Specifically, the Forest Service has graded and eventually paved (with chip seal) the overflow parking lots. However, the Forest Service did not design these modifications with "best management practices" and as a result they allow non-point source pollution to degrade the water quality of the stream.

The proposed project involves the re-paving of one of the existing overflow parking areas and restoring the other overflow area to natural conditions. The Forest Service has designed the repaving to minimize water quality impacts. Specifically, the Forest Service designed the proposed project with eighteen separate "best management practices." These "best management practices" include erosion control plans, slope stabilization, control of drainage, and control of construction in streamside management zones. These "best management practices" will prevent polluted runoff from the re-surfaced areas from significantly degrading water quality of the stream. Therefore, the Commission finds that the proposed project is consistent with the water quality policies of the CCMP.

CD-047-97
Forest Service
Page 14

## C. Habitat Resources. Section 30240 of the Coastal Act provides

that:
(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.
(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

The project area contains sensitive dune, riparian, and stream resources. The Forest Service has designed the proposed project to avoid any adverse effects on these resources. Except for the proposed boardwalk, the Forest Service will limit the project to already developed areas that do not contain any sensitive habitat resources.

On the other hand, the Forest Service will construct the proposed boardwalk outside the existing development footprint. One of the purposes of this boardwalk, however, is to reduce impacts to sensitive resources from existing public access routes. Currently, public access routes go through and are next to sensitive resources of the area and public use of these routes has resulted in degradation of these resources. The Forest Service proposed to construct the boardwalk, in part, to minimize habitat impacts. Additionally, it has designed the boardwalk to avoid existing resources and to become the primary access route from the parking lot to the beach. Thus it will reduce the ongoing degradation of sensitive resources.

Finally, the proposed project will improve habitat protection by eliminating the existing indiscriminate parking that occurs after the existing parking lots are full. That indiscriminate parking occurs on any area that can accommodate a vehicle regardless of any habitat impacts. This type of parking results in adverse impacts to riparian, stream, meadow, and other upland habitats. As part of the proposed project, the Forest Service will manage traffic on Sycamore Canyon Road in a manner that reflects the designated parking capacity. In other words, the Forest Service will discourage vehicle use of Sycamore Canyon Road if the parking lot is full. Such management practices will reduce the indiscriminate parking and benefit habitat resources. In evaluating, the project the U.S. Fish and Wildlife Service concluded that the project "will result in less impact upon riparian habitat and increased protection of riparian and aquatic areas." (Letter dated September 19, 1997, Exhibit 5.)

The U.S. Fish and Wildlife Service also analyzed the project for effects on the federally listed species. The two species of concern are the California red-legged frog (Rana
aurora draytonii), currently listed as threatened, and the Smith's blue butterfly (Euphilotes enoptes smithi), listed as endangered. The Service concludes that the proposed project will not affect the California red-legged frog. (Letter dated September 19, 1997, Exhibit 5.) With respect to the Smith's blue butterfly, the Fish and Wildlife Service determined that project will not adversely affect the butterfly, because the Forest Service's proposes to minimize the take of the butterfly and to revegetate disturbed areas with native species including seacliff buckwheat, host plant for the butterfly. Considering these facts, the Fish and Wildlife Service concludes that:

After reviewing the current status of Smith's blue butterfly, the environmental baseline for the action area, the effects of the proposed Pfeiffer Beach rehabilitation, and the cumulative effects, it is the Service's biological opinion that rehabilitation of the Pfeiffer Beach facilities, as proposed, is not likely to jeopardize the continued existence of Smith's blue butterfly. (Biological Opinion, page 6)

In conclusion, the Commission finds that the proposed project will not only avoid impacts to sensitive resources, it will reduce ongoing degradation. Therefore, the Commission finds the proposed project consistent with the habitat policies of the CCMP.


## PFEIFFER BEACH alternative 3- MODERATE REH,ABILITATION



| EXHIBIT NO. 2 |
| :--- |
| APPLICATION NO. |
| CD-47.97 |
| ac calluma Coasta Conmision |

Los Padres
National Forest

Monterey Ranger District 406 So. Mildred Ave.
King City, CA 93930
TEL (408) 385-5434
FAX (408) 385-0628
TDD (408) 385-1189

Peply to: 2300, Pfeiffer Beach
Date: October, 16, 1997
Mr. Peter Douglas
Executive Director
California Coastal Commission
45 Fremont Streat, Suite 2000
San Francisod, CA 94105-2219
Dear Mr. Douglas:
This letter addresses the Forest Service's proposed Pfeifer Beach Day Use Area Rehabilitation Project. I feel it is impontant to clarily several issues with the California Coastal Commlssion (CCC) regarding the proposed project prior to the Public Hearing and Consistency Determination schoduled in November, 1997. As this will be the third time the Forest Service has come before the CCC on this matter, it is imperative that the Commissioners have a solid understanding of this project and the associated public bencits.

## Extating Use - Sycamore Canyon Road Carrying Capacity

At the request of the Big Sur Multi-Agency Council and the CCC, the Forest Service prepared a Sycamore Carryon Road Transportation Analysis (1996). See enclosed copy of Sycamore Canyon Road Transportation Analysis. The analysis team included a Forest Service Engineer and Pecreation Planner, a Calfomia Coastal Commiscion Planner, a Cakrans Traffic EngIneer, a Monterey County Traffic Engineer, a Calfomia Department of Parks and Recreation Ecologist, and a resident member of the Multi-Agency Ackisory Council. Key findings and conclusions from the analysis can be summarzed as follows:

1. The existing traffic Service Level on Sycamore Canyon Road is as follows:

Senvice Level A (approximately 80 VPH both directions) $=70 \%$ of the time or 255 days/yr
Service Level B (approximately 100 VPH both directions) $=14 \%$ of the time or 52 days/yr
Service Level C (approximately 120 VPH both directions) $=14 \%$ of the time or 49 days/yr
Service Level D (approximately 140 VPH both directions) $=\mathbf{2 \%}$ of the time or 9 days/yr
2. The analysis concludes that to remain within an acceptable traffic Service Level range, a peak ailowable capacity should not exceed 120 VPH both directions (Service Level C). Although the analysis recommends Service Level A (60 VPH both directions), I have seleated Servies Level B (100 VPH both directions) because it provides adequate public transportation safety, maintains the recreational route experience and accommodates acceptable levels of public coastal access approximately 307 days per year.
3. The analysis reports that Sycamore Canyon Road can theoretically accommodate 150 VPH both directions (East and West, 75 vehicles each direction) whin varying degrees of congestion and delay. There is no history or documentation of a serious trafic accidents since the Forest Service assumed road maintenance responslbilities in 1972. The analysis also points out that necessary emergency response procedures can be accommodated even during peak traffic days.

Caring for the Land and Serving People


## PBDUA Parking Capacity

1. Traftic surveys indicate peak parking demand on weekends is less than 60 spaces, accounting for about 307 days/yr or $75 \%$ of the time. On the remaining 58 days/yr, or about $25 \%$ of the time, the peak demand has been observed to be in excess of 154 parking spaces. This condition exists a few hours per day on the peak use days.
2. The analysis shows that at 60 VPH (westbound traffic, one way) the parking demand is 90 spaces. This indicates that the capacity of the parking facility is the limiting factor, not the capacity of the road.
3. Based on the analysis, PBDUA shoukd accommodate between 60 and 87 parking spaces. A 60 space parking facility appears to be adequate for all weekends, sundays and midweek holidays which account for 307 days/yr, or approximately $75 \%$ of the time. On the remaining 58 days, the peak demand will exceed 60 parking spaces.
4. The analysis recommends the PBDUA parking capacity should be between 45 and 87 parking spaces. A lower level of dovelopment assures the driving, hiking and biking experlence is maintained.

## Proposed Project:

PBDUA Rehabilitation. As described in PBDUA EA (1997). I would like to clarity and emphasize the following points:

1. Currenty, the Forest Service manages PBDUA for approximately 87 parking spaces which equates to 261 PAOTS. [Originally, the 87 parking spaces reflected 2.5 persons/vehicle representing approximately 217 PAOTS. 1 However, recent Forest Service research for PBDUA indicates 3.0 persons/vehicle. Based on this new information and the need to scale down PBDUA rehabilitation efforts to mitigate forest resource impacts and pubilc concerns, the proposed project provides the Forest Service with an opportunity to provide a quality PBDUA recreation facility, while sustaning forest resources and promoting safe and reasonable access to Pfelffer Beach.
2. The carrying capacity of Pfeiffer Beach is 215 PAOTS (FS, 1986) at peak use. Using 3 people per vehicle this equates to about 65 parking spaces supporting 195 PAOTS ( $3 \times 85=195$ PAOTS). This supports FS management objectives (sustainability of ecosystem health) for Pfeiffer Beach and the recommendations of the the transportation analysis team.

## Sycamore Canyon Road Transportation Management Plan - Modiffed Option D

1. Rehabilitation of the PBDUA provides a peak parking capaciky of 65 parking spaces, which equates to a peak hourly flow of approximately 100 VPH both directions. This correlates directly to a Service Level $\mathrm{B}_{1}$ which is the preferred traffic Service Level.

2 Transportation Management Plan - Option D. Option D was the highest rated transportation management plan considered by the analysts team. Option D rated high for residents right to access, high for full public access with existing easement, medium for meeting Local Coastal Plan, high for adaptability for change of conditions, medium for acceptance of local residents, medium for acceptance of visitors, high for allowing emergency vehicle access, and high for accommodating maximum numbers of persons at one time.
3. Based on pubilc input responding to the PBDUA Environmental Assessment (1997), I modified the preferred Transportation Management Plan - Option D to more accurately reflect public comments and new information. Specifically, the modifications to Option D are as follows:

Dourglas, Peter
Page 3, October 16, 1997
a. Option D would be modified to go directly to Stage 2. Stage f remains as originally intended (manually operated sign) but by-passes the visitor honor system by having an attendant to enforce the sign on Sycamore Canyon Road (approximately 150 yards from the Highway 1 intersection) as the PDDUA parking capacity is reached.
b. A turn-around lane is constructed at the second turnout just below Highway 1. This represents a significant modification to Option D by incorporating the turn-around lane component of Option E. See enclosed Sycamore Canyon Road Turn-around Lane Conceptual. Forest Service would reconstruct existing turnout into a turnaround lane to facilitate the tuming around of PBDUA destined vehicles. This would prevent vehicles from accessing Sycamore Canyon Road once the PBDUA parking capacity is reached, significantly reducing potentlal traffic congestion within the Sycamore Canyon Road corridor.

The Forest Service is actively working with the local Sycamore Canyon property owner and Caltrans and have reached agreement in concept on the need for the turn-around lane. Discussions are underway to acquire the necessary righte-of-way for thls aspect of the project.
c. Forest Service would implement PBDUA Rehabilitation and Sycamore Canyon Road Transportation Plan (modified Option D) into phases. Phase 1 consists of implementing all aspects of modified Option D, prior to commencing with PBDUA rehabilitation activities. This will allow traffic management to be in place before PBDUA is closed for re-construction. Phase 2 conslsts of rehablithating the exdsting PBDUA facility.

The transportation management control plan addressed under modified Option D would be implemented prior to the re-construction of PBDUA when the facility will be closed to public access. At that time the Forest Service would start monitoring modified Option $D$ to see how effective it is for controlling traffic congestion along Sycamore Camyon Road. After PBDUA rehabllitation, transportation management would begin when the 65 space parking capacity is reached (which corresponds to Service Level B). Signage, attendant and tumaround lane will preclude the traffic volume on Sycamore Caryon Road to exceed Service Level B. Monitoring of Option D would be on-going. Modifications, as necessary, would be incorporated to mitigate traffic congestion.

Since the August 13 CCC hearing on the subject, the Forest Sevice met on September 19 with members and representatives of the Sycamore Canyon Property Owners Association. This meeting was facilitated by Commissioner Dave Potter and was very productive from the standpoint of identifying and discussing the property owners specitic issues and concerns with the proposal. A second meeting is scheduled for October 29 at PBDUA to resolve as many issues and concems as posstble and hopefully gain their support for the proposal.

In summary, the Forest Bervice feels that the proposed project provides a qually recreational experience, while maintaining edequate and safe public access for both local residents and forest visitors. I believe the proposed project is consistent, to the maximum extent practicable, with the Calfornia Coastal Act, Big Sur Coastal Land Use Plan and Monterey County Coastal Implementation Plan. I believe we have, in good faith, worked with the CCC and local Sycamore Camyon Road residents to develop a project that will be suctessful. To not rehabilitate PEDUA concurrent with the traffic management plan as proposed would perpetuate the unacceptable existing conditions, and would not be in the public interest, I look forward to the November CCC meeting, and a Consistency Determination vote on the proposed project.


# SYCAMORE CANYON ROAD/PFEIFFER BEACH 

## TRANSPORTATION ANALYSIS

September 1996


## Table of contents

Eage
Executive Summary ..... iii
Background ..... 1
Objectives for the analysis team ..... 1
Analysis Eeam composition ..... 2
Process used by the analysis team ..... 3
Section I - Management Options ..... 3
Option "A" ..... 4
Option "B" ..... 5
Option "C" ..... 6
Option "D" ..... 7
Option "E" ..... 8-9
Evaluation eriteria ..... 10
Options developed by the taam ..... 10
Evaluation of optiona ..... 10
Rating summary ..... 10
Section II - Traffic Analysis ..... 11
Description of project area ..... 11
physical characteristics of Sycamore Canyon Road ..... 21
Traffic flow information ..... $12-13$
Analysis of traffic data ..... 13-16
Derermination of capacity of parking facility ..... 16-17
Findings and Conclusions ..... 18-1.9

## List of Exinibits

Exhibit "A" Standard turnout ..... 20
Exhibit "B" September 1994 traffic survey data ..... 21
Exhibit "C" May 1996 traffic survey data ..... 22
Exhibit "D" Description of traffic service levels ..... 23
Exhibit "E" Ereakdown of typical year ..... 24
Exhibit "F" Darking demand data - May 1996 Eurvey ..... 25
Exhibit "F-I Parking demand data - September 1994 aurvey ..... 26
Exhibit "G" Regression curve ..... 27
Appendix "A" - Relationship of PAOT, parking demand, traffic volume ..... 28
Appendix "B" - Montexey County road standards ..... 29-30
Appendix "C" - Brainstorm exercise results ..... 31-36

## Executive Summary

This report is comprised of two main components:
A. Section 1 - Development of options to manage the Sycamore Caryon Road.
B. Section II - Traffic analysis for the Sycamore Canyon Road.

## A. Development of options to manage the Sycamore Canyon Road.

Los Padres national Forest has determined that the Pfeifier Beach Day Use Area represents a major recreation facility on the Big Sur Coast, and intends-to keep it open to the public indefinitely. Furthermore, the Agency has deternined that the support facilty is due for rehabilitation.
The rehabilitation effort should be implemented to protect the visual and physical resources, while making the facility suitable for public use.
The rehabilitation effort is not intended to increase use of the site from it's current level. The facilities should be constructed for a 20-year lite.

The Sycamore Canyon Road, which is the only access to Pfeiffer Beach, has become the subject of great concern, because of the peak traffic demands which occur periodically.

A multi-agency task force was created to develop ideas on the management of the Sycamore Caryon Road. The team developed the following management options:

Option "A" - Convert Sycamore Canyon Road to hilke/bike trall for visitors.
Option "B" - Discourage use of private vehicle/Encourage use of shutte.
Option "C" - Improve Sycamore Canyon Road to Courty standard, and encourage County to maintain it.

Option "D" - Minimum intervention/Two stage system.
Option "E" - install fully automated controls.
These options were rated using evaluation criterie developed by the team, and scored, using the non-numerical system of low, medium and high.

The option with the most number of "high's' and the least number of "low's" was option " D ', Minimurn intervention/Two stage system.

The analysis team determined that the currem situation of totaly unrestricted access on Sycamore Canyon Road is unacceptable, and recommends that one of the options is implemented prior to, or concurrent with, the rehabilitation project.

## B. Traffic analysis for Sycamore Camyon Road.

a. Road Carrying Capacity.

Using the available traffic data, the Analysis Team developed the road carrying capacity for Sycamore Canyon Road. With no access restrictions, the traffic situation on the Sycamore Canyon Road is currently characterized as follows:

Service level $A=70 \%$ ( 255 cays)
Service level $B=14 \%$ ( 52 days)
Service level $C=14 \%$ ( 49 days)
Service level D $=2 \%$ ( 9 days)
It was determined that tha Sycamore Canyon Road could accomodate a peak load of 150 VPH (both directlons), with varying degrees of congestion and delays.
However, the Analysis Team recommends that service lovel "A' should become the goal in order to maintain a quality experience level while driving from Hwy .1 to Pfeiffer Beach, and to facilitate multiple modes of travel, such as hiking and biking.
b. Capacity of parking facility

The available trafic cata indicates that the peak parking demand on weekdays and even on typical sundays, is less than 60 spaces. This accounts for about 307 days per year, or $75 \%$ of the time. On the remaining 58 days, or about $25 \%$ of the time, the peak parking demand has been observed to be in excess of 154. This level of peak demand usually tasts a fow hours on peak use days.

The regression analysis indicates that the parking facility can be as much as 90 spaces, while allowing a peak of 60 VPH (westbound direction).

This indicates that the parking facility is the imiting factor, and not the capacity of the road. It has been determined that an 87 space parking facility is the maximum available space.

Based on the regression analysis and the parking demand data obtained during the traffic surveys, the capacity of the parking facility should be between 45 and 87 spaces, with an adequate number of toilets to accomodate the median use level.
The lowest level of development ( 45 parking spaces), would assure that the driving experience from Hwy. 1 to Pteiffer Beach, becomes part of the recreation experience, and make the road more inviting to hiking and biking use.

Background.
The pfeiffer Beach Day Use Area rehabilitation project was proposed by the U.S. Forest service in 1995. The project proposal was developed with the oversight of a steering committee, composed of key staff and line officers of the los Padres National Forest.
The project proposal consisted of improvements to the pfeiffer Beach support facility, but excluded consideration to the traffic sicuation on the sycamore Canyon road.
The local public ayticulated concexns regarding the traffic issue during scoping and during the public review process. The decision notice was subsequently formally appealed, and witharawn by che Forest Service.

The decision to asemble an ad hoc team eomposed of representatives from the Big Sur multi-agency council membership, was made as a result of strong opposition of the pfeiffer Beach Rehabilitation project by the local public. The Forest service agreed to withdraw the decision notice, and conduct a transportation analysis to develop an array of management options for the Sycamore Canyon Road. This decision was reached following the Coastal Commission vote to object to the Forest Service consistancy seatement for the project.
In the process of developing the management options for the sycamore canyon Road, it became clear that it would be very helpful to obtain some traffic data on which to base the level of devalopment at Pfeiffer Beach.
It was discovered that there was some traffic gata available. This data was collected by a local resident in Sepember 1994. The team decided to conduct additional traffic surveys. Section II of this report was prepared by using all of the available traffic data.

## Objectivaz For The analyaig Taam.

The objectives for the analysis team were as follows:

1. Develop management options for moving people from zwy. 1 to pfeiffer Beach, including assesement of the pros and cons of each, such as, politics, feasibility, cost, implementation timeframes, maximum number of persons at one time (PAOT), level of development, service vehicle access, emergency vehicle access, resident access, potential for growth, concessionaite acceptance, etc.
2. Develop the most feasible options to implementation detail.
3. Develop evaluation oriteria.
4. Evaluate each of the management options.
5. Define a project proposal with each of the options.
6. Perform a representative traffic survey to determine the road carrying capacity based on empirical data.
7. Determine the parking demand for the Pfeiffer Beach Day Use Area.
```
Analysis Team Composition.
The analysis team was composed of the following:
Tony Varia, Civil Engineer
U.S. Forest Service
4 0 5 \text { South Mildred Ave.}
King City, Ca. 93930
408-385-5434
Marcha Amundsen, Recreation plannex
U.S. Forest Service
4 0 6 ~ S o u t h ~ M i l d r e d ~ A v e .
King City, Ca. }9393
408-385-5434
Lee Otter, Planmer
CaLiformia Coastal Commission
725 Front St., Suite 300
Santa cruz, Ca. }9506
408-427-4863
Nevin Sams, Traffic Engineer
Caltrans
p.O. Box 8114
San Luis Obispo, ca. 93403
805-549-3017
Ken Gray, Ecologist
Calif. Dept. of Parks And Recreation
22A1 Garden Road
Monterey, Ca. }9394
40B-649-2862
George Divine, Senior Traffic Engineer
Monterey Councy Dept. of Public Norks
312 East Alisal
salinas, Ca. 93901
408-755-4937
Barbara Woyt*, Resident Membex of The Multi-Agency Advisory Council
p.0. Box 120
Big Sur, Ca. 93920
408-567-2309
* Barbara Woyt became a member of the team after the first meeting.
```

Procean Uaed By The Analybia Team.
The following process was used by the analysis team to conduct the anajysis:
A. Define objectives for the group.
-Give background on the project proposal gnd primary objections by the public.
-Discuss the sycamore Canyon Road access situation.
-Display proposed timeline desired by the steering committee.
-Develop and agree on a process for the andiysis.
B. Genexate alternatives to transpoxt people from Ewy, $\mathcal{t o}$ Pfeiffer Beach, giving proper consideration to the visitor/resident mix.
C. Allow each team member to select their Eavorite management option, and develop it to implementation detail.
D. Develop evaluation criteria.
E. Evaluate each management option developed by the team members, on a relative scale.
F. Conduct a zepresentative traffie survey on sycamore Canyon Ropd to determjnethe use pattern at Pfeifeer Beach Day Uae Area.
G. Submit results of the axalysis to the Forest stering committee in report form.

## SECTION I - MANAGEMENT OBTIONS

The following opeions to manage the gycamore Canyon Road were developed by the analysis team, using the proesss described above.
option "A".
Convert sycamore Canyon road to hike/bike trail for visitors.
Deacription of system:
This system consists of phasing Sycamore Canyon Road into a hiking and biking trail, after the improvements are completed.
The ultimate system would function as follows;
A. Residents, guests and commercial enterprises serving the area residents, would be allowed to drive to their destination without restriction.
B. Recreational visitors would only be allowed to enter sycamore Canyon road on foot or on a bicycle.
They would enter the trail system at Pfeiffer Big sur State park, the Big Sur Station, and at Ventana Inn, They would be aliowed to park at these various trail head facilities.
c. Persons with disabilities would be allowed to drive to the beach.

Facilitties needed:
A. This option is predicated on extending the Mount Manuel Trail from the state Park ( 2 miles ), the Pine Ridge Trail from the Big Sur Station, along the East side of Hwy. 1 , to point accross from Sycamore Canyon Road ( 1 mile ). Also, constructing a trail from Ventata Inn to the same point (1 mile).
Then constructing an underpass under Hwy. 1 to allow hikera and bikers safely under the highway on to Sycamore Canyon Road.
The sycamore canyon Road would be turned into a trail for visitors, and remain a motor vehicle access road for the residents, their guests and comercial traffic sexving the residents.
B. Install a gate at highway 1 that would allow free resident access, but restrict all other traffic.
construct a pedestrian and bicycle bypass around the gate.
C. The parking area at the beach would accomodate a few vehleles, and bicycles. The toilets and the trail improvements to the beach would be construcred.
** Estimated cost of tmprovements for access (less cost of project):
A. Construct 4 miles of trail,

20000 LF © $\$ 10$
$=\$ 200,000$
B. Construct undeipase at Hwy.1
C. Construct automated gate and signs at Hwy. 1
$=\$ 400.000$
D. Misc. equipment and supplies
$=\$ 125,000$
$=\$ 25,000$
-----------
Total Estimated Cost of Improvements
$=\$ 750,000$

[^0]Option "B".
Discourage uge of private vehicle/Encourage use of ahuttla.

Description of eyatam:

This option consises of controlling access co Sycamore Cenyon Road by staffing it on Hwy. 1 and at the entry to the parking area. The person at the parking area would be in contact with the person at the highway to determine now many vehicles would be allowed on the road. An entry fee would be collected at the highway.

A shurtle bus would be ueed at peak periocis. This option would explore the possibility of encouraging local businesses to conduct the shuttle operation as part of a service package to their guests and other visitors. A shuttle service could be operated by anyone of a number of entities to provide public service in conjunction with their business, or fos a profit.

The focus of this oprion is to try to diacourage unplanned and excessive vehicle use of sycamore Canyon Road by providing alternative modes of access, and to charge a fee to drive to the beach.

## Facilities needed:

A. Provide staff (ccncessionaire) to control accese on sycamore canyon doad. Equip staff with reliable two-way radio.
B. Inscall gate and sign on Hwy.1. Sign would be automated to inform the using public when parking area is full and advice that the road is temporarily cloged.
c. Construct parking area coceptually as eurrently proposed, to accomodate the design PAOT.
** Estimated cost of improvemants for access (lese cont of project):
A. Install two gates and automated sign.
$=\$ 20,000$
B. Misc. equipment and supplies

Total Eetimated Cost of Improvements
$=\$ 20,000$
---20.----
$=\$ 40,000$
C. Operating cost:

2 persomnel for 250 days/year $=\$ 50,000$
Vehicles and ecuipment $=\$ 25,000$
Total Yearly operating Cost $=\$ 75.000$

[^1]Option "C".
Improve Sycamore Canyon road to County standard, and encourage county to maintain (follow LRMP dixection).

## Dascription of ayatem:

This option would call for improving the Sycamore Canyon Roac to meet the requirements on the Monterey County Depe. of Public Horks (see appendix "g"), and to encourage Monterey County to accepe the road as a fully dedicated county road, and maintain it as such.
The required width for a sural sidehill cul-de-sac road, serving mare than 5 acres, is 20 feet overall, according to Monterey counry. As a dedicared councy road, sycamore Canyon Road would be treated as any orher county road, and provide unrestricted access to residents and visitors alike.

## Facilities needed:

Improving Sycamore Canyon Road to Monterey County standard will require the following:

1. Widen the road to a minimum of 20 feet finished width,
2. Construct drainage structures consistent with the characteristics of the road.
3. Construct a structural section capable of handing the volume and type of traffic that will be prevalent on the road.
4. Install eraffic aigns and other devices as required.
5. The parking area and associated Eacilities would be constructed as proposed.
```
** Estimated cost of improvements fox aceesa (less comt of project):
A. Widen road to 20 foot width =$ 300,000
B. Construct drainage structures }=$250,00
C. Surface entire road (2.2 miles)
    5,000 cons of A/C © $45.00/ton =$225,000
    8,000 cons of A/B @: $30.00 =$ 240.000
D. Signing & other devices
    =$35.000
E. Misc. materials and construction
Total Estimated Cost of Improvements
    =$ 50,000
    ---------
    =$1,100,000
```

Note: This option is by direction of the Land and Resource Management Plan (LRMP), but inconsistent with the Local Coastal plan.

```
** See page 9.
```

Option "D".
Minimum intervention/two stage nystem.

## Descripetion of system:

This system would require litele or no permanent improvements. It consists of a two stage approech, and wouid only be implemented as needed.
Historienily, the demand tends to exceed the capaciey of the facilities, about 50 days per year.

Stage 1 - Stage 1 consists of inetalling a amgle sign at Hwy-i. The sign would be hand operated to say either:

ROAD CLOSED OI ROAD OPEN
This aign would be operated by an attendant, who woula change the reading on the $\ddagger i g n$ as conditions change in the paricing area.
gtage 2 - If the honor system method proposed above fails, stage 2 would be implemerrted.
Stage 2 would require the use of a sign and an arcendant to enforce the sign. Implementation of stage 2 will require a minimum of two people; one at the entrance to sycamore Canyon Road at Hwy.1, and ancther at the entrance to the parking axea, to monitor the occupancy. They will communcate with hand held radios. The person at fwy. 1 will change the reading on the gign as conditions at the parking area change.

In the event that both stage 1 and stage 2 fail to accomplish the desired results, a mystem such as the one described in option "E", is recommended.

Pacilities needed:
A. Manually operated wooden sign capable of diaplaying a mumber of messages.
B. Personnel with hand held two way radios.
C. The parking area at the beach would be minimaliy improved with a small roilet building, and some type of accessible trail to the beach. The other two (overflow) parking areas should be restored to natural. It is recomanded that all terrain wheelchairs are considered to carry people with disabilities to the beach.
** Istimatad cost of improvements for access (lass cost of project):
A. Cost of improvements: sign at Ewy 1
$=\$ 1,000$
B. Operating cost:

2 persomel for 150 day/year $\quad=\$ 50,000$
vehicles and equipment $\quad=\$ 25,000$
Total Yearly Operating Cost $=\$ 75,000$
** see page 9.

Option "E"
Fully automated controls.

Description of systam:
A. The system will consist of a fully automated entry control device, that will allow a prederemmined number of visitor vehicles per given unit of time, and unlimited resident access. It will also allow resident guest and service venicle access, as well as on-demand emergency vehicle access.
B. In addition to vehicle access, there could be shuttle service, operated by a concessionnaire, whereby the shut $=1$ e would run at some designated interval between pickup points along highway 1 and Pfeiffer Beach.
The cost of the shuttle would nave to be considerably leas than the vehicie fee (less than 1/4), in order to encourage use.
This would require developing a parking area on highway 1 for people to use. The large tumout on Hwy. 1 , just North of the Sycamore Canyon Road incersection might be a posesbility.

Resident and guest access:

- Residents will be allowed to enter and exit at all times by entering a code on the key pad.
- Resident guests will be ailowed to enter with approval of resident.
- Service vehicles (delivery vehicles, contractors, etc.) will be allowed to enter with approval of resident, unless the vehicle serves a number of people, in which case they may apply for cheir own access pasa.

Visicar access:
Recreationists will be charged a pre-determined fee to enter the site. The visitor will be instructed to deposit the fee in the electronic booth (bills or coins).

At this point, two thinge may occur:

1. The booth accepts the fee, issue a ticket, and allow the visitor to enter. This will be the case most of the time.
The viaitor will be asked to display the ticker chat was issued on the dashboard of his car. Failure to do so may result in a citation.
2. If the parking area is full, or if it is desired to limit the number of vehicles on that day, the booth will not accept the fee, and will display a digital message instructing the visitor on how to proceed.

Walk-in visitors or visitors on bicycles will be allowed to enter at all times without a fee.

Facilities needed:
A. At the second turnout just below Hwy 1.

1. Reconstruct turnaround by improving existing tumout and widening the road about 10 feet on the Scuth side. It may be necessary to acquire additional right of way at this location.
2. Install a steel gate in narrow section of road just below turnout.
3. Install electronic entry booth oo that it is accessible to drivers entering Sycamore Canyon Road from Ewy. 1 .
4. At the entry to the parking area.
5. Install a venicle counter that is capable of counting vehicles entering and exiting the parking area, and transmitting this-information to the entry booth near the higbway.
6. Construct a bicycle/pedestzian bypass so that the vehicle counter is not activated.
7. Construct parking area an currently designed, except to add bieycle facks foz at least 12 bices, and a loading/unloading area for the shuttle bus.
C. On the road.
8. Underground power Erom the mearest power pole to the entry booth.
9. A signal wire installed on the side of the road between the entry booth and the vehicle counter.
10. Install "No Parking" signs on the road for at least $3 / 2$ mile from the pfeffer Beach parking area, to assure that all visitors are acknowleged by the counter at the entry, and to keep all turnouts available for passing.
** Estimated coat of inprovemants for accast (lese cost of project):
A. Electronic equipment, including power supply.
B. Signal wire from Hwy. 1 to parking area. $12,000 \mathrm{LE} \$ 5.00=\$ 60,000$
C. Vehicle counter at parking area.
D. Misc. equipment supplies.

Total Estimated Cost of Improvements
$=\$ 20,000$
$=\$ 250,000$
= \$ 10,000
----------
$=\$ 230,000$
** The estimated costs represent approximations, used to make very general comparisons. These estimates do not include the cost of che project itself, nor do they include the staffing costs.

Evaluation criteria:

The following evaluation criteria was developed by the analysis team:

1. Cost (Low coat $=$ Eigh; High cost $=$ Low).
a. capital investment
b. operation and maintenamea
2. Technically Eeasible.
3. Freservas resident's right to access.
4. Full public access with extstize easement (all tansportacion modes).
5. Meecs Lanc and Resource Management plan (IRMP).
6. Meets Local Coastal Flan (LCR).
7. Adiaptibility to change of conditions.
8. Ability to charge user fees - meet the Land and Water Conserration fund Act (IWCRA).
9. Acceprance of local residanes.
10. Acceptance of visitors.
11. Allows emergency vebicia access.
12. Frotects resource values, i.e., wetland habitae, natural habitat, visual, archaelogical, cultural. recreational quality.
13. Ease of inmlementation.
14. Compatible with concessiomatre operation.
15. Accomodates the maximum $\quad$ umbers of persons at one time (DROT).
opetoma daveloped by tanm:
$|A|$ Convert road to hike/bike trail.
$|8|$ Discourage use of pxivate vehicla/encourage use of shutcla.
$|c|$ Improve road to County, scandand/County road.
|D| Minimum incervention/two staga syscem.
$|E|$ Fuily automated concral syscem.

Sycamore Canyon Road/Pfelffer Beach Analysis
Evaluation of Options


## Rating Summary:

| $\|A\|$ | High $=4$ | Med $=5$ | Low $=7$ |
| :--- | :--- | :--- | :--- |
| $\|B\|$ | High $=7$ | Med $=9$ | Low $=0$ |
| $\|C\|$ | High $=8$ | Med $=1$ | Low $=7$ |
| $\|D\|$ | High $=10$ | Med $=6$ | Low $=0$ |
| $\|E\|$ | High $=9$ | Med $=7$ | Low $=0$ |

# SECTION II - TraEELe Analyaia 

Deacription of projact Araa.
Sycamore Canyon extends from twy. 1 to PEeiffer Beach, approximately 2.1 miles. The road parallels the intermittent creek, and much of it is adjacent so the creek separated by retaining walis.
The road serves approximatejy 55 residential parcels, 20\% of which remain undeveloped. It is unknown if Monterey County plans to issue the remaining building permits.

Pfeiffer Beach has become an extremely popular destination attraction on the Big Sur coast, for both local and out of area visitors. The appeal is so great that during eimes of total road closures necespitatad by flood damage and emergeny road repaizs, many visitors choose to walk the 2.1 mile road to the beach, zather than leave the area without viaiting pfeiffer Beach. The Forest Service has not charged fees for day use, but with the advent of concessionaire management, a parking fee will be charged effective in summer 1996. It is anticipaced that the newly established fee will have some effect on the use pattern.

## Physical Characteristice of sycamore Canyon Road.

The Sycamore Canyon Road is essentially a single lane road varying in width from 12 feet to 24 feet, with about 40 widex spots which serve as turnouts. The turnouts occur at unspecified intervals, and vary in width and length. The turnouts were not engineered, and do not meet the Forest service standard for conEiguration or spacing along the road.
See exhibit "A" for standard turnout information.
The road is approximately 2.1 miles from Hwy. 1 to the parking area, at the end. The posted maximum speed is 15 Mph . The road gradient varies from $2 \%$ to $12 \%$, of the 2.1 miles, two way travel is possible in approximately 1.6 miles; the rest of the road $(0.3$ miles), is too narrow to allow two way trafilic. Consequently, when two vehicle meet in these narrow areas, someone has to back up to the nearest turnout or wide spot to allow the opposing vehicle to get by.

In order to grasp Sycamore Canyon Road in its proper perspective, one must have a mental picture of Sycamore canyon, which is the backdrop for the road. Perhaps the best depiction of sycamore Canyon was given by a local resident, as follows:
"The 2.1 mile single lane road traverses a uniquely beautiful canyon where the first homesteaders made their home. The rich biodiversity offers che visitor an opportunity to enjoy a seasonal cycle of natural visual resources.
The top of the canyon is flanked by steep walls of ferns and heavily mossed bay trees viewed through the dappled light. The blossoming of the buckeye trees provides a sighe/scent experience to rival any of the whole coasc. Diverse wildflowers, ferns and berries occur the full length of the intermittent stream. The majestic redwoods of mid-canyon give way to the riparian fields where the stream is lined by the sycamore trees, for which this canyon is
named. On the hilis rising to the south, wind-sheared stuneed redwood groves attest to the powerful winds that mold this opening onto the beach and sea. Willows protect the flood plain of the stream as it meanders to the escuary providing habitat for the wetland wildilfe species."

In general, two way travel becomes difficul: or imposaible where the road is less than 20 feet wicie. The longest segment of narrow road (about 650 feet), occurs about midway from $5 R 1$ to pfeiffer Beach. At this location, the road is 12 to 14 feet wide with one or two, very short, turnouts that will accomodate one vehicle. Traffic jams are likely to occur in this area when three or more vehicle clupters meet similiar clusters traveling in the opposite direction.

The likelyhood of this eondition occurring is greater when the hourly traffic volume suxpasses 120 VpH (both directions).
Some other factor that may contribute to severe jamming or gridiock are:

1. Numbez of vehicles in the clusters.
2. Size of vehicles.
3. Driver alertness and driving experience.
4. Weather condicions.
5. Road maintenance condition.
6. Time of day and day of week.

It appears that the most severe congestion will occur when two or more factors are present eimuleareousiy.

Traffic Flow Information.
There are two sets of traffic data available for syeamore Canyon Road, as well as some casual anecdotal observacions made by a number of individuals over the years.
The fingt set of data was obtained by Howard Strohn, a resident of sycamore Canyon, who collected some excellent traffic infoxmation during the Labor Day weekend in 1994. Mr. Strohn took westhound traffic counes and parking occupancy counfs at pfeiffer Beach, from Augugt 31, 1994 to September 8, 1994. This will be referred to as the September 1994 traffic survey.
This data was subsequently used to compile a report by a local citizen group called "Coastwarch". The report is called "A coastwarch Report", dated March 14, 1996 (a copy of this report is avallable from Coastwatch).

The Coastwatch Report makes a number of recommendations on the management strategies of the Pfeiffer Beach Day Uee Area, and Sycamore Canyon Road. The report appears to have a number of inconsistencies, which may hamper the logical flow of conclusions and recommendations.
Some of these inconsistencies will be discussed in the pages that follow.
The data obtained in the september 1994 survey will be used in this report, but we cannot be assured of the methodology or the accuracy of the data. The data was collected by a single individual who made his observations from the midpoint between Hwy. 1 and pfeiffer Beach.

The second set of data was obtained from May 17, 1995 to May 19, 1996, and May 25, 1996 to May 28, 1996.

This is referred to as the May 1996 Eraffic survey.
The May 1996 traffic survey was concucced with forest service staff, as part of the overall effort of the Analysis Team to conduct tine transportation analysis.

The foilowing data was obtained in the May 1996 Eraffic survey:
A. Two way visual traffic sounts near Hwy.1, documenting types of vehicles (autos, trucks, etc.), and number of occupants for all westbound vehicles. from 8:00 AM to 8:00 PM., on all days.
B. Two way visual traftic counts at the entry to the parking area at pfeiffer Beach, documenting types of vehicles, number of occupants in all westbound vehicles, and length of stay for each vehicle, from 8:00 AM to 8:00 PM, on all days.
C. Hourly vehicle count in the parking areas from 8:00 AM to 8:00 PM, on all days.
D. Two way visual traffic counts at the midpoint between Hwy.I and Pfeiffer Beach, documenting tyoes of vehicles, and number of occopants in all westbound vehicles, during the peak traffic periods on selected days. The main objective at this station was to make viaual observation and video documentation of major traffic conflicts.

## Analysia of Traffic Data.

The traffic data obtained in both the September 1994 and the May 1996 traffic surveys, is summarized in exbibits " $B$ " and " $C$ ", respectively.

Although it is somewhat inconsistent to make direct comparisons between the two traffic surveys, because the data collection stations are not the same, the assumption will be made that the numbers collected at the midpoint in the seprember 1994 survey, represent the entire traffic on the road, and equate to the numbers collected at the entry near Hwy.1, in the May 1996 survey. The traffic data was collected and displayed in vehicles per hour in each direction, because the hourly traffic flow on Sycamore Canyon Road is much more critical than the average daily traffic (ADT), which is the average 24-hour volume for a given period of time. Because Sycamore Canyon Road is a single lane road with turnouts, it is very susceptible to peak hour traffic conflicts, and the hourly traffic volume is much more meaningful.

Utilizing the data obtained in the September 1994 and the May 1996 traffic surveys, and by using the principle of extrapolation, the following observations are made:
A. On a yearly basis, with the eurrent situation of totally unrestricted access, a motorist traveling the Sycamore Caryon Road, can expect to experience the conditions described in the following chart:

| [1] <br> Service Level (Days) | $\begin{gathered} \text { [2] } \\ \text { Peak VPH } \\ \text { (Westbound) } \end{gathered}$ | [31 <br> No. of Days predicted | [4] <br> Peak Parking Demand | [5] <br> Encimated \% of <br> Time Per Year |
| :---: | :---: | :---: | :---: | :---: |
| A (weekdays) | 37 | 255 | 54 | 70\% |
| B (Sundays \& Hol.) | 49 | 52 | 43 | 14\% |
| C (Saturdays) | 58 | 49 | 76 | 14* |
| D (3-Day Weekends) | >60* | 9 | 154 | 24 |

* Note: In the current sieuation, with totally unresericted access, there are only a few hours per day that the one way traffic exceeds 60 Vpy (See Exhibits "B" and "C").
[1] See Exhibit "D" for description of service lavela.
[2] These Eigures were obtained from the September 2994 or the May 1996 traffic surveys.
[3] See exhibit "E" for elarification.
[4] These figures were obtained from the september 1994 or the May 1996 erafide surveys.
[5] Figures are rounded off. See exhibit "E".


## Interpreting The Chart:

As a way of interpreting the chart, on weekdaye, which equaten to 255 days/year or $70 \%$ of the time, a motorist can expect service level "A" conditions most of the time.

On Sundays and mid-week holidays, which aocount for 52 days/year, or 24 of the time, the motoriat can expect service lavel " B " conditions for part of the day.

On saturdays, 49 days/year ox 24t of the time, the motorist can expect service level "c" conditions for part of the day.

On 3-day weekends, i.e., Memorial Day, Independence Day, and Labor Day, the motorist can expect service level "D" conditions for part of the day.

It is recognized that on sycamore canyon Road, it may be necessary to back up co allow an uncoming vehicle to pass, under ary service level, if two vehiclea happen to meet in those narrow parts of the road previously described.
B. During the May 1996 traffic surgey, we had one hour in excess of 120 VPF (botin directions), and several hours approaching 120 VPH . There were no serious traffic conflicss observed. The observations that were made in the mose constricted part of the road, at the midpoint, were that any traffic conflict was resolved within a mattet of a Eew seconds.

During the course of the May 1996 traffic survey, several potential conflicts were observed at che mid-point. Some involving amall clusters of vehicles meeting oncoming traffic. This is considered a major ingredient in the creation of a potential traffic jam or grialock. In all cases, the drivers resolved the conflices expediently by utilizing the smail turnouts, waiting for oncoming erafisic prior to entering the narrow area, and in some cases, backing up to the nearest turnout to allow oncoming traffic to pass.
In the seven days of the traffic survey, we were unable to capture any video of major traffic conflicts, because, to our knowledge, they did not occur.

There are alleged reports of severe traffic jams lasting several minutes, occurring when the hourly volume was considerably less than 120 VPF . In the coastwatch report dated March 14, 1996, the following statement is made to describe the traffic situation at the midpoint of the road: "The time length of jams can range from two to three minutes and more. The peak time jam could be five to ten minutes, and occasionally fifteen to twenty minutes."

We can only assume that the term "jam" implies the length of time that the traffic congestion existed, and not time that opposing traffic is not moving past a given point.

The analysis in the Coastwatch Report appears to lead the reader to conclude that 45 VPH was the maximum acceptable traffic flow in the narrow test section, when in fact, 92 VpH were observed going through during the time that the most congestion, jamming, and gridiock was described by the author.

It must be understood that by allowing two-way traffic on a single lane road, some degree of conflict is anticipated.
In theory, these conflicts can be safely and quickly resolved by utilizing the available turnouts. As the traffic volume is aliowed to get larger and larger, eurnouts should be placed closer and closer, until, at some point, the turnouts should be continuous, which produces a double lane road.
C. Sare carrying capacity - The issue of safe travel on Sycamore Canyon Road has been raised.
The following aspects of safety deserve attention:

1. Accident rate - Accident frequency is a critical measure of highway safety. Accident frequency is a good indicator of serious problems on a segment of road or highway.

The Forest service is not aware of any serious vehicular zecidents on Sycamore Canyon Road since the Agency assumed responsibility in the early 1970 's. This is not to say that there haven't been minor encounters over the years, but if they did occur, they were not reported to the Forest servica.
2. Emezgency vehicle response time = Emergency vehicle response to the beach or to private residence, is a very serious concern. On Sunday, May 26, 1996, curing the zraf\#ic survey, several test runs of a small fire tanker from Hwy. 1 to the beach were conducted. The test muns were conducted from 1:00 DM to 3:00 PM, which is the peak traffic period.
The two directional traffic volumes during the runs were as follows: At 1:00 PM = $97 \mathrm{VPZ} ;$ at $2: 00 \mathrm{PM}=112 \mathrm{VDE} ;$ at $3: 00 \mathrm{PM}=122 \mathrm{VPH}$. Each time, it took about 12 minutes to travel the length of the road, without red lighes and siren.
It is speculated that the response time would be greater if the emergency vehicle was a fire truck, and the traffic volume was in excess of 120 VPH .
It is almo mpeculated that in the event of a true emergency, by using red lights and siren, and controlling access at the highway, an emergency vehicle could still get through, becmuse the airen would resound for a long distance down canyon, and eastbound drivera would tend to pull off in the turnouts and wait for the emargency vebicle to pass.
To increase the probability of quick emextency vehicle response, the Forest Service should stipulate that the conceasionaire receive training on handling emergency situetions, and have available at all times, means of communication.
3. Safe traffic flow - As diecussed earliar, a single lane road is intenced for relatively low traffic volumes, and as the traffic volume increases, some traffic conflict and congestion is fully expected. This congested condition does not, in itself, wake the road unsafe.

However, as the traffic volume approaches a certain number, the number of conflicts increase, and safety can be jeopardized.

It is, therefore, desirable to maincain the peak traffic levels below a certain volume. This can be accomplished by implementing one of the management options outlined in Section I, of this report.

It is recognized that totally unrestricted access on Sycamore canyon Road with its present configuration, could zeault in an unacceptable condition at certain peak use periods.
Based on the eraffic data that is available, and the professional judgement of che Analysis Team, the maximum number of vehicles that the road can reasonably accomodate is 150 VPa (boch directions). This traffic volume is theoreeically possible for a very short duration, but should not be sustained for extended periods of rime.
A. Relationship between traffic volume and partinc demand

There is a direct correlation between traffic volume on the road, and parking demand, as expecced. There is also a correlation between the weather conditions at the beach and the parking demand; visicors tend to stay longer when it's sunny and relatively warm and the wind is calm, and stay less when the weather is mpleasant or meomfortable. Since the weather conditions at pfeiffer Beach can be drastically different even on the same day, it is very difficult to maike any pradictions about the length of stay on any given day, with any degree of accuracy.

During the May 1996 traftic survey, the weatiner was probably typical in terms of the mixture of foggy, overcast in the morning and aunay and pleasant in the afternoon, and windy in late afternoon.
The observation made was that the extremea were between 3 minutea and 4 hours. The median length of stay was 30 to 60 minutes.

## B. Parking demand on yearly basis

The parking demand data that was collected in the May 1996 and the September 2994 traffic surveya (see exhibits "F" and "F-1"), indicates that the peak parking demand during the weekdaye and even on a normal Sunday, is less than 60. The data also ahows that the peak parking demand on a normal Saturday and on at least two days of 3 -day weekends, is over 60. Assuming that this holds true for the entire year, the parking demand is less than 60 spaces for about 307 days per year, and more than 60 spaces for about 58 days per year (refer to exhibits "E", "F", and "F-2").

## C. Relationship between traffic Elow and parking demand

A regression analysis was done using the peak westbound hourly flow for the independent variable, and the peak parking demand for the same days, as the dependent variabla.

This graph (exhibit "G"), illustrates that for a peak hourly flow of 60 VPF, which equates to traftic service level $C$, the parking demand is about 90 spaces.
This graph is also useful in determining that the eapacity of the parking facility is the limiting factor, not the capacity of the =oad. The road carrying capacity is greater than the capacity of the paricing facility.

This is demonstrated by the fact that on Sunday, September 4, 1994, a neat 50 VPH rate was maintained for at least 3 consecutive hours, indicating that there was no backlash effect operating. Had that been the case, che hourly counts would have diminished considerably. The vehicle count in the parking facility exceeded the capacity several times over.

Findinge and Conclusiona.
A. Management Options for Sycamore Canyon Road.

FINDINGS:
Los Padres National Forest has detemined that the Pfelfer Beach Day Use Area represents a maior recreation facility on the Big Sur Coast, and intends to keep it open to the public Incefinitely.

The Sycamore Canyon Road is the only public access road to Pfelifer Beach, as well as the only access for about 40 developed residential parcels, and about 20 undeveloped.

Currently, there is unrestricted access on Sycamore Caryon Road for both residents and visitors, except that motortomes and trailers are not ackiced.

The road appears to handle the traficic demand most of the time, but there are about 50 days per year where the peak demand exceeds the prudent capacity of the road.
This number may get larger in the next 20 years.
The analysis team determined that the current situation is not acceptable, and developed five options to deal with the traffic situation.
These options were rated against a set of evaluation criteria
CONCLUSIONS:
The Analysis Team recommends that one of the management options described in Section I, is implemented prior to, or concurrent with, the rehabiltation project.
B. Road Carrying Capacity.

## FINDINGS:

The available traficic data indicates that under the current situation of unrestricted access, the tratic service level on Sycamore Canyon Road is as follows:
Service level $A=70 \%$ ( 255 days)
Service level $B=14 \%$ ( 52 days)
Service level C = 14\% (49 days)
Service level $\mathrm{D}=\mathbf{2 \%}$ (9 days)
There is no history of vehicular accidents on Sycamore Caryon Road. There has never been a documerted report of a serious traffic accident since the Forest Service assumed road maintenance responsibility in 1972.

It is believed that by using appropriate emergency response procedures, including making provisions for traffic to be blocked at the Pfeifer Beach parking area during an incident, an emergency vehicle could travel from Hwy. 1 to Pfeiffer Beach in about 11 minutes, even on peak traftic days.

It has been determined that the Sycamore Canyon Road could accomodate a peak load of 150 VPH (both directions), with varying degrees of congestion and delays. This traffic volume should not be sustained.

## CONCLUSIONS:

In order to remain within the acceptable traffic service level range, the peak allowable capacity should not exceed 120 VPH (both directions).
However, the Analysis Team recommends that service level "A" should become the goal in order to maimain a quality experience level while driving from Hwy. 1 to Pfeiffer Beach, and to facilitate multiple modes of travel, such as hiking and biking.
To meet this goal, the maximum allowable traffic flow should be no more than 40 VPH Westbound), or 80 VPH (both directions).

## C. Capacity of Parking Facillty.

FINDINGS:

There is a direct correlation between parking demand and traffic volume on the Sycamore Canyon Road.

The traffic surveys indicate that the peak parking demand on weekdays and even on typical Sundays is less than 60 spaces. This accounts for about 307 days or $75 \%$ of the time. On the remaining 58 days, or about $25 \%$ of the time, the peak demand has been observed to be in excess of 154 spaces. This condition only exists a few hours per day on the peai days.

A regression plot of peak hourly flow vs peak hourly parking demand, indicates that at 60 VPH , the parking demand is 90 spaces.
This analysis indicates that the capacity of the parking facilty is the limiting factor, and not the capacity of the road.

Based on the regression analysis and the parking demand data obtained during the traffic surveys, the capacity of the parking facility should be between 60 and 87 spaces. The latest design proposal determined that the maximum number of parking spaces possible in the available area, is 87 spaces.

A 60 space parking facilly appears to be adequate for all weekdays, sundays and midweek holidays, which account for 307 days per year, or approximately $75 \%$ of the time. On the remaining 58 days, the peak demand will exceed 60 parking spaces.

## CONCLUSIONS:

Based on the emplical data that is available, the Analysis Team recommends that the capacity of the parking facilty is between 45 and 87 spaces, with an adequate number of toilets to accomodate the median use level,
The lowest level of development ( 45 parking spaces) would assure that the driving experience from Hwy. 1 to Pfeiffer Beach, becomes part of the recreation experience, and make the road more inviting to hiking and biking use.

TRAFFIC FLOW (Cars per Hour) ON SYGAMORE CANYON ROAD (WEST BOUND) LABOR DAY WEEKEND, 1994

|  |  | A | B | C | - O | - E. | $F$ | $\therefore \mathrm{G}$ | H | 1 | -J | K | L |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | $\because$ DAY | 10:30-11:15 | 11:15-12:15 | 12:15-1:15 | (106-2it5 | 2:153:18 | $\begin{aligned} & \because:: \\ & 3: 15-1 ; 15 \end{aligned}$ | 4:15e:1E. | 8:168:16 | 0:18-7:15 | 7:15:0:00 | TOTAL |
| $\therefore$ | 2 | SAT 9/3 | $\cdots$ | 48 | $50$ |  | $68{ }^{1}$ | $-52$ | 2. 38 | 25 | $\therefore 18^{i}$ | 13 | 368 |
|  | 3 | SUN 984 | 46 | 60. | 85, 1 | $\because 84$ | 92 | $57$ | $\therefore \quad 18$ | $\cdots$ | 1 | : | 1.440 |
|  | $4^{\prime}$ | $\begin{aligned} & \text { LABORDAY } \\ & \text { MON } 9 / 5 \end{aligned}$ | 30 | 31 | $45$ | $\begin{array}{r} 43 \\ 4 \\ \hline \end{array}$ | 6io | $\begin{aligned} \therefore 3 n \\ \hdashline 36 \\ \hline \end{aligned}$ | $\square$ | $\dot{2} \dot{B}$ | F | $7$ | $320$ |
| ; | 5. | WEEKEND AV. PER HoUR | 38 | 47 | 60 |  |  | $48$ | $\because ' 25$ | $26$ | $1^{\prime 8}$ | $10^{\circ}$ |  |
| $y$ | $6$ | TUES $9 / 6$ | 13 | 19 | $15$ | $\therefore{ }^{\prime 6}$ | $\because \%$ $\because 238$ $\therefore$ |  | $\begin{array}{r}\because \\ \therefore 33 \\ \hline\end{array}$ | is | $\therefore 17$ | $\boldsymbol{\theta}$ | 218 |
|  | . 7 | WED 9\% | 13 | 132 | $31^{1}$ | $\begin{aligned} & \because-i \\ & \hdashline i 26 \\ & \hdashline \end{aligned}$ | $14$ | $\qquad$ | $87$ | 22 |  | 9 | $191$ |
|  | 8 | THU989 | 10 | 37 | $\therefore 28$ | (1) | $\begin{aligned} & -1 \\ & \therefore 28 \\ & \hline \end{aligned}$ | '. 31 | $\begin{array}{rr} -7 & \prime \\ \therefore & 14 \\ \hline \end{array}$ | $\because 24$ |  | 17 | 228 |
|  | 9 | $\begin{gathered} \text { WEEKDAY } \\ \text { AV. PQR } \\ \text { HDUR } \\ \hline \end{gathered}$ | 12 | 23 | $25!$ | $\begin{array}{r} 1 \\ 123 \\ \hline \end{array}$ | $26$ |  | $22$ | $21$ | $\left\lvert\, \begin{array}{r} 1 \\ 16 \\ \hline \end{array}\right.$ | $\square$ |  |
|  | 10 | 38 | 112 | $227$ | $2 \dot{2} 5$ | $\underline{\therefore} \quad \therefore 25$ | (285 | $\begin{array}{r}  \\ 233 \\ \end{array}$ | 134 | $\therefore$ $\therefore 115$ | $84$ | 44 |  |

Data courtesy of Howard, Strohna:

Note: This data was collected at 'the midpoint between SR 1 and Pfeiffer Beach:

SYCAMORE CANYON ROAD
TRAFFIC SURVEY - MAY 1996
TOTAL VEHICLES PER HOUR (VPH)


NOTE: VEHICLE CDUNTS AT THE MIDPOINT WERE ONLY TAKEN DURING PEAK USE PERIODS

## Exhibit " 0 "

## Traffic Service Levels

for single lane roads

|  | $A$ | * | c | - |
| :---: | :---: | :---: | :---: | :---: |
| flum | Fraf fleving with edequate parilap factililea. | fangititer durlas hezvy Praific such an durinil fate. loflef or rearaltion ativilter. |  | Flaw in flan er est te Giectid it an agefyly ime whe srarite fa diftisiti ines maty requira taction to pilt. |
| 1sinat | Uneantrifledi will atcem. Enfote the engatted ermfic velmat. | ectsifanaliy tentrolited durlmg heavy men parlofls. | trritici froquenty cantrillet os the eapecity ite reached. | Intoraltiont one wivally centrolled. Voluet is fiafoil that peseclated ufth bin lafle parpate. |
| Yakicle Typer | MIati Ineluit! lhe trllical valisle ond alf wollelet aoratily found on pultic petis. | Hincif Incteatif the cribleat vatic te at sil vihiciat asormelly femat on puilie ratif | Cfetrallet min accementefti bil weificis iryet includias the critical thitelo. geme wat my be cemeralind is whicit typet. |  blici ireflis beme billeles ciy moitio ista le megeBloti, Cpacurrent wis iraific lic rabirfetid. |
| $\begin{aligned} & \text { Cribicet } \\ & \text { Yenicle } \end{aligned}$ | claterances era adequate is filay fras Brayil. ©urlies pormita ara raquires. | Irsffle ennirelif netust whet cfactices art oarplani. putiond permiti are required. | Spectal proylilisin asy th moded fom rahteleo will have ififatiy metelleife comis zimantu. | sume remiciat ater wes th stit te matilaft, Latimety mite le be efl-lemet and matied tr. |
| sataty | sifety tasarat ari part of thi diblim. | Digh prierily In dasifm. sadprotection is occterflithat by trafific mangachet. | hest protection il provitis If mangenent. | The naed far pratection is alainilic iff fon ipeni ine tirici fraflie cenfrals. |
| Trallic Kinigament | Meratily llutiad in raguletory, weraint, ond guifit ifini thi purnits. | Emplorat to metres irafite velmat ont ceplilicit. | Tratife centrals are trequentir weded durtay porledi of tifin wio ir the daminiat risatrese ceilvity. | Wat ie dizcournge reproWift iratite ether shin that iliaclatef with the thalif purpise. |
| Vier costi | Winlelen trenipartation tifictenty il thportant. | fansrilly higher thon "A bectuse of fower ipteds Had Incrisicd deltars. | Wat Importint fificiency of trival may ba tratod for lower conitruction coits. | Mst censfarst. |
| Allanment | Daslin tpeed la the pradominant factor within ratible tupgorsphic llaliblient. | Influmened more stragily ty topeirtehy thin ty spted and iftelency. | Genertlly dicstat by topogriphle taiturit and enylramintal factorti dition apmeti art penarally law. | alcuated by topajriphy, enylranenalal factort, and the deatpo on critices inhtele finltatians. Sposi It not tmpartont. |
| dosd surfice | \$latla und imooth mith llill or no wist. conblifiting the nermil peaien ol wit. | stabla for the fredumiatnt trailit for the narual ust teston. Parladic dust control fo: hoarr wie or enylrencentel ryatont, gateth- <br> , nesi is comanaturito witt the deilitn apest. | Kar nut be thale under 111 trallic ar mather canil. tions furint the narabl uete steson. surlact rulling. raughnets, onf tuit maty bu preliant. byt contrelles for onviraniental or Investmant protecilon, | Rewih and trraplar. Traval whin the clearence whicias fi diflievit. skatl durlag dry condiciont autimit ind duallny coniroliad ontr ior tall end mater pretection. |

Breakiow of typical year:

| YONTH | NEEXDAYS | Sat. | Suz. | $\begin{aligned} & \text { KID-PEET } \\ & \text { FOLTDAYS } \end{aligned}$ | 3-DAY MEEXEADS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Jamuary (31) | 22 | 4 | 4 | $\pm$ |  |
| February (28) | 20 | 4 | 4. |  |  |
| March (31) | 21 | 5 | 5 |  |  |
| April (30) | 22 | 4 | 4 |  |  |
| May (30) | 22 | 3 | 3 |  | 3 |
| Tune (30) | 20 | 5 | 5 |  |  |
| July (31) | 22 | 3 | 3 |  | 3 |
| August (31) | 22 | 5 | 4 |  |  |
| September (30) | 20 | 3 | 4 |  | 3 |
| Octoiner (31) | 23 | 4 | 4 |  |  |
| November (30) | 20 | 5 | 4 | 1 |  |
| December (31) | 21 | 4 | 5 | 1 |  |
| Totals: | 255 | 49 | 49 | 3 | 9 |
| * of Year | 70\% | 144 |  |  | 27 |

SYCAMORE CANYON ROAD
TRAFFIC SURVEY
PARKING DEMAND

|  | FRI | SAT | SUN | SAT | SUN | MON | TUE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HOUR | 5/17 | 5/18 | 5/19 | $5 / 25$ | 5/28 | $5 / 27$ | 5/28 |
| 0800 | 4 | 0 | 2 | 1 | 9 | 3 | 0 |
| 0900 | 2 | 2 | 3 | 6 | 10 | 4 | 1 |
| 1000 | 3 | 9 | 9 | - 6 | 13 | 1 | 2 |
| 1100 | 5 | 15 | $43^{*}$ | 10 | 23 | 8 | 6 |
| 1200 | 7 | 41 | 30 | 30 | 55 | 30 | 17 |
| 1300 | 6 | 57 | 36 | 47 | 85 | 39 | 26 |
| 1400 | 10 | 80 | 38 | 85 | 115 | 53 | 19 |
| 1500 | 21 | 89 | 30 | \$08 | 170 | 53 | 17 |
| 1600 | 30 | 76 | 27 | 104 | 88 | 42 | 13 |
| 1700 | 24 | 84 | 21 | 89 | 75 | 28 | 8 |
| 1800 | 7 | 37 | 16 | 52 | 39 | 13 | 2 |
| 1900 | 4 | 25 | 8 | 30 | 18 | 8 | * |
| 2000 | 2 | 19 | 5 | 16 | 11 | - | - |
| TOTALS | 125 | 480 | 225 | 562 | 649 | 282 | 111 |

PARKING AT PFEIFFERBEACH, LABOR DAY WEÉKEND, $1994 \div$ PEAK HOUR


## SYCAMORE CYN. RD./PFEIFFER BEACH RELATIONSHIP BETWEEN TRAFFIC FLOW AND PARKING DEMAND



Appendix (A".

Relationghip betwean max. pAor peak parking demand and peak tratitic voluma.

The following relationshio must be ja baiance:
(2) (2) (3)

(1) It was decemmined that the recreztion facility, i.e., Pfeiffer Beach, has the eapacity to gupport a maximum of 300 persons at one time (PAOT), without excessively impacting the respurces that exist at the site. This mumber dictaces the maximum size of the parking area.
(2) Assuming 2.5 peopie per car, 90 cars X 2.5 persons per car $=225$ paxaons at one time (PAOT). 225 PAOT < 300 allowable DAOT.
(3) It is theoretically possible to move $i 50$ vehieles per hour on a road like Sycamore Canyon Road, with varying degrees of congestion and possible delays.

The traffic on sycamore canyon Road consists of resident traffic and visitox traffic.
There are an estimated 40 homes that depend on Sycamore Canyon Road as their primary access.

Assume that $1 / 2$ of 90 spaces are to be filled, and asmume 1 trip for $1 / 2$ the residents in any given peak hour.

45 VPH (visicors) +20 VPH (residents) $=65 \mathrm{VPH}$ (total vehicles per peak hour)
65 VPH (westbound) $=130 \mathrm{VPH}$ (both directions) $\leqslant 250 \mathrm{VPH}$ (boch directions)
Assuming that during che peak periods, westhound traffic would be mezered a maximum of 2 vehicle for every 30 sec . This would allow a maximum of 120 vPH to enter.

- 30 sec. intervals and 15 MPH , westbound vehicles would be separated by approximately 600 feet, which would allow sufficient manuevering space for two way traffic.


## T3AETEC

STBE폰 Try
10,000 vainitias expected fn 20 years Mjas Divitied Sc=eet

This stemet is so deaignatadi by a Kastar Plan. Puectism Plan or Boad chasstifiction P1an adopered by fie Bosmi of Sumescisory. 5,000 vebicles or mora, but leas chan


Calleme of ams
thonugh a subdivision and that is zote
 major street.




100 urits - airucied by reazidemmini Ievs ani provide aceass to mor woth than 100



30 units or 7ess - begins and terminatan of the some crose streer and pmavidas -
 Hocimum 300 veiticites expeceed in 20 yerrs
 provide aceers to 3 linitied twive of




[^2]Tainsural Smees EnTfMridth Streee Firmenga Soad 17Iey - Sofx=-Levet




30


Modes of Travel for Sycamore Caryon Road
Highway 1 to Pfeiffer Baach
Ideas brainstomed at meeting on January 16. 1956 at Conference Room, Multi-Agency Facility, Big Sur, Calffornia

- improve road to beach to country standarcs
- Vehicle access with a sign at Highway 1 indicating Full or Vacancy.
- Sign/Fully automated using a token, i.e. airport parking.
- Token purcinased at MAF
- Host staffed gane
- Shuttle using tumout at Higtrway 1 as terminal
- Car pool only (diamond lane)
- Virtual reality tecnnology available at MAF instead of traveling road
- Vehicle size restrictions
- When parking lot full, allow onty 1 vehicle ar a time to enter as 1 vehicle leaves
- Improve number anc quality of xumouts
- Restrict parking to designated parking araas
- No parking aiong read
- More patrol/enforcemert of iilegal parking
- Restrict auto access during high fire dangerfpeak hazard periods, or when emergency venicle access/travel time excaeds 15 minute response.
- No change
* No change and residents use Clear Fidge Foad
- Using fees to regulate volume of use
- Using keys to regulare volume of use
- Use by reservation
- Walk-injBlke use anly
- Wak-injBike pius residents and personts with disabilities
- Walk-in/Bike plus residents,persons with disabilities and shuttle
- Road with parallel hiking path
- Parking lot near Highway 1
- Vehicle access but one way at a time. i.e. Enter on hour. exit on $1 / 2$ hour.
- Signal Light
- Uncer pass at Highway 1
- Under pass at Higtwisy 1, need to expand parking at MAF
- Off site-ticker sales for shutite
- Hotels/Lodge/Motelis/Campgrounds provide shutile for thair guests
- Several shutide stops, ie. Campgrounds, Fiver Inn, Poss Ranch, ecc.
- Shutde Only
- At certain times or day or on certain days of the week, close to auto access
- Shutte during times when auto accoss is restricted
- Bike renta//Dike surrey rentals
- Stating at parking lot
- DPR employes at Higrway 1 waving peopie on, when full
- Volunteers to staff road at heavy use times


## AUTO USE

- No Change
- No parking along road
- Mors parrol/entorcemem of illegal parking
- Restrict parining to designated areas
- Car pooling only (ciamond lane)
- Vehicle access with a sign ax Highwäy 1 indicating when full or vacancy
- When parking lot is full, allow only 1 vehicle at a time to enter, as 1 vehicle leaves.
- Staffing at parking lot
- A host at staffed gate
- Sign and fully automated system using tokens, Le. airport parking
- Tokens purchesed at MAF
- Improve rosd to county standards
- Improve number and quality of rumouts
- Vehicie access to one way at a time, i.e. enter on the hour, exit on $1 / 2$ hour.
- Signal light
- Venicle size restriction
- Use fees to regulate volume of use
- Use keys to regulate volume of use
- Use by reservation
- DPR employee at Highway 1, waving people on when full
- Volunteers to staff road ar heavy use times


## NON-AUTO

- Virtual reality technology available at MAF instead of traveling road
- Walk-invBike use onty
- Under pass at Higtway 1
- Under pass at Higtrway 1 , need to expand parking at MAF
- Eike renti/bike surrey rentals


## SHUTTLE

- Shuttle only
- Snunte using turnout at Highway 1 as terminal
- Off site-ticket sales for sinutile
- Hotels/Motels/Campground/Lodge provide shutte for their guest
- Several shuttie stops, l.e. campgounds. River Inn, Post Ranch, etc.


## OTHER IDEAS/COMEINATION OF IDEAS

- At certain times of day or on certain days of the week close to auto access
- Shuttle during times when auto access is restricted
- Farking lot near Highway 1
- Road with parallel hiking path
- Restrict auto access during high fire danger/paak hazard periods, or when emergency vehicfa access/travet tme exceeds 15 minute response
- No ehange and residents encouraged to use Clear Ridge Foad
- Walk-in/Bike access plus residents and persons with disabilites
- Walk-in/Bike access plus residents, persons with disabilities, and shutte.


Subject: Pfeiffer Beach Rehabilitation Project, Monterey County, California:
Dear Ms. Derby:
The:U.S. Fish and. Wildlife Service (Service) has reviewed your request for concurrence: that the: biological opinion issued for the Pfeiffer:Beach Rehabilitation Project.(1-8-95-F-33) in Monterey. County, Califomia.is still valid with recent modifications to the scope of the project. The Forest: Service has scaied down the level of modification of the existing project site which will result.in. less impact upon riparian habitat and increased protection of riparian and aquatic areas. The pnoject modification will also result in added rehabilitation of parking sites using native plants:

The biological opinion analyzed the effects of the proposed project on the federally endangered Smith's blue butterfly (Euphilotes enoptes smithi). The California red-legged frog (Rana aurora draytonii), currently listed as a threatened species, was proposed for listing at the time the biological opinion was issued:

The Service has reviewed the environmental assessment for the Pfeiffer Beach Day Use Rehabilitation Project; dated June 1997, and concurs that the terms and conditions of the existing. biological opinion are still valid.for the amended proposal. We also concur that the proposed. action would not adversely affect the California red-legged frog and fürtier consuitation pursuant to section 7 of the Endangered. Species Act of.1973; as amended; is not necessary. If the: Forest Service discovers new information that reveals effects of the proposed action that may adversely affect the Califormia red-legged frog, formal consultation should be reinitiared at that time.

The Service appreciates your efforts to develop a programmatic management plan, pursuant to conservation recommendation number two, addressing the effects of ongoing land uses within the Los Padres National Forest which may pose the potential to affect host buckwheat plants



[^0]:    ** See page 9.

[^1]:    ** See page 9.

[^2]:    Special purpose strees $\quad$ fpes

