The Honorable Richard O'Connell  
Director  
Office of Environmental Quality  
Control  
Office of the Governor  
550 Halekauwila Street  
Tani Office Building, Third Floor  
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: Kauai Belt Road, Princeville to Kaliihiwai,  
Project No. DP-056-1(17)

Enclosed is the Final Environmental Impact Statement for the subject project. This statement is accepted by the Governor, State of Hawaii and the U. S. Department of Transportation, Federal Highway Administration.

Sincerely Yours,

Ralph T. Segawa  
Division Administrator

By: H. Kauimoto  
Assistant Division Administrator

Enclosure
KAUAI BELT ROAD
KALIHIWAI TO HAENA
FAP Route 56, Kauai, Hawaii

FINAL
Environmental Impact Statement

Environmental Quality Commission
Office Of The Governor
550 Halekauwila Street
Tani Office Building, Third Floor
Lawrence, Hawaii 95813

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
and
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION
Highways Division
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KAUAI BELT ROAD
KALIHIWAI TO HAENA SECTION

FAP Route 56, Kauai, Hawaii

PROJECT NUMBERS:
DP-056-1 (17)
BRF-056-1 (20)
56D-01-70
56D-02-75
F-056-1 (11)

FINAL
ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION
Highways Division

Submitted pursuant to 42 U.S.C. 4332 (2)(C),
and 23 U.S.C. 128(e).

June 23, 1989

Date

Neil D. Schexnayd
Director
Office of Environment and Design
Federal Highway Administration
Region Nine
June 13, 1980

Mr. Donald A. Bremner, Chairman  
Environmental Quality Commission  
550 Halekauwili Street, Room 301  
Honolulu, Hawai`i 96813

Dear Mr. Bremner:

Subject: Recommendation for Acceptance - Environmental Impact Statement for Kauai Belt Road, Kalihiwai to Haena, Kauai

Based upon the recommendation of the Office of Environmental Quality Control, I am pleased to accept the subject document as satisfactory fulfillment of the requirements of Chapter 343, Hawaii Revised Statutes. This environmental impact statement will be a useful tool in the process of deciding whether or not the action described therein should or should not be allowed to proceed. My acceptance of the statement is an affirmation of the adequacy of that statement under the applicable laws, and does not constitute an endorsement of the proposed action.

When the decision is made regarding the proposed action itself, I expect the proposing agency to weigh carefully whether the societal benefits justify the environmental impacts which will likely occur. These impacts are adequately described in the statement, and, together with the comments made by reviewers, provide a useful analysis of alternatives to the proposed action.

With warm personal regards, I remain,

Yours very truly,

[Signature]
George K. Ariyoshi

cc: Mr. Richard L. O'Connell
Kauai Community Research Group
Attn: Jennie T. Yukimura
RR #1
P.O. Box 28-B
Lihue, Kauai 96766

Kauai Historical Society President
Attn: Robert J. Schleck
P.O. Box 248
Lihue, Kauai 96766

The Kauai Outdoor Circle
Attn: Helen C. Hopkins
P.O. Box 266
Hanalei, Kauai 96714

Life of the Land and Sierra Club
Attn: Elmer L. Frisbee, III
P.O. Box 256
San Francisco, CA 94123

National Trust for Historic Preservation, Regional Director
Attn: John L. Frisbee, III
802 Montgomery St.
San Francisco, CA 94133

Princeville Corporation
Hanalei, Kauai 96714

Shoreline Protection Alliance
Attn: Douglas Meller
P.O. Box 647
Honolulu 96813

Private Individuals
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P.O. Box 291
Anahola, Kauai 96703

John Wehrheim
P.O. Box 111
Kilauea, Kauai 96754

Geraldine A. Wojno
P.O. Box 205
Hanalei, Kauai 96714

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F. E. Havley  
Regional Administrator  
Federal Highway Administration  
Two Embarcadero Center, Suite 830  
San Francisco, California 94114  

Dear Mr. Havley:

The Environmental Protection Agency has received and reviewed the Draft Environmental Statement for the Kalaeloa to Kahului Road project (H3A Route 55) on Maui, Hawaii.

EPA's comments on the Draft Environmental Statement have been classified as Category 1-1. Definitions of the categories are provided on the enclosure. The classification and the date of EPA's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal actions. Our procedure is to categorize comments on both the environmental consequences of the proposed action and the adequacy of the environmental statement.

EPA appreciates the opportunity to comment on this Draft Environmental Statement and requests two copies of the Final Environmental Statement when available.

If you have any questions regarding our comments, please contact Patricia Sanderson, EIS Coordinator, at (415) 236-6266.

Sincerely,

[Signature]

Paul De Falco, Jr.
Regional Administrator

Enclosure

cc: Council on Environmental Quality  
Ralph T. Segawa, Div. Admin  
Federal Highways Admin  
677 Koa'ina Blvd., Suite 613  
Honolulu, Hawaii 96813

EIS CATEGORY CODES

Environmental Impact of the Action

1-1--Lack of Objections

EPA has no objection to the proposed action as described in the draft impact statement or suggests only minor changes in the proposed action.

2-1--Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications as required and has asked the originating Federal agency to reassess these aspects.

3-1--Environmentally Unnecessary

EPA believes that the proposed action is unnecessary because of its potentially harmful effects on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).


debits

Category 1--Adequate

The draft impact statement accurately reflects the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2--Insufficient Information

EPA believes that the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action. However, from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not included in the draft statement.

Category 3--Inadequate

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonably available alternatives. The Agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revision be made to the impact statement.

If a draft impact statement is assigned a Category 3, no rating will be made of the project or action, since a basis does not generally exist on which to make such a determination.
KAUAI BELT ROAD
KALIHIWAI TO HAENA SECTION

FAP Route 56, Kauai, Hawaii

PROJECT NUMBERS:
DP-056-1 (17)
BR-056-1 (20)
S6D-01-70
S6D-02-75
F-056-1 (11)

FINAL ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
and
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION
Highways Division

Submitted pursuant to 42 U.S.C. 4332 (2)(C),

Date

______________________________
Director
Office of Environment and Design
Federal Highway Administration
Region Nine
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A. Federal Highway Administration

Administrative Action Environmental Statement

( ) Draft ( X ) Final
( ) Section 4(f) Statement attached

B. The names, addresses, and telephone numbers of individuals at the Federal Highway Administration and State Highways Division who can be contacted for additional information concerning this proposal and statement are:

Mr. Ralph Segawa
Division Administrator
Federal Highway Administration
U.S. Department of Transportation
300 Ala Moana Boulevard, Box 50206
Honolulu, Hawaii 96850

(Telephone Number: 546-5150)

Mr. Tetsuo Harano
Chief, Highways Division
Hawaii Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

(Telephone Number: 548-5711)

C. DESCRIPTION OF THE PROPOSED ACTION

The recommended action consists of widening and curve improvements from Kaliihiwai to Princeville. This Final EIS presents "recommended" improvements for the Kaliihiwai to Princeville section only, plus an interim maintenance repair program for several of the one-lane bridges. A long-range solution for correcting the deficiencies from Princeville to the end of the highway can not be recommended until a number of significant issues are resolved. (See Appendix F, Section V, "Unresolved Issues"). When these issues are settled, a Supplemental Final EIS will be prepared for the Princeville to Haena section of the highway.
The Proposed action consists of re-grading the highway, increasing the pavement width from 16 feet to 22 feet, and adding 4-foot paved shoulders with 4-foot graded extensions between Kaliihiwai and Princeville. Except for improvements to the geometry of several curves, the project will follow the existing alignment. The project length is 1.9 miles and has an estimated cost of about $3 million.

The Draft EIS (2/23/77) presented alternative proposals for improving the highway and one-lane bridges for the entire unimproved portion of the Kauai Belt Road from Kaliihiwai to Haena. However, since the Draft EIS was circulated, the Hanalei, Waioli, and Waipa Bridges have been determined to be eligible to the National register of Historic Places. This initiated a Section 106 (National Historic Preservation Act) review of the State Department of Transportation's plans for the section of highway from the Hanalei Bridge to the end of the highway at Haena. Until all issues, including the Section 106 process, are resolved, a decision on the proposed bridge replacements from Princeville to Haena has been deferred. The Kaliihiwai to Princeville section of the highway does not involve the Section 106 process, and the recommended action for this section will not affect the future selection of alternatives for the Princeville to Haena section. Therefore, the decision has been made to proceed with project development from Kaliihiwai to Princeville. This Final EIS covers as much as possible for both sections. However, at such time a decision is made to proceed with any of the proposed bridge replacements, a supplement to this final EIS will be prepared.

In the interim, because of the seriously deteriorated condition of the Hanalei Bridge and others, repair and maintenance will be performed to keep the structures in service until a final program is decided upon. The repairs will not alter the appearance of the bridges, and will not significantly increase their load capacities.

D. SUMMARY OF ENVIRONMENTAL IMPACTS

The primary impact of widening from Kaliihiwai to Princeville will be an improvement in the structural and safety aspects of the highway. The appearance of the highway will be altered by re-grading the narrow box-cuts and eliminating the "entrance point" at the end of the previously improved section. However, much of this appearance will have already been altered by the planned addition of an approach to the
privately-developed Anini Vista Estates Subdivision. Physical impacts (soil loss, vegetation removal, etc.) will be minimal, since the improvements will follow the existing alignment. The improvements may encourage growth at Princeville, but this area is planned for development so growth is not necessarily a negative impact. The recommended highway widening will not influence decisions regarding the disposition of the historic bridges.

E. MAJOR ALTERNATIVES CONSIDERED

For reference, the full scope of proposed improvements from Kalihiwai to Haena are summarized here. At the present time, alternative W2 (widening from Kalihiwai to Princeville) and interim repairs to some of the bridges are the only improvements that have been raised to "recommended" status. The remaining proposals described in the 2/23/77 Draft EIS have been deferred. (See the following matrix, "Summary of Alternatives and Impacts" for a complete tabulation of the proposed improvements.)

1. Highway Improvement: Kalihiwai to the Hanalei Bridge

This section has been divided into two segments, Kalihiwai to Princeville (1.9 miles) and Princeville to the Hanalei Bridge (1.7 miles), each of which has two alternatives. Alternative 2 (Kalihiwai to Princeville) is a new highway alignment on the north side of the existing route, and Alternative W is widening the existing highway and realigning dangerous curves. (W1 provides 8-foot paved shoulders and W2 provides 4-foot paved shoulders.) For the Princeville to Hanalei bridge section, Alternative A involves realignment to the northerly side of the road, while Alternative W involves minimal widening and realignment closely along the existing highway. The alternatives differ in their curve radii and approach alignments.

2. Highway Improvement: Hanalei Bridge to Hanalei Town

Several types of elevated alignments were considered as solutions to the problem of road closure from flooding on the Hanalei River but these were rejected on the basis of high cost and environmental impacts. The only alternative being considered for this section is constructing paved shoulders and resurfacing the existing highway.
## SUMMARY OF ALTERNATIVES AND IMPACTS

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</tr>
<tr>
<td>ALTERNATIVE W6 (4-Foot Shoulders)</td>
<td>A M M 0 0 A M B A 0</td>
<td>3336</td>
<td></td>
</tr>
<tr>
<td>ALTERNATIVE W5 (Safety Improvements)</td>
<td>0 M M 0 0 0 M B M 0</td>
<td>2346</td>
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<tr>
<td>HANALEI BRIDGE TO HANALEI TOWN *</td>
<td>0 0 0 0 0 0 O B O 0</td>
<td>208</td>
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<tr>
<td>HANALEI BRIDGE *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DESIGN NO. 1A (1-Lane Steel Truss)</td>
<td>0 M O M 0 0 O M O A A</td>
<td>559</td>
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</tr>
<tr>
<td>DESIGN NO. 1B (2-Lane Steel Truss)</td>
<td>0 M O M 0 0 M B O A</td>
<td>948</td>
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</tr>
<tr>
<td>DESIGN NO. 2 (1-Lane Conc. with Mock Truss)</td>
<td>0 M O M 0 0 O M O A O A</td>
<td>643</td>
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</tr>
<tr>
<td>DESIGN NO. 3A (2-Lane Conc. with Mock Truss)</td>
<td>0 M O M 0 0 M B O A</td>
<td>1015</td>
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</tr>
<tr>
<td>DESIGN NO. 3B (2-Lane Conc.)</td>
<td>0 M O M 0 0 M B M A</td>
<td>702</td>
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<tr>
<td>DESIGN NO. 4 (2-Lane Conc. 550' Downstream)</td>
<td>A M O A 0 0 M B A O</td>
<td>5-12</td>
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</tr>
<tr>
<td>WAIOLOI BRIDGE *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO-LANE</td>
<td>0 M O M 0 0 M B M A</td>
<td>496</td>
<td></td>
</tr>
<tr>
<td>MAJOR REPAIR</td>
<td>0 0 0 0 0 0 M O O 0</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>WAIPA BRIDGE *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO-LANE</td>
<td>0 M O M 0 0 O B M A</td>
<td>503</td>
<td></td>
</tr>
<tr>
<td>MAJOR REPAIR</td>
<td>0 0 0 0 0 0 O O A 0</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>WAIKOKO BRIDGE *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO-LANE</td>
<td>0 M O M 0 0 O B M A</td>
<td>503</td>
<td></td>
</tr>
<tr>
<td>MAJOR REPAIR</td>
<td>0 0 0 0 0 0 O O A 0</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>WAINIHA BRIDGES 1, 2 AND 3 *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO-LANE</td>
<td>0 M O M 0 0 O B M A</td>
<td>1165</td>
<td></td>
</tr>
<tr>
<td>MAJOR REPAIR</td>
<td>0 0 0 0 0 0 O O B M 0</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>HAENA BRIDGES 1 AND 2 *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO-LANE CALVERT</td>
<td>0 M O M 0 0 O O O O</td>
<td>389</td>
<td></td>
</tr>
<tr>
<td>MAJOR REPAIR</td>
<td>0 0 0 0 0 0 O O A 0</td>
<td>257</td>
<td></td>
</tr>
<tr>
<td>MANOA STREAM FORD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REPAIR FORD</td>
<td>0 0 0 0 0 0 O O A 0</td>
<td>46</td>
<td></td>
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<td>WIDEN FORD</td>
<td>0 M O M 0 0 O O O O</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>TWO-LANE CALVERT</td>
<td>0 M O M 0 0 O O O O</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td>LIMAHI STREAM CROSSING *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAJOR REPAIR</td>
<td>0 0 0 0 0 0 O O B M 0</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>TWO-LANE CALVERT</td>
<td>0 M O M 0 0 O O O O</td>
<td>163</td>
<td></td>
</tr>
</tbody>
</table>

0 = NO IMPACT
B = BENEFICIAL
M = MITIGATABLE TO ACCEPTABLE LEVELS
A = ADVERSE (REFER TO TEXT FOR LEVEL OF SIGNIFICANCE AND WHETHER OR NOT IMPACT IS PARTIALLY MITIGATABLE)
OA = EXISTING ADVERSE CONDITION NOT CORRECTED
* = TO BE COVERED BY SUPPLEMENT TO THIS FINAL EIS
3. **Bridge Replacements: Hanalei Bridge to Limahuli Stream**

Six alternatives for replacing the Hanalei Bridge have been proposed; one or two-lane steel truss, one or two-lane concrete with mock truss, a modern two-lane bridge design at the present location, and a two-lane modern-style structure located 550 feet downstream from the existing crossing. Either two-lane replacements or major repairs to six existing bridge structures are proposed: the Waioli, Waipa, and Waikoko Bridges, and the three Wainiha Bridges. At Haena, two culverts would either be repaired or replaced with wider structures. At the Manoa Stream Ford, the alternatives consist of either a repaired ford, a repaired and widened ford, or a double-lane culvert. The alternatives proposed for the Limahuli Stream crossing are a double-lane culvert, or repairs to the existing structure.

4. **No Project**

The "Do-Nothing" alternative (maintaining the highway in its existing condition) could be applied separately to any of the proposed improvements. In each case the effect would be the continuation of substandard highway conditions consisting of poor horizontal alignments, inadequate roadway widths, and structurally unsound bridges. This is not a desirable alternative for the project on an overall basis.

**F. CITIZEN PARTICIPATION**

Following is a chronological summary of all formal and informal citizen participation in this project.

**5/30/74**  
Information Meeting at Hanalei to discuss roadway improvements from Kalihiwai to Hanalei.

**7/9/75**  
Draft EIS for Kalihiwai to Hanalei section circulated for public review. (Appendix A of this Final EIS contains a list of respondents and a summary of their comments with references to the Final EIS text.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/13/75</td>
<td>Public Hearing at Hanalei to receive formal testimony on proposed improvements from Kaliihiwai to Hanalei. (See Appendix A for a list of persons giving testimony.)</td>
</tr>
<tr>
<td>10/22/75</td>
<td>Information Meeting at Hanalei to discuss all proposed improvements from Kaliihiwai to Haena.</td>
</tr>
<tr>
<td>3/3/76</td>
<td>EIS Preparation Notice for Kaliihiwai to Haena section circulated for public review. (See Appendix A for a list of respondents, copies of their comments, and the State DOT's response where required.)</td>
</tr>
<tr>
<td>3/21/77</td>
<td>Draft EIS for Kaliihiwai to Haena section circulated for public review. (Appendix F of this EIS contains a list of all respondents, copies of their comments, and evaluations where appropriate. Comments were accepted for approximately 75 days beyond statutory 30-day review period.)</td>
</tr>
<tr>
<td>4/20–21/77</td>
<td>&quot;Combined Corridor and Highway Design&quot; Public Hearings at Hanalei and Lihue to receive formal testimony on proposed improvements from Kaliihiwai to Haena. (See Appendix F for excerpts of testimony relating to the Kaliihiwai to Princeville section.)</td>
</tr>
<tr>
<td>8/24/77 to Present</td>
<td>On-going correspondence and informal consultation with the North Shore Belt Road Citizens Advisory Committee (established to coordinate citizen action regarding the proposed project).</td>
</tr>
<tr>
<td>3/22/79</td>
<td>Public Information Meeting at Hanalei held by the Advisory Council on Historic Preservation to discuss and receive testimony on the effect of the proposed improvements with respect to historic preservation concerns.</td>
</tr>
</tbody>
</table>
CHAPTER I

PROJECT DESCRIPTION
CHAPTER I DESCRIPTION OF THE PROPOSED ACTION

A. LOCATION

The Kauai Belt Road extends along the coast of the Island of Kauai from Barking Sands on the west coast to Haena on the north. (The Na Pali Coast is without road access). The Kuhio Highway (Federal Aid Primary 55) comprises the segment of the "belt" from Lihue to Haena, a distance of 38 miles. The proposed project involves improvements from near Kaliihiwai to the terminus of the highway at Kee Beach near Haena, a total of 12.5 miles (Figures 1 and 2).

B. NEED FOR IMPROVEMENT

1. Structural and Design Deficiencies. In 1969, the County of Kauai transferred jurisdiction of the Kaliihiwai to Haena section of the Kuhio Highway to the State Department of Transportation. The State concluded at that time that the two-lane highway, with eleven one-lane bridges, was sub-standard in design and that several of the bridges were in serious need of replacement. The Kuhio Highway has been gradually improved from Lihue to Kaliihiwai; the segment presently proposed for improvement is the last to be upgraded.

The Kuhio Highway is the only ground linkage between the North Shore and the rest of Kauai. It must therefore carry all of the resident and visitor traffic and provide emergency access to an area that is subject to both flooding and tsunami inundation. By current highway design standards, the Kauai Belt Road from Kaliihiwai to Haena is inadequate; some degree of improvement is necessary. The following paragraphs describe the major deficiencies of the highway from Kaliihiwai to Princeville (a), from Princeville to the Hanalei Bridge (b), from the bridge into Hanalei Town (c), and from Hanalei Town to the end of Kuhio Highway at Kee Beach (d).

The recommended action consists of widening and curve improvements from Kaliihiwai to Princeville. This Final EIS covers these improvements, plus an interim maintenance repair program for several of the one-lane bridges. A long-range solution for correcting the deficiencies from Princeville to the end of the highway cannot be recommended until a number of significant issues are resolved. (See Appendix F, Section V. "Unresolved Issues").
When these issues are settled, a Supplemental Final EIS will be prepared for the Princeville to Haena section of the highway to provide additional discussion on the impacts of the proposed improvements.

a. **Kalihiwai to Princeville.** The highway section from Kalihiwai to Princeville is substandard in pavement width, too narrow (approximately 18 feet wide) and the grassed shoulders (approximately 2 feet wide) do not provide sufficient lateral clearance (Plate 1). These inadequate shoulders cause constrictions in an already narrow pavement, especially during times of rain when the shoulders become muddy and cannot be used, and water runs along the edge of the pavement. The curves have poor horizontal alignments, including unexpectedly sharp "S" curves and inadequate sight distances. The total thickness of the pavement and base is only about 5 inches, which is inadequate for the heavier modern vehicles and traffic volumes that the highway now carries. This structural deficiency shows up in numerous failures in the roadway base course, even with regular resurfacing. The rapid development of rough spots and potholes after repair or resurfacing indicates that the highway has passed its economic life span. In addition, a row of large eucalyptus trees immediately adjacent to the highway present a potential hazard from falling branches during high winds.

b. **Princeville to the Hanalei Bridge.** This section of highway, which descends the Hanalei River bluff, has substandard pavement and shoulder widths, substandard roadway alignment, and structural deficiencies. A set of curves in a horse shoe configuration at the top of the bluff is substandard in alignment and offers poor visibility. There is inadequate roadway shoulder for emergency stopping off of the travel-way.

c. **Hanalei Bridge to Hanalei Town.** The Hanalei Bridge (Plates 9 and 10) was prefabricated in New York by Hamilton and Chambers and erected in 1912 at its present location. It was upgraded in 1934, and in 1967, new Warren steel trusses were added to the original Pratt truss. In 1973, major repairs costing over $40,500 were made by strengthening the members and connections with welded plates, and since 1970, an average of $4,300 has been spent for annual maintenance on the bridge. In spite of these
efforts, the Hanalei Bridge is in an advanced state of deterioration, with some of the members having only 20% of their original cross sectional areas remaining. The posted load limit has been reduced to 10 tons in order to reduce strain on the bridge, but State Department of Transportation bridge engineers seriously consider it to be in danger of collapse. In addition to this hazard, the Hanalei Bridge has a clear width of only 17 feet (one lane) and right-angle approaches with poor visibility (Table 1). Because of its deteriorated condition and substandard design, the Hanalei Bridge is ranked Number One Priority in the State's Federal-aid Bridge Replacement Program.

The highway section from the Hanalei Bridge to the outskirts of Hanalei Town is characterized by periodic flooding, deteriorated pavement, and inadequate grass shoulders. Clearance between the pavement and obstructions is minimal, and approximately 1,000 feet from the bridge the road makes a slight curve at a narrow culvert, making the highway alignment deceptive.

d. Hanalei Town to Kee Beach. The roadway from Hanalei to the end of the highway is only 18 feet wide, which is not adequate for the expected traffic. However, there are ten structures that provide only one lane (Table 1). Given the traffic volume carried by this highway, one-lane bridges are considered substandard. Furthermore, the bridges are in very poor condition. Although an average of over $34,000 per year (1970-1978) has been spent to repair and maintain the deteriorated one-lane bridges from Hanalei Town to Wainiha, they all require major improvements. A summary of the major defects follows:

The Waioli Bridge (Plate 11) has damaged parapet walls, and the piers are scoured at the waterline.

The Waipa Bridge (Plates 12 and 13) has cracks on the parapet walls, spalling of the concrete, and badly corroded reinforcing steel. The concrete piers are eroded at the waterline. The bridge was constructed in two increments (1912 and 1934) with different widths, which creates a potentially hazardous condition.
### TABLE 1 EXISTING STREAM CROSSING INVENTORY

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Width (ft.)</th>
<th>Length (ft.)</th>
<th>Load Restrictions</th>
<th>Date Const.</th>
<th>Latest Repairs</th>
</tr>
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<tbody>
<tr>
<td>Hanalei Bridge</td>
<td>Steel thru-truss</td>
<td>17</td>
<td>113</td>
<td>47 H15</td>
<td>1912</td>
<td>1973</td>
</tr>
<tr>
<td>Waioli Bridge</td>
<td>Flat Slab</td>
<td>16</td>
<td>90</td>
<td>29 H15</td>
<td>1912</td>
<td>none</td>
</tr>
<tr>
<td>Waipa Bridge</td>
<td>Flat Slab</td>
<td>18</td>
<td>138</td>
<td>27 H15</td>
<td>1912</td>
<td>1925</td>
</tr>
<tr>
<td>Waikoko Bridge</td>
<td>Flat Slab</td>
<td>17</td>
<td>45</td>
<td>29 H10</td>
<td>1913</td>
<td>1957</td>
</tr>
<tr>
<td>Lumahai Bridge</td>
<td>Prestressed Beam</td>
<td>30</td>
<td>538</td>
<td>NA HS20</td>
<td>1973</td>
<td>none</td>
</tr>
<tr>
<td>Wainiha Bridge #1</td>
<td>Steel truss-deck</td>
<td>12</td>
<td>42</td>
<td>NA H10</td>
<td>1957</td>
<td>1973</td>
</tr>
<tr>
<td>Wainiha Bridge #2</td>
<td>Steel truss-deck</td>
<td>12</td>
<td>78</td>
<td>NA H15</td>
<td>1957</td>
<td>1973</td>
</tr>
<tr>
<td>Wainiha Bridge #3</td>
<td>Steel truss-deck</td>
<td>12</td>
<td>146</td>
<td>NA H15</td>
<td>1957</td>
<td>1973</td>
</tr>
<tr>
<td>Haena Bridge #1</td>
<td>Culvert</td>
<td>20</td>
<td>22</td>
<td>NA NA</td>
<td>1912</td>
<td>none</td>
</tr>
<tr>
<td>Haena Bridge #2</td>
<td>Culvert</td>
<td>20</td>
<td>24</td>
<td>NA NA</td>
<td>1912</td>
<td>none</td>
</tr>
<tr>
<td>Manoa Stream Ford</td>
<td>Concrete on boulders</td>
<td>22</td>
<td>15</td>
<td>NA NA</td>
<td>1912</td>
<td>none</td>
</tr>
<tr>
<td>Limahuli Stream</td>
<td>Flat Slab</td>
<td>17</td>
<td>15</td>
<td>NA NA</td>
<td>1912</td>
<td>none</td>
</tr>
</tbody>
</table>

### NOTES:

- a. Rail-to-Rail; effective pavement width is several feet less.
- b. Theoretical (ideal condition) maximum at the yield point stress.
- c. "H11" is standard 2-axle truck, 14' between axles. "HS20" is a 2-axle trailer and semi, 14'-30' between axles.
The 1946 tsunami caused the collapse of the east abutment of the Waikoko Bridge (Plate 14). The remaining west abutment is cracked and resting on boulders with large voids. There are large cracks in the parapet walls and spalling of a large area of the slab bottom. The reinforcing steel in the slab and the west abutment is corroded beyond use.

The tsunami of 1957 destroyed the original Wainiha Bridges. The three existing bridges (Plates 15 and 16) were constructed as an emergency project and were only intended as temporary crossings. In 1969, timber and steel members were added, and in 1973, the timber decking was replaced on all three bridges. Despite the intense maintenance effort, the steel structural members on the bridges require replacement.

From Wainiha to the end of the highway there are four minor stream crossings that are also in need of major repairs or replacement. The Haena Bridges #1 and #2 (Plates 17 and 18) show signs of concrete spalling and other decay and are structurally and geometrically substandard. The condition of Haena #2 is especially serious. The Manoa Ford (Plate 19) is dangerous at high water and subject to washouts. The Limahuli Stream Crossing (Plate 20) shows signs of decay and is substandard in design.

2. Accident Rates. The Kuhio Highway from Kalihiwai to Haena provides two lanes, but the eleven one-lane bridges create potentially hazardous conditions.

The accident rate on the Kalihiwai-Haena segment of the Kuhio Highway is disproportionately high. This segment carries only about 5% of the total traffic on Kauai, but has over 8% of the total accidents on the island. The 1972-1978 accident rates per million vehicle miles are given in Table 2 for the improved and unimproved sections of the Kuhio Highway and for Kauai as a whole. It can be seen that the accident rate in the project area is significantly higher than the rate for the adjacent section of Kuhio Highway which has already been improved. The locations and circumstances of the accidents of the study area in 1973 and 1974 are shown on Figure 3. Most of the accidents can be attributed to poor road geometry; cars running off of sharp curves at night and hitting fixed objects. The majority of the accidents
### TABLE 2  ACCIDENT RATES a

<table>
<thead>
<tr>
<th></th>
<th>Accidents Per Million Vehicle-Miles b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Kuhio Hwy</td>
<td></td>
</tr>
<tr>
<td>Anahola to Kalihiwai</td>
<td>2.00</td>
</tr>
<tr>
<td>Unimproved Kuhio Hwy</td>
<td></td>
</tr>
<tr>
<td>Kalihiwai to Haena</td>
<td>6.12</td>
</tr>
<tr>
<td>Island of Kauai</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>3.00</td>
</tr>
</tbody>
</table>


Notes:

a. This is a revision of Table 2 of the Draft EIS showing four more years, and aggregating the sub-sections to show the trend of accident rates from year to year on improved parts of Kuhio Highway. Table 2 of the Draft EIS displayed the accident rate for each sub-section, but because the sub-section designations were changed several times, direct comparison between sub-sections was difficult and confusing.

b. Accident rate per million vehicle miles (R) is calculated by the following formula:

\[ R = \frac{A}{L \times ADT \times 365 \times 10^{-6}} \]

Where:
- \( A \) = Yearly total of accidents on segment
- \( L \) = Length of segment
- \( ADT \) = Average daily traffic (vehicles per day) on segment
- 365 = Days per year, to convert traffic to one year total
- 10^{-6} = Conversion to convenient decimal position

The overall accident rate (\( \Sigma R \)) for a series of segments (1, 2, 3, ..., n) is obtained by:

\[ \Sigma R = \frac{\sum L_i R_i}{\sum L_i} \]

I-10
(80%) involved local drivers and a large number (22%) involved
drinking drivers. (Statewide, approximately 13% of the total
accidents involve drinking.) The majority of these accidents
(53%) resulted in injuries. Although the total number of
serious accidents may not be very great at present, the high
accident rate indicates a potential for many more accidents as
the traffic volume increases. In overall terms, the road
section from Hanalei Town to Wainiha has been identified as
the most dangerous, followed closely by the segment from
Kaliihiwai to the Hanalei Bridge.

3. Traffic Increase. Traffic projections indicate a significant
increase in future traffic due primarily to the development
of the planned community of Princeville. Also contributing
to traffic increases are the development of other areas of
the North Shore, the normal growth in population and vehicle
usage, changes in travel patterns and an expected increase
in visitor use. Figure 4 presents the existing highway capa-
city, existing traffic volumes and projected volumes for
1980 and 1998. The 1978 traffic volume up to Princeville was
less than what was projected for that year, but the traffic beyond
Hanalei was much greater than the 1980 projection.

These projections are based in part on the following planning
documents:

"A General Plan for the Island of Kauai" - March, 1970;

"Economic Base Analysis with Resulting Population
Projections for the Island-County of Kauai, State of

"The North Shore Plan" - September, 1972;

"The Hanalei Development Plan, A Socio-Economic
Prelude" - September, 1972; and

"Planning for Princeville at Hanalei".

(These documents are available for review from the Kauai
County Planning Department.) A basic condition of the
projections was that by 1990, 69% of the residential units,
31% of the hotel units, and 100% of the commercial space
planned for Princeville will be developed.

I-11
# Kauai Belt Road
**Kaliihiwai to Haena**

## Figure 4
Traffic Volume Data
Existing and Projected

Scale: 1" = 1 mi.

<table>
<thead>
<tr>
<th>Section Designation</th>
<th>D6</th>
<th>D5d</th>
<th>D5c</th>
<th>D5b</th>
<th>D5a</th>
<th>D4</th>
<th>D3b</th>
<th>D3a</th>
<th>D2d</th>
<th>D2c</th>
<th>D2b</th>
<th>D2a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section Length (mi.)</td>
<td>3.2</td>
<td>0.4</td>
<td>2.2</td>
<td>0.3</td>
<td>0.5</td>
<td>0.5</td>
<td>0.4</td>
<td>1.3</td>
<td>1.3</td>
<td>0.6</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Capacity Existing/Proposed (VPH)</td>
<td>500</td>
<td>860</td>
<td>890</td>
<td>1070</td>
<td>1070</td>
<td>1070</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
<td>1390</td>
<td>1390</td>
<td>1390</td>
</tr>
<tr>
<td>1975 Traffic Count (ADT)</td>
<td>1148</td>
<td>1337</td>
<td>1777</td>
<td>1955</td>
<td>1568</td>
<td>2563</td>
<td>2640</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1977 Traffic Count (ADT)</td>
<td>1568</td>
<td>1863</td>
<td>2563</td>
<td>2640</td>
<td>1874</td>
<td>2203</td>
<td>2794</td>
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</tr>
<tr>
<td>1978 Traffic Count (ADT)</td>
<td>1663</td>
<td>1874</td>
<td>1874</td>
<td>2203</td>
<td>2534</td>
<td>2794</td>
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<tr>
<td>Projected* 1980 ADT</td>
<td>1085</td>
<td>1447</td>
<td>1159</td>
<td>3068</td>
<td>5195</td>
<td>4716</td>
<td>3398</td>
<td></td>
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</tr>
<tr>
<td>Projected* 1998 ADT</td>
<td>1890</td>
<td>2520</td>
<td>2520</td>
<td>2719</td>
<td>3435</td>
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<td>9725</td>
<td>8926</td>
<td>8926</td>
<td>7776</td>
<td>13,426</td>
<td>8461</td>
</tr>
<tr>
<td>Design Hr. Volume (VPH)</td>
<td>227</td>
<td>302</td>
<td>252</td>
<td>272</td>
<td>344</td>
<td>458</td>
<td>973</td>
<td>893</td>
<td>893</td>
<td>778</td>
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<td>846</td>
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<tr>
<td>% Peak Hr. Trucks (%)</td>
<td>10.0</td>
<td>10.0</td>
<td>9.0</td>
<td>9.0</td>
<td>9.0</td>
<td>9.0</td>
<td>9.0</td>
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<td>6.5</td>
<td>6.5</td>
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<tr>
<td>% 24 Hr. Trucks (T24)</td>
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<td>11.0</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
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</tbody>
</table>

*Projections made in 1975 by the State DOT.
In the process of traffic assignment, it was found that the existing highway does not presently limit the total volume of traffic to the North Shore, albeit its limitation of certain types of vehicles, since the capacity of the highway is not being exceeded. It therefore follows that an improved highway would not by itself generate a significant increase in the total volume of traffic. However, since the existing Hanalei Bridge and most of the other bridges to the west do presently restrict the passage of certain types of vehicles such as large buses, heavy trucks and cranes, with new two-lane bridges the number of these types of vehicles could be expected to increase. All other increases in traffic would be tied in to land-use policies for the area.

C. PROJECT CHARACTERISTICS

1. Introduction. The ultimate improvements to Kuhio Highway from Kalihiwai to Haena involve two categories of action; upgrading the roadway, and repairing or replacing one-lane bridges. For design purposes, the roadway improvements have been separated into three sections, each with a different set of alternatives. These sections are from Kalihiwai to Princeville (1.9 miles), from Princeville to the Hanalei Bridge (1.3 miles), and from the Bridge to Hanalei (1.2 miles). (No major roadway improvements are proposed beyond Hanalei.) There are ten one-lane bridges (and one ford) from the Hanalei Bridge to the end of the highway, each of which requiring different treatment. These bridges are the Hanalei Bridge, Waioli Bridge, Waipa Bridge, Waikoko Bridge, Wainiha Bridges (3 adjacent structures), Haena Bridges (2 nearby culverts), Manoa Stream ford, and Limahuli Bridge.

Public involvement throughout this project has made it very clear that any improvements that are made to the highway must not be allowed to degrade the scenic resources or the quality of life of the North Shore. The objectives of this project is to bring the Kuhio Highway up to adequate safety standards, while at the same time maintain a design that is compatible with the character of the area.

This Final EIS deals only with the recommended improvements for the section of highway from Kalihiwai to Princeville. Until issues raised by the Section 106 process established by the Advisory Council on Historic Preservation are resolved,
in addition to clearances pursuant to the Endangered Species Act, and Executive Orders on Floodplain Management and Wetlands Management, a recommended action can not be proposed for the Hanalei, Waioli or Waipa Bridges. (See Appendix E, "Project Approvals and Clearances Required" and Appendix F, "Comments and Responses to the Draft EIS", Section V "Unresolved Issues", Page F-101.) Likewise, until final plans for the Hanalei Bridge are agreed upon, it is premature to propose changes in the highway section from Princeville to Hanalei Town. When these issues are settled, a supplement to this Final EIS will be prepared for the recommended roadway improvements from Princeville to Hanalei, and for the recommended plans for the one-lane bridges. The following paragraphs describe the recommended action for the Kalihiwai to Princeville section and interim measures to maintain the bridges. The proposed alternatives for the remainder of the highway are described in the Draft EIS (dated 2/23/77).

It is important to note that "splitting" the project by constructing the Kalihiwai to Princeville improvements first will not influence the selection of alternatives for the remainder of the highway. There are three main reasons for this: First, the alignment on the Hanalei Bluff will not be changed, so the previous alternatives for the approach to Hanalei Bridge may continue to be evaluated on their own merits. Secondly, the recommended improvements from Kalihiwai to Princeville should not cause an increase in traffic beyond Princeville; traffic is increasing, but this is due to factors other than the condition of the highway (see Page II-30). Finally, the proposed maintenance repairs to the Hanalei Bridge will not eliminate the need for its eventual replacement.

2. Highway Improvement: Kalihiwai to Princeville. The existing highway has two 9-foot wide lanes, 2-foot wide grassed shoulders and no clear area for most of its length (Plates 1 and 5). The existing right-of-way is 50 feet wide. The speed is presently posted at 35 mph near the beginning of the segment. Two alternative improvements were proposed for the highway between Kalihiwai and Princeville (1.9 miles). The first alternative consisted of a new alignment (Alternative 2) and the second, developed as a result of public suggestions, involved widening the existing highway and adjusting/realigning dangerous curves at several locations. Alternative W had several variations of traffic lane and shoulder widths. The characteristics of these alternatives are summarized in Table 3.

I-15
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Kalihiwai to Princeville</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exist.</td>
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<tr>
<td><strong>Design Data</strong></td>
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<td>Design speed (MPH)</td>
<td>varies</td>
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<tr>
<td>Posted limit (MPH)</td>
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<tr>
<td>Pavement width (ft.)</td>
<td>b</td>
</tr>
<tr>
<td>Shoulder width (ft.)</td>
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</tr>
<tr>
<td>Min. ROW (ft.)</td>
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<tr>
<td>Max. Grade (%)</td>
<td></td>
</tr>
<tr>
<td>Min. Grade (%)</td>
<td></td>
</tr>
<tr>
<td>Length (Mi.)</td>
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<td><strong>Cost Estimate ($1000's)</strong></td>
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<td>Right-of-Way</td>
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<td>Prelim. Engineering</td>
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<tr>
<td>Benefit/Cost Ratio</td>
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<td><strong>Community Impact</strong></td>
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<tr>
<td>Land Acquisition (Acre)</td>
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<tr>
<td>Parcels Affected</td>
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<tr>
<td>Homes Displaced</td>
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</tr>
<tr>
<td>People Displaced</td>
<td>--</td>
</tr>
<tr>
<td>Business Displaced</td>
<td>--</td>
</tr>
</tbody>
</table>

**NOTES:**

a. Set by County Ordinance. (Advisory speed signs are posted designating slower speeds.)

b. Guardrails will be provided where there is an insufficient roadside clear area or as required for safety.
The recommended action for the Kalihiwai to Princeville section is Alternative W2, which will provide two 11-foot lanes and 4-foot paved shoulders (Figure 5). The curves at three locations will be adjusted and realigned (Figure 6) to eliminate their substandard alignment geometrics while minimizing right-of-way impacts. In the vicinity of the eucalyptus trees (Figure 8A and Plates 1 and 3), the road will be widened to one side in order to avoid removing any trees. Where there are no trees the road may be widened symmetrically. The minimum right-of-way will be 60 feet where trees are present, and 50 feet where there are no trees. Appropriate safe transitions to the existing road will be required at Princeville beyond the project terminus. The posted speed limit will be kept at 35 mph.

Power and telephone lines will have to be moved, but sufficient rights-of-way will be provided and coordination with all affected utility companies will be maintained. Traffic control will be determined in the design phase and/or by the contractor according to contract specifications.

The cost of widening the highway from Kalihiwai to Princeville is estimated at approximately $2.6 million. The computed Benefit/Cost ratio is 1.13, indicating that anticipated user benefits (primarily safety) outweigh the construction and maintenance cost of the improved highway. This ratio was calculated according to the methodology prescribed in the American Association of State Highway Officials publication, "Road User Benefit/Cost Analyses For Highway Improvements". Costs and benefits not priced monetarily such as aesthetics, environmental impacts, economic impacts and non-user benefits are not included in the ratio, but are evaluated throughout this EIS. The improvements are to be funded jointly by the Federal Highway Administration (approximately 77%) and the State Department of Transportation (approximately 23%).

If appropriations are granted as scheduled, the improvements will begin in late 1982, and should take approximately 12 months to complete. To minimize the area exposed to erosion, clearing and grading activities will be restricted to a maximum 700,000 square foot "open area" unless otherwise permitted by the engineer. If possible, grading will be started around April and be completed by October so as to avoid the season of most intense rainfall (November to March).
TYPICAL OF EXISTING HIGHWAY
KALIHIWAI TO PRINCEVILLE

ALTERNATIVE W₂
KALIHIWAI TO PRINCEVILLE

**May be increased to 60' minimum to preserve eucalyptus trees.
KAUAI BELT ROAD
KALIHIWAI TO HAENA

FIGURE 6
CURVE IMPROVEMENTS
KALIHIWAI TO PRINCEVILLE
3. **Maintenance Repairs.** In order to keep the more deteriorated bridges in service until a permanent replacement or rehabilitation program can be implemented, major repairs will be required. Those requiring the most attention are the Hanalei, Waipa, and Wainiha Bridges. These interim repairs will not "strengthen" the structures to a significantly higher load capacity, but will "restore" them to a better condition until a permanent solution is determined. To significantly increase the load capacity of the Hanalei Bridge, in particular, would require major restructuring. Because the Hanalei, Waipio, and Waipa Bridges have been determined to be eligible for listing in the National Register of Historic Places, there is a limit to the changes that can be made under "maintenance". The anticipated repairs to the Hanalei and Wainiha Bridges include replacement of timber decking, stringers and girders, replacement of portions of structural steel members, cleaning, and painting. The concrete bridges will have reinforcing bars replaced, and will be repaired with epoxy injections and spot patching and sealing of spalled areas. Where necessary, the deck slab will be replaced. These repairs are not as extensive as those envisioned under the "major repair" alternative presented in the 2/23/77 Draft EIS.

The State Legislature has granted appropriations of $70,000 for planning repairs to various bridges on the State Highway System. The work will be performed out of the Kauai District's $757,000 regular maintenance budget. The repair work is anticipated to begin in August 1980. The economic justification for the interim bridge repairs is based on the need to maintain continuous access and operation of the highway; if one of the bridges should collapse and isolate a portion of the North Shore population, the safety, health and welfare of the community would be severely affected.

**D. PROJECT HISTORY AND SYNOPSIS OF THE ENVIRONMENTAL REVIEW PROCESS**

Beginning in 1963, State funds have been periodically designated for the purpose of upgrading the Kuhio Highway. These improvements, which have included widening and bridge replacements, have been completed to a point approximately 1/2 mile beyond the Kaliihiwai Bridge (Mile Post 25.5). In 1969, the County of Kauai transferred the remainder of the Highway to the jurisdiction of the State Department of Transportation.
At the time, a study made on the condition of the highway indicated that the geometry of the curves and width of pavement and shoulders was inadequate for the loads the highway was carrying. These deficiencies were resulting in high maintenance costs. Furthermore, the accident rate was inordinately high. Plans for improving this last segment were supported by the County of Kauai, and included the County's General Plan.

In May of 1972, notices regarding the State DOT's plans for improving the Hanalei Bridge were published in the local newspapers, giving citizens the opportunity to request a public hearing. There were several requests for a hearing, but these were subsequently rescinded, so the State DOT proceeded to acquire the necessary rights-of-way for a new bridge to be located approximately 500 feet downstream from the present bridge (Design No. 4 as described in the 2/23/77 Draft EIS). The U.S. Fish and Wildlife Service was acquiring property for the Hanalei National Wildlife Refuge at the same time, so the new right-of-way was coordinated with the establishment of the Refuge boundary.

In May of 1974, the State Department of Transportation held an informal informational meeting in Hanalei to present plans for improving the highway from Kalihiwai to the Hanalei Bridge. Proper notice was given in the local newspapers, and letters were sent to community associations and individuals affected by the project, but the meeting was poorly attended. There were no major objections to the alternative alignments presented at this meeting.

A Draft Environmental Impact Statement on the Kalihiwai to Hanalei segment of the project was circulated for review in the summer of 1975 (Report No. FHWA-HI-EIS-75-01-D, May 29, 1975). This EIS evaluated the impacts of four alternative alignments; two from Kalihiwai to Princeville and two from Princeville to the Hanalei Bridge. These were essentially parallel to, but separated from, the existing highway.

Following circulation of the Draft EIS, a public hearing was held at the Hanalei Courthouse on August 13, 1975. The major concern of the residents was that a new highway would induce growth on the North Shore and that the present quality of life would thereby be lost. Another concern was that an improved
highway would allow more tourists and especially tour buses into Hanalei (Heavy trucks and buses are presently restricted by the weight limit of the Hanalei Bridge); some residents reacted against the idea of having tourist-oriented concessions in Hanalei. On the other hand, the County of Kauai Planning Department and the Public Works Department expressed support for the proposed improvements because of the deteriorated condition and poor safety record of the highway. (See Appendix A, particularly pages A-3 to A-7 and A-59 to A-60, for a summary of written and public testimony at this stage of the project.)

The scope of the May 29, 1975 Draft EIS was challenged on the grounds that it did not discuss the entire highway improvement plans for the North Shore. Plans for replacing the Hanalei Bridge were being developed, and a Negative Declaration on the project was approved on June 22, 1972. Therefore, a new Draft EIS was written to evaluate all of the proposed highway improvements from Kalihiwai to the end of the highway at Kee Beach beyond Haena.

The second phase of environmental review on this project was initiated on October 22, 1975 with a public information meeting in Hanalei, at which the revised highway improvement alternatives were discussed. This meeting was followed by an EIS Preparation Notice circulated on March 10, 1976 (under State environmental rules and regulations). The public responses to this Preparation Notice expressed the same basic concerns over uncontrolled growth on the North Shore. In addition, many people commented that they did not wish to see the appearance of the existing bridges changed, especially the Hanalei Bridge which they feel has become a landmark identified with the rural character of the North Shore. These comments resulted in further modification of the State Department of Transportation's proposals and guided the discussion of environmental concerns in the "Kalihiwai to Haena" Draft EIS dated February 23, 1977 (Report No. FHWA-HI-EIS-76-03-D).

Two "Combined Corridor and Highway Design" public hearings were held to discuss the project. The first was held in Hanalei on April 20, 1977 and the second was held in Lihue on April 21. Comments received on the Draft EIS and testimony given at the public hearing reiterated the community's desire to preserve a rural lifestyle. However, not all were willing to accept a substandard transportation system,
so support was expressed for the concept of improving the highway and bridges. A number of respondents raised the issue of the historical significance of the bridges, and requested that they be nominated to the National Register of Historic Places. (See Appendix F, "Comments and Responses to the Draft EIS.)

Draft National Register nomination forms were prepared by the Kauai Historical Society and submitted to the State Historic Preservation Officer (SHPO) in November of 1976. At the request of the SHPO and the Department of Interior, additional documentation on the history of the North Shore transportation system was provided by the State Department of Transportation. A formal request by the FHWA for a determination of eligibility for nomination to the National Register was made to the Keeper of the National Register in June, 1978. In August, 1978, the Keeper of the Register determined that the Hanalei, Waioli, and Waipa Bridges were eligible for inclusion on the National Register of Historic Places. The remaining North Shore highway structures were determined not eligible. However, this judgement was qualified due to the Keeper's opinion that there was insufficient information to assess individual historical significance or eligibility within the context of an historic transportation system which influenced the development of the Hanalei Valley.

With the determinations of eligibility, the procedures of Section 106 of the National Historic Preservation Act were initiated to coordinate plans for the bridges with the advisory Council on Historic Preservation and other concerned parties. A Preliminary Case Report on the three eligible bridges was prepared in January, 1979 by the State DOT, reviewing the various alternative bridge improvement proposals and summarizing the historical context of the bridges. On March 22, 1979 the Advisory Council held a public information meeting at Hanalei to discuss and receive testimony on the effects of the proposed highway and bridge improvements with respect to historic preservation concerns, and on possible alternative courses of action. Public testimony brought out both the need for stronger, safer bridges and the desire to keep Hanalei as it is by preserving the bridges determined eligible for the National Register.

On November 21, 1979, the State DOT informed the Federal Highway Administration of its intention to undertake maintenance repair of several of the one-lane bridges, and to widen the
existing highway from Kalihiwai to Princeville. Thus, it became unnecessary to complete the Section 106 review of the State DOT's proposals for the bridges (see Page D-5). Furthermore, the Kalihiwai to Princeville section of the highway is outside of the historical issue which is centered in the Hanalei Valley. Therefore, the environmental review process has been separated back into two sections, from Kalihiwai to Princeville and from Princeville to the end of the highway. (The 1975 Draft EIS covered from Kalihiwai up to the Hanalei Bridge.) The improvements to the highway can proceed as far as Princeville without influencing the disposition of the bridges. When ultimate improvements are determined, a supplemental Final EIS will be prepared for the Princeville to Haena Section.

E. RELATIONSHIP OF THE PROJECT TO LAND USE PLANS

The proposed project is located within the Hanalei Planning Area of the Kauai General Plan (March, 1970). This plan establishes the development concepts and objectives for the six planning areas of the Island. The North Shore Development Plan (September 30, 1972) is the official land use plan for the project area (County of Kauai Comprehensive Zoning Ordinance, Bill No. 210, Ordinance No. 239 and amendments). The Development Plan assigns first priority to improvement of the Kuhio Highway to Hanalei including a new bridge over the Hanalei River. These improvements are placed in Phase I, to be implemented within 5 years (i.e., 1977).

The highway improvements designated in the North Shore Development Plan are based on proposals of the State Department of Transportation made at the time the Plan was being developed. Although the plan is presently being revised and may reflect different policies for Hanalei than were being followed in the late 1960's, the Princeville area remains in need of improved access.

As a result of public involvement in this project, the proposed improvement alternatives have been modified from what is indicated in the 1972 Plan. The following is a section-by-section comparison of the circulation system designated by the North Shore Plan with that currently recommended or proposed by the State Department of Transportation. It can be seen from this comparison that most of the proposed highway improvements would be less extensive in scope than what is envisioned in the 1972 North Shore Plan.
<table>
<thead>
<tr>
<th>Highway Segment</th>
<th>North Shore Development Plan</th>
<th>State DOT Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaliihiwai to Princeville</td>
<td>New southerly alignment.</td>
<td>Minimal widening of existing highway and improving 3 curves.</td>
</tr>
<tr>
<td>Princeville to Hanalei Bridge</td>
<td>New alignment close to existing highway and realign hairpin curve.</td>
<td>New alignment close to existing highway (Alt. A) or widen existing highway (Alts. W2 &amp; W3). Realign hairpin curve (Alts. A &amp; W2), or retain existing alignment (Alt. W3).</td>
</tr>
<tr>
<td>Hanalei Bridge to Hanalei Town</td>
<td>Elevated causeway to eliminate flooding of highway</td>
<td>Constructing shoulders and resurfacing road. No flood-proofing.</td>
</tr>
<tr>
<td>Hanalei Town</td>
<td>New inland alignment.</td>
<td>No change to existing alignment.</td>
</tr>
<tr>
<td>Waiohi Stream to Waikoko Stream</td>
<td>New inland alignment and new bridges</td>
<td>Replace bridges on adjacent alignment or major repairs to existing bridges.</td>
</tr>
<tr>
<td>Wainiha Valley</td>
<td>New inland alignment &amp; new bridges</td>
<td>Replace bridges on adjacent alignment or major repairs to existing bridges.</td>
</tr>
<tr>
<td>Terminus</td>
<td>Loop through proposed State Park.</td>
<td>None proposed.</td>
</tr>
<tr>
<td>Bikeway</td>
<td>Adjacent to entire route.</td>
<td>Proposed, but only where there would be paved shoulders.</td>
</tr>
<tr>
<td>Tour Buses</td>
<td>Allowed on Kuhio Highway, Mahimahi Road and Weke Road to Black Pot (in Hanalei).</td>
<td>New or repaired bridges would allow tour buses and other heavy vehicles into Hanalei and beyond.</td>
</tr>
</tbody>
</table>
F. SUMMARY OF TECHNICAL STUDIES

1. "Drainage Report, Hanalei Bridge and Approaches" (prepared by Wilson, Okamoto and Associates, June 1976). This engineering and hydrology study was made to determine the feasibility of various measures to prevent closure of the road into Hanalei by flooding on the Hanalei River. The report describes the flooding characteristics of the Hanalei River and presents three solutions to protect the road: (1) a 2.1 mile long berm that would completely block floodwaters from the western portion of the valley; (2) an elevated roadway along the river with a cut-off berm at the eastern edge of Hanalei; and (3) a viaduct along the river and no cut-off berm. Any of these schemes would significantly alter the hydraulic characteristics of the Hanalei River and the appearance of the Hanalei Valley. They would cost from $6.6 million to $14.0 million dollars. The responsibility of the State Department of Transportation is to prevent its highways from aggravating any flooding. Controlling the existing flooding would be within the jurisdiction of the Corps of Engineers. The recommended improvements to the Kaliihiwai-Princeville Section do not encroach on any flood plains, so the provisions of Executive Order 11988, Flood Plain Management, do not apply.

2. Archaeological Survey. An archaeological survey has been conducted for the recommended improvements to the Kaliihiwai-Princeville Sections. The results of this investigation are reported in Appendix D and summarized in Chapter II.

G. OTHER RELATED PROJECTS

The preceding sections of Kuhio Highway have already been upgraded to modern design standards. The section terminating at Kaliihiwai was constructed in 1963, and provides two 11-foot lanes with 4-foot gravel shoulders. The preceding section was constructed in 1973, and provides two 12-foot lanes with 10-foot paved shoulders (Plate 2). No highway projects other than those described in the February 1977 Draft EIS are being considered for the North Shore. However, the State Department of Transportation is implementing a minor drainage project along the highway within Hanalei Town. This project consists of the construction of a covered ditch to carry highway surface
runoff to an existing drain. The culvert will not completely alleviate local flooding in Hanalei, nor will the proposed highway improvements alleviate the flooding problem between the Hanalei Bridge and Hanalei Town.

Periodic maintenance and resurfacing would be required on the highway system in the future but this would not qualify as an additional "project".

H. DISCUSSION OF SECTION 4(f) CONSIDERATIONS

The term "Section 4(f)" is a reference to the Department of Transportation Act of 1966 (89 Stat. 931; PL 89-670). The subject section deals with the encroachment of a highway project onto publicly owned lands such as parks, recreation areas, wildlife and waterfowl refuges, or historical sites. Where a highway project must take such lands, a special "Section 4(f) Statement" must be prepared to demonstrate that there is no feasible and prudent alternative to the offending alignment, and to present proposed measures for minimizing harm to the public lands.

The recommended improvements to the Kalihiwai to Princeville section will not affect any Section 4(f) lands. Except for slightly realigning three curves, the widening will be accomplished within the existing highway corridor. Affected land outside of the existing corridor has been verified to be devoid of historical or archaeological resources (see Appendix D). A portion of the Hanalei National Wildlife Refuge property abuts the highway right-of-way at the top of the Hanalei River bluff, but the recommended improvements will not require the use of any of this land. This part of the Refuge is a steep wooded slope that is not utilized by the protected waterbirds, so highway construction will have no secondary effects.

The highway improvements and bridge replacements from Princeville to Haena will involve Section 4(f) concerns, since the Hanalei, Waiolei, and Waipa Bridges have been determined to be eligible for inclusion in the National Register of Historic Places, and the Hanalei National Wildlife Refuge may be affected. Also, the effect of the proposed improvements on the Hanalei two field system, North Shore transportation system, and Haena archaeological sites, may have to be evaluated in a Section 4(f) statement. These subjects will be addressed in a supplement to this Final EIS when a recommended action for the Princeville-Haena section is selected.
CHAPTER II
ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES
CHAPTER II PROBABLE IMPACTS OF THE PROPOSED ACTION

A. THE GROWTH INDUCING IMPACT

When an area is underdeveloped relative to permitted land use, highway improvements can stimulate development if the area was previously inaccessible or when access was restricted or limited in some way. The latter situation typically occurs where a highway is so congested that to commute to job centers becomes unreasonable; reducing the commuting time by increasing the highway capacity then makes the area more attractive for residential use. Limited access can also be found in the form of a single constraining factor, such as a bridge or other condition that restricts certain types of vehicles, such as heavy or oversize trucks, etc.

The Kalihiwai to Princeville section of the Kauai Belt Road can not be placed in either of the above categories. There is presently highway access to the area, so the concept of opening up a new area does not apply. Furthermore, this section of the highway does not limit the flow of traffic, since the existing capacity is sufficient for the projected 1988 traffic volume. (The primary justification for the project is safety, not traffic projections.) When the subject segment is improved, the travel time to the Kapaa and Lihue job centers will not be appreciably reduced, since the project involves only 2 miles of "unimproved" highway versus the remaining 25 miles of excellent highway. Finally, there are no constraints to certain types of vehicles using the Kalihiwai to Princeville segment. For these reasons, it is highly improbable that widening the Kalihiwai to Princeville segment and realigning the dangerous curves would induce growth on the North Shore, particularly in the sensitive area beyond Princeville.

The Princeville to Haena segment of the highway does have constraining factors in the deteriorated one-lane bridges. It is therefore very probable that removing these constraints will have a growth inducing effect. However, the recommended interim repairs to the Hanalei Bridge may only increase its load capacity from the present 12 tons, back to 15 tons. Since the repairs will only restore the capacity to a previous condition, there will be no growth inducement. The growth inducing impact of a permanent restoration or replacement program will be addressed in the Final EIS for the Princeville to Haena section of the highway, which will be prepared when the historical review process (Section 105) is completed.
B. PRIMARY IMPACTS

The following section describes the existing conditions, probable impacts of the project, and proposed mitigation measures for each major element of the physical and cultural environment of the North Shore. This section thus combines in one chapter "The Description of the Existing Environment", "Environmental Impacts of the Proposed Project" and "Mitigation Measures" which are typically presented in separate chapters of an EIS. These paragraphs have been modified from the Draft EIS (2/23/77) to cover the impacts of the recommended improvements to the Kalihiwai to Princeville highway section. The impacts of the proposed improvements from Princeville to Haena are discussed in the Draft EIS and will be further evaluated as required when the Section 106 process is completed and when the nature of the improvements are decided.

1. Landform.

a. Existing Conditions. The Kuhio Highway encounters four basic physiographic provinces in the project area: coastal upland, coastal strand, bottom land (flood plain), and rough mountainous land (Figure 2A, B and C). From the Kalihiwai River to the Hanalei River, the highway crosses a coastal upland where the road ranges from 200 feet to 350 feet in elevation. This bench has an undulating topography dissected by the Anini Stream and numerous minor drainages. At Honu Road, the highway begins its descent across a steep bluff into the Hanalei River Valley and drops approximately 225 feet to an elevation of 17 feet above sea level at the Hanalei Bridge. The highway varies in elevation from 6 to 14 feet as it follows the Hanalei River bottom land and curves around the Hanalei Bay coastal strand. At the western edge of Hanalei Bay, the road climbs a steep headland above Lumahai Beach, drops into the Lumahai Valley and follows along another coastal cliff to Wainiha Bay. At Wainiha Bay, the road turns slightly inland at an elevation of 6 feet then rounds a point at the western edge of the bay. The Haena section of the highway crosses a low, wide
coastal strand (elevation 8-15 feet). At the Haena County Park the road follows along the base of precipitous cliffs and rises to an elevation of 70 feet at the Limahuli Stream crossing. From the Limahuli Stream the road drops to an elevation of 18 feet at Kee Beach, the terminus of the Kuhio Highway and the beginning of the Kalalau Trail along the Na Pali Coast.

b. Impacts. Landform modification from the recommended widening alternative from Kalihiwai to Princeville (W2) will be minor, since the improvements will mainly be limited to the present highway alignment. The existing box-like road cuts (Plate 1) will be smoothed to more gentle slopes (Plate 2). Several feet of additional fill will be placed on either side of the road across the Anini Stream valley, in order to provide adequate shoulders. These alterations will have no adverse impact on the project area (see Paragraph 9, Scenic Resources).

c. Mitigation Measures. Due to the minor nature of the landform modifications, no mitigation measures (other than standard erosion control practices described below) need be considered.
2. *Geology and Soil Erosion*

   a. *Existing Conditions.* The North Shore landform is a result of deposition (volcanoes, corals and water) and erosion (wind, water and landslides). These processes have formed the four physiographic provinces described above, and have given each province a characteristic soil. The following descriptions of the soils encountered by the Kuhio Highway on the North Shore are from the literature of the Soil Conservation Service (1, 2). *

The soils of the coastal upland between the Kalihiwai River and the Hanalei River bluff are predominantly of the Makapili Series. The highway crosses approximately 2.6 miles of these soils (71% of the segment). These are well-drained silty clay and clay loam soils with a depth to bedrock greater than 5 feet. Makapili soils have a low fertility and a low shrink-swelling potential. Erosion potential ranges from moderate to very severe, depending on the slope: 58% of the Makapili soils crossed by the highway are on 0-8% slopes and are subject to moderate erosion if unprotected (Class II e); 31% of the soils are on 15-25% slopes subject to very severe erosion (Class III e and IV e); and 10% of the Makapili soils occur on 25-40% slopes that are highly erosive (Class VI e). Other soils encountered by the highway on this coastal upland include Pooku Silty Clay, Rough Broken Land, and Rough Mountainous Land. The highway crosses approximately 0.4 miles of Pooku soils (12% of this section) on the elevated area east of Anini Stream. Pooku soil is deep, well drained, and similar to the Makapili soils except that it is only slightly erodable. The "Rough" lands are crossed at the Anini Stream and on the Hanalei River bluff (0.6 miles or 17% of the Kalihiwai-Hanalei Bridge section). These areas are too steep and rocky to have developed much of a soil cover, and are very severely limited by erosion.

* References are listed at the end of this Chapter.

II-4
The soil found on the bottom land and flood plain of the Hanalei River is Hanalei Silty Clay. This is a poorly-drained soil formed on alluvium and limited by a high water table. It has a moderate shrink–swell potential and is only slightly erodible. The approaches of the Hanalei Bridge, the highway into Hanalei and the Wainiha Bridges #1 and #2 are on this soil.

The town of Hanalei, the highway around Hanalei Bay, Wainiha Bridge number 1, and the Haena bridges are on Mokuleia soils. This is a fine sandy loam on areas where drainage is good (most of the highway and bridge approaches) and a clay loam where drainage is poor (west approach of the Waioli Bridge). These are coastal strand soils, formed on recently deposited alluvium over coral sand. Mokulea soils have a low shrink–swell potential and moderate fertility. They are not subject to erosion due to the gentle slopes on which they occur.

The soil at the Manoa and Limahuli crossings is Kolokolo Extremely Stony Clay Loam. This soil is characterized by large boulders with varying amounts of soil in between. It is not particularly erodible, but since it is associated with steep stream courses and outwashes it is subject to overflow.

b. Impacts. Natural soil loss on undisturbed soils between Kaliliwai and Princeville is estimated (3) to range from 0.6 tons per acre per year to 7.6 tons per acre per year depending on the slope of the ground. A typical roadcut in these soils would expose up to 11 feet of soil to erosion (2:1 slope, 5-foot soil depth). The bedrock is not considered to be erodible. If left unprotected, such a road cut would erode at a rate of approximately 360 tons of soil per acre per year. A typical fill would produce approximately 230 tons per acre per year (4:1 slope, 10-foot depth).

The recommended improvements will have approximately 2.1 acres of newly exposed cuts and fills. The total potential soil loss (without mitigation) will therefore be approximately 730 tons per year, which
is much less than a new alignment would cause.
Natural soil loss in the Anini watershed is estimated
to be on the order of 4,000 tons per year (based on
an average of 2.0 tons per acre).

c. Mitigation Measures. Appropriate erosion control
measures, planned and contracted as a part of the
total job and applied immediately following grading,
will significantly reduce soil loss. The State
Department of Transportation is obligated to imple-
ment erosion control measures as specified in
Section 639 of the 1976 State of Hawaii "Standard
Specifications for Road and Bridge Construction,
Temporary Project Water Pollution Control (Soil
Erosion)". Typical erosion control measures are
described below (specific practices may vary as
appropriate):

During grading and other construction activities, the
temporary measures that will be applied include:
mulching with bagasse, hay, netting, etc.; installa-
tion of temporary berms and slope drains; sedi-
ment traps and siltation ponds; seeding with fast-
growing grasses; and other measures appropriate
to the situation. At the end of each working day,
the Contractor will shape and berm exposed
earthwork in such a manner as to control and
direct runoff. Failure to conform to these and
other requirements spelled out in the Specifications
will be cause for suspension of all operations.

Permanent erosion control will primarily rely on
slope plantings. Species that have been rec-
ommended by the Soil Conservation Service are dwarf
pangola grass (Digitaria decumbens), bermuda
grass (Cynodon dactylon), St. Augustine grass
(Stenotaphrum secundatum), centipede grass (Ere-
mochloa ochioroide), metallic plant (Hemigraphis
colorata), money wort (Lysimachia nummularia),
and lypia (Lippia canescens). Most of the grasses
are presently common in the project area. The high
rainfall of the area (70" - 100") enables plants to
become readily established, and many introduced
species of trees, shrubs and vines will volunteer on
the new cuts as they have on the older ones (Plates
1, 2, 6 and 7). However, it would be desirable to plant cuts and fills with declining native species such as ohia lehua (Metrosideros collina), if economical stock can be obtained. To provide additional erosion control, long cuts and fills will have slope serrations, drains and terraces where possible.

Special erosion control consideration will be given to the stream crossings, including the Anini Stream. Where appropriate, berms and sediment traps will be employed and highway areas exposed to flowing water will be protected with netting or rock, and will be planted with fast-growing stream-bank species (e.g. California grass, *Brachiaria mutica*). Cuts and fills in the vicinity of Anini Stream and the Hanalei River will be given extra protection with mulching or netting and immediate planting. Maintenance, including fertilizing and replanting, will be carried out as needed to insure the efficacy of the erosion control treatments. Where feasible grading will be carried out during the period of least intense rainfall to further reduce potential erosion. This period occurs between April and November, when only 29% of the intense rainfall falls. Much of the erosion hazard would be avoided if all of the grading is completed and slopes are stabilized during this period.

Implementation of these erosion control measures will reduce soil loss from exposed cuts and fills by a factor of 100 (4). Immediate application of mulch will reduce total potential soil loss by a factor of 50, or from 230-360 tons per acre per year to 4.6-7.2 tons per acre per year. (1.3-2.1 tons per acre if slopes are stabilized before November 1.) Once grass is well established, soil loss from cuts and fills will be 2.3-3.5 tons per acre per year. The estimated average natural soil loss over the total Anini Stream watershed is at least 2 tons per acre (ranging from 0.6-7.6 tons per acre). Soil loss from cultivated fields in Hawaii (i.e. sugar cane or pineapple) varies from 5 tons per acre to 10 tons per acre or more. Given the relatively small area to be exposed by cuts and fills (approximately 2 acres at the most), it can be concluded that with the proposed erosion control measures, overall soil loss from the project area will not be significantly above natural erosion.
3. Water Resources and Hazards

a. Existing Conditions. The project area has three rivers (Hanalei, Lumahai and Wainiha), five streams (Anini, Waioli, Waipa, Manoa and Lima-huli) and numerous minor drainages (eg. Waikoko and Haena #1 and #2). There are no lakes or reservoirs in the vicinity of the highway, although there are taro ponds in Hanalei Valley which are seasonally flooded and drained. Flow and water quality data are only available for the Hanalei and Wainiha Rivers. The gaging stations are located approximately 2.6 river-miles and 3.8 river-miles, respectively, upstream from the highway crossings so data are not directly applicable to project-site conditions.

The average annual flow of the Hanalei River at the gage (drainage area 19.1 square miles) is 231 cubic feet per second (cfs), since its diversion into the Hanalei Tunnel for irrigation in 1963. The minimum recorded flow is 33 cfs (September 1973) and the maximum recorded flow is 24,900 cfs (5). The discharge at the bridge (drainage area 20.8 square miles) would be slightly greater. A discharge of 6,000 cfs is considered to be of flood magnitude. This level is exceeded yearly, sometimes twice in one year; since 1962, the Hanalei River has flooded 13 times (6). The months of January, April, May and December are the most flood-prone; around 68% of the floods since 1868 have occurred in these months (based on newspaper reports up to 1962 and flow records thereafter). Seasonal flooding generally causes only inconvenience and closure of the highway for several hours between the Hanalei Bridge and the outskirts of Hanalei. However, a damaging flood occurs on the average of once every 3½ years and results in crop damage, livestock loss, and the isolation of Hanalei. Because the town is slightly higher than the surrounding flood plain it is rarely affected. The most damaging flood occurred in November, 1955; it was slightly greater than a 100-year flood and covered the road to a depth of 8 feet over the lowest section (7). The ex-
tent of this flood is shown on Figure 7. The yearly floods cover the road with 2-2 1/2 feet of water (8).

The Hanalei River has been given a Class 2 quality rating by the State Department of Health, indicating that it is not used as a domestic water supply. The quality is well within State standards, however, with only 56-67 mg/L of total dissolved solids (standard: 28,000 mg/L) and 0.01-0.02 mg/L dissolved nitrite plus nitrate (standard: 0.1 mg/L) (8). Coliform bacterial levels are not counted in the river, but samples taken by the Department of Health at the Hanalei Bay Landing near the river mouth range from 7 mpn to 35,000 mpn for total coliform and from less than 2 mpn to 1300 mpn for fecal coliform. This wide range is attributable to variations in river discharge. The 35,000 mpn count occurred following a heavy rain (October 20, 1975). The water quality of Hanalei Bay and the other North Shore coastal waters is very good, being rated Class AA (pristine conditions) by the Department of Health.

The average annual flow of the Wainiha River is 143 cfs. The drainage area at the gage (5.8 miles upstream from the highway) is 10.2 square miles, but the total watershed is 22.6 square miles; discharge at the Wainiha Bridges would therefore be much greater. The extremes range from a minimum flow of 34.8 cfs (February, 1954) to a maximum flood of approximately 40,000 cfs (February, 1956). It is of interest that these extremes occurred in the same month only two years apart. This is a result of variations in the intense "Kona Storms" that are responsible for most of the winter rainfall. The Wainiha River floods almost as frequently as the Hanalei River and often damages homes at Wainiha. Since the severe 1956 flood which damaged the Wainiha bridges, there have been at least seven damaging floods in the flood plain, with inundation exceeding 3 feet (10).
The water quality of the Wainiha River is rated Class 2. Its chemical characteristics are similar to those of the Hanalei River, with total dissolved solids of 45-55 mg/L and nitrate levels of 0.02-0.12 mg/L. Coliform bacteria levels are not sampled in the area.

In addition to flooding, the North Shore is also subject to tsunami (tidal wave) inundation. Damaging tsunamis occurred in April, 1946 and March, 1957. The 1957 tsunami resulted in $1.5 million damage on Kauai(11) and destroyed or badly damaged many of the bridges presently proposed for replacement. The maximum predicted (100 year) tsunami run-up at Hanalei is 4000 feet inland; at Lumahai the maximum predicted run-up is 5000 feet, at Wainiha it is 4000 feet inland, and at Haena it is 2500 feet inland (12).

b. **Impacts.** The proposed highway improvements will not adversely affect the flow characteristics of any of the streams or minor drainages of the North Shore. The possibility exists that a record-intensity storm or a flood could occur during construction, in which case no erosion control measure would be completely effective, and additional sediment would be discharged to the streams and coastal waters for a short period of time. However, these storms produce such a high level of "natural" sediment that the contribution from the proposed project would be very small. Under normal rainfall conditions, the proposed erosion control measures (see above) will keep sediment production from graded areas to levels near background. Pollution of the streams from the spill of chemicals or other materials during construction is a potential adverse impact that could affect fish and wildlife.

c. **Mitigation Measures.** Culvert crossings will be provided for the Anini Stream and the minor drainages crossed by the recommended highway widening. Sedimentation will be mitigated by the proposed erosion control measures (see above). Pollution from accidently spilled materials is a remote possibility that can be avoided by impressing construction
workers with the need for careful handling of paint, acid, etc. Sediment and oil traps will be installed at construction yards to insure that runoff from these areas does not cause stream pollution. The "State Standard Specifications for Road and Bridge Construction" (Section 107.17 A and B) requires the Contractor to prevent siltation and pollution of rivers and streams resulting from construction activities.

4. Biological Resources

a. Existing Conditions. The vegetation encountered by the Kuhio Highway in the project area is almost entirely composed of species introduced relatively recently into Hawaii. Three vegetation types can be distinguished in the project area: pasture (dry and wet types), guava-java plum thicket, and marsh (natural and taro pond). These are delineated on Figure 8A, B and C.

The coastal upland from Kaliliwai to Princeville is dry pasture land composed of kikuyu grass (*Pennisetum clandestinum*), pangola grass (*Digitaria decumbens*), and intortum (*Desmodium intortum*) (Plates 3 and 4). Under good management this pasture type can produce up to 8-10,000 pounds of forage per acre per year (13). On the south side of the highway is a dense windbreak of tall eucalyptus (*Eucalyptus robusta*), delineated on Figure 8A. The highway also crosses a wet pasture type in the Hanalei River Valley and other lowlands subject to periodic flooding. The same grasses are found in this type, with the addition of California grass (*Brachiaria mutica*) in the wettest areas.

The stream courses and low-elevation mountainous areas of the North Shore support species of introduced shrubs and trees that form dense thickets (Plate 3). Guava (*Psidium guajava*), java plum (*Eugenia cumini*), and mango (*Mangifera indica*) are the dominant members of this vegetation type. Scattered native ohia-lehua (*Metrosideros*...)
collina) and hala trees (Pandanus rectiorius) can also be found (Anini Stream, Hanalei River bluff, Lumahai Beach), but are relatively uncommon.

Natural fresh-water marsh is very limited in extent in the project area. Fringing marsh plants (primarily bullrushes, Scirpus) occur in the estuaries formed at the mouths of the Hanalei River, the Waioi and Waipa Streams and the Lumahai and Wainihia Rivers. The largest marsh (9 acres) is found north of the mouth of the Hanalei River (Figure 8B). Of greater ecological importance in the project area are the numerous taro ponds which are essentially "cultivated marshes." Taro occupies much of the Hanalei River bottom land (approximately 113 acres), the area behind Hanalei (136 acres), and there are scattered patches along the Waioi Stream (10 acres), Waikoko Stream (11 acres) and the Wainihia River (15 acres) (Figures 8A, B and C). The stream and river banks support dense thickets of hau trees (Hibiscus tiliaceus).

The wildlife found in the project area is, like the vegetation, predominately non-native. Mammals include rats, feral cats and some feral pigs (forested areas). There are no feral goats or cattle in the project area and no deer. Introduced game birds include the ring-neck pheasant (Phasianus torquatus) and the Japanese quail (Coturnix c. japonica). The pheasant is relatively abundant in the dry pasture areas near Princeville. The guava-java plum thickets are occupied by the cardinal (Cardinalis cardinalis), Japanese white-eye (Zosterops japonica), shama thrush (Copsychus malabaricus), melodius laughing-thrush (Garrulax canorus), barred dove (Geopelia striata), common mynah (Acridotheres tristis), and other introduced birds. Cattle egrets (Bubulcus ibis) have recently come to the island and are increasing in numbers. Black-crowned night herons (Nycticorax n. hoactli) are common in ponds and marshes. There are no native forest birds in the project area - these species do not occur below 2-3000 feet in elevation as they are restricted to areas with native vegetation and no mosquitoes (which transmit avian malaria from introduced birds).
The project area contains important populations of four species of waterbirds that are listed as Endangered by the State and the U.S. Fish and Wildlife Service. These are the Hawaiian stilt (Himantopus h. knudseni), Hawaiian coot (Fulica americana alai), Hawaiian gallinule (Gallinula chloropus sandvicensis), and Hawaiian duck or koal (Anas wyvilliana) (14). The taro ponds of the Hanalei Valley are the most important habitat for these species, especially for the stilt. The Hanalei National Wildlife Refuge protects a portion of this habitat (approximately 113 acres of taro). The habitat of these four species within the project area is delineated on Figures 8A, B and C. (The proposed improvements from Kalihiwai to Princeville do not encounter any of the important habitat of these species.)

The Hawaiian stilt is a black and white long-legged wading bird that feeds on insects and crustaceans in the taro ponds. It nests on the dikes between ponds. A large number of stilts also nest around the shallow lakes on Niihau Island. There are only about 1,500 Hawaiian stilts, of which approximately 250 live on Kauai and Niihau. Without taro cultivation stilts would not occur on Kauai, as they require areas of shallow open water. Natural marshes (such as the one near the Hanalei River mouth) have a tendency to become too overgrown. The birds are very tolerant of non-destructive human activity (i.e. automobile traffic) and may be easily observed from the highway near the refuge (Plate 9).

The Hawaiian coot, a sub-species of the abundant American coot, is a black duck-like bird with a white bill and forehead. It is relatively common in taro ponds and in the estuaries of the Waipo, Waipa, Lumahai and Wainiha Streams (The Hanalei River mouth has too much boating activity). It builds a floating nest in dense reeds. The world population of Hawaiian coots is estimated at 1,700 (1969) of which approximately 1,200 occur on Kauai and Niihau Islands. The American coot, which is often found in destructive numbers on the mainland, does not occur in Hawaii.
The Hawaiian gallinule is a black bird with a red beak and forehead, similar in general appearance to the coot, but with longer legs. It walks on floating vegetation in search of aquatic insects. The gallinule nests in dense vegetation near the shore of taro ponds or estuaries. Gallinules are more secretive than coots or stilts, but are tolerant of human activity. A gallinule was observed only 50 feet from the Waioli Bridge and was apparently not disturbed by the passing automobiles. Population numbers of the gallinule are in the mid-hundreds on Kauai, where it is most abundant. It is found in most suitable habitats on the North Shore.

The Hawaiian duck frequents all of the freshwater aquatic habitats, from taro ponds to mountain streams, and nests in dense vegetation near water. Hawaiian ducks seek out areas with little human activity, and flush readily when approached. The world population is approximately 3,000 birds, most of which are found on Kauai.

The native fauna of the streams in the project area includes several species of freshwater gobies (oophu), shrimp, snails, fresh water limpets and worms. Tilapia, an introduced species of fish is abundant in taro ponds. The oopu nakea (Awaous stamineous) is a very important food fish on Kauai, the only island where it is abundant (15). Each fall the oopu comes downstream with peak stream flows to the mouths of the Hanalei River, Waioli and Waipa Streams, the Lumahai and Wainiha Rivers, and the Limahuli Stream to spawn. Spawning occurs primarily from mid-August to late December during which time the oopu lays a single layer of eggs on a rock. On the Hanalei River, spawning extends from approximately 200 meters below the bridge to one mile upstream. Spawning adults are caught in large numbers by local fishermen. The eggs hatch within 24 hours of laying and the fry are washed out to sea. After about 6 months the oopu fingerlings return to the river and migrate upstream. The main return of young fish occurs from mid-Autumn to early summer.
b. **Impacts.** The vegetation of the North Shore will not be adversely affected by the recommended highway improvements. The relatively small areas exposed by grading will be quickly revegetated by seeded and volunteer plants. The widening will not affect any of the eucalyptus trees, but will result in the removal of four large (4-foot trunk diameter) java plum trees on the north side of the highway near the Princeville Ranch road. No native vegetation will be removed.

The highway widening will affect a minor amount of pheasant habitat within the right-of-way, and the additional fill in the Anini Stream valley will very slightly reduce the potential Koloa habitat. However, these impacts do not have a large enough magnitude to be of consequence. No wetland habitat will be affected.

c. **Mitigation Measures.** The proposed erosion control planting program will fully mitigate the loss of plant cover along the widened highway section. (This does not include restoration of grazing lands.) More trees will be planted than will be removed.

The proposed erosion control measures will not allow excessive amounts (above "background" levels) of sediment into the rivers or streams crossed by the highway. Adverse impacts to the oopu and other native stream fauna will therefore be avoided.

5. **Air Quality**

a. **Existing Conditions.** There are no significant sources of air pollution in the project area. The highway is only a minor source due to the low traffic volumes. The Princeville area was once used for growing sugar cane (the cane is burned prior to harvesting), but is no longer. The pasture land is well-vegetated and does not contribute abnormal amounts of dust.

b. **Impacts.** During construction of the Kalihiwai-Princeville section, dust and exhaust from equipment will be emitted. This will last approximately 6 months.
An analysis of automobile emissions was performed to determine the effect of the proposed highway improvements on ambient air quality. This analysis is presented in Appendix B. Based upon present design parameters and Federal motor vehicle emission standards (as amended March 1975), no significant impact on air quality is anticipated in the vicinity of the proposed improvements during the 20 year design period. For the no-build alternative, the microscale CO impacts are similar to those of the improved highway until 1980. By 1998 however, the CO levels associated with the improved highway should be generally less than those predicted for the existing highway.

Under the projected traffic volumes and Federal motor vehicle emission standards, the total CO emissions should decrease nearly 38% between 1975 and 1998. Hydrocarbon emissions will likely decrease by 37% while nitrogen oxide values should increase by 30%. For carbon monoxide, the maximum emission rates during the 1976 through 1998 period are currently being observed. Peak hydrocarbon emissions will be observed in 1978 while emissions of nitrogen oxides will gradually increase throughout the 1976 to 1998 period. The proposed highway improvements should have little bearing on these factors.

Violations of existing State or Federal ambient air quality standards are not likely, even under the "worst case" meteorological and traffic flow conditions. Table 7 of Appendix B indicates that the estimated maximum CO concentrations will remain at least a factor of two less than the most stringent applicable standard for both the build and no-build alternatives.

Because the State Air Quality Control Implementation Plan relies on the Federal Motor Vehicle Emission Controls, the State Department of Health has confirmed that the proposed project can be considered to be in conformance with that Plan.
c. **Mitigation Measures.** Dust will be controlled by watering. No other mitigations are required.

6. **Noise**

a. **Existing Conditions.** Noise levels have been calculated for four representative points in the project area, using the standard Federal Highways Administration methodology (16) and 1975 traffic volume data. (The basic assumptions and calculation sheets are given in Appendix C.) The four locations and the existing noise levels are plotted on Figure 9. Noise levels on the North Shore are low, as is characteristic of a rural area.

In the highway corridor (75 feet from the centerline), traffic is the main noise source. The L10 dBA level ranges from 59 dBA to 62 dBA, depending on traffic volume. (L10 is the noise level that is exceeded 10% of the time at a given point.) Spot noise measurements made in 1973 indicated an L10 of only 58 dBA approximately 300 feet away from the highway at the residences on Honu Road.

b. **Impacts.** Predicted L10 noise levels for 1998 traffic volumes with and without the proposed improvements are tabulated on Figure 9. As a result of increased traffic on the highway, L10 levels will increase by 4-6 decibels without any highway improvements. By providing a widened roadway and increased speed limits, the recommended improvements will increase the L10 within the highway corridor (75 feet from the centerline) to ± 68 dBA from Kalihiwai to the Princeville Ranch Road. Since this level is within the Federal Design Standard of L10 70 dBA for residential areas and other sensitive receptors, it can be concluded that the recommended highway widening will not have an adverse impact on existing or future receptors along this road section. There are no applicable State noise standards for Kauai; the DOH has set 70 dBA as the limit for equivalent land use on Oahu. At the intersection of the Kuholo Highway and Honu Road, there is a cluster of six residences that will experience an increase in noise levels to L10 62-68 dBA, depending...
### Table: 1998 $L_{10}$ dBA with IMPROVEMENTS

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<thead>
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<th>LOCATION</th>
<th>EXISTING $L_{10}$ dBA</th>
<th>1998 $L_{10}$ dBA w/o IMPROVEMENTS</th>
<th>1998 $L_{10}$ dBA with IMPROVEMENTS</th>
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**Notes:**

a. Point 75 feet from centerline.
b. Calculated from 1975 traffic volumes.
c. As established for Island of Oahu by DOH.
   Potentially applicable to Kauai.

E = Exterior, I = Interior

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**Figure 9**

Existing and Predicted $L_{10}$ dBA Noise Levels

Scale: 1" = 1 mi.
on the distances of each house from the road. The Oahu noise standard of 50 dBA on the interior of homes, etc. (potentially applicable for future development at Princeville) will not be exceeded.

c. **Mitigation Measures.** The recommended highway improvements will not have an adverse noise impact, so noise mitigation is not required. To prevent future impacts, no residences or public facilities should be constructed closer than 75 feet from the highway centerline without including noise attenuating measures into the design.

7. **Socioeconomics**

a. **Existing Conditions.** Agriculture is the dominant land use along the highway corridor. The coastal upland between Kalihiwai and Princeville is used for cattle grazing, and the bottom land along the Hanalei and other river valleys is used for pasture and taro cultivation. Urban uses are encountered at Princeville, Hanalei, Wainiha and Haena. The State Land Use Districts crossed by the Highway include: Conservation (39% of the highway), Agriculture (33%), Urban (22%), and Rural (6%) of the highway). The State Land Use Districts and the County Zoning Districts are delineated in Figure 10 A, B and C.

The character of the urban land use on the North Shore varies considerably. Princeville is a planned resort development with house lots, condominiums, rental units, commercial facilities and a 27-hole golf course. However, the majority of Princeville is yet to be developed. Hanalei is presently the major community of the North Shore. It has small commercial facilities, community services (fire station, post office, court house, elementary school), and approximately 120 dwelling units. Wainiha and Haena are small rural communities with limited commercial facilities (store, restaurant, resort) and less than 100 dwelling units total. A small airport has recently been completely near the highway just beyond Kalihiwai (Figure 2A).
The resident population of the Island of Kauai was 29,460 persons in 1974, with 1,150 persons residing on the North Shore (17). Although the total population of the Island dropped slightly from 1970 to 1974, the Hanalei Census Tract (the North Shore and the Kilauea area) experienced "phenomenal growth" over this period (43.8% increase) (18). The majority of this growth can be attributed to an influx of persons from the Mainland (19). The North Shore Development Plan projects an "ultimate" population ceiling of 8,788 persons on the North Shore. These would be distributed as follows; 5,800 permanent residents at Princeville (59%), 2,057 from Wainiha Valley to Haena (21%), 1,358 at Hanalei (14%), and 573 at Anini Beach and other small areas (6%). While it is highly unlikely that these ultimate population figures will be realized, the growth pattern is expected to follow that promulgated by the North Shore Development Plan (Figure 10 A, B and C).

The economy of Kauai is based on tourism and agriculture (dominated by sugar cane). In Hanalei, approximately 19% of the residents are employed full or part-time in the tourist industry, 16% are engaged in agriculture, 8% work for the government, and 31% work full or part-time in other areas (eg non-tourist commercial) (20). The county-wide unemployment rate in 1974 was 7.4%

Taro and cattle grazing are the most important agricultural activities on the North Shore; approximately 40% of the taro grown in Hawaii comes from the Hanalei Valley, with approximately 285 acres in cultivation. Because taro farming is a very difficult, labor-intensive occupation and is limited to small family operations, few young people plan to choose it as a career. With attrition of the present taro farmers, a declining market, and technological problems such as weed and disease control, taro production does not appear to be able to support the the future economy of the North Shore (21).
The majority of the visitors to the North Shore do not stay overnight, as there are not enough hotel units in the area. Since there are very few tourist-oriented commercial facilities, the North Shore presently does not receive much direct economic benefit from tourism. However, the beauty and rural charm of the North Shore is very attractive to tourists, and with the expected growth in tourism will come a demand for more tourist accommodations.

Although small-scale agriculture is not as economically viable as the tourist industry, the residents of the North Shore do not wish to see it decline. In the two socioeconomic surveys previously cited (Anderson, et.al, 1972 and 1975), and in the numerous resident responses to the present highway improvement proposals, the local people have given top priority to maintaining or increasing small-scale agriculture and have assigned lowest priority to expanding tourist facilities. The major reason behind this choice is the contention that an increase in tourist facilities would degrade the very features of the North Shore that are presently so attractive.

On the other hand, the North Shore Development Plan (Page 47) takes the position that, "In order to utilize and capitalize on the environmental resources, more people, bringing more money and more interest and more ideas, will be necessary. The great majority of these people will have to be visitors - tourists, if you like-hosted by a much smaller number of permanent residents." And, "...either the visitors come in sufficient number to maintain a socially and economically viable community or the North Shore will become another playground for the wealthy and occasional recluse and a haven for the social dropout."
b. **Impacts.** The recommended widening of the Kalihiwai to Princeville segment will require less than ten acres of land for the new right-of-way. The majority of this land is presently used for cattle grazing, and roughly half (3-5 acres) is classified as Prime Agricultural Land. The widening will closely follow the existing highway, so no pasture land will be isolated without access. Since the existing right-of-way fencing will be relocated where required, there will be no hazard to livestock from the improved highway.

The proposed highway improvements will not adversely affect the transportation requirements of the elderly, handicapped, minorities, or other special groups. Rather, the North Shore will be benefited by a safer highway.

Regarding population growth and tourism, it can be reasonably assumed that growth would occur with or without an improved highway. However, as pointed out in Section A, above, building activity would be facilitated by improved bridges (one or two-lane). It is also possible that the area's environmental and legal growth constraints would not be recognized in the assessment of property taxes, and increased taxes along the highway would result. Unfortunately, the actual magnitude of this potentially adverse socioeconomic impact cannot be predicted.

The present agricultural activities on the North Shore are, in one sense, "competing" with tourism for position as the dominant economic base and guiding factor in land use decisions. Although tourism is the stronger force, it is State policy to encourage diversified agriculture. The proposed highway improvements would benefit both agriculture and tourism, since both require an adequate transportation system.

c. **Mitigation Measures.** The relatively small amount of land required for right-of-way will be purchased, thus mitigating any economic impact to the owners.

Mitigation of the secondary impact of economic growth resulting from highway improvements - as this is considered to be an adverse impact by many North Shore residents - is not within the jurisdiction of the State Department of Transportation. However, strict control of development is available to the local
residents through existing environmental and regulatory land use constraints as managed by the County of Kauai Planning Department. With the application of these growth controls, rather than relying on the constraints of a substandard highway, the rural character of the North Shore can be preserved.

8. Circulation and Traffic

a. Existing Conditions. The characteristics of the Kuhio Highway have been previously described in Chapter I. In Section B, Need for Improvement, the highway's deficiencies have been pointed out: high accident rate, unsafe bridge conditions, high maintenance requirements, and limited capacity for future traffic.

b. Impacts. The recommended improvements are the minimum necessary to correct the inadequacies of the existing highway and provide sufficient capacity for future traffic around Princeville. None of the recommended improvements will cut off access to peripheral areas. New road crossings will be provided at grade where required. Access to the Hanalei Sanitary Landfill (located between the two branches of Anini Stream and north of the highway) will be provided at all times. The sections of highway where shoulders will be paved will be suitable for use by cyclists.

The recommended improvements do not involve the entire highway. The Kaliihiwai-Princeville section carries a higher volume of traffic than the rest of the highway and hence warrants higher design standards. The majority of the highway will remain unchanged from the Hanalei Bridge to the end of the highway.

It is unlikely that an improved highway will directly cause an increase in passenger-vehicle traffic, since automobiles are not presently limited by the deficiencies of the highway. In other words, the current highway capacity is greater than the
projected volume on all but two of the highway sections, as shown on Figure 4 (compare "capacity" with "design hr. volume"). Traffic will increase if tourist facilities are provided, but such development would be subject to land use and zoning regulations (which are not within the jurisdiction of the State Department of Transportation).

c. Mitigation Measures. The recommended improvements are designed to correct the deficiencies of certain segments of the Kuhio Highway, and are therefore mitigation measures in themselves.

9. Scenic Resources

a. Existing Conditions. The North Shore is one of the most beautiful areas in Hawaii. The long curving beaches, rocky headlands, quiet bays, spectacular mountains with distant waterfalls, meandering rivers, open pastures and dense thickets all within a relatively small area produce an incredibly rich and diverse visual environment. Woven into this setting are pockets of settlement and small-scale farming that add to the scenic quality of the area. The North Shore is not a wilderness; human influence is readily apparent. However, it is the type of influence that has been tempered by time and has become an integral part of the landscape, rather than something added to it. It is this low-key quality of the human presence that gives the North Shore its "rural charm". This combination of natural scenic features and rural character occurs in only a few places in the world and is prized wherever it is found.

The Kuhio Highway is the means by which most people experience the North Shore, and is in itself an important element of the area's scenic resources. Driving from Lihue, the character of the roadway and surrounding countryside becomes increasingly rural. Approximately one mile past Kilauea, the new (1973) highway ends and the section constructed across Kaliihiwai Valley in 1963 begins. The roadway on this section passes
through a wooded area, and there is an excellent view of Kalihiwai Valley from the elevated bridge. Shortly after crossing the bridge, the visitor passes a sign stating "End of Improved Highway" and enters a narrow box-cut flanked by dense vegetation. This gives a very strong feeling of "entering" a unique area. For the next 2.6 miles the view constantly shifts from open vistas of pasture land (Plate 3) or mountains to closed cuts (Plate 1) and dense thickets. Even at a conservative speed of 30 mph, it is difficult to take it all in. (This is where the narrow pavement and sharp curves pose a hazard.) Just before Honu Road is the famous Hanalei Bridge overlook (Plate 9), which provides an unobstructed view of the mountains and river valley. A second scenic overlook occurs at the hairpin curve, where Hanalei Bay and the coast beyond may be viewed.

The Hanalei Bridge is the entry point for the Hanalei Valley and Hanalei Town where the rural aspect of the North Shore is the dominant visual element. The old stores and houses set among the taro paddies is a characteristic feature. The Hanalei Bay can be seen from the Waipapa Bridge, but the view is screened by trees. The first clear view of the bay is afforded in the vicinity of the Waikoko Bridge (Plate 14). From the Waikoko Bridge the road curves around a rocky coast with several views of the open ocean and Lumahai Beach. At the Lumahai Bridge, the lagoon and mountains are major visual elements.

Entering the Wainiha Valley the viewer is again presented with a rural environment. The one-lane wooden bridges emphasize this and form a strong contrast with the modern style of bridge over the Lumahai River.

Through Haena to the end of the highway the view alternates from dense "tree tunnels" to open pastures and house lots. The mountains rise very steeply through this section and give a closed-in feeling. The crude crossings at the Manoa and Limahuli Streams (Plates 19 and 20) strengthen the sense of isolation that is created by the dense vegetation. The end of the highway at Kee Beach is a destination point, and completes the idea of "entering" created by the beginning of the unim-
improved highway. The total distance between these two points is only 12.5 miles but there is such a diversity of visual stimuli that it seems a much greater distance.

The North Shore Development Plan designates the highway as a Scenic Corridor, and the Department of Transportation has classified it as a Rural Highway.

b. Impacts. The recommended widening from Kalihiwai to Princeville will eliminate the present "entrance" to the North Shore. However, this point will also be altered by the construction of an approach to the Anini Vista Estates Subdivision. The loss of this visual node will be an unavoidable adverse impact. The actual views from this section of highway will not be significantly changed, but the closeness of the box-cuts will be lost. The edge of the highway - the beginning of the "view" - will thus be farther away and will tend to separate the viewer from the view. On the other hand, vistas that are now blocked by the narrow road cuts may be opened up. The "enclosure" at the Anini Stream, where the road drops into dense thicket, will be retained. The Hanalei Bridge overlook will be unaffected.

c. Mitigation Measures. The "closeness" of the existing Kalihiwai-Princeville section is one of the features that make it unsafe. This visual element cannot be completely restored on the wider highway but the use of heavy plant cover (trees and shrubs rather than grasses alone) on cuts will tend to offset the feeling of distance created by the wider highway. Landscaping with tree clusters (30 feet from the pavement edge) would provide variety in the appearance of the right-of-way. The "gateway" effect of the beginning of the unimproved highway could be partially replaced by over-arching trees at the same location or closer to Princeville. Another alternative would be to develop a stronger sense of "entrance" at the beginning of the Kalihiwai segment (one mile past Kilauea).
10. Historical and Archaeological Resources

a. Existing Conditions. The North Shore has been settled since the time of the early Polynesians and the Hanalei Valley and coastal strand to Haena was a major area of population concentration in the past. In 1847, the North Shore area had a total population of 1,661 people, of which 637 lived in Hanalei, the largest community (23). One of the first missions on Kauai was the Waioli Mission at Hanalei, established in 1834. This structure is still standing and is listed on the National Register of Historic Places (23). Other historical structures include some elegant old homes, many of the buildings in the community of Hanalei and the Hanalei Pier. Only the Waioli Mission is presently listed on the National Register of Historic Places, although the Hanalei, Waioli, and Waipa Bridges have been determined to be eligible for listing by the Keeper of the National Register. (A detailed evaluation of the status of the historic bridges will be provided in a supplement to this Final EIS covering that section of the project). Natural historic features along the North Shore include the Dry Cave at the Haena County Park and the Wet Caves near the end of the highway.

An archaeological reconnaissance has been conducted for the three areas where the recommended Kalihiwai-Princeville will extend outside of the present roadway. The results of this study are included in Appendix D. Each area has been extensively altered by previous agricultural activities, and contain no historic or archaeological features of any kind.

b. Impacts. The recommended highway improvements will not affect historical buildings or natural historic features. No known archaeological sites are found in the area to be impacted.

c. Mitigation Measures. Should an archaeological resource be found during construction, the "State Standard Specifications for Road and Bridge Construction" (Section 107, 17D) requires the contractor to suspend all work that would disturb the findings and contact the State Historic Preservation Officer to determine a course of action.
CHAPTER II. REFERENCES

1. U.S.D.A. Soil Conservation Service and University of Hawaii
   Agriculture Experiment Station. Soil Survey of the Islands
   of Kauai, Oahu, Maui, Molokai and Lanai. State of Hawaii.
   1972.


3. Ibid.

4. Ibid.

5. U.S. Geological Survey. Water Resources Data for Hawaii and
   Other Pacific Areas. 1975

   and Approaches. June, 1976

7. Department of the Army Corps of Engineers and Hawaii Depart-
   ment of Land and Natural Resources. Flood Hazard Infor-


10. Department of the Army Corps of Engineers and Hawaii Depart-
    ment of Land and Natural Resources. Wainiha Flood Hazard
    Area, Map FP-25. February, 1975.


12. Ibid.

13. U.S.D.A. Soil Conservation Service. Soil Survey Interpretations,

II-35
14. U.S. Fish and Wildlife Service and Hawaii Division of Fish and Game. *Hawaii's Endangered Waterbirds*. No. date. (Also personal communication with Fred Zeillemaker, Hanalei NWR Refuge Manager.)

15. Personal communication, Dr. John Maciolek - U.S. Fish and Wildlife Service and University of Hawaii Fisheries Biologist.


18. Ibid.


20. Ibid.


CHAPTER III. ALTERNATIVES TO THE PROPOSED ACTION

The project has been divided into two segments to be covered in separate Final EIS's. Of the 27 alternatives for 11 different actions discussed in the Draft EIS, those dealing with the Princeville-Haena section will remain as "proposed alternatives" until the historic review (Section 106) process is completed. For the Kaliihiwai-Princeville section, Alternative W2 has been selected ("recommended"). The other alternatives are briefly described below and the reasons for recommending Alternative W2 are discussed.

A. ALTERNATIVES CONSIDERED BUT REJECTED EARLY IN THE PLANNING PROCESS

Early in the project, numerous alternative improvements were considered for the Kaliihiwai to Princeville section. After evaluation, four were rejected prior to circulation of the Draft EIS. These rejected alternatives are shown on Figure 11. Alternative 1 would provide a new alignment to the south of the existing highway. Its technical characteristics are similar to Alternative 2 (Figure 5), except that it is farther away from the existing alignment (approximately 400 feet at one point). Alternative 1 was rejected because it would interfere with the Princeville landing strip (opened September, 1976), and would isolate approximately 27 acres of pasture land.

A new, shorter alignment approximately 1,500 feet north of the existing highway (Alternative 3) was also studied but rejected because of problems with drainage, the need for excessive cuts and fills, high construction cost, and it would disrupt the development plans for Princeville Ranch.

A modification of Alternative W was considered that would involve only realigning the curves, with no road widening in-between. This would slightly improve the safety characteristics of the highway, but there would still be no shoulders for emergency pullouts and the road base would remain inadequate.

Construction of 12-foot lanes and 10-foot shoulders was considered for the new alignments, but was rejected because of environmental impact, public opposition, and cost.
B. PROPOSED ALTERNATIVES REJECTED SUBSEQUENT TO THE DRAFT EIS.

1. Alternative 2 - Realignment North of the Existing Highway: Alternative 2 (Figure 11) would provide a new highway for the Kaliihiwai-Princeville segment which would be immediately parallel to the existing highway on the north side (Plate 3). The total length of Alternative 2 is approximately 2.05 miles. The cost would be approximately $2,614 million, with a benefit/cost ratio of 1.2.

The new highway would have two 11-foot wide lanes and 8-foot wide paved shoulders (Table 3). Total right-of-way would be a minimum of 50 feet. The highway would be designed for 40 mph and posted for 35 mph. (The original proposal called for a 50 mph speed limit and 10-foot wide paved shoulders.) The width of the new alignment would allow most disabled vehicles to adequately clear the travelled way. Turnouts would be provided at scenic view points. The old alignment may become a bicycle path.

Alternative 2 would cross the main branch and west fork of the Anini Stream (Plate 3). These two branches presently cross beneath the existing road through tunnels. The crossings for Alternative 2 would be on a fill with pipe culverts of sufficient capacity for a 50-year flood. Small gullies, irrigation channels and other drainage features would also be provided with culverts. Access at grade would be provided for all roads intersecting the new alignments. Rights-of-way for utilities would be maintained along the existing highway. Coordination with the U.S. Department of Commerce, National Ocean Survey would be established to insure the proper relocation of geodetic survey control monuments. During construction of this alternative, traffic would be handled by the existing highway.

Alternative 2 was rejected because a new highway alignment would have a much greater impact on the environment than widening the existing highway. This is particularly apparent when considering such factors as landform alteration and soil loss. Public reaction to a new
alignment was very negative. As shown on Table 3, Alternative 2 would cost approximately $22,000 more than the recommended Alternative W2, with a benefit/cost ratio only 0.07 points higher than Alternative W2 (an insignificant difference).

2. Alternative W1. The widening alternative had two variations; both provided 11-foot traffic lanes but W1 proposed 8-foot paved shoulders, and W2 proposed 4-foot paved shoulders. The curve improvements were identical in each case. The cost of Alternative W1 would be approximately $2.716 million (the highest of the three proposals), with a benefit/cost ratio of 1.08. This is $124,000 more than Alternative W2, and a difference of 0.05 points below the benefit/cost ratio of Alternative W2 (Table 3).

Alternative W2 was selected over Alternative W1 because W2 will disturb less land and will therefore have less environmental impact. In keeping with the frequently expressed desires of the community, Alternative W2 provides the minimum level of improvement within the standards of safety sought by the Department of Transportation.

C. ALTERNATIVE TRANSPORTATION SYSTEMS

Many North Shore residents have suggested the development of a mass transit system as an alternative means of handling the projected increases in traffic. If increasing capacity was the only objective of the proposed highway improvements, a mass transit system would be an alternative to consider. However, the main reasons for the proposed improvements are the existing substandard conditions (poor alignments and unsafe bridges) and structural inadequacies (pavement base and bridges). Increased capacity is important, but it is secondary to the objective of providing a safe highway. Any mass transit system designed to use the existing highway (eg, bus or shuttle as opposed to fixed-rail) would increase the need for the proposed improvements.
D. **NO PROJECT ALTERNATIVE**

The "Do-Nothing" alternative has been considered separately for each of the eleven different improvements that constitute the proposed project. However, it has been rejected for the Kalilihai to Princeville section, since it is the Department of Transportation's responsibility to provide a safe highway. To take no action to correct the dangerous curves, narrow pavement, and inadequate base structure would not be properly discharging that responsibility. The Department of Transportation has been responsive to the wishes of the community by selecting the minimum level of improvement. When ultimate improvements for the Princeville to Haena section are determined, safety will also be given high importance in evaluating the "Do-Nothing" alternative.
CHAPTER IV
UNAVOIDABLE
ADVERSE IMPACTS
CHAPTER IV. UNAVOIDABLE ADVERSE IMPACTS

Since the scope of the recommended widening is relatively minor, the potential for avoidable adverse impacts is small. In regrading the box-cuts to a more gentle slope, the appearance of the highway will be altered. This can be considered an adverse impact, since the present character of the highway is valued by many residents and visitors. Some soil loss will occur during construction, but this will be held to a minimum by requiring the Contractor to comply with the State Standard Specifications for erosion control.
CHAPTER V
SHORT TERM USES VS
LONG-TERM PRODUCTIVITY
CHAPTER V. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

To the majority of residents and visitors, the "productivity" of the North Shore is found in its natural beauty combined with unique rural charm. Any activity should therefore be evaluated on whether or not it maintains and enhances the scenic quality of the area. The recommended widening will not detract from the scenic quality of the area other than altering the appearance of the highway. The view from the road may be improved by opening up vistas that are presently blocked by narrow box-cuts.

Other forms of productivity such as taro farming, cattle grazing and the preservation of endangered waterbird habitat will not be affected. The wider highway will not foreclose future activities or land uses.
CHAPTER VI
COMMITS
MENTS
OF RESOURCES
CHAPTER VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Highway construction and paving will commit small amounts of materials that will be imported to the project area from existing quarries on Kauai. The recommended improvements will not commit land outside of the identified corridor; all cuts and fills will be approximately balanced. Within the highway corridor, a small amount of grazing land will be removed.

The U.S. Department of Interior has called to attention a deposit of ferruginous bauxite that is found at shallow depths (0–50 feet) in a north-south belt through the project area. There are approximately 30 million tons of this mineral resource with an average content of 26% alumina, 40% iron, and 7% titanium. Maintaining the present highway alignment will continue to make unavailable an insignificant amount of this resource. In light of the objectives for the future of the North Shore, namely the enhancement of its scenic resources, and the restrictions of the North Shore Development Plan, it is inconceivable that an attempt would be made to recover this mineral resource.

The proposed improvements will commit the economic resources of the State and Federal Government, and a portion of the required funds has already been appropriated. Because of the unsafe conditions of the existing highway, its improvement has been given a top priority.
Plate 1  Typical view of the Kuhio Highway between Kalihiwai and Princeville. Note narrow shoulders and blind curve. Alternative W would make this spot similar to Plate 2.

Plate 2  Typical view of the improved Kuhio Highway showing treatment of cuts and shoulders. Photo taken near Kilauea.
Plate 3  The coastal upland near Princeville, looking west toward Anini Stream with its dense growth of Java Plum and Guava. Alternatives 2 and W would follow the right-hand side of the road.

Plate 4  View of the Princeville Ranch looking east. The realignment of curve number 3 would pass through this area.
Plate 5  The existing road cut on the Hanalei River bluff.

Plate 6  The road cut on the east bluff of Kalihiwai Valley, made in 1963. Road widening on the Hanalei bluff would be similar. Note the dense plant cover including large trees; these are entirely self-established.
Plate 7  Approximate cut and fill on the Hanalei River Bluff from Alternatives A or W₂.  (View from the bridge).

Plate 8  Approximate cut and fill on the Hanalei River Bluff from Alternatives A or W₂.  (View from the valley).
Plate 9  The Hanalei Bridge and taro patches of the Hanalei NWR. Note cars waiting to cross. At the time this photo was taken (6/14/76, A.M.), there were several Hawaiian Stilts and Coots feeding in the pond closest to the highway.

Plate 10  The thru-truss design of the Hanalei Bridge.
Plate 11  The Waioli Bridge looking east.

Plate 12  The Waipa Bridge looking east. Note the two different segments; the shorter one (background) is narrower than the 1934 extension.
Plate 13  Cars waiting to cross the Waipa Bridge.

Plate 14  The Waikoko Bridge looking west. Note the makeshift repairs made after the 1946 tsunami dropped the east abutment.
Plate 15  The Wainiha Bridge Number 1 looking west.

Plate 16  The Wainiha Bridges Numbers 2 and 3 looking west. These were erected as temporary structures in 10 days after the 1957 tsunami. Note the sag in bridge #3 (background).
Plate 17 The Haena "Bridge" number 1 looking west. Note the settlement of the west abutment.

Plate 18 The Haena "Bridge" number 2. The grass growing on the top of the bridge camouflages the edge. Note evidence of decay in the concrete.
Plate 19  The Manoa Ford looking west.

Plate 20  The Limahuli Stream Crossing.
APPENDIX A
ORGANIZATIONS AND PERSONS CONSULTED
APPENDIX A
ORGANIZATIONS AND PERSONS CONSULTED IN
THE PREPARATION OF THE DRAFT EIS

I. RESPONDENTS TO THE MAY 29, 1975 DRAFT EIS AND SUMMARY
OF COMMENTS (Kalihiwai to Hanalei Bridge Section Only)

A. List of Respondents

1. U.S. Governmental Agencies

   a. Advisory Council on Historic
      Preservation
      - Mr. Louis S. Wall 7/18/75
   b. Department of Agriculture
      Soil Conservation Service
      - Mr. Francis C. H. Lum 8/6/75
   c. Department of Commerce
      Office of Science & Technology
      - Mr. Sidney R. Galler 8/29/75
   d. Department of Defense
      Air Force
      - Mr. Ben D. Kosa 8/8/75
      Army Engineer District, Honolulu
      - Mr. Ki Suk Cheung 8/27/75
      Army Support Command
      - Col. Charles S. Varnum 7/17/75
   e. Department of Health, Education
      and Welfare
      Office of Environmental Affairs
      - Mr. James D. Knochenhaur 9/5/75
   f. Department of Housing and Urban
      Development
      Federal Housing Administration
      - Mr. Alvin K. H. Pang 8/12/75
   g. Department of the Interior
      Office of the Secretary, Pac. SW Reg.
      - Mr. Webster Otis 8/21/75
   h. Department of Transportation
      Federal Aviation Administration
      - Mr. Herman C. Bliss 7/16/75
   i. Environmental Protection Agency,
      Region IX
      - Mr. Paul De Falco, Jr. 9/2/75

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2. **U.S. Congressional Representatives**
   a. The Honorable Hiram L. Fong 7/8/75
   b. The Honorable Patsy T. Mink 7/7/75

3. **State of Hawaii Agencies**
   a. Department of Agriculture  
      - Mr. John Farias, Jr. 8/4/75
   b. Department of Defense  
      - Mr. Valentine A. Siefermann 7/8/75
   c. Department of Education  
      - Mr. Teichiro Hirata 7/8/75
   d. Department of Health  
      - Dr. James S. Kumagai 8/1/75
   e. Department of Land & Natural Resources  
      - Chairman of the Board 7/15/75
      - Mr. Christopher Cobb
   f. Department of Planning and Economic Development  
      - Mr. Hideto Kono 8/26/75
   g. Office of Environmental Quality Control  
      - Mr. Richard E. Marland 7/23/75 & 9/18/75

4. **University of Hawaii**
   a. Environmental Center  
      - Mr. Doak C. Cox 9/4/75

5. **County of Kauai**
   a. Department of Public Works  
      - Mr. Akira Fujita 7/21/75

6. **Public Utilities**
   a. Citizens Utilities Company  
      - Mr. Boyd T. Townsley 7/10/75
7. Other Organizations
   a. American Lung Association
      - Mr. James W. Morrow 9/4/75
   b. Archaeological Research
      Center, Inc.
      - Mr. Francis Ching, Jr. 7/30/75
   c. Life of the Land
      - Mr. Robert W. Gould 8/6/75
   d. Sierra Club & Life of the Land
      - Mrs. Helen C. Hopkins 8/13/75

8. Private Individuals
   a. Mr. David Chang, Koloa, Kauai 7/15/75
   b. Mr. Joe Hadley, Kapaa, Kauai 8/?/75
   c. Mr. Mark Hemmings, Koloa, Kauai 7/24/75 &
      8/22/75
   d. Mr. Peter Moras, Sonoma, Ca. 8/23/75
   e. Ms. Helen Morihisa, Kauai 8/14/75
   f. Mr. Jack Nishimoto, Hanalei, Kauai 8/27/75
   g. Ms. Marilyn Pollock and
      Mr. Ewin R. Pollock 8/23/75
   h. Ms. Gail Rush, Kaneohe, Oahu 8/18/75
   i. Mr. Robert J. Schleck, Lihue, Kauai 8/13/75
   j. Mr. Wm. J. Solner, Kapaa, Kauai 7/19/75
   k. Mrs. Alexander J. Veech, Hanalei,
      Kauai 8/?/75
   l. Mrs. R. White, Koloa, Kauai 10/5/75

9. Persons Giving Testimony at the August 13, 1975 Public
   Hearing

   In addition to those responding by letter, the following
   private citizens presented their views at the public hearing
   on the May 29, 1975 Draft EIS (Kalihiwai to Hanalei
   Bridge section only), held at the Hanalei Courthouse. A
   total of 86 persons attended the hearing, which lasted four
   hours.

   a. Ms. Winona Aipia, Princeville
   b. Ms. Nancy Bennet, Kauai
   c. Mr. D.A. Carswell, for Princeville Corp.
d. Mr. Jack Euwing, Haena

B. **Summary of Comments**

The following is a point-by-point summary of the major issues raised by the agencies and persons responding to the May 29, 1975 Draft EIS prepared for this project (Kalalihiwai to Hanalei Section). These issues were weighed by the State Department of Transportation, and resulted in modifications to the proposed improvements. The major changes are: the preparation of this EIS (Kalalihiwai to Haena), the addition of Alternative W, and several new proposals for the replacement of the Hanalei Bridge.

Comments relating to the scope of the May 29, 1975 Draft EIS, rather than to the proposed project itself, are not summarized here but have been answered throughout the text of this EIS. Following each summary, the reader is directed to the appropriate pages of this EIS for further discussion. (The issues are arranged according to the outline of this EIS not according to their importance in the opinion of the respondents).
1. **Need for the Project**

Many citizens expressed their disapproval of the proposed improvements by questioning the need for an improved highway. Some claimed that the present highway is not unsafe, that it is in good condition, and that the bridges are satisfactory as they are. (See pages I-7 to I-9 and Tables 1 and 2). Other respondents criticized the traffic projections on the grounds that Princeville has not experienced the rapid growth that had been first anticipated. The traffic projections have been revised. (See Figure 4).

2. **Project Economics**

Requests were made for information on project cost, levels and sources of funding, and the Benefit/Cost Ratio of the proposed improvements. (See page I-15 and Table 3).

3. **Growth Inducement**

By far the greatest concern of North Shore residents is the possibility that an improved highway would bring more tourists and more construction, and would eventually lead to the destruction of their quality of life. (See the following pages for further discussion of this subject: I-20, II-1, II-29, and A-10.)

4. **Modification of Landform**

Concern was expressed that construction on the Hanalei River Bluff would leave an ugly scar. (See pages II-3, II-33 and Plates 6, 7, and 8).

5. **Erosion and Siltation**

Several agencies (e.g., SCS, Dept. of Interior) and many private citizens considered this a major potential impact of the proposed improvements. It was requested that the effects of construction-induced erosion on Anini Stream and the Hanalei River be thoroughly discussed. (See pages II-5 to II-7).
6. Water Resources

Water pollution from erosion and the effect of the project on the Hanalei Valley flooding problem were frequently voiced concerns. Hydrologic data and the provisions for crossing Anini Stream were requested. (See pages I-24, I-25 and II-8 to II-12).

7. Wildlife

The effect of the proposed project on the endangered waterbirds at the Hanalei National Wildlife Refuge and on the stream fauna of the Hanalei River was a major concern of the U.S. Department of Interior and other agencies. (See pages II-17 to II-19).

8. Air Quality

The May 29, 1975 Draft EIS discussed the air quality impact of the proposed project, but did not employ the most up-to-date prediction methodology. (See pages II-19 to II-21 and Appendix B).

9. Noise

The May 29, 1975 Draft EIS predicted noise levels in excess of Federal Standards and proposed mitigating measures. However, these measures were not acceptable to some respondents. (See page II-21 to II-23).

10. Socioeconomics

It was felt by some respondents that a new highway alignment would have a severe effect on the grazing industry. (See page II-29.) Others were concerned about increased land valuation (see page II-29), and the displacement of families (see page II-29), or conflict with the Hanalei Sanitary landfill (see page II-30).

11. Scenic Resources

Landscaping, preserving the eucalyptus trees, and the overall effect of the project on the scenic quality of the North Shore were given a high priority by the respondents. (See pages II-31 to II-33).
12. **Archaeological Resources**

   The State Department of Transportation's plans to conduct an archaeological survey for the selected route but not for the alternative routes was criticised by some but accepted by others. (See page II-4 and Appendix D).

13. **Mass Transit**

   As an alternative to improving the existing highway, a number of respondents suggested some form of mass transit, such as a shuttle bus. (See page III-4.)
II. RESPONDENTS TO THE MARCH 10, 1976 EIS PREPARATION
NOTICE (Kalihiwai to Haena Section)

A. List of Respondents

1. U.S. Governmental Agencies
   
   a. Advisory Council on Historic Preservation
      - Mr. Louis S. Wall 4/7/76
   
   b. Department of Agriculture
      Soil Conservation Service
      - Mr. Francis C.H. Lum 4/8/76
   
   c. Department of Defense
      Air Force
      - Mr. Ben D. Kosa 3/25/76
      Army Engineer District, Honolulu
      - Mr. Kisuk Cheung 4/12/76
   
   d. Department of Housing and Urban Development
      Federal Housing Administration
      - Mr. Alvin K.H. Pang 4/12/76
   
   e. Department of the Interior
      Bureau of Outdoor Recreation
      - Mr. Frank E. Sylvester 4/1/76
      Fish and Wildlife Service
      - Mr. Maurice H. Taylor 5/20/76
      Geological Survey
      - Mr. F.T. Hidaka 4/7/76
      National Park Service
      - Mr. Robert L. Barrel 6/15/76
   
   f. Department of Transportation
      Coast Guard
      - Capt. H.C. Holmgren 5/11/76
      Federal Aviation Administration
      - Mr. Joseph B. Nestor 4/2/76

2. State of Hawaii Agencies
   
   a. Department of Accounting and General Services
      - Mr. Hideo Murakami 3/31/76
   
   b. Department of Agriculture
      - Mr. John Farías, Jr. 4/7/76
c. Department of Defense
   - Maj. Gen. Valentine A. Siefermann 3/19/76

d. Department of Education
   - Mr. Charles G. Clark 3/15/76

e. Department of Health
   - Dr. James S. Kumagai 3/24/76

f. Department of Land & Natural Resources
   Chairman of the Board
   - Mr. Christopher Cobb 4/6/76


g. Department of Planning and Economic Development
   - Mr. Hideto Kono 4/26/76

h. Office of Environmental Quality Control
   - Mr. Richard E. Marland 3/29/76

3. County of Kauai

a. Mayor
   - The Honorable Eduardo E. Malapit 5/13/76

b. County Clerk
   - Mr. Tad T. Miura 5/18/76

c. Planning Department
   - Mr. Brian Nishimoto 3/18/76

4. Public Utilities

a. Gasco, Inc.
   - Mr. Francis Tanaka 3/18/76

b. Hawaiian Telephone Company
   - Mr. S.K. Smiddy 3/26/76

5. Other Organizations

a. American Lung Association
   - Mr. James W. Morrow 3/18/76

b. Kauai Historical Society
   - Mr. Robert J. Schleck 4/9/76

c. The Kauai Outdoor Circle
   - Mrs. H. Roger Netzer 4/16/76

d. Shoreline Protection Alliance
   - Mr. Douglas Meller 4/15/76

e. Sierra Club & Life of the Land
   - Mrs. Helen C. Hopkins 3/30/76

A-9
6. **Private Individuals**

<table>
<thead>
<tr>
<th></th>
<th>Name and Address</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Mr. &amp; Mrs. John C. Ferry, Sherman Oaks, California</td>
<td>3/7/76</td>
</tr>
<tr>
<td>b.</td>
<td>Mr. William T. Le Gro, Anahola</td>
<td>3/16/76</td>
</tr>
<tr>
<td>c.</td>
<td>Mr. John T. Wehrheim, Kilauea</td>
<td>4/29/76</td>
</tr>
<tr>
<td>d.</td>
<td>Ms. Geraldine A. Wojono, Hanalei</td>
<td>3/23/76</td>
</tr>
<tr>
<td>e.</td>
<td>Mr. E.L. Yates, Corona Del Mar, California</td>
<td>4/6/76</td>
</tr>
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B. **Summary of Comments**

The concerns expressed by the respondents to the March 10, 1976 EIS Preparation Notice were essentially the same as those received on the May 29, 1975 Draft EIS (See Pages A-4 to 7). "Growth" and the subsequent loss of the rural North Shore lifestyle continues to be the major issue. It was expressed in several different ways, but the North Shore residents definitely want to retain the "slow and peaceful" atmosphere created by the narrow winding road and the one-lane bridges. The style of the existing bridges is considered to be essential to the rural character of the area. Most respondents stressed the importance of retaining the present style, even if the bridges must be replaced. Of the respondents that accepted the State Department of Transportation's contention that the Kalihiwai-Hanalei Bridge section is unsafe (not all did accept it), the majority favored widening the existing road (Alternative W) rather than building a new one (Alternatives 1, 2, A and B). Only the Kauai County Engineer preferred a new alignment. Most respondents disapproved of the concept of an elevated alignment in the Hanalei Valley as a solution to the flooding problem. All of these comments were weighed by the State Department of Transportation, and the concerns have been addressed in this EIS.

These letters and the State Department of Transportation's replies are reproduced below.
Mr. R. Alvey Wright  
Director  
State of Hawaii  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii  96814

Dear Mr. Wright:

This is in response to your request of March 10, 1976 concerning the Environmental Impact Statement Preparation Notice for the Kaualani Road, Hana to Pa'ia, on Maui, Hawaii.

It might be helpful to explain the roles of the Advisory Council not only in fulfilling its responsibilities under Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), but also its mandate from the Congress and the President. The Council was created by the National Historic Preservation Act of 1966 (80 Stat. 915, 16 U.S.C. 470) to advise the President and the Congress in the field of historic preservation. Section 106 of the Act directs the head of any Federal agency conducting any undertaking which would affect cultural resources included in the National Register of Historic Places to afford the Council an opportunity to comment on the undertaking prior to its approval. The letter on May 31, 1971 from Executive Order 11593, "Protection and Enhancement of the Cultural Environment," broadened the Council's area of responsibility. By that order, Federal agencies were directed to work with the Council to ensure that their plans and programs contribute to the enhancement and preservation of non-federally owned cultural resources. It further required the head of any Federal agency to afford the Council an opportunity to comment on any undertaking which would result in the sale, transfer, demolition or substantial alteration of a property under the agency's control or jurisdiction that had been determined eligible for inclusion in the National Register by the Secretary of the Interior. The "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800) set forth the steps an agency is to follow in obtaining Council comments.

Therefore, if the Federal Highway Administration or another Federal agency is assisting with this project, as part of its planning process, it should arrange to have the areas that will be impacted by the undertaking surveyed to identify cultural properties eligible for inclusion in the National Register of Historic Places pursuant to Executive Order 11593, "Protection and Enhancement of the Cultural Environment" issued May 31, 1971 as implemented through the "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800). After the survey is complete, if the Federal agency determines, in consultation with the Hawaii State Historic Preservation Officer, that the undertaking will result in an effect on any property included in or eligible for inclusion in the National Register it is required to afford the Advisory Council an opportunity to comment on the undertaking in accordance with the Council's procedures.

I trust the above information will be of assistance to you in the preparation of the proposed environmental impact statement. Should you have questions or require additional assistance, please contact

The Council is an independent unit of the Executive Branch of the Federal Government charged by the Act of October 26, 1966 to advise the President and Congress in the field of Historic Preservation.
Page 3
April 7, 1976
Mr. R. Alvey Wright
Kualii Belt Road

Michael H. Dirrman of the Advisory Council staff at P. O. Box 25085,
Denver, Colorado 80225, telephone number (303) 234-4466.

Sincerely yours,

[Signed]

Louis S. Hall
Assistant Director, Office of Review and Compliance

Encl.

A-12

GEORGE H. ARYUSHI
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF ENVIRONMENTAL
REGULATORY COMMISSION

May 16, 1976

Mr. Louis S. Hall, Assistant Director
Office of Review and Compliance
Advisory Council on Historic Preservation
1522 K Street NW
Washington, D.C. 20005

Dear Mr. Hall:

Subject: Kualii Belt Road, Haena to Kalihiwai
Reference: Your letter dated April 7, 1976

Please be assured that this project will comply with the procedures set forth in 36 C.F.R. Part 800 and that the concerns of the Advisory Council will be properly addressed. The State Historic Preservation Officer (SHPO) will be consulted on the historic resources in the project vicinity.

We sincerely appreciate your comments and recommendations and will look to your office for guidance on historical matters.

Sincerely,

[Signed]

E. ALVEY WRIGHT
Director
Mr. F. Alvey Wright, Director
Department of Transportation
459 Punchbowl Street
Honolulu, Hawaii 96813

April 28, 1976

Mr. Francis C. H. Lum
State Conservationist
U. S. Department of Agriculture
Soil Conservation Service
440 Alexander Young Building
Honolulu, Hawaii 96813

April 6, 1976

Dear Mr. Wright:
Subject: EIS Preparation Notice for
Kualoa Road to Honolulu
reference: Your letter of April 6, 1976

We have reviewed the subject preparation notice and offer the following comments for your consideration:

1. The notice states that "A major portion of the area is used for cattle production." Each alternative should take into consideration the effects it will have on the cattle-raising operations. Effects may include: highway isolating small parcels of grazing land making these lands of little or no use for cattle operations; highway bisecting a pasture making it difficult to move cattle between pastures.

2. Attention should be given to planning for erosion control along the highway right-of-way on approach Honolulu to Princeville.

3. The statement "A parallel elevated alignment (bridge or high fill) from Kualoa Bridge to Honolulu Town has been proposed as a possible solution to the existing problem of flooding." may be true as far as flooding the roadway is concerned. If a high fill is used, will it act as a dam and cause flooding in the valley areas not now affected by flooding problems?

Thank you for letting us review this preparation notice.

Sincerely,

Francis C. H. Lum
State Conservationist

[Signature]

April 28, 1976

Mr. F. Alvey Wright
Director
DEPARTMENT OF THE AIR FORCE
HEADQUARTERS (US.AIR BASE WING PACIFIC
AND SAN FRANCISCO AREA)

State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

1. This headquarters has no comment to render relative to the environmental impact statement preparation notice for the Kauai Belt Road, Kalihiwai to Haena Project, on the Island of Kauai, Hawaii.

2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your development projects throughout the State.

B. D. Jones
Engr Mgr of Civil Engineering

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
Bldg. 328, Ft. Shafter
APO San Francisco 96666

It is the responsibility of the Engineer District, Ft. Shafter, Hawaii, to coordinate with the Department of Transportation for the execution of engineering projects in the area.

Mr. W. A. Wright, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

We received the environmental impact statement preparation notice for Kauai Belt Road, Kalihiwai to Haena on 17 March 1976. Supplementing the suggestions in our letter of 27 August 1975 regarding the Haena to Kalihiwai section of the Kauai Belt Road, we offer the following comments:

a. The drainage area, flood frequency, and design discharge for each of the bridge crossings should be included in the EIS. It is requested that design of the bridge or high fill for flood control purposes, from Hanalei Bridge to Haena, be coordinated with us.

b. Structures or fills in stream crossings subject to tide will require Department of the Army permits under Section 10 of the River and Harbor Act of 1936 and Section 606 of the Federal Water Pollution Control Act Amendments of 1972. In addition, fill in streams or wetlands above tidal influence will require Section 404 permits.

c. We recommend that the U.S. Coast Guard, Department of Transportation, be added to Agencies to be consulted on page 9. Permits are required from the U.S. Coast Guard for the construction of bridges and causeways in or over tidal waters.

d. We suggest that the EIS consider beneficial aspects of old roads as historic and aesthetic resources and as buffer that filter change and growth.

Thank you for the opportunity to provide comments.

Sincerely yours,

[Signature]
Chief, Engineering Division
Mr. Kinuk Chung, Chief
Engineering Division
Department of the Army
U.S. Army Engineer District,
Honolulu
Building 230, Fort Shafter
APO San Francisco 96558

Dear Mr. Chung:

Subject: Kaaul Belt Road, Kaneohe to Kahalu
Reference: Your letter dated April 12, 1976

Thank you for informing us about the necessary Army and
Coast Guard permits. These will be obtained as our project
develops.

We may not be able to include the detailed data suggested
for each of the proposed bridge crossings in the Final EIS.
However, we will have the data developed during the final design
plans which will be coordinated with your Department.

Your suggestions on the use of the old roads will be
considered.

The Coast Guard will be sent a copy of our EIS preparation
Notice.

Thank you for your continued cooperation.

Sincerely,

R. Higashinuma
for E. Alvey Wright
Director

Mr. E. Alvey Wright, Director
Department of Transportation
State of Hawaii
809 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

Subject: Kual Belt Road
Kaneohe to Kaahual, Island of Kual

As requested in your letter dated March 10, 1976, we have
reviewed the Environmental Impact Statement Preparation
Notice for the subject project and have no comment at this
time.

We look forward to receiving the Draft Environmental
Impact Statement and will make comments at that time.

Sincerely,

[Signature]
Director
Mr. R. Alvey Wright
Director
Hawaii Department of Transportation
800 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

This responds to your letter of March 30, 1976, requesting comments on the Environmental Impact Statement Preparation Notice for the Kualo Belt Road, Hana to Kikaha, Island of Kauai.

Our major concern is whether or not the proposed project will impact either the Hana Hou Park or the Hana State Park. Land for both parks has been acquired with a grant from the Land and Water Conservation Fund (LAWCF).  If either park is impacted, provisions of Section 6(f) of the LAWCF Act may be applicable in that taking of land from the parks would require the approval of the Secretary of the Interior and replacement land of equal value and utility. A Section 6(f) assessment also would be necessary.

If either park would be affected by the project, we recommend that you notify us of this fact prior to preparation of the environmental impact statement so we can determine the extent of involvement with the LAWCF project and the applicability of Section 6(f). You should consult also with Mr. Hiroshi, Director, Department of Planning and Economic Development, also in the State Liaison Office for LAWCF matters.

We note that the proposed project contains a number of bridge replacements. We suggest that you consider the possibility of public water access development utilizing portions of old bridge approaches and structures in those locations where potential public use would warrant such development.

With respect to the Hana Bridge and approaches, we recommend that you consult with the U.S. Fish and Wildlife Service on potential impacts for this portion of the project in that the proposed bridge replacement is within a National Wildlife Refuge.

Sincerely yours,

[Signature]

Frank E. Sylvester
Regional Director

cc: Mr. Ralph Segawa
Federal Highway Administration, Hawaii
Mr. Frank E. Sylvester
Regional Director
U. S. Department of the Interior
Bureau of Outdoor Recreation
Pacific Southwest Regional Office
Box 36062
650 Golden Gate Avenue
San Francisco, California 94102

Dear Mr. Sylvester:

Subject: Kalalau Belt Road, Haena to Kal正是u
AIS Preparation Notice
Reference: Your letter, 4230, dated April 1, 1976

Thank you for your prompt response. Our plans will not affect either the Hanalei Beach Park or the Haena State Park. We have already sent Mr. Hideto Kono of the Department of Planning and Economic Development a copy of our EIS preparation notice and are awaiting his comments. The U.S. Fish and Wildlife Service has also been sent a copy of our EIS preparation notice.

The possibility of public water access development will be considered where warranted and feasible.

Sincerely,

E. A. Eaves Wright
Director

United States Department of the Interior
Fish and Wildlife Service
Division of Ecological Services
821 Hawaii Street
Honolulu, Hawaii 96813

May 20, 1976

Mr. Ralph T. Segawa, Division Administrator
U.S. Department of Transportation
Federal Highway Administration
407 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Dear Sirs:

This provides comments on the environmental impact statement preparation notice for the proposed Kalalau Belt Road, Kalalau to Haena, island of Kauai, Hawaii.

Kalalau to Hanalei Bridge, page 2. As long as the proposed actions do not involve construction activity south of the present roadway from the intersection of the Poonao Road on the east to the Hanalei Valley Overlook on the west, little, if any, disturbance to the refuge and endangered wildlife would occur. It appears that the "third alternative" would cause the least impact on the environment.

Hanalei Bridge and Approaches, page 3. A map should be provided to clearly identify the Hanalei National Wildlife Refuge and other wetlands, as well as stream crossings along the proposed route. Notes along the route pertaining to the above areas should be described with estimates of relative importance. A bridge replacement on the site of the present bridge would have the least impact on the adjacent endangered waterbird habitats. A replacement bridge downstream of the present bridge that would sweep out into lands currently under taro cultivation would destroy wetland habitat for four species of endangered waterbirds. Such a span would necessitate abandonment of taro lands beneath and near the structure as it does not grow in shade. In addition, litter disposal, including cans and bottles thrown from an elevated roadway, would cover several feet on each side of the bridge. Taro farmers who work the area barefoot and with bares could not tolerate cans and bottles in the paddies. Road noise would also increase if traffic was elevated above ground level. Greater visual disturbance to wildlife would result, the high estimate value of the valley would be diminished, etc. Furthermore, we suggest that the proposal include provisions to replace any loss of existing access roads onto the Hanalei National Wildlife Refuge. It is imperative that these roads be designed and located in coordination with the Refuge Manager of the Hawaiian Islands National
Wildlife Habitats and other Interested Parties,

Hamakua Tunnels, page 3. Road construction activity along the course of the present roadway from Hamakua bridge on the east to the power substation on the west would have the least impact on taro paddies and endangered wetland habitats. The present road is adequately shielded from endangered bird habitats by a hedgerow of dense vegetation. Elevating the roadway would elevate noise, visual activity, and lighting above the protection of the hedgerow. Elevating the road would have less impact if a hedge was provided adjacent to the pavement. A design of this type would require an earth fill rather than a concrete causeway to permit the placement of the hedge. Roadside parking should not be permitted from the Hamakua Bridge to the western edge of the taro lands by providing a very minimum shoulder and appropriate signs. A public viewing point on the south side of the road, approximately 1,000 feet west of the present bridge, would be acceptable. Numerous culverts beneath the roadway would be required to minimize flooding of taro lands on the refuge.

Identification and Summary of Nuisance Hazards, page 6. The statement should discuss the potential environmental impacts to fish and wildlife resources, particularly within the Hamakua River Valley. In addition, we suggest that the amount of water lost under the various project alternatives be compared with respect to its impact on wildlife. During construction of new bridges or stream crossings the statement should indicate whether or not bypass channels would be utilized. If construction would occur in flooding streams, the statement should describe how turbulence and siltation would be controlled, as well as identify the extent of this activity on the stream fauna. Under this section, or under Mitigation, the draft environmental impact statement should indicate that construction would be timed to avoid peak flows (late fall) and peak periods of endangered wetland use of taro paddies and other waterbird habitat in the Hamakua River Valley (July through January).

Proposed Mitigation Measures, page 6. This section should be expanded to explicitly describe pertinent provisions of the Endangered Species Act of 1973.

Sincerely yours,

Maurice H. Taylor
Field Supervisor

cc: FH (CS), Portland
    PDNR, Furago
    ST, Kekaha
State Department of Transportation
450 Punchbowl Street
Honolulu, Hawaii 96813

Gentlemen:

Subject: Request for comments, Kaual Belt Road
Hona to Kalihwai, Island of Kauai, HI

We have no comment except to point out that the section between
Hona Belt Bridge and Honokalani and parts of the section between
Hona Belt and Kaunakai are low-lands which are subject to in-
undation during extreme floods. Adequate drains must be
provided, especially if the proposed parallel elevated alignment
is built upon a fill.

Sincerely,

[Signature]
District Chief

cc: Regional Hydrologist, USW, HI (Attn: L. E. Newcomb)
G. H. Chase (Attn: G. H. Davis)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
450 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

April 22, 1976

Mr. F. T. Hidaka
United States Department
of the Interior
Water Resources Division
1833 Kalakaua Avenue, 5th floor
Honolulu, Hawaii 96813

Dear Mr. Hidaka:

Subject: Kaual Belt Road,
Hona to Kalihwai,
EIS Preparation Notice
Reference: Your letter
dated April 7, 1976

Thank you for your comments. We are cognizant of the
low-lands which are subject to inundation during extreme
floods and will design our highway to prevent it from
aggravating these flooding problems.

Thank you for your continued cooperation.

Sincerely,

[Signature]

for E. Alvey Wright
Director
United States Department of the Interior
NATIONAL PARK SERVICE
HAWAII GROUP
677 ALA NALEIMA ALI'A, SUITE 611
HONOLULU, HAWAII 96813

June 15, 1976

Mr. Ralph T. Smythe
Division Engineer
Federal Highway Administration
677 Ala Moana Blvd., Suite 611
Honolulu, Hawaii 96813

Dear Ralph:

Sorry that I was not able to locate your February 6 letter requesting information on lands managed by the National Park Service in Hawaii, Guam and American Samoa. In addition, our Regional Office received a request for information on the Kualoa Belt Road, Kailua to Kaaawa, Hawaii. This is in response to both requests. The following information is provided for your technical assistance only and does not represent formal review comments on an environmental statement from the Department of the Interior.

Regarding specifically the Kualoa Belt Road Project, there are no existing or proposed units of the National Park System or any proposed or known potential sites or properties listed or to be listed as National Landmarks that will be affected by the proposed project. However, cultural resources may exist within the project boundary. We recommend that an archaeological survey be made by a professional archaeologist over the entire project area. All archaeological and/or historical properties discovered should be evaluated for their National Register potential pursuant to Title 36, GMR 800.10.

The National Register of Historic Places and the National Register of Natural Landmarks must be consulted to determine whether or not properties listed and/or eligible for listing are within the project boundary. If any cultural property is included in or determined eligible for inclusion in the National Register of Historic Places, a determination of effect must be made through consultation with the State Historic Preservation Officer (Title 36, GMR 800.6).

The environmental statement should contain the results and recommendations of the archaeological survey. The statement should indicate that the National Register of Historic Places, National Register of Natural Landmarks and the State Historic Preservation Officer have been consulted. A copy of the comments received from the State Historic Preservation Officer should be included in the statement. Impact upon cultural resources and Natural Landmarks should be thoroughly evaluated and will define mitigation measures which should be included in the statement. The proper protective and mitigative measures for each cultural resource are included in Title 36, GMR 800. The latest full cultural resources are included in Title 36, GMR 800. The listing of eligible and registered Natural Landmarks in the May 5, 1976, Federal Register. Additional sites have been listed in the February 9, 1976, Federal Register.

There are no units of the National Park System in American Samoa, nor in Guam. There is, however, a proposed National Historical Park on Guam, which the Department of the Interior has title to some of the lands therein. The enclosed, no-cost-of-charge map shows the proposed boundaries as of some years ago. The proposed is still alive and under consideration by the Congress. Even if it does not become a Federal Park, there is some consideration of the Territory leasing Federal (Interior) lands for a territorial park.

Maps (designated for other purposes, but helpful to you, I hope) of Hawaii Volcanoes National Park, City of Refuge National Historical Park and Puuhonua O Honaunau National Historic Site, all on Hawaii, are listed here. The City of Refuge map shows present boundaries and the other shows the boundaries proposed by the Master Plan.

There are properties listed and eligible for listing on the National Register of Natural Landmarks and on the National Register of Historic Places in Hawaii, American Samoa and Guam. All prehistoric and historical impact evaluations for projects should include consultation with latest listings of these properties as well as an archaeological survey over the project area. For further specific information please call me, or come on down and let us know.

We hope that this information will assist you toward the implementation of Section 106(C)(2)(A)(4) of the National Environmental Policy Act of 1969, as amended.

Sincerely yours,

Robert L. Banfield
State Director

Enclosures
Dear Admiral Wright:

Staff review of the "EIS Preparation Notice for Kual Belt Road, Hana to Kalipuhi, Island of Maui" has been completed. The only Coast Guard interest in this project, as we see it now, may involve the bridges. More information is required to determine if Coast Guard Bridge Permits are required.

A Coast Guard Bridge Permit may be required for any one or all of the proposed bridges. Each of the bridges will have to be addressed on an individual basis. Please submit an application for each bridge in accordance with instructions contained in the enclosed booklet. Applications should be mailed to: Commander (cap), Fourteenth Coast Guard District, 677 Ala Honaunau, Hilo, Hawaii 96720. Please contact LT Frederick F. Leder in our Bridge Section, Office of Navigation Safety, at 546-7130 if there are any questions on this matter.

Thank you for the opportunity to review and comment on the EIS Preparation Notice. We look forward to reviewing the draft EIS when it becomes available.

Sincerely,

H. G. Horner
Captain, U. S. Coast Guard
Chief of Staff
Fourteenth Coast Guard District
Acting

Enclosures:

- Permits for the Construction of Bridges Across Navigable Waters of the United States (booklet - 2 copies)

Copy to:

CAPT. Hana
Dear Admiral K. Alvey Wright:

Thank you for the State of Hawaii letter HWY-PA 2.27590 dated March 16, 1976, requesting the Environmental Impact Statement Preparation Notice for the Kualii Belt Road, Haena to Kaliiwai, Island of Kauai.

The proposed project does not appear to have an impact on recreational interest in the area and we, therefore, have no comments.

Sincerely,

[Signature]

Acting Director, APC-1

Honorable K. Alvey Wright
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Mr. Wright:

Subject: Request for Comments, Kauai Belt Road
Haena to Kaliiwai, Island of Kauai

This is in response to your letter no. HWY-PA 2.27590 dated March 10, 1976.

From the point of view of any environmental effects of the proposed action of upgrading the subject road, we have no comments.

However, if the recommended alternative calls for widening of the subject road fronting Hanalei District Court and Hanalei Elementary School, we would like to review the proposal prior to its recommendation.

If you have any questions, please call us at 546-5460.

Very truly yours,

[Signature]

BISO HIRANO
State Comptroller
The Honorable Hideo Harakami  
State Comptroller  
Department of Accounting and  
General Services  
P.O. Box 119  
Honolulu, Hawaii 96810

Dear Mr. Harakami:

Subject: Kauai Belt Road, Haena to Kalalau, Island of Kauai  
Reference: Letter No. (P) 1352.6 dated March 31, 1976

Thank you for your letter. For the section through Hanalei Town proper, our present intentions are to abide by the planned requirements of the North Shore Development Plan (typical section enclosed). We intend to require developers of lands adjacent to the highway to conform to this plan. No widening project is included for this section. In the immediate future, we will be implementing a drainage project along Kuhio Highway through a portion of Hanalei Town within the existing right-of-way.

We thank you for your comments.

Sincerely,

R. Higashino  
for E. Alvey Wright  
Director

Enclosure:

Memo

To: Mr. E. Alvey Wright, Director  
State Department of Transportation

Subject: Kauai Belt Road, Haena to Kalalau, Island of Kauai

The Department of Agriculture finds the proposed highway could impact on agricultural areas. The two farmers in the Hanalei drainage are faced frequently with inundation by high water. Any design and impact statement relating to location of the Hanalei Bridge and improvements in the flood plain should carefully consider the future of flooded crop culture in this valley.

The major portion of the project impacts on pasture areas used for cattle production. There are no serious impacts as long as passage between pasture areas is not impaired.

The Department of Agriculture would be pleased to assist wherever possible.

John Fariñas, Jr.  
Chairman, Board of Agriculture  
Kauai

April 7, 1976
MEMORANDUM

TO: THE HONORABLE JOHN FARIAS, JR., CHAIRMAN
BOARD OF AGRICULTURE

FROM: E. ALVEY WIGHT, DIRECTOR
DEPARTMENT OF TRANSPORTATION

SUBJECT: KAALI BELT ROAD, HALEA TO KALIHIWAI
EIS PREPARATION NOTICE COMMENTS
References: Your memorandum dated April 7, 1976

Your comments on the flooding of cultivated lands and impact on pasture lands will be considered and addressed in our Environmental Impact Statement. Thank you for your continued cooperation.

R. Higashima
for E. Alvey Wright

DIRECTOR'S OFFICE

March 1, 1976

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
640 Punchbowl Street
Honolulu, Hawaii 96813

DEAR ADMIRAL WRIGHT:

Kukui Belt Road Home to Kalihiwai, Island of Kauai

Reference is made to your letter dated March 10, 1976, subject as above.

We have no comments to offer on the Environmental Impact Preparation Notice for the subject project. Please keep us advised of the progress of this project.

Very truly yours,

VALERIE A. GRAY
Major General, HANO
Adjutant General

March 10, 1976

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
OFFICE OF THE ADJUTANT GENERAL
Fort Shafter Honolulu, Hawaii 96818

MEMO
To: Honorable M. Alvey Wright, Director
Department of Transportation

From: Charles G. Clark, Superintendent
Department of Education

Subject: Environmental Impact Statement for Kuualii Belt Road - Haena to Kalalau

March 15, 1976

Thank you for your letter of March 10, 1976, providing us with a copy of the EIS Preparation Notice for the subject proposal.

We have no additional comment aside from our letter of July 8, 1975, when we reviewed the portion of the project from Hanalei to Kalalau.
Honorable E. Alvey Wright
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright:

We have reviewed the Environmental Impact Statement notice for the Kamehameha V section of the Haulua Belt Road.

We want to emphasize that flooding in the vicinity of Hanalei River and Hanalei town should be considered in the design of this project.

If all work is done on fast land, there should be no effect on fishing in the area. Review of the final project design should be made to ensure that silt, debris and noxious chemicals do not enter Hanalei River which is an important nursery for mullet, muna, crab and other species. Measures will also be necessary to prevent silting off the river during construction. The EIS should also cover possible adverse effects to Waioli, Haena, Hanalei, Hanalei, Naolea, Hanalei, and other streams.

Very truly yours,

[Signature]

cc: DONALD
Fish & Game
Historic Sites
State Parks

The Honorable Christopher Cobb
Chairman and Member
Board of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Cobb:

Subject: Haulua Belt Road, Kamehameha V EIS Preparation Notice Comments
Reference: Your letter dated April 6, 1976

Please be assured that your comments on the flooding problem and the possible pollution to the Hanalei River and the various streams during construction will be fully addressed in our Environmental Impact Statement. Thank you for your continued cooperation.

Sincerely,

[Signature]

for E. Alvey Wright
Director
The Honorable H. Alvey Wright
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Mr. Wright:

Subject: Kual Belt Road, Haena to Kalihiwai Island of Kauai

We have reviewed the prepation notice of the environmental impact statement for the subject project and found the proposed EIS will identify the major impacts of the proposed highway improvements.

I would appreciate receiving a copy of the EIS to review when it is completed.

Sincerely,

HIDEO KENO

By: H. Alvey Wright

The Honorable Hideo Kono
Director
Department of Planning and Economic Development
P.O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Kono:

Subject: Kalaul Belt Road, Haena to Kalihiwai


We will send you a copy of our EIS when it is completed. Thank you for your cooperation.

Sincerely,

HIDEO KONO

By: H. Alvey Wright

Director
MEMORANDUM

TO: H. Alvey Wright, Director
Department of Transportation

FROM: Richard E. Herland, Director
Office of Environmental Quality Control

SUBJECT: Environmental Impact Statement Preparation Notice
for Kauai Belt Road, Hanalei to Kalalau, Island of Kauai

March 29, 1976

This Office appreciates the opportunity to participate in the consultation period. In our review of the EIS Preparation Notice on the above subject, we offer the following comments:

1. We suggest that further consultation be sought with the U.S. Fish and Wildlife Service, Kauai County's Department of Public Works, Corps of Engineers, Soil Conservation Service, and public organizations.

2. The amount and type of funding for the project should be described. Are these funds federal, state, and/or county? In what proportions?

3. The justification of the improvements should be given.

4. The preparation notice mentions flooding at the Hanalei Bridge. We recommend that a discussion be given of the flooding in terms of property damages, flooding history, flow capacity, and etc. It is also important to discuss the cause of the flooding.

5. In the summary of affected environment, social impact of Hanalei Valley to Hanalei should be carefully analyzed. A discussion should reveal that improvements of the highway will generate a different flow of traffic which may alter the present lifestyle of the area.

6. Another alternative should be discussed is the possibility of transferring the jurisdiction of the highway to the County of Kauai. Since your proposed improvements make it necessary to conform to federal standards and specifications, one lane bridges will be replaced by two lane bridges. However, if the jurisdiction was given to the county, then perhaps the residents may be able to have their one lane bridges and retain their existing lifestyle.

We trust that these comments are helpful to you in preparing your EIS. We look forward to the draft EIS.

If we can be of further assistance to you in this matter, please do not hesitate to contact us.
TO: THE HONORABLE RICHARD E. MARLAND, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM: E. ALVEY WRIGHT, DIRECTOR
DEPARTMENT OF TRANSPORTATION

SUBJECT: KAUA'I BELT ROAD, HANEA TO KALIHIWAI
Reference: Your memorandum dated March 29, 1976

We agree with comments 1, 2, 3, 4 and 5 of your letter and will incorporate them in our draft EIS.

However, we do not agree with your comment No. 6. The primary concern is one of safety and access for the public. We do not recommend one-lane bridges for safety reasons. We were informed that we may be liable for accidents that occur on newly-constructed substandard roadways. The County of Kaua'i could also be liable.

We are aware that this is an environmentally sensitive area which may be impacted by our proposed highway improvements. We are hopeful of finding a solution to best serve and satisfy the public interest.

Your comments and concern are appreciated.

E. ALVEY WRIGHT
DEPARTMENT OF PUBLIC WORKS
COUNTY OF KA'UAI
MEMORANDUM

TO: HAYOH KALUALI
DATE: MARCH 31, 1976

FROM: COUNTY ENGINEER

SUBJECT: REQUEST FOR CONTACTS, KA'UAI HIST ROAD
HAENA TO KALIHEA, ISLAND OF KA'UAI

March 31, 1976
Page 2

Mayor Kalapiti

C. In addition to provisions for abating the annual flooding from Hamakau Bridge to Hamakau Town, a drainage system through the town taking filling to Hamakau River should be included.

The new post office has experienced flooding and it has been in existence for less than a year.

D. Road widening should be considered in the Hamakau Town to Haena section. Shoulders should be provided wherever possible. The scene lookout at Waikalo Point has been the locality for many mishaps due to the narrow road and concentration of tourists.

The County's Hamakau maintenance crew has assisted the State in countless emergency occurrences which are attributed to the road's present condition. These include flooding, landslides, fallen trees, and vehicular mishaps.

Other County agencies may address other impacts of the proposed sections. Should further information be required, please call.

E. We concern that the Hamakau Bridge be replaced with a two-lane bridge. The new bridge should be of a capacity to carry modern sized trucks and highway loads. The high construction costs in Hamakau area is partly due to the limited capacity of the present bridge.

INDOCE
June 24, 1976

The Honorable Eduardo E. Malapit
Mayor, County of Kauai
4396 Rice Street
Lihue, Hawaii 96766

Dear Mayor Malapit:

Subject: Kauai Belt Road, Haena to Kaliihiwai
Reference: Your letter dated May 13, 1976

Our response to the comments contained in the County Engineer's memorandums dated March 31, 1976 follow:

A. Kaliihiwai to Hanalei Bridge: Based on the testimonies and comments received through previous transactions with the public, we are presently considering an alternative of widening the existing highway, utilizing a lower design speed to accommodate bicycles and vehicles. Posted speed limits would be 35 miles per hour from Kaliihiwai to Princeville and 25 miles per hour or less for the remainder. Under this concept, we would retain the existing alignment as much as possible except for improvements to four curves.

Another exception to retaining the existing alignment is in the area near the eucalyptus trees. We are studying in terms of utilizing these trees as a control and shifting the roadway from them to provide safety requirements with a travelled way width of 22 feet and shoulder widths of 6 feet.

For all other areas, it is our intent to utilize the existing pavement area, as much as possible.

An amendment to the North Shore Development Plan may be required since the typical section being proposed represents a decrease in planned requirements.

B. Hanalei Bridge: We are considering a new bridge meeting current load capacities at the location of the existing bridge. We have not made a final decision on laneage (i.e., one-lane or two-lanes) for the bridge. Safety and environmental impacts are prime factors being considered.

C. Hanalei Bridge to Hanalei Town: A hydrological study is being conducted to assure that our improvements will not add to the flooding problems in this area. A separate highway drainage improvement project within Hanalei Town is under design. However, we will not be able to alleviate all of the annual flooding problems since flood control is not within our jurisdiction. We are willing to cooperate in a flood control project with the County and/or the U.S. Corps of Engineers.

D. Hanalei Town to Haena: From a highway capacity viewpoint, traffic projections do not warrant anything more than our proposed bridge replacements. Widening of the existing road was considered in our earlier studies. Unfortunately, the low traffic projections and high estimated costs made this alternative economically unfeasible.

We appreciate the assistance that your Hanalei maintenance crew has provided us in times of need. Thank you for your past cooperation, and we solicit your continued support.

Sincerely,

E. Alvey Wright
Director
May 18, 1976

Mr. E. Alvey Wright, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

The Council of the County of Kauai acknowledges, with thanks, the receipt of your letter of May 10, 1976, and the copy of the Environmental Impact Statement Preparation Notice for the Kauli Belt Road, Kalibihui to Haena.

Very sincerely,

Tad T. Miura
County Clerk, County of Kauai

March 18, 1976

Mr. E. Alvey Wright, Director
State Dept. of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Re: Comments, Kauai Belt Road
Haena to Kalibihui

1. Kalibihui to Hanalei Bridge
   The third alternative alignment, proposing widening and improving of the existing roadway has merit from an aesthetic and feasibility standpoint. It would be the least costly to develop and it is lined with trees. These trees as much as possible should be preserved, and widening and realignment of the roadway should follow the alternative that would eliminate the least number. This alignment was most preferred by those in attendance at the public informational meeting (October, 1975) and offers the most advantages.

   This portion of the visitors' drive from Lihue to the North Shore destination area is important in establishing the setting and character to one of the world's most beautiful coastlines.
2. Hanalei Bridge and Approaches
   Bridge design should reflect rural character or be unobtrusive. It must fit into its sensitive surroundings, since Hanalei Valley is considered one of Kauai’s and the State of Hawaii’s most valuable scenic resources. Excessive grading should be properly landscaped.

3. Hanalei Town
   If roadway between Hanalei Bridge and Hanalei Town is to be elevated by a high fill as a possible solution to the flooding problem, design should assure that the fill does not act as a barrier to the natural drainage of the valley. Any viaduct must be carefully designed.

4. Hanalei to Lumahai
   Replacement of the bridges within this strip would be a welcome improvement.

5. Lumahai to Waimea
   The North Shore Development Plan proposes that new bridges over Hanalei River be located further upstream. Should these new bridges be built on the existing alignment, it should be designed to withstand tsunami forces. Like Hanalei, these bridges should be designed harmonious to its setting.

6. Waimea to Haena
   Proposals relate to improvements to the existing roadway only, which are appropriate courses of action for the area.

   No improvements proposed for turn-around at highway’s end in Haena to alleviate existing congestion? When improvements to other highway sections are completed, buses will then be able to travel all the way to beginning of Na Pali Coast.

In general, the North Shore (Hanalei to Haena) is a valuable natural, scenic, and recreational resource area for the State and Nation. It is also constrained by flood, tsunami, and slopes. Therefore, it warrants strong growth control measures, and the highway is one of the major factors. The area is very rural, and if its scenic beauty is to be preserved, it should remain that way. Too many improvements to the highway may have negative impacts to the area. It would generate more traffic, thus stimulating more residential or other developments and further taxing our public facilities and parks. Improvements to the existing road as compared to widening and realignments between Hanalei and Haena, would be more preferable and would definitely control growth. It must be recognized that increased development of the area, a possible resultant of highway improvements, could be detrimental to the sensitive environment that exists on the North Shore.

(g)5. Relating to EIS
   Primary and secondary effects on scenic quality should be evaluated also.

(h). As a mitigation measure, temporary and permanent landscaping should be considered.

/Aug

BRIAN MISHIMOTO
Planning Director

Ed Nakano
Mr. Brian Nishimoto
Planning Director
Planning Department
County of Kauai
4280 Rice Street
Lihue, Kauai, Hawaii 96766

Dear Mr. Nishimoto:

Subject: Kauai Belt Road, Haena to Kalihiwai
Reference: Your letter of March 18, 1976

Thank you for your comments and suggestions. They will be helpful in our efforts to implement our proposed highway improvements for the North Shore area.

To clarify our proposed improvements for the Haena to Kalihiwai section, we are considering the future replacement or improvement of four existing stream crossings consisting of two box culverts and two fords. No other work is being contemplated for this segment except for an impending minor drainage improvement project in the vicinity of the east ford.

We agree that the North Shore area is a valuable, natural, scenic, and recreational area and we recognize its sensitive environment.

We will continue to coordinate our planning with you. We appreciate your continued cooperation and assistance.

Sincerely,

E. Alvey Wright
Director

March 18, 1976

Admiral E. Alvey Wright, Director
Department of Transportation
859 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright:

Thank you for this opportunity to comment on the environmental assessment on the Kauai Belt Road Haena to Kalihiwai on the island of Kauai.

The project does not appear to have any adverse effect on the Gas Company.

Very truly yours,

Francis Tenaka
Environmental Coordinator

FT:Jm
Mr. Edwin Nakano  
District Engineer  
State Highway Division  
P.O. Box 1971  
Lihue, Hawaii 96766

Subject: Kualo Belt Road, Haena to Kalibwal, Island of Kauai

Ref: INV-PA 2,7755B

Gentlemen,

With regards to your proposed highway improvements from Kalibwal to Haena, we have no comments on environmental effects. However, we suggest that an adequate right-of-way be acquired to accommodate the placement of both electric and telephone facilities.

Very truly yours,

[Signature]

S. K. Salsby  
Island Manager

March 26, 1976

ADAM W. ALVY WRIGHT, Director  
Department of Transportation  
465 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Admiral Wright:

Re: Environmental Impact Statement for the Kualo Belt Road, Haena to Kalibwal

This is in reply to your letter of March 10, 1976 (INV-PA 2,7755B) requesting comments on the environmental effects of the proposed highway project.

In assessing the air quality impact of the project we suggest that you include the following:

1. Identify the critical year for automotive pollutants by estimating annual emissions of carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NOx) over the design life of the proposed highway. The construction period should be carefully examined as reduced speeds result in higher emissions. Estimates should take into account changes in traffic volume, variations in average route speed, percentage of heavy duty traffic, etc.

2. When the critical year is identified, compute ambient CO concentrations under worst-case and most probable meteorological conditions as well as peak and average daily traffic conditions at various distances from the highway. A review of meteorological data from the nearest weather recording stations will be necessary.

3. Evaluate the ambient estimates in light of the frequency of occurrence of weather conditions conducive to pollutant build up and compare with State and Federal air quality standards.

[Signature]

Christian Scale Fight TB, Asthma, Emphysema, Air Pollution
Thank you for the opportunity to offer these suggestions prior to preparation of the EIS. When the EIS is complete we would appreciate receiving a copy for review.

Sincerely,

James W. Morrow
Director
Environmental Health

cc: Dr. Richard E. Harland, OEGC

Mr. James W. Morrow
Director
American Lung Association of Hawaii
245 North Kukui Street
Honolulu, Hawaii 96817

Dear Mr. Morrow:

Subject: Kualai Belt Road
Letters to Kalihualii
EIS Preparation Notice
Reference: Your letter dated March 18, 1976

Thank you for your prompt response to our EIS Preparation Notice. We will consider your suggestions. Our air quality analysis will cover the State and Federal requirements which in part duplicate your suggestions.

A copy of the draft EIS will be furnished you when it is prepared.

Sincerely,

E. Alvey Wright
Director
Mr. E. Alvey Wright  
Department of Transportation  
Honolulu, Hawaii 96813

Re: HWY-PA 2.27558

Dear Mr. Wright,

The route from Kalihiwai to Haena should be preserved as a scenic and historic highway and should receive the most sensitive engineering and landscape treatment.

1. Kalihiwai to Haena Bridge
   We hope the existing roadway will be maintained and not improved to permit faster auto traffic. A speed limit of 35 miles per hour will enable the traveler to go slow enough to enjoy the superb scenery.

   In the event a decision is made to realign this road, we urge that the road follow the contours of the land rather than run straight through open cuts that detract from the scenic landscape.

2. Hanalei Bridge and approaches.
   We concur with the majority of Hanalei residents that the present bridge should be retained because of its unique structural style. However, if another bridge has to be built, it should be located parallel to the existing bridge and in the same structural style.

3. Hanalei Town.
   No question the need for a parallel elevated alignment (bridge or high fill) from Hanalei bridge to the town. A far less expensive solution to the annual problem of flooding would be to have the river mouth dredged frequently and the river itself cleared of debris and silt to allow for faster flow of water during heavy rains.

   We agree that the bridges at Waipio, Waipou and Waikoko need to be repaired or replaced. New bridges should be built parallel to the present ones to avoid as much as possible the disturbance of adjacent landscape. Their major structural style should be retained.

The Waimea bridge has a special character of its own. Every effort should be made to retain it. We see no reason why travelers can't take their time in crossing over it. This is what gives the Hanalei-Haena scenic drive a country-like quality that is fast disappearing from the rest of Kauai Island.

In conclusion:

1. Any new alignments should include bike-paths.

2. The National Trust for Historic Preservation offers consulting service by engineers specially trained in the preservation of scenic highways. We request that you contact Mr. Russell Keene, Vice-President for Preservation Services, National Trust for Historic Preservation, 740-748 Jackson Place, N.W., Washington, D.C., 20005 for assistance in scenic road planning.

Very truly yours,

KAUAI HISTORICAL SOCIETY

Robert A. Schrock  
President

April 9, 1976

-2-
Mr. Robert Schleck, President
Kauai Historical Society
P. O. Box 208
Lihue, Kauai, Hawaii 96766

Dear Mr. Schleck:

Subject: Kauai Belt Road,
Haena to Kalibhai Colony
Reference: Your letter
dated April 9, 1976

Thank you for your comments. Our responses to your comments follow:

1. Kalibhai to Haena Bridge

   We plan to retain much of the existing highway with minimal widening and curve improvements. The reason for our proposal is to reduce the high accident rate in this section. The present speed limits will be maintained.

2. Haena Bridge and Approaches

   Your proposal regarding the style and location of the Haena Bridge is one of the alternatives we are developing. Please note that we will most likely be liable for accidents that occur on newly constructed one-lane bridges.

3. Haena Town

   We are presently conducting a hydrological study for this area and should be able to comment on the flooding problem shortly. Draining of the river mouth comes under the jurisdiction of the County or U. S. Corps of Engineers.

4. Haena Town to Haena

   We agree on the concept that the structural styles of the existing bridges be retained. However, we are considering two-lane bridges since we will probably be liable for accidents that occur on newly constructed one-lane bridges.

5. Bikeways

   We appreciate your proposal for bikeways. We hope you realize that additional rights-of-way would be required for the bikeways.

   Thank you for the information regarding the National Trust for Historic Preservation and their services. We will contact them for information on scenic road planning.

Sincerely,

R. Higashinuma
Director
State of Hawaii Department of Transportation
860 Punchbowl Street
Honolulu, Hawaii 96813

Attention of Mr. E. Alvey Wright, Director

Subject: Request for Comments, Kauai Belt Road, Hanama to Hanalei, Island of Kauai

Gentlemen:

The Outdoor Circle was founded for the purpose of preserving and enhancing the beauty of Hawaii. However, in the last few years people have begun to realize that the beauty and charm of the Islands, which mean so much to the residents and to the many visitors, is slowly being eroded and replaced, so that Hawaii is becoming a miniature replica of the mainland. We also have learned that what might seem like small changes on the mainland have far-reaching effects on Hawaii's fragile ecology.

Each of the Hawaiian Islands has its special places. For Kauai, these places are the Eleele-Waialae coast and the Hanalei-Prince area. As the plan for the North Shore (by Eko, Dean, Austin and Williams, Inc.) states: "The North Shore is a region of fantastic beauty." The accompanying socio-economic study by Anderson, Barron and Eyre says: "Hanalei has in abundance, beautiful condition, mountain, and natural scene beauty unexcelled anywhere else in Hawaii."

The North Shore Plan is thoughtful, well presented, and has many excellent features. However, many of the research was done in 1971 and early 1972—six years ago. A plan is just that—a plan—and even the planners recognize that plans should not generally be reviewed at regular intervals but that they should take into account the desires of the local residents.

The people of Kauai have had the planning mistakes made on the other Islands to guide them (Kauai is often cited as a prime example). At the last public hearings on the proposed changes to the highway and the bridges on the North Shore, the residents were overwhelmingly against these changes. It means that the residents not only want to retain the rural beauty of the area but to have some control over the growth of tourism.

Many of the predictions for the North Shore have not taken place, and the approval of large increments of tourist accommodations...

State of Hawaii Department of Transportation - Page Two
April 6, 1976

In the Waimea Valley area and the planned development at Puipu-Makai make it even less likely that major growth in tourism will take place in the Hanalei-Waimea area in the foreseeable future.

Regarding the specific proposals outlined in your Environmental Impact Statement Preparation Notice (with cover letter dated March 10, 1976), the Kauai Outdoor Circle, by action of the board today, would like to make the following remarks and recommendations:

1. Kalihini to Hanalei Bridge: That the road not be widened and/or straightened and that the speed limit be 35 mph. We feel a straight road and a higher speed limit will not reduce the accident rate, as the curves and the width of the road may not be the primary factor in accidents; on the contrary, a wider, straight road with a higher speed limit may increase the number of accidents.

It would make no sense to lose the scenic qualities of the present road alignment only to find that the accident rate remained the same or increased.

2. Hanalei Bridge and Approaches: That a new bridge over the Hanalei River replace the present bridge at the same location and by of similar construction. The bridge itself is not important during flood periods but only a short stretch of the road at its approach. This condition lasts for only a short time, of the Hanalei side. The condition is not only dangerous but because the flow of water is uncontrolled, no damage is sustained.

A bridge on a vantage point downstream of the present bridge would not require cuts into the steep side of the hill (which is a wildlife sanctuary), but because of the necessary curve out toward the valley would greatly detract from the famous and much photographed view of Hanalei Valley.

3. Hanalei Town: An elevated alignment (bridge or road fill) from Hanalei Bridge to Hanalei Town seems to be most unsatisfactory. If the road were elevated on a bridge, debris being carried down the stream would clog the under the bridge causing a backflow up the valley. A high fill could cause the water down to Hanalei Town. Either way, the result would be problems much more severe and dangerous than the present flooding pattern.

Flood plains have their own place in the ecological scheme, and attempts to change them have often proved disastrous. However, the off-limit policy is the best. In the past the location of the Post Office at the Ohana Family Store has caused some inconvenience to through traffic and pedestrians. However, the off-street parking provided at the new post office has taken care of this problem.
4. Maialai Town to Haena: Although the Waipa and Maiko bridges are particularly attractive structures, the Waialua Stream Bridge is characteristic of the rural atmosphere of Ewa. Even more so are the bridges in the Waipahu area. If it is absolutely imperative that these bridges be replaced for safety reasons, we reemphasize that the new bridges be designed as a more graceful and pleasing feature. We are not opposed to the widening of the bridges but their design should be such as to harmonize with the surroundings. The same is also true of the Waialua Stream Bridge. Our suggestion is that the existing bridges be preserved for the time being and that the new bridges be designed as a more graceful and pleasing feature. The same is also true of the Waialua Stream Bridge.

It appears that the only reason for widening these bridges is to increase the capacity of the roadway. In our opinion, this would be to allow buses and other vehicles to pass each other more easily. We suggest that the existing bridges be preserved for the time being and that the new bridges be designed as a more graceful and pleasing feature. The same is also true of the Waialua Stream Bridge.

Proposed Mitigation Measures:

1. Regarding the bridges, since we do not know what new features are planned, we cannot comment on these. However, we would hope that the Department of Transportation does not feel that the concrete and steel bridge at Omao is an aesthetic improvement over the existing bridges.

2. Regarding erosion and siltation during the proposed construction, we realize that the State specifications and grading and grubbing ordinances of the County of Ewa are designed to prevent this from occurring. However, we do not believe that these measures are foolproof, and if they are not, we would like to see the highest possible standards used. We also suggest that the Department of Transportation consider the effects of erosion and siltation on the Waialua Stream Bridge and its surroundings.

The area below the bridge at Waialua is the northern section of Waialua Bay, and all the development along Waialua have brought...
Mrs. H. Roger Metzer, President
The Kauai Outdoor Circle
P.O. Box 921
Lihue, Hawaii 96765

Dear Mrs. Metzer:

Subject: Kauai Belt Road, Lihue to Kalibual
Reference: Your letter dated April 6, 1976

Thank you for your comments. Your concerns on the limitations of the North Shore Plan are appreciated. Our responses to your specific comments follow:

1. Kalibual to Hanalei Bridge

   Our proposal is to provide a better alignment and a wider road for safety. We feel that highways should be designed to accommodate all drivers in relative safety, including reasonable provisions for human error due to drinking, drugs, personal problems, etc. We intend to retain the 35 mph posted speed limit.

2. Hanalei Bridge and Approaches

   Your proposal regarding the style and location of the Hanalei Bridge is one of the alternatives we are developing.

3. Hanalei Town

   A hydrologic study is being conducted to assure us that our highway improvements will not aggravate the present flooding problem. With the exception of a minor drainage project, we are not proposing any other highway improvements for this section.

4. Hanalei Town to Lihue

   We are considering two alternatives for this segment of Kauai Belt Road. Both alternatives will replace the existing bridge structures with similar type structures with either one or two through lanes. Please note that we are likely to be liable for accidents that occur on newly constructed one lane bridges.

5. Mitigation Measures

   As mentioned previously, we intend to replace the existing bridges with similar type structures.

   Mitigation measures to prevent erosion and siltation are an integral part of all our highway projects including the period during construction. The actual specifications or references thereto will be detailed in our Environmental Impact Statement.

   Please be assured that all of your comments will be seriously considered. We appreciate your comments and concern.

Sincerely,

E. Alvey Wright
Director

Mrs. H. Roger Metzer
Page 2

HIW-PA 2.28655
April 5, 1976

State of Hawaii
Department of Transportation
Highways Division
Planning Branch
600 Elopai Boulevard
Honolulu, Hawaii 96813

Re: EIS Preparation Notice for Kualii Belt Road, Kalihiwai to Haena

Gentlemen:

I would like to be a consulted party on the Kualii Belt Road Environmental Impact Statement. My understanding of the EIS process is that I should have at least 30 days to comment on the completed EIS - rather than on the Preparation Notice as was suggested in a letter I received from the Department of Transportation dated March 29, 1976.

You should be aware that you will need a Shoreline Management Area Permit for this project.

You also should be aware that although Kualii residents support road improvements between Hanalei and Kalihiwai, they are adamantly opposed to improvements which would allow tourist busses to travel between Hanalei and Haena. You might be able to address their concerns by banning tourist bus use of Kualii Belt Road beyond Lumahai Beach.

Respectfully,

Douglas Heller
Secretary

Mr. Douglas Heller
Secretary
Shoreline Protection Alliance
P.O. Box 4247
Honolulu, Hawaii 96813

Dear Mr. Heller:

Subject: Kualii Belt Road, Haena to Kalihiwai, EIS Preparation Notice

Reference: Your letter dated April 5, 1976

We are aware that a Shoreline Management Area Permit is required for this project.

Your suggestion of banning tour use of Kualii Belt Road beyond Lumahai Beach should be directed to the Public Utilities Commission for consideration.

A copy of the draft EIS will be transmitted for your review when it is completed.

Very truly yours,

T. Harano
Chief
Highways Division
The DOT recently also considered the revised development plans in Princeville. Therefore, we don't feel that our traffic forecasts are being overstated. We will however, monitor the actual growth of the area, as per our continuing surveillance activity, and evaluate our projections and make adjustments as required.

The DOT seems to be saying that the activity at Princeville and the 20-year plans for development at Princeville require the proposed plans for the road and bridges in the Hanalei-Princeville area. At the same time it appears to be saying that if the actual growth they predicted does not take place, the project will be reconsidered. It would be very difficult to reconsider a plan that has already been completed.

Paragraph D of Section 4.06 "Special Planning Areas" of the General Plan for the County of Kauai, adopted in 1971, states: "The Planning Department shall review each development plan formulated under this Section no less than every five years after its adoption and shall revise and update all plan elements consistent with the conditions that prevail at the time of such review.

According to the draft R.I.R. on Project No. DP-056-1(17), the final R.I.R. and project report were to be finished by the end of 1975 and the design and construction stages would each take about one year to complete. It is now March of 1976 and the final R.I.R. has not been completed and at this point, final decisions on alternate plans have not been made. Before any construction begins, the Planning Dept. should review the special planning for the North Shore.

The "Economic Base Analysis with Resulting Population Projections for Kauai, 1970-1980, dated Dec. 1969", is obviously outdated. At a meeting for County officials on Nov. 8, 1975, Mr. Santos, head of the Kauai Finance Dept., (at Princeville), said he felt the County must (a) cut government spending, (b) increase the tax base and county revenues, or (c) go bankrupt. The Kauai Public Works Department's CIP budget for 1975 was $172 million and it was expected the budget would be $275-280 million over the next six years. Most of the money would be used to build sewers and roads and put in drainage essential to development. Since 1973 there has been a growing deficit in the County budget. Revenues through grants-in-aid from the State have remained the same over that period.

The State Legislature has just passed and sent to the Governor a bill raising the real property tax exemption for homesteads in Kauai, which will mean an even greater loss of revenues for the counties unless they raise property tax rates, which would still leave Kauai County in financial straits.
The DOT says the General Plan for Kaau1 is geared to a population of 30,000 by 1990. According to the Kaau1 County Planning Dept., figures quoted in the Environmental Impact Assessment Report, Lihue Airport Master Plan Study (Nov. 1973) by Peat, Marwick, Mitchell & Co., the population of Kaau1, including the island of Hi‘iaka, in 1970 was estimated to be 29,761. The Planning Dept. projected an increase of approximately 6,300 for each five year period to 1985 (which would make a total population of approximately 31,300). We assume then that the population would increase by nearly 39,000 between 1970 and 1990. The 1997 "Hawaii 75th Annual Economic Review" by the Bank of Hawaii, August 1975, statistics show that the population of Kaau1 in 1970 was 27,002 and in 1979 was 28,543.

The County Planning Commission is convinced that the best way to increase the tax base is to allow more development for tourism. Even though development already existing is overcrowding and congestion, financial troubles are in serious financial position. If more goods are needed for more tourist development, Kaau1 will continue to be in serious financial trouble and the downward trend in population will continue.

Regarding the DOT data on plans for Princeville, on pg. 92 of the Socio-economic Prelude of the North Shore Plan, the following: "Resort/residential developments such as Princeville are a largely untapped concept in Hawaii----The future magnitudes and impact of this community is difficult to assess, but also highly intriguing since such an effort has yet to succeed in Hawaii."

The Socio-economic Study was initiated in Nov. 1973 and the field work was carried out in the first three months of 1972, so the predictions regarding tourism, which were admittedly vague and conditional, are now four years old. In the meantime, many changes have taken place nationwide and locally. We have suffered a financial recession and an energy shortage. In Hawaii during 1972 and the first half of 1973, land and housing costs escalated at a dizzy speed and the market was inundated with speculators, many of whom were caught in the rapidly rising interest rates and increasing construction costs.

Figures from the North Shore Plan, which projected a full-time population with 2,300 dwelling units, 1,000 resort units and a 5-acre general commercial site at Princeville were included in the draft EIS (5/4/75). The contingency statement in the plan that Princeville is anticipated to continue as a second home and resort community was not considered by the DOT.

There are approximately 500 house lots at Princeville. Fifty-four homes have been built and all others are occupied (some by employees of Princeville). Of the rest, some are for sale, some are used as vacation or weekend houses by owners and others are rented to people who live on Kauai or on a short-term basis to visitors. Three new houses have been built in the last year. Of the eight condominiums started, seven have been completed. Construction stopped some time ago on one and these are in very serious financial trouble.

Halelei Colony Resort at Haena is situated ideally on a point on a beautiful beach. It was built in 1969 and before the project was completed all the units were sold to resident of Hawaii or others who are familiar with and love the North Shore. Of the 57 units, 58 are available to tourists. In its more than six years of existence, Halelei Colony has not made a profit, but the majority of the apartments are still owned by the original buyers because of the beauty of its location and its quaint, lomaloa style. The people who stay at Halelei Colony and other tourist accommodations in the Haenl-Lehua area are "repeat" visitors. The great majority of tourists who come to Kauai prefer to be in the Waiau-Lehua area. In speaking of the visitors to the North Shore, the Halelei Development Plan Socio-economic Prelude says:

"Who are these visitors and why will they come? Unlike the standard tourist who comprises the traditional backbone of the Hawaiian market they will not be seeking the status of jaded resorts or the sun and sand of the famous lotion bakeouts. Rather, they will be those desirous of the Kauai contact and all that it brings, those seeking the essence of the real Hawaii, the real people engaged in the real social pursuits. Her will be those who yearn for the quiete historical fabulous or the simply surreal Hawaiian cultures. Rather, they will be those tired of artificial paradises who seek only the experience of relaxation, recreation, and complete respite from the tempo of Hawaiian society which has neither lost its traditional roots nor stubbornly refuses to express itself in new ways. They will be those who are satisfied to experience Hawaii from the roof of a parking structure or a golf cart. Rather, they will be those who increasingly need the exhilaration and the peace of the isolation and the encouragement of magnificent nature-surrounded people, their creations and their activities. The North Shore will not be for everyone—-and it shouldn't try to be."

This statement makes it clear that if the DOT insists on "progress" in Halelei, the very thing that draws those who prefer the North Shore, will be destroyed. The statement was not written by impractical dreamers but is part of a plan prepared by civil engineers and professional planners.
It has been seven months since the original public hearing on the subject project was held. The financial situation at Princeville is still precarious. The Princeville Corp. (Consolidated Oahu Oil, Inc. of Denver, Colorado) lost $2 million on the project last year. The permanent population remains the same. The project manager for Princeville, Inc., Don Carnall, spoke against the widening and straightening of the road between Kahiliwai and Princeville at the hearing and suggested a tram bridge in the style of the present bridge over the Hanalei River.

Princeville recently received permission from the Kauai Planning Commission to reactivate and extend an airfield between Kahiliwai and Princeville. The purpose of the airfield is to promote package golf-tour groups. Though there is no traffic congestion between Kapa'a and Princeville, one of the reasons given for the airport request was to relieve traffic congestion on the highway.

The conclusions in the North Shore Plan include the following: "Forecasts of employment and population levels for small areas are necessarily conditional statements. Simple time-series projections have little validity in a situation in which the major determining variables are in a high state of flux. The state of the art in economic forecasting is such that only firm reliability has been shown for forecasts of one or two years. To attempt to forecast in detail the economy of the North Shore area over the next decade thus borders on being socio-economic fiction."

The report also says: "....the following assumptions and forecasts prove wrong over the next decade, adjustments should be made in the overall forecasts."

As a result of hearings before the Kauai Planning Commission during the spring of 1975, community opposition to a shopping center in Hanalei Town made it obvious that the people do not want a commercial development of such size (25 shops) or the increased population suggested in Table 21, Pg. 10 of the North Shore Study. The conclusion in the Plan is: "Keep the development at Princeville", a position which Princeville Corp. no doubt agrees. Yet, Princeville's request for 5 acre for general commercial, instead of the originally planned 2.9 acres, was denied by the Planning Commission because the rate of development of the Princeville project does not warrant the change.

The Land Use Commission also denied a request for urban zoning of approximately an additional thousand acres.

The North Shore Plan is not an edict from heaven. It can and should be changed. The plan itself has emphasized that it should be reviewed in 5 years and that adjustments be made in 10 years to the wishes of the residents. Though the plan was published in Sept. 1973, the research on the socio-economic factors, as stated previously, was complete in May 1972——close to four years ago. The hearing held on the highway plans in August and the public meeting in Oct. of 1975 made it quite clear that the residents of the North Shore are ready for adjustments to the plan. As reported by Ar. Jan Tan Bruggrisseau in the March 17, 1976 edition of the Honolulu Advertiser, "The Department's original plans for upgrading the section of Kuhio Highway from Kahiliwai to the end of the road at Hanalei made a solid wall of opposition at an informational meeting in Hanalei last year." (See attached.) The records of the public hearing will show that not one person spoke in favor of the plans of the DOT.

The DOT says the road between Kahiliwai and Hanalei does not have an adequate base——the pavement is too thin——and that because of this maintenance has been twice as expensive on that as on other segments of highway on Kauai's. The road was paved in 1971. It would seem that once it was learned the pavement was not adequate, it would have made more sense to repave it properly rather than to spend so much on maintenance. However, the thickness of the pavement is not relevant to the plans of the DOT to widen and straighten the road.

In extolling the "fantastic beauty" of the "unfolding scenery and panoramic views" of the North Shore, the Plan describes the trip from Lihue to Kapaa (sic) as an experience that is "anticipatory and exciting...from unimpired, non-urban, urban to dramatic, almost overpowering natural culmination...An indescribable experience...From the Egyptian Temple to the Nuggenheim Museum, this design principle has been consciously pursued."

The speed of movement and sequence in which the experience unfolds is as important as the route and direction. Both currently contribute to the overall experience, although new road alignments could begin to give an undesirable uniformity to the rural canyon (uplifting effect). The Plan goes on: "Dramatically onto the Princeville shelf, the apparent openness and size is increased in contrast to Kahiliwai Valley. The shelf is unpredictably revealed, obscured by trees and topo-geometry, and effectively so. Any new alignment must be careful to maintain the tantalizing circumstances." The Plan also contains a picture of the bridges at Wainaha with the caption: "One lane bridges are a part of the rustic charm of the Hanalei area."

A letter signed by R. Alvey Wright, Director of the State DOT (March 11, 1976) says: "We feel that a functional and attractive facility is required and must be designed to be compatible with the plans promulgated by the County for the North Shore area." Only the ultimate pragmatist could
believe that widening and straightening the road from Kalihiwai to Princeville and replacing the bridges in the Hanalei-Hana area with concrete and steel structures would be “compatible” with what “through natural and cultural coincidence” has been achieved “more grandly than most human efforts.”

In the letter of March 11, 1976, statistics on traffic accidents were given as follows: "The 16 accidents which occurred in 1975 between Hanalei and Kalihiwai (6.5 miles in length) resulted in sixteen injuries and one fatality. This resulted in an accident rate of 7.20 accidents per million vehicle miles for the project segment. The weighted average accident rate for Kauai County was 3.96 accidents per million vehicle miles in 1973. For comparison, on Kuhio Highway between Kilauea Point and Koloa, an improved stretch (6.7 miles in length) there were ten accidents in 1974. These ten accidents resulted in four injuries and no fatalities.”

These statistics have little meaning because considering the small population on Kauai, statistics for other years could be very different. So far in 1976 there have been two fatalities in accidents on Kauai—between Lihue and Lihue and the other near Opaekaa Falls. One single accident on any given stretch of highway on Kauai could change the whole ratio regardless of the condition of the road.

There are many sections of highway in Hawaii that are heavily traveled and have substantial pavement widths and shoulders. A good example is the section of Kahuku Highway between Luce and Kupau on Windward Oahu. Why, if the residents of the North Shore do not want the improvements the DOT suggests, has this segment of highway been chosen to be part of the highway project? Is it very obvious that any improvements made to the highway will reduce vehicle value (and taxes) of the adjacent land and as a consequence there will be pressure to urbanize more land. Obviously, too, aside from the desires of the landowners who hope to profit from land urbanization, the only explanation is that this is a “park-barrel” project....

The Draft EIS presents that if the alignment chosen for the highway would pass a problem of air and noise pollution, the admission of dummy construction, glaze windows and air conditioning should be considered. In such a case, the Draft EIS, not to speak of energy problems, it is hard to believe that such a recommendation could be made.

The statements regarding air pollution, as usual, are all based on the assumption that national air standards will be met, but if this is not the case, what will be the effect of the proposed EIS on the area's environment? What will be the effect on the area's economy? What will be the effect on the area's recreation? What will be the effect on the area's aesthetics? What will be the effect on the area's wildlife? What will be the effect on the area's historical sites?

The DOT letter of March 31, 1976 states: "The WES points out that there are allocation measures to reduce potential impacts. This is a proper function of the EIS in the event of non-compliance in the event of the EIS. Unfortunately, it appears that the DOT's function in the event of non-compliance in the event of the EIS, would not be detrimental in any way and that the requirements of the EIS under the law have been met. Its function seems to be that a project is costly both economically and environmentally and that everyone would be better off without it.

The cost/benefit analysis was included in the Draft EIS, but perhaps there had been one case where it was necessary to consider other things to be considered. The cost/benefit analysis was included in the Draft EIS, but perhaps there had been one case where it was necessary to consider other things to be considered. The cost/benefit analysis was included in the Draft EIS, but perhaps there had been one case where it was necessary to consider other things to be considered.
are a number of homes back in the valley in the middle of the taro fields. These homes are not endangered at flood time because they are built on ground above the flood level and the flooding does not damage the taro. Part of the land in the valley and on the Princeville side of the river is used for cattle grazing. The cattle move to high ground as the water rises. If a bridge or high fill were built from the bridge over the river to Hanalei Town, the whole pattern of the flood waters could be drastically altered. The water would be blocked from flowing down the swampy area along the river bank. With either a bridge or culvert under a fill there would be danger of clogging by debris and silt. Result of this could be inundation of the homes in the taro fields and the flooding of more water down to Hanalei Town.

Other problems would be cutting off the access road to the taro fields and homes and to the area where the cattle graze; cutting off access to the river on the Hanalei side where local people go to fish and great stress on the Hanalei River bridge. If either a bridge or fill were to carry the highway to Hanalei Town and if shoulders were included, the highway would have to extend either into the taro fields and Wildlife Sanctuary or into the swamp on the makai (ocean) side of the present highway. It was suggested at the meeting on the proposed highway that if the man made dikes the river were cut back, their would be more room for flood waters to drain down the river and the County transportation representatives said they would consider this.

The area north of the highway comes under the jurisdiction of the County Zoning Board as well as the U.S. Army Engineers.

Regarding highway financing, a report prepared for the State Dept. of Budget and Finance by Arthur Young & Co., an analysis of the assignment of responsibilities and funding of Transportation in Hawaii, states that under present financing procedures and plans for transportation funds expenditures by 1980, the annual deficit in the DOT finances will be between $87 million and $107 million (of which $80 million would be in highway program) unless the State gas tax goes to 21.5 cents per gal.

The study says further that the DOT's plans into the early 1970s were based on expectations of the early 1960s, of ever increasing growth in population and tourism. For various reasons these expectations did not and will not take place. Aside from costs of fuel, inflation, high interest rates, increase in construction and maintenance costs, the people of Hawaii and the State are beginning to feel that there must be limitations placed on growth in Hawaii.

The study says that by 1981 the capital investment required for master-plan requirements for existing highway, airport and harbor through 1981 will increase the total outstanding debt to $775 million. This does not include $71 million for a State ferry system and the planned rapid transit system in Honolulu.

State DOT director, E. Alvey Wright, said on Jan. 19, 1976 (Honolulu Advertiser 1/19/76): "To avoid a deficit it will be necessary to cut back 75% of our operation and maintenance activities including the termination of approximately 250 out of the 360 currently filled positions. It may also be necessary to terminate 50 additional filled positions which are currently involved in capital construction programs." (Undertaking added.) On the same date, also in the Honolulu Advertiser is an article that points out: "The number of State workers and the State payroll are growing at a much faster pace than the total State population, individual family budgets, the cost of living and private per capita income.

If the DOT programs are in trouble now, how will it handle the problems created by the necessary repayment of borrowed money. As the indebtedness grows, the amount left for essential services in the future will diminish. Eileen Anderson, State Budget Director said: "Bond rating analysts consider Hawaii's outstanding debt as very high and they have expressed their concern over our ability to continue our current borrowing practices while maintaining a favorable rate of interest". (Star-Bulletin & Advertiser, Feb. 1, 1976).

One solution to these financial problems would be to stop funding G.I.P. such as the proposed Kuhio Highway and bridges improvement on the North Shore of Kauai and other G.I.P. that are unwanted by Hawaii's taxpayers. This is the recommendation made by me as a representative of the Storrm Club and Life of the land and for my family and myself.

Helen C. Hopkins
P. O. Box 266
Hanalei, Hawaii 96714

Date: March 10, 1976
Ms. Helen G. Hopkins
P.O. Box 266
Hanalei, Hawaii 96714

Dear Ms. Hopkins:

Subject: Kauai Belt Road, Haena to Kahiliwai
EIS Preparation Notice
Reference: Your letter dated March 30, 1976

Thank you for the time and effort you have taken in responding to our EIS Preparation Notice. We commend you on the scope and depth of your comments. Our response to your comments is attached as an enclosure to this letter.

Your concern for the North Shore area is appreciated.

Sincerely,

E. Alvey Wright
Director

Enclosure

Paragraphs 2, 3, 4

The project information furnished by our letter dated March 11, 1976 is correctly stated.

Paragraph 5

Should substantive events cause a significant decrease in traffic predicted over the 20-year design period, we will reconsider the portions of the project that have not yet been implemented. It should be noted however, that the improvements proposed are not solely for increased activity and growth of traffic in the North Shore. The improvements are also necessary for traffic safety. Some of the bridges are in danger of collapse which would endanger people. The existing one-lane bridges are also operationally unsafe based on our present design criteria.
Paragraph 6

This project is being coordinated with the County of Kauai's Planning Department. The revision and updating of the General Plan is their responsibility.

Paragraph 7

The draft EIS, prepared and circulated for Project No. DP-056-1(17), covered the section from Hanalei to Kalinbali. We are now including all sections of the proposed highway improvements from Kalihuli to Naana in a new draft EIS to be circulated later this year.

Paragraph 8, 9

Your comments deal with fiscal concerns beyond the scope of our project. However, we will include pertinent economic data in our draft EIS.

Paragraph 10

We recognize that the Kauai General Plan does contain population projections in the range of 90,000 for the year 1990 with the qualification, "only if and as economic development takes place..." However, the General Plan, until revised, is still the official planning document promulgated by the County of Kauai.

Paragraph 11, 12, 13

We thank you for the information you have furnished.

Paragraph 14

It is our understanding that you consider the North Shore Plan to be contradictory in anticipation that Princeville will continue to grow as a second home and resort community. You feel that this growth is not presently happening due to current economic conditions.

Our traffic projections are conservative in that they reflect only a portion of the total Princeville Complex being developed in the 20-year period and thus does account for the economic fluctuations such as you have indicated. We have found that this is generally the best approach where we feel projections by others are too high or where there is a great amount of uncertainty in the ultimate development.

Paragraphs 15, 16, 17

Thank you for the current information on the sales and occupancy conditions at Princeville and your opinion on the preferences of the tourists who come to the North Shore area.

Paragraph 18

Your statement implying that DOT insists on progress in Hanalei by the proposed improvements is inaccurate. The basic reasons for the proposed improvements are to replace...
the various structures that are in danger of collapse and to replace the existing roadways where the pavement has outlived its useful life (high maintenance costs). These highway improvements will be based on present design and safety standards.

Paragraph 19

We are studying the alternative of a new truss bridge at the existing bridge location.

Paragraph 20

Our involvement in the airstrip at Princeville is to assure that there will be adequate airway-highway clearance between the runway and our highway. We are not aware of traffic congestion between Kapaa and Princeville at present.

Paragraph 21, 22, 23

We agree that no one testified in favor of the highway from Kaliiwai to Hanalod at the public hearing held in August 1975. However, some support was received for the curve improvement and widening alternative at the October 1975 informal meeting.

Your comments on the changes to the North Shore Plan should be directed to the Kauai Planning Commission and the Kauai County's Planning Department.

We will consider the present North Shore Plan to be the official plan promulgated by the County until such time that it is revised.

Paragraph 24

The road section between Kaliiwai and Hanalei was taken over from the County in 1969. Initial improvements were made in 1971, consisting of minimum overlays to the existing pavement. These improvements were meant to serve as stop-gap measures until more permanent measures could be studied.

Paragraphs 25, 26

The attractiveness of the North Shore area will make it a significant destination for many people. We are aware of the environmental sensitivity of the area as well as the need for safe and efficient transportation. The widening and curve improvements proposed for the Kaliiwai to Hanalei segment can be accomplished with minimal impact to the surrounding area.

We propose to replace the bridges between Hanalei to Haena with similar looking structures.

Paragraphs 27, 28

The latest traffic statistics for the section of highway from Malua Road to Kiluaea Road shows lower accident rates for 1974 and 1975. For your information, we are tabulating the most recent available data.
<table>
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<tr>
<th>DESCRIPTION</th>
<th>SECTION LENGTH (MILES)</th>
<th>ACCIDENT RATE (PER MILLION VEHICLE MILES)</th>
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<td>4.93</td>
<td>1.10</td>
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<tr>
<td>Moloa Rd. to Kilauea Rd.</td>
<td>4.89</td>
<td>3.72</td>
</tr>
<tr>
<td>Antiel Rd. to Hanalei Bridge</td>
<td>4.02</td>
<td>7.20</td>
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<tr>
<td>Hanalei Bridge to Malolo Rd.</td>
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<td>-0-</td>
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<tr>
<td>Anse Rd. to Wainiha Rd.</td>
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<td>11.26</td>
</tr>
<tr>
<td>Wainiha Rd. to Keene</td>
<td>3.22</td>
<td>3.60</td>
</tr>
<tr>
<td>Island of Kauai</td>
<td>115.00</td>
<td>3.319</td>
</tr>
</tbody>
</table>

[Table continues]

Paragraph 29

We are looking into all of the sections with substandard facilities. We feel that our current proposal of curve improvements and the replacement of deteriorated stream crossings between Kaliliwai and Iheena are necessary for safety. The State Legislature has appropriated funds for these projects.

The proposed project is being undertaken at the present time because it has a high priority when compared to other proposed projects for the Island of Kauai. Studies for the section of Kaneohe Highway between Kaneohe and Kawa are not being undertaken at the present time since other projects like Interstate Routes H-1, H-2 and H-3, Moanalua Road Improvements, etc. have higher priorities for our proposed Oahu projects.

Paragraph 30

We regret that you disagree with the mitigation measures cited in the draft EIS for future public facilities. The mitigation measures mentioned in the EIS will be dependent upon the type of public facility constructed if any. Please be assured that we will consider all alternatives to minimize the impact to the natural beauty of the area.

Paragraph 31

We plan to revise our air quality studies based on the latest available criteria.

Paragraph 32, 33

The mitigation measures described in the EIS have proven to be more effective than those used on our previously constructed projects.
We also intend to monitor recently constructed projects in other areas to provide us with data on the effectiveness of these mitigation measures.

Paragraph 34
We will include a benefit-cost analysis in the draft EIS.

Paragraph 35, 36
A hydrologic study is underway as a part of the study for Hanalei Bridge. Please be assured that our improvements will not aggravate the present flooding conditions or create flooding of other areas not now subject to flooding.

Paragraph 37
The problems you mention are all being studied.

Paragraph 38
We will coordinate the development of the project with the Coastal Zone Management Committee and the U.S. Corps of Engineers.

Paragraphs 39, 40, 41, 42, 43, 44
We appreciate your concerns on our State Transportation program, its policies, funds, and relationship with the Kauai projects on the North Shore. We feel that we cannot drop the proposed improvements as you have suggested since the health, welfare and safety of the people would be endangered. We will, however, continue to evaluate your comments and suggestions before we finalize any decisions for the proposed highway improvements.

Dear DOT-

Please save the old bridges from Kaliiwai to Haena, Kauai.

Hawaii needs to protect its past for our sake and our children's sake. We have already taken so much from this good land.

A few new bridges mean a few more big trucks, buses, and cars. Please keep our Hawaii the way it has been. We have done enough damage.

Thnks
John and Marci Fenn
Hanalei
Mr. and Mrs. John C. Ferry  
4122 Stone Canyon Avenue  
Sherman Oaks, California 91403  

Dear Mr. and Mrs. Ferry:  

Subject: Kualii Belt Road, Access to Kualii  
Reference: Your letter received on March 31, 1976  

Thank you for your note asking that the old bridges from Kualii be retained. Regrettably the existing structures are not structurally sound, and are not salvageable. 

While new structures will be required, please be assured that they will be designed and built to blend with the scenic and rural setting, as well as the lifestyle of the North Shore area.

Sincerely,  

[Signature]  

Director
for the enjoyment and spiritual renewal of our descendants. This
protection of a truly unique area can be accomplished if you take
 utmost care in your planning. Specifically, the road should be
widened and straightened and elevated where absolutely necessary;
since the speed limit now is 30 mph, I don't think much work need
be done here. The bridges and the road in low-lying areas should
be raised. I don't think the architecture of the bridges should
be changed—no one who has seen the Hanalei and Waipoua bridges
and has any sensitivity could recommend replacement with a "speep-
ing" structure such as existed upon the Kauai Stretches. I also
think that the weight limits should not be increased so as to pre-
vent the crossings of tour buses, cars of large-scale construction,
and ultimate despoliation of an incredibly beautiful area. Let the
other islands open up their treasures for all to see from a bus or
condominium. Allow Kauai to remain hidden. In some respects, visible
only to small and controllable numbers of people who will forever
thank you for preserving this environment.

Naholo miala for considering my opinion, which I believe is the
opinion of many other residents.

Haoleia a me Aloha,

William T. La Gro

Mr. William T. La Gro
Box 291 Anahola
Kauai, Hawaii 96703

Dear Mr. La Gro:

Subject: Kauai Belt Road
Haena to Kalalau

Thank you for your letter of March 16, 1976. Your comment
to improve the roadway only where it is absolutely necessary
will be considered. We recognize the sensitive environment that
casts in the North Shore area. We are hopeful of finding a
solution that will best serve the overall public interest.

We appreciate your interest and concern on our proposed
project.

Sincerely,

E. Albert Wright
Director
John Koberlein  
Box 111 Elihu  
Kula, Maui  
96754

State of Hawaii  
Dept. of Transportation  
Highways Division  
Planning Branch

Dear Sirs:

April 29, 1976

Thank you for mailing us the environmental impact statement on the Kula Belt Road #1340 to Hana Project. I would appreciate your consideration of the following comments:

1. The route would impede both the movement and access of the existing high-speed, semi-rural character of the North Shore's cattle industry. To raise the speed limit of this road with new alignments would raise the insurance rates of the cattle operation in the area and in effect be raising the price of beef on Maui. I recommend that you consider only your third alternative, "to retain and widen the existing roadway with improvements to the curves."

2. The nature and the size of the majority of that roadway is a pleasure for the people of the North Shore as well as an attraction for visitors to our community. To change the alignment of this road or to remove the intrusions of the highway in the path would be in effect to destroy a source of pleasure and recreation for local residents as well as our visitors. We consider the road in its present state a natural resource.

3. The people who live on the North Shore are not in much of a hurry and the people who come to visit us are usually not in a hurry. A public hearing held by your office in Kula has people of the North Shore unanimously opposed any change to the alignment of this road. To consider the first two alternatives and alignment after this public testimony, I propose that the people of the North Shore have a right to a highway project that they can have a say in.

4. The people of Kula have experienced over and over again their desire for the development, carefully controlled growth, and quality living on their island. Kula is trying to protect its community, its special way of life, its agricultural lands and Kalala is trying to develop a selective and high-quality visitors industry. To substantially alter the nature of our landscapes and the pace of our lives with a new highway and new bridges is to act against the intent that the people of this Island have so often and poignantly expressed, their intent to hold onto their way of living in a peaceful rural atmosphere.

5. Kula is quaint and historic. Slow and peaceful. It is a good place to raise a family and it is a good place for a family to come on vacation. To take away our winding roads, our one lane wooden bridges would be taking away some of Kula's history and character. To open up the North Shore to faster traffic and a faster way of life is to take away some of the privacy of our communities and to make the experience of visiting Kula less personal.

6. The county has repeatedly stated its policy to develop a visitors industry for people who come to Kula with families and spend a week or two exploring the beaches, driving the beautiful winding roads, visiting our historic sites, and experiencing the beauty of our people. Kula has little to offer the visitor on a quick tour who arrives one morning and leaves the next. And that visitor gets little from Kula. This type of "tourism" leaves the visitor and the local people used but not paid.

7. I ask that your consider only improving the existing roadway from Enilihan to Hamoa bridge without excessive removal of trees, lining the highway and parallel, elevated alignment from the Hamoa bridge to the beach. I believe that the town to help the flood problem. I recommend that bridges be replaced with structures that retain the original design and materials.

8. I ask that no other work be projected for this area by the Department of Transportation until requested by the citizens of the various North Shore communities in this project area.

Thank you for the opportunity to comment on your proposal.

Sincerely,

John Koberlein
Mr. John Wahrheim
Box 111
Kilauea, Hawaii 96754

Dear Mr. Wahrheim:

Subject: Kauai Belt Road, Hanalei to Kapaa
EIS Preparation Notice Comments
Reference: Your letter dated April 9, 1976

Thank you for commenting on our EIS Preparation Notice. Our response to your comments follows:

1. The alternatives will have minimal impact on cattle operations since they are located adjacent to the existing highway. The existing speed limits will be retained.

2. Every attempt will be made to retain the existing trees.

3. The people testifying at the public hearing at Hanalei in August of 1975 were opposed to realigning the road. We have since developed a proposal to widen the existing roadway and improve several curves.

4. We are cognizant of the sensitive environment that exists in the North Shore. While one lane wooden bridges reflect Kauai's history and character, there is a need for safe transportation. Some of the bridges are in danger of collapse and the existing one-lane bridges are also operationally unsafe.

We have requested guidance from the County on their Development Plan. At the present time, the Kauai General Plan is the official plan which we must consider.

7. One of our alternatives reflects your recommendation and will be presented at the public hearing.

Our proposals for the North Shore were described in the EIS Preparation Notice. We will continue to monitor the transportation facilities in the North Shore to assure the public of safe and efficient transportation. Any significant proposals to improve the highway will be fully coordinated with all concerned agencies including the people of the various North Shore communities. The public will also be given ample opportunity to present their views.

We appreciate your concern for the North Shore.

Sincerely,

[Signature]

E. Alvey Wright
Director
PRINCEVILLE ART CENTER
AT
HANALEI, KAUA'I, HAWAII 96714

March 23, 1976

(808) 828-6561

State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wrights:

I am dropping a line in regards to the proposed improvements to the bridges and roads between Kalihiwai and Hanalei, Kauai. Having lived here but a short time, but indeed with an eye for the artistic beauty of this place, I find the wooden truss bridges into Hanalei and the rural one-lane bridges beyond marks of quiet beauty in the landscape. I am quite sure that modern-style constructions would mar that beauty. If anything, I would only endorse the continued maintenance and inspection of the present facilities.

I shall be present at the summer hearing which has been proposed to discuss the project. If at all possible, please post me posted of the date of this event.

Very truly yours,

Geraldine A. Wojno

April 12, 1976

Ms. Geraldine A. Wojno

P. O. Box 205
Hanalei, Kauai, Hawaii 96714

Dear Ms. Wojno:

Subject: Kauai Belt Road,
Hanalei to Kalihiwai
Reference: Your letter dated
March 23, 1976

We appreciate your concern for the beauty and charm of the Hanalei area. Your endorsement of continued maintenance and inspection of the various bridges is not possible. The present bridges are too deteriorated to be considered safe, or even salvable. Our bridge engineers report that there are no economical solutions whereby the existing structures can be repaired to a sound condition for highway use.

Furthermore, safety considerations would preclude the replacement of existing structures with new one-lane facilities, as this would be a substandard design.

We will however try to design our improvements to be harmonious with the sensitive environment of the area.

Sincerely,

R. Nigao

"Community Involvement in Art"
Ms. Geraldine A. Wojno
Proprietor

[Signature]

Director
Re Kalanianaole Road Project: Sirs, people's desires and facts have been presented and as my family owns over seven acres in Kailua area strongly urge denial of unnecessary major road-bridge reconstruction -- most specifically Kailua-Waialae area. If so done -- face not threat of probable major lawsuit from this family and others.

E L Yates

Col. 869 Honolulu 96813
C. Petitions

The State Department of Transportation has received six petitions prior to the circulation of this Draft EIS; two petitions in favor of the project (287 signatures), three petitions opposed to the project (18 signatures), and one petition requesting an improved drainage system in Hanalei Town as a part of the project (25 signatures). These petitions read as follows:

1st Petition

"we the tax payers and the citizens of Kauai want the State Transportation Department to build the highway from Kaliihiwai to Hanalei."
- Dated August 21, 1975, 241 signatures, 12 addresses (Kapaa, Koloa, Kekaha, Kalaheo, Lihue).

2nd Petition

"The undersigned visitors to Kauai request that the State Department of Transportation withdraw its plans for widening and realignment of Kuhio Highway and that if it is imperative that the bridges over Hanalei and Wainiha Rivers be made stronger, they either be repaired or replaced in the same style. The Hanalei-Haena area is one of the last remaining 'Hawaiian places' and we would like to see it remain that way.
- No date (received 4/8/76), 5 signatures from Canada, Alaska and California.

3rd Petition

"As residents of Kauai, we request that the State Department of Transportation withdraw its plans for widening and realignment of Kuhio Highway and that if it is imperative to make the bridges over Hanalei and Wainiha Rivers stronger, they either be repaired or replaced in the same style."
- No date (received 4/8/76), 7 signatures; 6 from Hanalei and 1 from Haena.

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4th Petition

"As owners of condominium apartments at Hanalei Colony Resort, we recognize that the Hanalei-Haena area is unique and that the leisurely pace and rustic charm of the old-fashioned bridges adds greatly to this uniqueness. We therefore request that the State Department of Transportation withdraw its plans for widening and realigning of Kuhio Highway and that if it is imperative to make the bridges over Hanalei and Wainiha Rivers stronger, they either be repaired or replaced in the same style."
- No date (received 4/8/76), 6 signatures from Hanalei Colony Resort at Haena.

5th Petition

"We, the undersigned residents of Kauai, in recognition of the urgent need for improved highway safety and a uniform, island-wide vehicular transportation system, hereby urge the State Department of Transportation to expedite its proposed program of highway widening and bridge improvements in the area between Kaliihiwai and Haena."
- No date (received 5/5/76), 46 signatures, no addresses.

6th Petition

"We, the undersign residents and voters from the town of Hanalei request that when the new highway is constructed in Hanalei that you will put in a drainage (covered) system at least 6 feet deep. This will alleviate the flooding of our yards and cesspools during our rain storms."
- Dated March 24, 1976 (received 5/11/76), 25 signatures, no addresses.
III. OTHER CONSULTATIONS

Appreciation is extended to the following agencies and persons who contributed information useful in the preparation of this EIS.

A. U.S. Governmental Agencies

1. Department of Agriculture
   a. Soil Conservation Service
      - Kauai Field Office Mr. Neal S. Fujiwara
      - Oahu Field Office Mr. Saku Nakamura
   b. Forest Service
      - Inst. Pacific Islands Forestry Mr. Ed Pettys

2. Department of the Interior
   a. Geological Survey
      - Water Resources Division Mr. John Yee
   b. Fish and Wildlife Service
      - Hanalei National Wildlife Refuge Mr. Fred Zeullemaker (Manager)
      - Fisheries Biologist Dr. John Maciolek

B. State of Hawaii Agencies

1. Department of Health
   a. Kauai District Office Mr. Ted Inouye
      Mr. R. Masuo
   b. Pollution Technical Review Mr. Harold Tobin

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c. Noise Pollution  Mr. Len Yoshioka

2. Department of Land and Natural Resources
   a. Fish and Game Division
      - Kauai District Office  Mr. Thomas Telfer
      - Oahu  Mr. Joe Dalrymple
              Mr. Richard Yoshida
   b. Water and Land Development Division

C. County of Kauai
   1. Department of Planning  Mr. Tom Shigemoto

D. Other Organizations
   1. American Lung Association  Mr. Jim Morrow
   2. The Kauai Historical Society  Mr. Robert J. Schleck
   3. The National Trust for Historic Preservation  Mr. John L. Frisbee III
APPENDIX B

AIR QUALITY REPORT
APPENDIX B  AIR QUALITY STUDY

A. INTRODUCTION

In this section are presented the various elements of the air quality study for the proposed improvements to the Kanai Belt Road from near Calhoun to I-295.

To determine the air quality impact of the proposed improvements, all available background air quality and meteorological data were examined and air quality levels were evaluated for the base year 1975 and projected for the years 1980 ("critical year") and 1984 (highway design year). The air quality effects were then related to the applicable Federal and State standards to determine whether the proposed highway improvements will meet these criteria.

Two alternative actions were considered:

1. Construction of the proposed improvements, consisting of widening and/or realigning the existing highway and replacement of the existing single-lane bridges with double-lane structures.

2. No build alternative, in which the existing road would remain in its present condition. A detailed discussion of the proposed improvements is included in Chapter 1. The microscale carbon monoxide effect associated with each alternative was determined, using the HIWAY Model developed by EPA 1 for motor vehicle pollutant emissions along highways. The specific methodology employed was that contained in the EPA publication "Guidelines for Air Quality Maintenance Planning and Analysis - Volume II" issued January, 1976. In addition to CO impacts, a regional pollutant burden analysis was performed for the motor vehicle - generated pollutants, hydrocarbons (HC) and nitrogen oxides (NOX).


The various objectives of the air transfer study are as follows:

1. Estimate background CO concentrations at the proposed site using the existing data base.

2. Compute motor vehicle traffic data to CO emissions and ambient air impact concentrations for the years 1975, 1980 and 1984 through highway diffusion modeling techniques.

3. Calculate SO2 and NOX emission burdens, expressed in tons/year, on a regional basis.

These objectives were designed to meet the requirements of the National Environmental Policy Act of 1969. The air pollution effects for each alternative were assessed in terms of the National Ambient Air Quality Standards (NAAQS).

B. ANALYSIS TECHNIQUES AND ASSUMPTIONS

The HIWAY model, which was adopted for estimating traffic-generated CO effects in a steady state Gaussian dispersion method. It is based on considering each lane of traffic for an at-grade highway as though it were a finite, uniformly emitting line source of pollution. Once all traffic line sources have been specified, the air pollution concentration representing hourly average lines at a demanded receptor location, can be determined by trapezoidal integration of the values of air pollution concentration produced by a number of point sources placed at equal intervals along the line source. This model is applicable for any highway directional orientation, any wind direction and any receptor location at ground level or at some specified elevation.

The HIWAY model was used to derive a series of curves 1 which made it possible to convert motor vehicle volumes to CO impact concentrations at various distances from the highway edge. This adaptation of the HIWAY model is based on the following conditions:

CO emission factors for the year 1975 were for a national average mix of gasoline motor vehicles by model year, comprising 88 percent automobiles and 12 percent light duty trucks. The small number of buses that currently enter the area do not travel beyond Princetown due to the weight restriction on the Shumate Bridge.

For the 88/12 percent vehicle mix, adjustment factors were applied to the 1975 CO emission factors to reflect the application of emission control programs for the years 1980 and 1985. The 1975 emission factor for the national model year distribution was calculated to be 61.6 g CO per vehicle-mile. The Shumate mix is almost the same as the national average. Therefore, no local adjustment was required. The projection factors to be applied to the 1975 CO levels for the years 1980 and 1985 were .2 and .5 respectively.

The National average emission factors assume an average route speed of approximately 20 mph. Although the speeds on the existing and proposed road are generally higher, the emission factors used were not adjusted for these increased speeds. Since this factor was not applied, the estimates represent the "worst case" conditions of heavy traffic congestion. This is a very conservative assumption since CO emissions tend to decrease with increased vehicle speed.

The transport and dispersion of pollutants are influenced by both wind speed and atmospheric stability. The methodology applied in this study assumes a stability Class D which represents adverse dispersion conditions. The application of this stability category and the selection of maximum traffic volume represent worst-case conditions which yield maximum estimated air quality impact concentrations.

A steady wind speed of 1 m/s (2.2 mi/hr.) is assumed in the dispersion model. Wind speed and direction data at Kalamazoo Point typically average from 13 to 20 mph, with speeds of less than 3 mph observed less than 4% of the time (Table 1-3). These values, although not directly applicable to the project area due to differences in topography, do indicate that the assumed wind speed of 2.2 mph used in the estimation of CO concentrations represents extreme "worst case" conditions. Under typical wind patterns, the resulting concentrations would be nearly a factor of 5 less than those computed.

1. Air Quality Variables

The four major factors affecting air quality in this study are highway location and configuration, vehicle emissions, background meteorology and ambient air quality.

The highway location influences the air pollution effects of the site located in proximity to the road. Sensitive receptors such as schools, public facilities or residences, where persons might be subjected to one-hour or eight-hour exposures to motor vehicle exhaust emissions, must be considered, and CO concentrations in ambient air computed at these locations. The proposed improvements consist of several possible realignments at various points along the highway, or involve changes in the existing road itself. Regardless of the specific alignment chosen, the changes in microclimate carbon monoxide levels at receptor will be primarily due to changes in the width of the existing highway and elimination of one-lane bridges. Both of these elements will allow increased traffic volume and speed. Sensitive receptors were chosen at the property line of private residences 15 feet from the edge of the existing highway. The distance from the road to receptor was conservatively assumed to be the same for the improved or realigned road as that measured for the existing road (Figure 7 of the EIS). Two receptor locations were chosen, one representing the effect of a new bridge (Shumate Bridge) and the other the effect of a widened highway (Kalamazoo Highway at the Shumate Plantation Road).

The typical highway configurations are shown in Figures 5 and 7 of the EIS. The HWAY model employed to determine CO concentrations assumes at-grade elevations for both roads.

2. Background Meteorology and Air Quality

The project area is located on the north shore of the island of Kauai. The wind is from the east quadrant at least 80% of the time, reflecting the prevailing trade wind circulation of tropical latitudes. Wind speeds on the north shore average from 13 to 20 mph as measured at the Kilaeua Lighthouse (approximately 7 miles from the midpoint of the study area). As mentioned previously, the CO dispersion calculations were based on a very conservative wind speed of about 3 mph.

There has been no air quality monitoring on the north shore of Kauai. Some monitoring has been done in Lihue, but it is not representative of conditions in the rural areas of the north shore. A large portion of the area is used for cattle-grazing and there are no pollution-generating industries in the area. As a result, a national background level of 1 ppm has been assumed.

To estimate the total CO levels caused by the 1975, 1980, and 1988 year traffic flows, it is necessary to estimate the background CO one-hour and eight-hour concentrations in ambient air for these three years. Although increasing (annual) vehicle miles traveled (VMT) values tend to increase the CO background levels, more stringent emission standards will cause them to be reduced.

Based on the influence of both the VMT and emission standard variations, a pollutant burden analysis for all three years has been prepared and is summarized in Table 6. These values indicate that the effect of increasingly stringent motor vehicle emission controls outweighs the projected VMT, thus yielding continuously decreasing emissions. Because the background CO concentration of 1 ppm is assumed to be the level naturally occurring in the free atmosphere, and the total vehicle emissions in 1980 and 1988 should not exceed 1975 levels, the background level of 1 ppm was also used for these years.

3. Dispersion Modeling

The step-wise methodology applied for the microscale air pollution assessment is as follows:

a. Traffic flows were obtained for the year 1975 and projected for 1980 and 1988 (Highway design year).

b. EPA-based motor vehicle pollution emission factors were determined for the years 1975, 1980, and 1988.

c. CO concentrations were estimated in ambient air at the project site, for both the build and no-build alternatives for 1975, 1980 and 1988. The year 1975, rather than 1985, was chosen as the baseline period due to the availability of traffic data.

d. Based on traffic flow data and roadway configurations, one-hour and eight-hour CO concentrations were estimated for both alternatives at two critical receptors in accordance with EPA Air Quality Maintenance Guidelines.

e. The CO concentrations determined in the previous tasks were added to the background concentrations to obtain total CO levels.

f. The total CO impact values were computed with the ambient air quality standards for this pollutant (See Table 4).

4. Example Calculations

Carbon Monoxide Concentration Calculations. At the present time, air monitoring is conducted on the north shore for carbon monoxide, as the background CO concentration of 1 ppm is assumed to be the level naturally occurring in the free atmosphere, and the total vehicle emissions in 1980 and 1988 should not exceed 1975 levels, the background level of 1 ppm was also used for these years.

Example Bridge Receptor Calculation. For the no-build alternative in 1988 the capacity of each lane of the adjoining road is 535 VPH/ln. See Figure 4 segment BDD in the EIS. Bridge capacity is taken to be 535/2 = 268.5 VPH. Design hour traffic demand is 344 VPH (172 VPH/bd), or 10% of AADT (determined from traffic counts). Demand capacity ratio V/C = 172/268 = 0.64.

From Figure 1, the impact at 10 meters of the upstream lane using the growing curve is 5.0 ppm. From Figure 2, assuming a cruise speed of 35 mph, the impact of the downstream lane at 10 meters is 1.0 ppm.

Lane dimension - four lanes. To determine the maximum CO concentration at highway edge, the approximate distance of the receptor from the near edge of lanes 1 and 2 is 5 meters and 8 meters respectively. Correction values for conversion of "10 meters" CO values to the actual distance of 5 and 8 meters from the roadway edge are 1.2 and 1.0, respectively (see Figure 3).

<table>
<thead>
<tr>
<th>Lane No.</th>
<th>V/C</th>
<th>Receptor Distance (feet)</th>
<th>CO level (ppm) at 10 meters</th>
<th>Distance Factor</th>
<th>CO level (ppm) at Receptor</th>
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<td>8</td>
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</table>

**Total 1 Hour Impact** = 6.2 ppm

This value must be adjusted for 1988 emissions and converted to mg/m³. Using the projection factor of .2 to convert 1976 emissions to 1988 gallon, and applying the conversion factor of 1.14 mg/m³ per 1 ppm for CO, then

Adjusted CO concentration = 6.2 x .2 x 1.14 = 1.4 mg/m³

Background CO concentration (1 ppm = 1 mg/m³)

Total peak one-hour CO concentration = 1.1 mg/m³

The one hour value must also be adjusted for 1980 emissions and converted to mg/m^3. Using the .5 projection factor and applying the conversion factor of 1.14 mg/m^3 per 1 ppm for CO, then:

Adjusted CO concentration
(+2.2 x 0.5 x 1.14 x 0) = < 0.0 mg/m^3

Background CO concentration
(1 ppm x 1.1 mg/m^3) = 1.1 mg/m^3

Total impact is less than
1.0 mg/m^3

Pollutant Burden Analysis. An analysis of regional pollutant burdens of CO, hydrocarbons (HC), and nitrogen oxides (NOx) was performed for the years 1975, 1980 and 1988. The average daily vehicle-miles traveled for each year are summarized in Table 5.

The calculation methods employed are as follows:

Pollutant emission factors

<table>
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<th>Year</th>
<th>CO</th>
<th>HC</th>
<th>NOx</th>
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<tr>
<td>1975</td>
<td>51.6 g/ml</td>
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<td>1988</td>
<td>11.3 g/ml</td>
<td>1.9 g/ml</td>
<td>2.6 g/ml</td>
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Simple Calculation

For 1980 the estimated daily VMT = 31,343

CO = 31,343 x 31.0 g/ml x 1 lb x 1 ton / 454 g = 1.1 tons 2000 lb.

HC = 31,343 x 5.4 g/ml x 1 lb x 1 ton / 454 g = .2 tons 2000 lb.

NOx = 31,343 x 3.6 g/ml x 1 lb x 1 ton / 454 g = .1 tons 2000 lb.

A summary of vehicle pollutant emission burdens is presented in Table 6. It should be noted that the 1975 and 1980 traffic projections (Figure 1 of the 1975 study) assume that the proposed highway improvements would not be implemented. Induced traffic since the existing highway is not a limiting factor in violation (a lack of commercial facilities in the limiting factor). However, this is not true for buses and other heavy vehicles which cannot cross the existing Tunstall Bridge. The traffic projections assume that by 1980 the Tunstall Bridge will not have less traffic ("build alternative"). If the weight restrictions of the Tunstall Bridge are not lifted ("no build alternative"), traffic beyond the bridge could be greater than predicted since trucks, which are the major contribution to traffic and which will increase with or without the proposed improvements, would travel in smaller vehicles. The traffic volume data used in this analysis is therefore an approximation in that it does not take into account these highly complex variables.

SUMMARY OF RESULTS

Based upon present design parameters and Federal motor vehicle emission standards (as amended March, 1975), no significant impact on air quality in anticipated. The elimination of the proposed improvements during the 20 year design period. For the "build alternative", the micro-scale CO impacts are similar to those of the improved highway until 1980. By 1988 however, the CO levels associated with the improved highway should be generally less than those predicted for the existing highway.

Under the proposed "no build" and Federal motor vehicle emission standards, the total CO emissions should decrease nearly 30% between 1975 and 1988. Hydrocarbon emissions will likely decrease by 37%, while nitrogen oxide values should increase by 30%. For carbon monoxide, the maximum emission rates during the 1975 through 1988 period are currently being observed. Peak hydrocarbon emissions will be observed in 1978 while emissions of nitrogen oxides will gradually increase throughout the 1978 to 1986 period. The proposed highway improvements should have little bearing on these factors.
Violations of existing State of Federal ambient air quality standards are not likely, even under the "worst case" meteorological and traffic flow conditions. Table 7 indicates that the estimated maximum CO concentrations will remain at least a factor of two less than the most stringent applicable standard for both the build and no-build alternatives.

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Calculated as .0117

Years of Record - 1964, 1965, 1971
Number of Observations - 1,095

Compiled from HDS data by:
THE AMERICAN LUNG ASSOCIATION OF HAWAII

B-11
### TABLE 2
KILUAU POINT, KAUAI
1400 HST WINDRUSH

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<td>.0000</td>
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<td>.0037</td>
<td>.0027</td>
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<td>.0055</td>
<td>.0073</td>
<td>.0018</td>
<td>.0027</td>
<td>.0018</td>
<td>.0201</td>
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<td>.0037</td>
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<td>.0064</td>
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<td>.0018</td>
<td>.0192</td>
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</tr>
</tbody>
</table>

Calcs = .0027

Years of Record - 1964, 1967, 1971
Number of Observations - 1,093

### TABLE 3
KILUAU POINT, KAUAI
2200 HST WINDRUSH

<table>
<thead>
<tr>
<th>Direction</th>
<th>0-3</th>
<th>4-7</th>
<th>8-12</th>
<th>13-18</th>
<th>19-24</th>
<th>&gt;24</th>
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<td>.0192</td>
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<td>.0037</td>
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<td>.0000</td>
<td>.0092</td>
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<td>SW</td>
<td>.0037</td>
<td>.0110</td>
<td>.0137</td>
<td>.0037</td>
<td>.0000</td>
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<td>.0037</td>
<td>.0018</td>
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<td>.0765</td>
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<td>.0840</td>
<td>.2402</td>
<td>.3169</td>
<td>.2055</td>
<td>.0724</td>
<td>.9915</td>
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</tbody>
</table>

Calcs = .0055

Years of Record - 1964, 1967, 1971
Number of Observations - 1,095

Compiled from US data by:

THE AMERICAN SAILING ASSOCIATION OF HAWAII

R-13

Compiled from US data by:

THE AMERICAN SAILING ASSOCIATION OF HAWAII

R-14
### TABLE 4
SUMMARY OF
STATE OF HAWAII AND FEDERAL
AMBIENT AIR QUALITY STANDARDS

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Federal Standards</th>
<th>State Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary $^b$</td>
<td>Secondary $^b$</td>
</tr>
<tr>
<td>1. Suspended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Geometric Mean</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>Annual Arithmetic Mean</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Maximum Average in Any 24 Hours</td>
<td>260</td>
<td>150</td>
</tr>
<tr>
<td>2. Sulfur Dioxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Arithmetic Mean</td>
<td>69</td>
<td>60</td>
</tr>
<tr>
<td>Maximum Average in Any 24 Hours</td>
<td>365</td>
<td>260</td>
</tr>
<tr>
<td>3. Carbon Monoxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(milligrams per cubic meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Average in Any 8 Hours</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>4. Hydrocarbons:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-methane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Average in Any 3 Hours</td>
<td>180</td>
<td>100</td>
</tr>
<tr>
<td>5. Photochemical Oxides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Average in Any 1 Hour</td>
<td>160</td>
<td>100</td>
</tr>
<tr>
<td>6. Nitrogen Dioxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Average in Any 24 Hours</td>
<td>160</td>
<td>70</td>
</tr>
</tbody>
</table>

$^a$ Designed to prevent against adverse effects on public health.
$^b$ Designed to prevent against adverse effects on public welfare including effects on comfort, visibility, vegetation, animals, aesthetic values, and soiling and deterioration of materials.

### TABLE 5
EXISTING AND PROJECTED
DAILY VEHICLE - MILES OF TRAVEL (VMT)

<table>
<thead>
<tr>
<th>Segment $^b$</th>
<th>Length</th>
<th>Vehicle-Miles/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1975</td>
<td>1980</td>
</tr>
<tr>
<td>12a</td>
<td>0.0</td>
<td>1,700</td>
</tr>
<tr>
<td>12b</td>
<td>0.0</td>
<td>1,241</td>
</tr>
<tr>
<td>12c</td>
<td>0.0</td>
<td>3,117</td>
</tr>
<tr>
<td>12d</td>
<td>1.3</td>
<td>2,318</td>
</tr>
<tr>
<td>13a</td>
<td>1.3</td>
<td>3,810</td>
</tr>
<tr>
<td>13b</td>
<td>0.4</td>
<td>3,650</td>
</tr>
<tr>
<td>14</td>
<td>0.5</td>
<td>666</td>
</tr>
<tr>
<td>15a $^c$</td>
<td>0.5</td>
<td>609</td>
</tr>
<tr>
<td>15b</td>
<td>0.3</td>
<td>348</td>
</tr>
<tr>
<td>15c</td>
<td>2.2</td>
<td>3,190</td>
</tr>
<tr>
<td>15d</td>
<td>0.4</td>
<td>519</td>
</tr>
<tr>
<td>16</td>
<td>3.2</td>
<td>3,472</td>
</tr>
<tr>
<td>Total</td>
<td>12.5</td>
<td>31,654</td>
</tr>
</tbody>
</table>

Notes:

a. Refer to Figure 4, Traffic Volume Data, of the RCE.

b. Representative receptor: Kahului Highway and Hanald Plantation Road.

c. Representative receptor: Waialu Bridge.

N-18
### TABLE 6

**POLLUTANT EMISSIONS BURDENS - TONS/DAY**

A. Burdens based on Projected Traffic (Figure 4 of the ES) *a*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>1.3</td>
<td>1.1</td>
<td>0.8</td>
</tr>
<tr>
<td>HC</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>NO_x</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

B. Burdens contributed by Additional Buses *b*

<table>
<thead>
<tr>
<th></th>
<th>1980 T/D</th>
<th>1988 T/D</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>0.005</td>
<td>0.015</td>
</tr>
<tr>
<td>HC</td>
<td>0.001</td>
<td>0.002</td>
</tr>
<tr>
<td>NO_x</td>
<td>0.005</td>
<td>0.012</td>
</tr>
</tbody>
</table>

**Notes:**

a. Includes buses and trucks; approximately 300 per day in 1980 and 500 per day in 1988 (12%).

b. Assume 100 more buses per day than projected for 1980 and 200 more buses per day than projected for 1988, to demonstrate small effect that buses have on polluted emissions.

### TABLE 7

**ESTIMATED MAXIMUM CO CONCENTRATIONS AT TWO CRITICAL RECEPTORS**

(Expressed as mg/m³)

<table>
<thead>
<tr>
<th>Project Alternative</th>
<th>1 Hr.</th>
<th>8 Hr.</th>
<th>1 Hr.</th>
<th>8 Hr.</th>
<th>1 Hr.</th>
<th>8 Hr.</th>
</tr>
</thead>
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<td>Build</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>roadside receptor</td>
<td>----</td>
<td>----</td>
<td>2.0</td>
<td>&lt; 1.9</td>
<td>3.3</td>
<td>&lt; 1.5</td>
</tr>
<tr>
<td>receptor at bridge</td>
<td>----</td>
<td>----</td>
<td>2.4</td>
<td>&lt; 1.9</td>
<td>&lt; 1.6</td>
<td>1.0</td>
</tr>
<tr>
<td>No-Build</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>roadside receptor</td>
<td>&lt; 3.6</td>
<td>&lt; 2.6</td>
<td>&lt; 2.4</td>
<td>&lt; 1.9</td>
<td>2.2</td>
<td>2.4</td>
</tr>
<tr>
<td>receptor at bridge</td>
<td>&lt; 3.6</td>
<td>&lt; 2.6</td>
<td>&lt; 2.4</td>
<td>&lt; 1.9</td>
<td>2.5</td>
<td>1.8</td>
</tr>
</tbody>
</table>
APPENDIX C  NOISE LEVEL CALCULATIONS

The following worksheets present the basic assumptions and calculation methodology used to predict existing and future traffic noise at four selected points in the project area. The source for this methodology is the Federal Highways Administration publication "Fundamentals and Abatement of Highway Traffic Noise" (3 volumes), June 1973.
TRAFFIC NOISE COMPUTATION TALLY
NOISE LEVEL, dBA

Project Kuhio Highway (Kalihiwai-Haena)  Engineer FLP

Segment Points 1, 2, 3 and 4  Date July 23, 1976

Autos/hr. as noted  Trucks/hr. as noted  Miles/hr. 35

Highway Width 22 feet  Observer 75'

Comments "Existing" $L_{10}$ dBA from 1975 traffic counts

<table>
<thead>
<tr>
<th>Item</th>
<th>1975 VPH</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975 VPH</td>
<td>183</td>
<td>13</td>
<td>305</td>
<td>21</td>
<td>122</td>
</tr>
<tr>
<td>Item</td>
<td>A</td>
<td>T</td>
<td>A</td>
<td>T</td>
<td>A</td>
</tr>
<tr>
<td>$I_{50}$ reference at 100 feet</td>
<td>49</td>
<td>28</td>
<td>52.5</td>
<td>31</td>
<td>46</td>
</tr>
<tr>
<td>Distance, width adjustment</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>$L_{10} - L_{50}$ adjustment</td>
<td>9.6</td>
<td>13</td>
<td>7.8</td>
<td>13</td>
<td>11.2</td>
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<tr>
<td>$L_{10}$ reference at observer</td>
<td>60.1</td>
<td>42.5</td>
<td>61.8</td>
<td>45.5</td>
<td>58.7</td>
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</table>

Segment adjustment

Barrier adjustment

- Gradient
- Road surface
- Foliage
- Rows of houses
- Acceleration at Bridge 7 7

Miscellaneous Adjustments

$L_{10}$ at observer, by veh. type 60.1 42.5 61.8 45.5 58.7 49.5 58.2 49.5

$L_{10}$ at observer, summed 60.2 61.9 59.2 58.7
TRAFFIC NOISE COMPUTATION TALLY
NOISE LEVEL, dBA

Project  Kuhio Highway (Kalihiwai-Haena)  Engineer  FLP
Segment  Points 1, 2, 3 and 4  Date  July 23, 1976
Autos/hr.  as noted  Trucks/hr.  as noted  Miles/hr.  35
Highway Width  22  feet.  Observer  75'
Comments  1998 L10 dBA without highway improvements

<table>
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<th>(1) 1998 VPH</th>
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<th>(3)</th>
<th>(4)</th>
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</thead>
<tbody>
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<td>T</td>
<td>A</td>
</tr>
<tr>
<td>L50 reference at 100 feet</td>
<td>58</td>
<td>40</td>
<td>58</td>
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<tr>
<td>Distance, width adjustment</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
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<tr>
<td>L10 - L50 adjustment</td>
<td>5.7</td>
<td>12.6</td>
<td>57</td>
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<tr>
<td>L10 reference at observer</td>
<td>65.2</td>
<td>54.1</td>
<td>65.2</td>
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</tbody>
</table>

Segment adjustment
Barrier adjustment

Miscellaneous Adjustments
- Gradient
- Road surface
- Foliage
- Rows of houses
- Acceleration at Bridge

L10 at observer, by veh. type

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L10 at observer, by veh. type</td>
<td>65.2</td>
<td>54.1</td>
<td>65.2</td>
</tr>
<tr>
<td>L10 at observer, summed</td>
<td>65.5</td>
<td>65.5</td>
<td>64.6</td>
</tr>
</tbody>
</table>
**TRAFFIC NOISE COMPUTATION TALLY**

**NOISE LEVEL, dBA**

**Project** Kuhio Highway (Kaliihiwai-Haena)  
**Engineer** FLP  
**Segment** Points 1 and 2  
**Date** July 23, 1976  
**Autos/hr.** as noted  
**Trucks/hr.** as noted  
**Miles/hr.** 45  
**Highway Width** 38 feet  
**Observer** 75'  
**Comments** 1998 L10 dBA with improvements as noted

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>T</th>
<th>A</th>
<th>T</th>
<th>A</th>
<th>T</th>
<th>A</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998 VPH</td>
<td>791</td>
<td>55</td>
<td>727</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I50 reference at 100 feet</td>
<td>61</td>
<td>41</td>
<td>60</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance, width adjustment</td>
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<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L10 - L50 adjustment</td>
<td>5.8</td>
<td>1.29</td>
<td>6.1</td>
<td>12.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L10 reference at observer</td>
<td>68.3</td>
<td>55.3</td>
<td>67.6</td>
<td>54.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Segment adjustment**

**Barrier adjustment**

<table>
<thead>
<tr>
<th>Miscellaneous Adjustments</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gradient</td>
<td></td>
</tr>
<tr>
<td>Road surface</td>
<td></td>
</tr>
<tr>
<td>Foliage</td>
<td></td>
</tr>
<tr>
<td>Rows of houses</td>
<td></td>
</tr>
<tr>
<td>Acceleration at Bridge</td>
<td></td>
</tr>
</tbody>
</table>

| L10 at observer, by veh. type              | 66.3 | 55.3 | 67.6 | 54.4 |
| L10 at observer, summed                    | 68.5 | 67.8 |  |

C-4  

DOT/FHWA
ARCHAEOLOGICAL RESEARCH CENTER HAWAII, INC.

P. O. Box 285; Lawai, Kauai, Hawaii 96765; Ph. 332-8521

11 January
1980

Mr. Fred Proby
Chief Environmental Scientist
VTN Pacific
1164 Bishop Street, Suite 906
Honolulu, Hawaii 96813

SUBJECT: LETTER REPORT: Archaeological
Reconnaissance of Portions of the Kauai
Belt Road from Kaliihiwai to Princeville,
Haleiei'a, Kauai Island. ARCH 14-59.

Dear Mr. Proby:

In early January of 1980 personnel of Archaeological Research Center Hawaii, Inc., conducted an archaeological reconnaissance of three separate parcels adjacent to the Kauai Belt Road between Kaliihiwai and Princeville (see enclosed map). These three parcels are to be used for the proposed widening of the road and run parallel to the present road. They are related to survey stations along the road and were described in the scope of work for this project as follows:

Station 82 - 94 Four acres from the north edge of existing highway to approximately 30 feet beyond the proposed right-of-way line.

Station 109 - 113 One acre in Anini Stream Gulch, approximately 50 feet beyond toe of existing fill, on both sides of highway.

Station 130 - 164 Four acres, 50 to 90 feet northerly from the edge of existing highway.

The purpose of the reconnaissance of these three areas was as follows:

1. To determine the presence, location and nature of archaeological sites or cultural layers in the study area.

2. If archaeological sites were located, to evaluate the significance of these sites to determine what further steps are
necessary to mitigate their impact by the proposed highway modification.

Each of these parcels was carefully examined on foot and documented with photographs. The present condition of each of the parcels is described as follows:

Station 82 - 94  This four acre parcel is in pasture land with vegetation consisting of low grass with occasional Lantana bushes and Eucalyptus trees. Modern modification is evident including bulldozing for the construction of modern drainage ditches.

Station 109 - 113  This one acre parcel is within Anini Stream Gulch with steep topography and heavy vegetation of Guava, Pandanas and Guava plum. There is evidence of previous bulldozing.

Station 130 - 164  This is a four acre parcel presently in a pasture which has been heavily bulldozed and filled in modern times. This is evidenced by tracks and partially buried telephone pole sections in low mounds.

In summary, all three of the parcels examined have received extensive modern modification and contain no archaeological or historic features or cultural layers of any kind. On the basis of this, archaeological clearance with no further investigation is recommended.

If there are any questions concerning the above or if we can be of further assistance to you, please do not hesitate to contact me.

Nā Kau a Kau,

ARCHAEOLOGICAL RESEARCH CENTER HAWAII, INC.

Hallett H. Hammatt, PhD.
Vice President

Enclosure
February 15, 1980

The Honorable Ryokichi Higashionna
Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Higashionna:

Subject: Kauai Belt Road - Princeville to Kalihiwai

Based on the data from Archaeological Research Center Hawaii, Inc. reconnaissance of your proposed area of impact, it is our opinion that the proposed undertaking will have no effect upon any known historic or archaeological site on or likely to be eligible for inclusion on the Hawaii Register and/or National Register of Historic Places.

In the event that any unanticipated sites or remains such as shell, bone or charcoal deposits; human burials; rock or coral alignments, pavings, or walls are encountered during construction, please inform the applicant to stop work and contact this office immediately.

Sincerely yours,

[Signature]
Susumu Ono
State Historic Preservation Officer
January 15, 1980

Mr. Neil Dillabough  
Director, Office of Environment and Design  
Federal Highway Administration  
Two Embarcadero Center, Suite 530  
San Francisco, California 94111

Dear Mr. Dillabough:

This is to acknowledge your letter of December 19, 1979, to Mr. Robert R. Garvey, Jr., Executive Director of the Council, concerning the decisions made regarding the Kauai Belt Road in Hawaii. We appreciate learning of the Hawaii Highways Division's decision to undertake the required maintenance repairs of the Hanalei and Waipa Bridges and to delete the proposed improvements to the Kauai Belt Road between Princeville and Haena. As these actions appear to eliminate the involvement of the Federal Highway Administration in any undertaking affecting properties included in or eligible for the National Register of Historic Places we are closing our case file on FHWA's request for Council comment on the Kauai Belt Road, Kalihiwai to Haena Section (FAP Route 56, Kauai, Hawaii).

The Council looks forward to the continued assistance and cooperation of FHWA should this undertaking be reconsidered in the future.

Sincerely,

[Signature]

Louis S. Wall  
Chief, Western Division  
of Project Review
APPENDIX E. PROJECT APPROVALS AND CLEARANCES REQUIRED

The proposed highway improvements require the following clearances and permits:

1. Clearance from the State Department of Land and Natural Resources. (Obtained)

2. Clearance from the State Historic Preservation Officer that the project would have no adverse impacts on features of historical or archaeological significance. (Pending review of archaeological survey.)

3. Clearance from the Federal Aviation Administration that the Princeville landing strip would not be affected. (Obtained)

4. Clearance from the U.S. Fish and Wildlife Service that the project would have no adverse effect on the Hanalei National Wildlife Refuge ("Section 4(f) land"). (Formal Section 7 clearance has been completed.)

5. Wetlands finding in accordance with Executive Order 11990. (Not required for the Kalihihawai to Princeville Section, since no wetlands are encountered. May be required for the Princeville to Haena Section, in which case a finding will be included in a Supplemental Final EIS.)

6. Permit from the U.S. Army Corps of Engineers for the Anini Stream crossing. (Pending completion of construction plans.)

7. Permits from the U.S. Army Corps of Engineers for the replacement of the Hanalei, Waipio, Waipaoa, Waikoko and Wainiha Bridges, since it would involve the placement of structures or fill in stream crossings subject to tides. (Pending determination of a recommended alternative.)
8. Bridge permits from the U.S. Coast Guard for the replacement of the Hanalei Bridge and (perhaps) the Wainiha Bridges, since they are over navigable tidewaters. (Pending determination of a recommended alternative.)

9. Special Management Area permit from the County of Kauai Planning Department for the Waikoko Bridge (the Waioli and Waipa Bridges are not within the SMA). (Pending selection of a recommended alternative.)

10. Certification of federal consistency with the State Coastal Zone Management Act, by the State Department of Planning and Economic Development. (Pending approval of a Special Management Area permit for the Privceville to Haena section.)

11. The Statewide Review Agency Clearance, and intergovernmental agency review clearinghouse to insure coordination of Federally funded projects. (Satisfied through circulation of the Draft EIS through the State Department of Planning and Economic Development.)
Honorabla E. Alvey Wright  
Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Sir:

SUBJECT: Kauai Belt Road, Hanalei to Kaliihiwai  
Project No. DP-056-1(17)  
Draft Environmental Impact Statement

Thank you for allowing us to comment on the subject draft impact statement.

We see no major adverse effects on wildlife values and no perennial streams will be affected by the two alternate routes being proposed. Erosion and prevention of pollution should be adequately controlled through Section 639"(Temporary Project Water Pollution Control (Soil Erosion)" - page 57.

The statements regarding historic preservation concerns -- that FHWA will conduct an archaeological survey once a route is chosen, are satisfactory to us.

Very truly yours,

CHRISTOPHER COBB  
Chairman of the Board
Rear Admiral E. Alvey Wright, USN (Ret)
Director, Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright:

Thank you for the State of Hawaii letter HWY-Pa 2.27558 dated March 10, 1976, regarding the Environmental Impact Statement Preparation Notice for the Kauai Belt Road, Haena to Kalihiwai, island of Kauai.

The proposed project does not appear to have an impact on aeronautical interest in the area and we, therefore, have no comments.

Sincerely,

[Signature]

JOSEPH B. MESTOR
Acting Director, APC-1
Mr. Ralph T. Segawa  
Division Administrator  
Federal Highway Administration  
Region Nine  
677 Ala Moana Blvd., Suite 613  
Honolulu, Hawaii 96813

Dear Mr. Segawa:

This responds to your letter 915EC dated March 16, 1977, transmitting a copy of the draft Environmental Impact Statement for the proposed improvements to Kauai Belt Road, Kaliihiwai to Haena Section, on the island of Kauai, Hawaii.

The proposed improvement project will have no impact on existing or planned FAA facilities in that area. However, we wish to point out that Princeville Airport, a private facility, is located within the project limits. So that there will be no further derogation of the existing airway/highway clearance, the planned widening along this section of the highway should be made on the side further away from the airport.

Thank you for the opportunity to comment on this document.

Sincerely,

K. Hayama  
Supervisory Airports Engineer, APC-620
November 13, 1979

In reply refer to:
AFA-SE - 1-2-79-F-95

Mr. Ralph T. Segawa
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
300 Ala Moana Blvd., Room 4119
Honolulu, Hawaii 96813

Dear Mr. Segawa:

This is in reply to your letter of June 26, 1979 requesting the consultation pursuant to Section 7 of the Endangered Species Act of 1973, as amended in 1978 (PL 95-632). It concerns the proposed improvements to the Kauai Belt Road, Kalihiwai to Haena Section, Federal Aid Primary Route 51, Island of Kauai, Hawaii.

At issue is the possible effects this proposed highway project may have on the Hawaiian stilt (Himantopus h. knudseni), Hawaiian coot (Fulica americana alai), Hawaiian gallinule (Gallinula chloropus sandvicensis), and Hawaiian duck (Anas wyvilliana).

The project information provided with your request was used in this consultation and our opinion is based on the project details and design as presented. A field inspection of the project area was conducted on August 15, 1979 to gather additional data for the consultation. We also contacted Federal and State personnel familiar with management of waterbirds and their habitat, and freshwater fishery biologists familiar with the aquatic fauna of streams in the project area.

Portions of the highway improvement construction will occur within known habitat of these waterbirds. The areas of concern include those sites where wetlands or streams will be bridged. Of particular concern are the Hanalei and Wainiha bridges. These occur adjacent to or in proximity to areas that have been identified by the Hawaiian Waterbird Recovery Team as essential habitat.

Historically, most of the Hawaiian Islands supported large natural marshes and ponds. In addition, the Hawaiians had established an extensive system of coastal fish ponds and engaged in large scale wetland taro farming. All these areas provided habitat for these four species of waterbirds. However, with conversion to crops other
than taro, loss of wetland habitat to urbanization and introduction of exotic species, the populations of these waterbirds has steadily declined. In recognition of the threat placed upon the species, they were listed as endangered by the Department of Interior in 1967 (Hawaiian gallinule and duck) and in 1970 (Hawaiian stilt and coot).

Currently, Hawaiian stilts are distributed on the Islands of Niihau, Kauai, Oahu, Maui, Molokai and Hawaii. The 1977 statewide population was estimated at 1,500 birds. This species is associated with shallow freshwater, brackish water, or saltwater habitats.

The Hawaiian coot is presently distributed on the same islands as the stilt. The coot population was estimated to 2,500 individuals in 1977. The coot prefers thickly vegetated, fresh or brackish water marshes associated with open water.

Hawaiian gallinules, at present, are known to exist only on the islands of Kauai and Oahu, although one was seen on Molokai in 1971. The total population is estimated to be 750 birds; 500 on Kauai and 250 on Oahu. Like the coot, the gallinule prefers thickly vegetated freshwater marshes interspersed with ponds, taro patches, and lagoons, and reedy margins of water courses, reservoirs, and wet pastures.

The Hawaiian duck is presently a resident on Kauai and Hawaii and like the other waterbird is dependent upon wetland habitat. It inhabits coastal lagoons, marshes and mountain streams. Population estimates in 1967 place their numbers at 3,000.

Construction at the Hanalei and Wainiha bridge sites will involve habitat utilized by the gallinule and duck for foraging and loafing. Construction work on the stream banks and within the stream bed will result in silting on site and downstream. Some streamside cover will be removed prior to construction or covered with silting following construction. Chemical pollutants from construction materials and equipment may also have adverse affects on the aquatic ecosystem downstream. There will be increased disturbance attributable to construction activities and improved vehicular access into coots habitat (particularly in the Wainiha estuary) and stilt habitat at the taro fields in the Hanalei Unit of the Hawaiian Islands National Wildlife Refuge adjacent to the bridge site and highway. However, observations by a number of ornithologists indicate that these endangered waterbirds have considerable tolerance for limited human activities, such as those resulting from this highway project.

E-7
November 13, 1979
Page three

It is, therefore, the opinion of the Fish and Wildlife Service that construction of the proposed improvements to the Kauai Belt Road, Kalihiwai to Haena Section, as discussed above, is not likely to jeopardize the continued existence of the listed species. Although there will be some adverse impacts to these species and their habitat, they are believed to be transitory in nature and of such scope as not to constitute jeopardy to these species.

In order to help the Federal Highway Administration fulfill the mandates of Section 7(a) which require all Federal agencies to utilize their authorities for the conservation of endangered species, we recommend your agency incorporate the following recommendations into the project:

1. Construction of the Hanalei Bridges should be scheduled to avoid the peak periods of waterbird use of the refuge from July through January.

2. Removal of streamside vegetation should be kept to the minimum required for specific structures to preserve this foraging and loafing habitat.

3. All construction work should be accomplished in such manner as to minimize sedimentation and pollution of aquatic habitats to prevent adverse affect on aquatic fauna and the birds that utilize these areas.

This concludes our formal consultation on construction of the proposed improvements to the Kauai Belt Road, Kalihiwai to Haena Section, Island of Kauai, Hawaii. If project modification beyond those discussed above occurs, or if new information on listed species becomes available, reinitiation of consultation may be appropriate. We would appreciate notification of your intent in light of this opinion.

Sincerely yours,

[Signature]
William M. Meyer
Acting Regional Director
# APPENDIX F

## COMMENTS AND RESPONSES TO THE DRAFT EIS

### I. DRAFT EIS MAILING LIST (Circulated 3/16/77)

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<td>Advisory Council on Historic Preservation</td>
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<td>Attn: Akira Fujita Lihue, Kauai 96766</td>
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<td>Attn: Walter Bryant Lihue, Kauai 96766</td>
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<td>Hawaiian Telephone Co.</td>
<td>4444 Rice Street Lihue, Kauai 96766</td>
<td>1</td>
</tr>
<tr>
<td>Transportation Commission</td>
<td></td>
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</tr>
<tr>
<td>Noboru Yamane</td>
<td>RR #1 Kapaa, Kauai 96746</td>
<td>1</td>
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<tr>
<td>Other Organizations</td>
<td></td>
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<tr>
<td>American Lung Association Director, Environmental Health</td>
<td>Attn: James W. Morrow 245 N. Kukui Street Honolulu 96817</td>
<td>1</td>
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<tr>
<td>Hanalei Community Association President</td>
<td>Attn: Robert Semitekol Hanalei, Kauai 96714</td>
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F-6
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<tr>
<th>Organization</th>
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</table>
| Kauai Community Research Group | Attn: Jennie T. Yukimura  
RR #1  
P.O. Box 28-B  
Lihue, Kauai 96766 | 1 |
| Kauai Historical Society President | Attn: Robert J. Schleck  
P.O. Box 248  
Lihue, Kauai 96766 | 1 |
| The Kauai Outdoor Circle | P.O. Box 921  
Lihue, Kauai 96766 | 1 |
| Life of the Land and Sierra Club | Attn: Helen C. Hopkins  
P.O. Box 266  
Hanalei, Kauai 96714 | 1 |
| National Trust for Historic Preservation, Regional Director | Attn: John L. Frisbee, III  
802 Montgomery St.  
San Francisco, CA 94133 | 1 |
| Princeville Corporation | Hanalei, Kauai 96714 | 1 |
| Shoreline Protection Alliance | Attn: Douglas Meller  
P.O. Box 4247  
Honolulu 96813 | 1 |
| **Private Individuals** | | |
| William T. Le Gro | P.O. Box 291  
Anahola, Kauai 96703 | 1 |
| John Wehrheim | P.O. Box 111  
Kilauea, Kauai 96754 | 1 |
| Geraldine A. Wojno | P.O. Box 205  
Hanalei, Kauai 96714 | 1 |
## II. COMMENTS RECEIVED

<table>
<thead>
<tr>
<th>FEDERAL AGENCIES</th>
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<tr>
<td>Advisory Council on Historic Preservation</td>
<td>4/28/77</td>
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<td>Agricultural Stabilization and Conservation Service</td>
<td>4/4/77</td>
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<td>Soil Conservation Service</td>
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<td>Department of the Army</td>
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<td>Department of Housing and Urban Development</td>
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<td>Department of the Interior</td>
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<td>Federal Aviation Administration</td>
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<td>U.S. Senate, Hon. Spark Matsunaga</td>
<td>3/31/77</td>
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<th>STATE OF HAWAII AGENCIES</th>
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<tr>
<td>Department of Accounting and General Services</td>
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<tr>
<td>Division of Fish and Game</td>
<td>4/25/77</td>
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<td>Historic Preservation Officer</td>
<td>5/6/77</td>
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<td>Office of Environmental Quality Control</td>
<td>5/11/77</td>
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<td>College of Tropical Agriculture</td>
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<td>Environmental Center</td>
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<tr>
<td>Planning Department</td>
<td>4/21 &amp; 4/22/77</td>
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<tr>
<td>Department of Public Works</td>
<td>4/6 &amp; 4/20/77</td>
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<td>Department of Water</td>
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ORGANIZATIONS

American Lung Association  Comment Date  5/4/77
Hawaii Building & Construction Trades  Council  4/29/77
Hawaiian Telephone Company  4/20/77
Kauai Historical Society  5/25/77
Kauai Outdoor Circle  5/10/77
Kauai Society of Professional Engineers,  Architects & Land Surveyors  5/10/77
National Trust for Historic Preservation  5/9/77
North Shore Belt Road Citizens Advisory Committee  5/1-6/30/77
Princeville at Hanalei  5/4/77
Sierra Club, Life of the Land, and Helen Hopkins  5/28/77

PRIVATE INDIVIDUALS

Phil and Jo Barber  4/28/77
Charles Forward Jr.  4/14/77
Dr. & Mrs. H.P. Groesbeck  5/4/77
Roger and Genevieve Luther  4/24/77
William Manewal  5/8/77
Craig Nakamura, and Others  5/10/77
Bryson Nishimoto  4/21/77
Marilyn Pollock  4/15/77
G.L. and Jeannette Routon  5/3/77
M. Skedd  5/9/77
Harry and Kathleen Steward  4/18/77
Ernie Wenck  4/19/77
Jennie T. Yukimura  5/16/77

NOTE:

For this Final EIS, the evaluation of comments covers only the Kalihiwai to Princeville section. Only maintenance repairs of the one-lane bridges will be undertaken at present. When a decision is made regarding long-range plans for the Princeville to Haena section (following resolution of the historicity issues), a supplement to this Final EIS will be prepared, which will include evaluations of comments relevant to that highway section.
EVALUATION

ADVISORY COUNCIL ON HISTORIC PRESERVATION (4/26/77)

The results of the Section 106 review procedure will be reported in a supplement to this Final EIS covering the Princeville to Hana section.

April 26, 1977

Mr. Ralph T. Segura
Director, Administrative, Region 9
Federal Highway Administration
400 Main Street, Suite 623
Honolulu, Hawaii 96813

Dear Mr. Segura:

This is in response to your request of March 16, 1977, for comments on the draft environmental statement (EIS) for the proposed improvements to Federal-Aid Primary Route 66, the Hana Highway (Hana Belt Road), from near Kipahulu to the terminus of the road near Hana (Gee Ranch), in the Homeland District of the Island of Maui, Hawaii. The Advisory Council on Historic Preservation has reviewed the EIS and notes that the undertaking will affect the Hanauli bridge, as well as other bridges in the vicinity which may be eligible for inclusion in the National Register of Historic Places.

Pursuant to Section 106 of the National Historic Preservation Act of 1966, (16 U.S.C. 470, as amended, 80 Stat. 1194), Federal agencies must, prior to the approval of the expenditure of any Federal funds or an undertaking or prior to the granting of any license, permit or other approval for an undertaking, afford the Council an opportunity to comment on the effect of the undertaking upon properties eligible or as included in the National Register of Historic Places.

Until the requirements of the "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800), which detail the steps for compliance with Section 106, are met, the Council considers the EIS to be incomplete in its treatment of historical, archaeological, architectural and cultural resources. To remedy this deficiency, the Council will provide additional comments on the undertaking's effect on the previously mentioned properties through the "Procedures." Please contact Michael H. Robinson of the Council staff to assist you in completing this process as expeditiously as possible.

Sincerely yours,

[Signature]

Assistant Director, Office of Review and Compliance

April 4, 1977

U.S. Department of Transportation
Federal Highway Administration
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Gentlemen:

Ewaikole Road, Kapolei to Hanauma Section,
PWA Route 56, Draft Environmental Impact Statement

This will acknowledge receipt of your letter of March 16, 1977, together with draft EIS on above subject project. We have no comments to offer on said project and do not desire a copy of the final environmental impact statement.

Very truly yours,

C. F. Chau
State Executive Director
Hawaii State ADSS Office

May 9, 1977

Mr. Ralph T. Segura
Division Administrator
Federal Highway Administration, Region IX
U. S. Department of Transportation
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Dear Mr. Segura:

Subject: Ewaikole Road, Kapolei to Hanauma Section, PWA Route 56
U.S. Department of Transportation, Federal Highway Administration

We have reviewed the subject draft EIS and offer the following comments for your consideration during further evaluation of the potential impact of the project on the environment:

The section is made of prime agricultural land lost to highway construction. For example, percent highway and alternatives include Kualapa soils in terms of potential erosion, not loss of prime agricultural land. Kualapa silty clay, 0 to 8 percent slopes, and Kualapu silty clay, 0 to 8 percent slopes, are considered prime agricultural lands. Also, the taro and rice fields in the Hauula area are considered to be unique lands.

The number of acres of these soils and the type and rice fields that will be affected by the highway should be mentioned. Any mitigation measures to lessen the impact of taking these lands out of production should be stated.

Thank you for the opportunity to review this document.

Sincerely,

Jack F. Kauai
State Conservationist
On page II-26 of the Draft EIS the amount of grazing land that would be affected by the different alternatives was identified. It was an oversight that this acreage was not identified as prime agricultural land. The recommended widening alternate from Kuala Bual to Princesville will take an estimated 3.3 acres of grazing land for new right-of-way (see Page II-26 of this Final EIS), of which approximately half is classified as Prime. This widening will not affect any far or rice fields.

Mr. Ralph Y. Stigler, Division Administrator
U.S. Department of Transportation
Federal Highway Administration, Region Nine
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Dear Mr. Stigler:

We have reviewed the Draft Environmental Impact Statement for Ewa Belt Road, Kalaeloa to Ewa South, as requested in your letter 955-3, dated 14 March 1977. The Corps commented on the Environmental Impact Statement Preparers Notice for this proposed project in a letter to Mr. L. Alwyn Wright, dated 12 April 1976. We feel that our comments were adequately addressed in this document and have no further comments to offer at this time.

We appreciate the opportunity for additional input.

Sincerely yours,

[Signature]

Chief, Engineering Division
By 11/1/77

Ralph T. Segawa
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Region I
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Dear Sir:

The Draft Environmental Impact Statement for the Hana Belt Road, Kalalau to Haena Section, FAP Route 56, has been reviewed in accordance with the interagency procedures of the Department of Health, Education, and Welfare as required by Section 102(2)(c) of the National Environmental Policy Act, PL 91-190.

The major concern of this Department are related to possible impacts upon the health of the population, services to that population and changes to the characteristics of the population which would require a different level or extent of services. At this time we have no comments to offer.

We appreciate the opportunity to review this statement. We would like a copy of the final EIS when it is developed.

Sincerely,

James W. Frenkenhauer
Regional Environmental Officer

cc: CD

Mr. Ralph T. Segawa, Division Administrator
U.S. Department of Transportation
Federal Highway Administration
677 Ala Moana Boulevard, Suite 613
Honolulu, Hawaii 96813

Dear Mr. Segawa:

Subject: Hana Belt Road Kalalau to Haena Section
FAP Route 56, Draft Environmental Impact Statement

The proposed realignment and improvements covered in the Draft EIS for the 17.5 mile section on FAP Route 56 on Hana was reviewed by this office.

The proposed realignment and alternatives considered in the Draft EIS do not impact on NHD projects or NHD areas of concern.

We look forward to receiving the Final Draft of the EIS.

Sincerely,

Alvin K. H. Pang
Director

April 1, 1977

9 FF (Johnson/546-5554)
Dear Mr. Segawa:

We have reviewed the Draft Environmental Statement for Kauai Belt Road (FED-52) Hanalei to Kauaiikaua, Kauai County, Hawaii and have the following comments:

GENERAL COMMENTS

The Department of the Interior does not endorse construction of a new Hanalei Bridge by proposed Alternative Design #4. Although no Hanalei National Wildlife Refuge property would be needed for that alternative, and the historic Hanalei Bridge would not be affected, implementation of Alternative Design #4 would result in direct and indirect loss of about five acres of endangered waterbird habitat.

The increased noise and human activity resulting from the construction of Alternative Design #4 would probably reduce the value of this habitat for use by endangered waterbirds. Any of the various other bridge design alternatives discussed would not cause significantly adverse impacts to the 0.965 acre parcel of Refuge land that would be affected, assuming that erosion control precautions discussed in the draft statement would be utilized.

SECTION 4(f) COMMENTS

Hanalei National Wildlife Refuge

Although Alternative Design #4 does not require the direct taking of land from the Hanalei National Wildlife Refuge, it does result in the loss of about five acres of endangered waterbird habitat. For this reason, we believe that the selection of Design #4 would be an improper choice. The Department of the Interior would therefore concur that there are no feasible and prudent alternatives to the selection of Designs 1B, 1C, 2, 3B, or 3C, as far as the taking of land from the Refuge is concerned.

We note that the Kualii Historical Society has recommended that the Hanalei, Puuoi, Wa'a Bridge, and Waipoua Bridges, and the Haena Tourist and the Lihue Stream Crossing be nominated to the National Register of Historic Places. Regardless of the final outcome of the nomination procedure, it would appear that all of these structures are of local historical significance and thus subject to Section 4(f) consideration. We therefore urge that a Section 4(f) statement be prepared for the project's involvement with these historic resources.

Based on information in the draft statement concerning the need for repair or replacement of the above bridges and stream crossings, plus the desirability of maintaining a scenic highway approximately along the existing right-of-way, the Department of the Interior would probably concur that there were no feasible and prudent alternatives to some use of these historic resources. We recommend, however, that innovative design techniques be utilized to maintain the historic and scenic character of the existing roadway, and that other mitigation measures be developed, as appropriate, in consultation with the Kualii Historical Society and the State Historic Preservation Officer.

Concerning the Hanalei Bridge, the Department of the Interior concurs that there are no feasible and prudent alternatives to Designs 1B, 1C, 2, 3C, or 3C. We oppose the selection of Design #5 because of its impact on endangered waterbird habitat. Mitigation measures should include reallocation to professionally acceptable standards, as well as any other appropriate measures that may be decided upon in consultation with State and local officials. Based on information presented in the draft statement, it appears that Design 1C or 2C would best preserve the existing evidence of the Hanalei crossing.

Archaeological Sites

Since an archaeological survey of the project area has not yet been undertaken, the applicability of Section 4(f) to archeological resources cannot be determined at this time. We would point out that, should significant
archeological sites be discovered later in the planning process, additional Section 4(f) statements may be required. We urge that adequate surveys be accomplished as soon as possible before the final statement is completed so that archeological information will be available for the selection of alternatives and for adequate compliance with the requirements of Section 4(f).

ENDANGERED SPECIES COMMENTS

The Department of the Interior is concerned with the possible adverse effects of the proposed action on endangered species. Section 7 of the Endangered Species Act of 1973 requires all Federal agencies to ensure that activities authorized, funded or carried out by them do not jeopardize the continued existence of the species or their critical habitat.

As noted above, the Department of the Interior opposes the selection of Alternative Design #4 because of its impacts on about five acres of endangered wetland habitat. Even if Design #4 is selected the proposed project may have some adverse impact on endangered species in the area. Further evaluation of this possibility is needed in the final statement.

Unless the Federal High Administration (FHWA) is certain that the proposed project, including any proposed mitigation measures, will not jeopardize endangered species or their critical habitat, then we strongly recommend that FHWA enter into formal Section 7 consultation with the U.S. Fish and Wildlife Service. FHWA should initiate such consultation by submission of a written request to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 3737, Portland, Oregon, 97208. The proposed procedures for Section 7 compliance have recently been published: Proposed Provisions for Interagency Cooperation, 42 FR 40894-40873, January 26, 1977.

In any event, the responsibility for determining project impacts on endangered and threatened species, and complying with Section 7 of the Endangered Species Act remain with the sponsoring Federal Agency. Specific actions taken in regard to Section 7 should be discussed in the final environmental statement.

ENVIRONMENTAL STATEMENT COMMENTS

Page 11-19c Mitigation Measures. The document proposes replacement for loss of endangered species habitat if Iwalea Bridge Design Alternative #4 is selected and constructed. However, such replacement should not be for an equivalent amount of land area as implied, but to provide habitat and wildlife use values equal to those destroyed. The text should recognize that this procedure does not in actuality replace habitat that is irrevocably lost with project development.

In Figures 2A, 6, and 16A, a portion of the Iwalea National Wildlife Refuge has not been delineated but should be in the final statement. This area is located north of the highway to the center of Iwalea River below the existing bridge as shown in Figure 31.

As noted on page 11-37, "Impacts to potential archeological resources are as yet undetermined." This situation appears to be due to the stated policy (11-36, 37) that an archeological survey will be conducted for the selected alternative only.

This means that cultural resources of an archeological nature will not be a part of the planning process that selects alternatives, and this is contrary to the intent of 36 CFR 800.4(a) that "As early as possible and in all cases prior to agency decision concerning an undertaking..." If found resource is "marginal," excavation would occur; but if it is of more importance, routes would be re-evaluated to select an alternative that would not affect the resource.

All cultural resources along each alternative route should be identified and individually weighted against the national register criteria before final decision as to the route is made.

The "Summary of Impacts" table on page 14 is inaccurate in that assessments of impacts on historical and archeological resources cannot be made without first determining the nature and extent of such resources within the project area. Also, it is unclear what "problematic impact," as used in the table, means when referring to archeological and historical resources.

In sum, the lack of information regarding the presence or absence of cultural resources makes it impossible to evaluate the impacts of the proposed project and its alternatives upon cultural resources, and, as such, the statement is inadequate.

The area from Iwalea Bridge westward to the end of the project is described as having unsuitable soil and steep unstable slopes (p. 11-1, par. 2). In view of these adverse conditions and the fact that proposed bridge improvements would result in the use of heavy vehicles over roads that have not carried such traffic in the past, the physical impact of
Mr. Ralph T. Segawa, Honolulu, Hawaii

We appreciate the opportunity to review and comment on this draft environmental statement.

Sincerely yours,

[Signature]

Acting Deputy Building Secretary of the Interior

Mr. Ralph T. Segawa Division Administrator Federal Highway Administration Pacific International Gold Bank Building 677 Ala Moana Blvd., Suite 613 Honolulu, Hawaii 96813

cc: Rear Admiral E. Alvey Wright, U.S. Ret. Director, Department of Transportation Division of Highways 689 Punchbowl Street Honolulu, Hawaii 96813

As mentioned above, additional information must be presented before the Department of the Interior can complete its role under Section 4(f) of the Department of Transportation Act. Since we have a continuing interest in this project, we would be happy to provide technical assistance in the preparation of additional Section 4(f) documentation. For matters relating to the Hanalei National Wildlife Refuge, please contact the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 3737, Portland, Oregon, 97208 (503-234-4050). For matters relating to historical and archeological resources, please contact the Regional Director, National Park Service, 450 Golden Gate Avenue, San Francisco, California, 94102 (415-556-4196).
A. B. These comments, relating to the Princeville to Iliina section of the highway, will be evaluated in a supplement to this Final EIS.

D. The recommended highway widening will affect only a small area adjacent to the highway, in which archaeological sites are highly unlikely. Nevertheless, a reconnaissance survey has been conducted, the results of which are presented in Appendix D. Should any artifacts be uncovered during construction, work will be stopped in the area and the SHPO will be immediately notified.

E. Section 7 consultation has been concluded. Since the primary concern is with the alignment at the Hanalei Bridge, a final determination will be made in the Princeville to Iliina supplemental Final EIS.

G. These maps have been corrected.

H. See response to D, above.

J. This will be provided for in the Iliina State Park.

K. Landslides are not a concern on the gentle topography of the Kauaiwa to Princeville segment. Your suggestion on discussing the stability of road cuts from Princeville to Iliina will be discussed in the supplemental Final EIS covering that section.
The recommended highway widening from Kailua to Princeville will
be made on the side of the road away from Princeville Airport, so
there will be no interference.

March 31, 1977

Mr. Ralph T. Segawa
Division Administrator
Federal Highway Administration
677 Ali Drive Blvd.
Honolulu, Hawaii 96813

Ralph

Dear Mr. Segawa:

Thank you for forwarding to my office a
copy of the Environmental Impact Statement for
the Kapiolani Road, Kailua to Hanna Section.

Although I do not have any comments at
this time, I have noted the date for public
hearings.

If I may be of any assistance in this
matter, please do not hesitate to contact me.

Aloha and best wishes.

Sincerely,

[Signature]

Spark Matsunaga
U.S. Senator
Mr. Ralph T. Segawa  
Division Administrator  
U.S. Department of Transportation  
Federal Highway Administration  
Region Nine  
677 Ala Moana Blvd., Suite 613  
Honolulu, Hawaii 96813

Dear Mr. Segawa:

Subject: Kanal Belt Road, Kaliihi to Waipahu Section, H-36, Route 56, Draft Environmental Impact Statement

This is in response to your letter number 91590C requesting review and comments on the subject project.

As the project will not involve any right-of-way or easement taking of property along Manoel Elementary School and Manoel Courthouse, we have no comments to offer.

We would appreciate a copy of the final environmental impact statement.

Very truly yours,

RIGO MICHOSA  
State Public Works Engineer

Mr. R. S. Tanaka  
Assistant Division Administrator  
U.S. Department of Transportation  
Federal Highway Administration  
677 Ala Moana Blvd., Suite 613  
Honolulu, Hawaii 96813

Dear Mr. Tanaka:

Subject: Kanal Belt Road, Kaliihi to Waipahu Section  
H-36, Route 56, Draft Environmental Impact Statement

The Department of Transportation is preparing the draft environmental impact statement. This project concerns with the alteration proposed by the Department of Transportation for the proposed truck and pedestrian routes.

We would appreciate a copy of the final environmental impact statement.

Yours sincerely,

JACK LEWIS, Jr.  
Chairman, Board of Transportation
Mr. J. Kato
Assistant Division Administrator
U. S. Department of Transportation
Federal Highway Administration
677 Ali Ii Street, Suite 613
Honolulu, Hawaii 96813

Dear Mr. Kato:

Kamehameha Road

Thank you for sending us a copy of the "Kamehameha Road" Environmental Impact Statement. We have received the publication and have no comments to offer.

Yours truly,

[Signature]

DAVID A. TAKAHASHI
Chief, E&H

Enclosure
EVALUATION
DEPARTMENT OF HEALTH (5/2/77)

This Final EIS for the Kailua to Princeville section does discuss secondary (i.e., growth) impacts (see page 11-1). A future growth-induced impact may result from widening the Lumahai Bridge. This impact will be discussed in the supplement Final EIS for the Princeville to Hanalei section.

April 4, 1977

Honorable C. Alvey Wright, Director
Department of Transportation
669 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright:

SUBJECT: Kauai Belt Road, FAP Route 56, Hanau to Kalalau

This project will have an impact on Naapali State Park. We should coordinate park development with the highway project. There are two main concerns:

1. Bridge improvement or relocation at Lumahai Stream should be determined by park plans. The stream forms the park boundary and all roads beyond that point to Kauai Beach will be park roads.

2. The existing roads and parking arrangements within the park are inadequate. If you think it possible for buses to reach the park, the problem could become unmanagable. We would prefer to construct an adequate road before highway improvement makes it possible for buses to reach the park. Park planning is scheduled to begin later this year, with construction to follow as soon as possible.

Very truly yours,

[Signature]

Christopher Corbin
Chairman of the Board
EVALUATION
DEPARTMENT OF LAND AND NATURAL RESOURCES (4/4/71)

Impacts to parks on the Princeville to Hanema segment of the highway will be discussed in the supplemental Final EIS for that segment. We will continue to coordinate highway plans with your agency.

U.S. Department of Transportation
Federal Highway Administration
677 Alaka Street, Suite 613
Honolulu, Hawaii 96814

Gentlemen:

DEPARTMENT: Kauai Belt Road, Kailua to Hanama Section,
F-13, Route 52, Hawaii Environmental Impact

Statement

The Division of Fish and Game has reviewed the subject document and offers the following comments:

1. With respect to fisheries values in the eight streams and rivers affected by the proposed project, adverse effects are expected. It is suggested that on Page 41-12, lines 1 and 2 in referring to the words “highly sought after food fish” be used other than “Deer-15” to be absolutely correct.

2. As far as wildlife values are concerned, the Draft E.I.S. adequately covers the subject. Wildlife values would be best protected by proceeding with Alternative B-10, keeping the non-alignment for that portion of the road between the Kauai Belt and Hanama sections on your route. Other alternatives for the alignment to Poi Island and Hanama through lands are less consistent in utility. All alternatives for which the Department of Transportation has approved preference would be on 
debate from the standpoint of the protection of utilities.

Thank you for the opportunity to review the subject document.

Sincerely,

[Signature]

[Name]
Division of Fish & Game
1. Your suggestion has been incorporated in the Final EIS, page II-10.

2. The comments regarding the Hamakua Bridge will be taken into consideration.

Mr. Ralph T. Segard
Division Administrator, Region 9
Federal Highway Admin.
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Dear Mr. Segard:

I appreciate this opportunity to comment on the draft environmental statement for the proposed improvements to the Federal-aid Primary Route 56, the Kohala Highway (Kona Belt Road), from near Kalawai to the terminus of the road near Honokaa, Hamakua District, Kona.

It will be appropriate for your agency to allow the Advisory Council on Historic Preservation an opportunity to comment upon the effect that this undertaking might have on properties on or likely to be eligible to the National Register of Historic Places. The Section 106 procedures for the protection of historic and cultural properties are indicated in 36 C. F. R. Part 800.

Sincerely yours,

Jane L. Silversman
Historic Preservation Officer
State of Hawaii

cc: Advisory Council, Washington and Denver
The results of the Section 106 review process will be reported in the supplemental Final EIS for the Princeville to Hanaa section.

MEMORANDUM

TO: E. Alvey Wright, Director
   Department of Transportation

FROM: Richard A. Harland, Director
   Office of Environmental Quality Control

SUBJECT: Fossil Belt Road, Kalihewa to Hanaa Section

Before we make specific comments on the draft environmental impact statement, we have one general comment. We are aware of the sensitive and scenic environment of the North Shore, especially Hamoepo Valley. Residents have vividly expressed their opinions on protecting their tranquil rural lifestyle. Yet, we are also aware of the shortcomings of the present bridges. Thus, in planning and selecting alternatives, we strongly recommend that this be done in accordance with the State's Environmental Policy Act, Chapter 344, Hawaii Revised Statutes.

With this in mind, we offer the following comments:

HABITAT: BRIDGE DESIGN? (p. 1-11)

The EIS indicates that the Federal Highway Administration will not pay for design B. Is it also applicable to design 2B or any other one-lane bridge proposal?

PLATE: 19, 4-20

The copy does not have plates 19 and 20.

HABITAT (p. 11-18)

It is interesting that 55% of the habitat will be directly and indirectly affected by the proposed alternate highway design, the EIS, etc.:

Although this is a relatively small amount, loss of the habitat would be a significant adverse impact, especially in "critical habitat" for four endangered species. These waterbirds are endangered for the very reason that their habitat has been eliminated or...
In the response to Mr. Helen Hopkins' comment, it states, "We will include a benefit/cost analysis in the draft EIS." Our copy did not include such an analysis.

A major concern of the Hana, Maui residents is that with an improved highway tour bus service will no longer be restricted. This attitude is in conflict with the North Shore development plan which specifically states that tour buses will be allowed in the area. Thus, and other dis-agreements that North Shore residents have with their official land use plan, is an issue that is not within the jurisdiction of the State Department of Transportation.

The development plan is in a policy statement - not a final document that cannot be amended. Nor, is it a document that must be implemented. The cited passage seems to indicate that your agency has no jurisdiction on the matter therefore it is not an issue. Your participation in the highway is related to the development such that you are implementing some of its objectives. This should not be treated lightly. Indisputably the proposed action will influence the plan's objectives directly and/or indirectly. In other words, your proposal serves as the vehicle which is part of the infrastructure of the plan.

For fair play and brevity, our office did not attempt to summarize other review comments. Instead, we strongly recommend that careful consideration be given to each comment.

Further, the EIS regulations state that the accepting authority must not consider responses after the fourteen-day response period. However, because of the controversial nature of the proposal, we will consider responses beyond the fourteen-day period.

We trust these comments will be helpful to you in preparing the final EIS. We thank you for the opportunity to review the final EIS. We look forward to the final EIS.
EVALUATION
OFFICE OF ENVIRONMENTAL QUALITY CONTROL (5/11/77)

A. Federal funds under 23 USC may not be used for the construction of new low bridges on the North Shore.

B. C. F. T. Those comments relate to the proposed improvements to the Princeville to Haena section of the highway. These comments will be given careful consideration in selecting alternatives, and will be evaluated in the supplemental Final EIS for this section.

D. The erosion control measures described in this Final EIS (pages 117 & 8) will be employed, where appropriate, throughout the construction period, and until the exposed slopes are stabilized.

E. The benefit/cost ratio for the alternative improvements to the Kalihiwai to Princeville and Princeville to Hanalei Bridge segments were given on page 1-18 of the Draft EIS. The benefit/cost ratio of the recommended widening from Kalihiwai to Princeville is 1.12.

F. The referenced comment regarding the North Shore Development Plan was not intended to imply that the Department of Transportation is not responsible for the impacts of its actions, nor that growth is not an issue. Rather, the Draft EIS clearly identifies growth as the major issue surrounding this project. However, when the balance of "growth" and "safety" are in conflict, the Department of Transportation must give greater weight to providing a safe highway. In the present case, the highway is not, and should not be, the only control to growth. The Development Plan is recognized as a policy statement, and is not thought of as inflexible, as demonstrated by the fact that the Department of Transportation's proposals are heavier in scope than shown on the Development Plan (see pages 1-23 & 24 of this Final EIS). The recommended widening has been selected as a balance between the need for a safe highway and the community's desire for a minimum amount of change. It is expected that the revised Development Plan will reflect this approach.

Office of the Assistant Director
April 11, 1977

Mr. E. Alvey Wright
Director, Department of Transportation
State of Hawaii
809 Punchbowl St.
Honolulu, Hawaii 96813

Re: Mr. Wright:

I have asked Dr. J. Oda, Superintendent of the Kauai Research Station of the College of Tropical Agriculture, to comment on the proposed Kauai Belt Road, PAP Route 56, Haena to Kauaiway (E-96A 2.3872)

He responds that the proposed road or its construction do not appear to present a hazard to agriculture and probably will not affect agriculture directly. However, an indirect effect could result from increased traffic due to easier access. Increased recreational use and exploitation of watershed areas may result in the degradation of the water supply used by taro farmers in the area.

Would you please accept this written assessment in lieu of attendance at a public hearing.

Yours sincerely,

[Signature]

N. P. Kauai
Acting Associate Director

[Address]

Mr. J. Oda
EVALUATION
COLLEGE OF TROPICAL AGRICULTURE (4/11/77)

Your concern on the indirect effects to the water supply used by
farm growers is acknowledged and will be noted in the supplemental
Final EIS for the Princeville to Kaeau section.

University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2500 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 956-7281

Office of the Director
May 10, 1977
RE: 0221

SUBJECT

10: U.S. Department of Transportation
FROM: Duak C. Cox
RE: Kaillal Belt Road - Kalihiwai to Kaeau Section, FAP Route 56
Draft Environmental Impact Statement (EIS)

The Environmental Center review of the above cited EIS has been prepared
with the assistance of C. L. MacKinnon (Botany), C. S. Popoulos (Civil Engineering),
and Clare Shimato (Environmental Center).

Time and available personnel has not permitted us to prepare our usual
broad review. Therefore, our comments are confined to specific limited areas.
It should not be assumed that areas not addressed in our comments are to be
considered adequate or do not present any potential detrimental impacts. The
following comments are submitted for your consideration.

In general, the draft EIS has discussed the range of potential environmental
impacts which the proposed project may generate. We are pleased to note many of
the questions we raised in the Kalihiwai-Manoa draft EIS have been addressed in
this EIS.

The State Department of Transportation "will recommend one proposed action" following public and governmental reviews. We note that the environmental impacts
may be more fully assessed when the specific alternatives have been chosen and
fully discussed in the final EIS (e.g., an archaeological survey will be conducted "for the selected alternative only"). We would suggest that a preliminary
archaeological survey be conducted on each of the alternative sites so that the
results of the survey can be used in the selection of the final right-of-way.

The draft EIS states that the geometric characteristics of the existing
facility are substandard. A number of comparisons between components of the
existing highway and AASHO standards indicate that this is often the case. The
final EIS will be greatly enhanced by including the design standards used and by
citing the major alignment, right-of-way distance and cross-section discrepancies between
the standards and the existing highway.

AN EQUAL OPPORTUNITY EMPLOYER
The alternatives which had the greatest potential for encountering previously undiscovered archaeological sites have been rejected in favor of minimal widening within the slightly outside the right-of-way from Kaliihawi to Princeville. An archaeological reconnaissance has been conducted for the recommended alternative (Appendix D). If any artifacts are encountered during construction, work will be stopped and the NIHPO immediately notified.

B. The pavement on the existing Kaliihawi to Princeville segment is 18 feet wide compared to AASHO standards allowing a 22 foot minimum. The existing shoulders are 2 feet wide compared to the standard 3 feet minimum. The curves that are to be realigned are examples of extremely poor geometry ("broken back" curves and "S" curves without a tongue), and are not considered to be adequate highway design under AASHO criteria.

C. The accident statistics in Table 2 have been revised to show more years and to eliminate the confusion caused by changing in designating segments. The improvements in the highway from Anaeho'omalu to Kaliihawi (C1 and C2) are shown on Plate 2 (compare with existing alignment on Plate 1). They consisted of the same type of widening and realigning proposed for the subject section. It is therefore reasonable to assume that the Kaliihawi to Princeville section will experience a drop in the accident rate to a level close to that of the previously improved segment, or around 1.5 accidents per million vehicle miles.
Mr. E. Alvey Wright  
Director  
State Hpt. of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813  

Gentlemen:

Mr. Kauai Belt Road, FAP, Route 56,  
Haena to Kalihiwal, Kauai.

Based upon your findings and evaluation contained within the draft Environmental Impact Statement for the proposed highway and bridge improvement from Kalihiwal to Haena, the Kauai Planning Department is in concurrence and supports all of your "preferred alternatives" as specified in your public hearing notice.

We recognize that in selecting these "preferred alternatives", your objective is to bring the subject highway and bridges up to adequate safety standards for the safety, health, and welfare of the residents and visitors that commute on this ground transportation system, while at the same time maintaining a design that is compatible with the unique character and the scenic beauty of this region that is hard to find elsewhere.

The blind curves and narrow pavement and shoulder widths, and the one-way and very poor structural condition and short remaining life span of the bridges described in your studies make segments of the highway and the bridges hazardous and dangerous. A collapse of any one of the bridges may not only endanger lives, but will isolate some communities from needed daily services that may be vital to some. Improvement plans (as you are now doing) should therefore proceed expeditiously in order to achieve timely improvement that has had the opportunity to consider various designs appropriate for this area. We believe that your "preferred alternatives" can achieve your objective. We commend the efforts and attitude of your Department in trying to develop an acceptable and appropriate design solution for the highway and bridges in this region.

Sincerely,

[Signature]

Planning Director

cc: Mayor, P.E. Cons.
   Edwin Nakano
Mr. Ralph T. Segawa  
Division Administrator  
U.S. Department of Transportation  
Federal Highway Administration  
677 Alaka Street, Suite 613  
Honolulu, Hawaii 96813  

Subject: Kalaau Belt Road, Hanaaka to Kaena  
Section, PAP Route 35, Impact Environmental  
Impact Statement  

Gentlemen:  

The information provided in the Draft Environmental  
Impact Statement was very helpful in evaluating the various  
proposed alternatives on the subject matter.  

We have just one comment to make. Under the socio-  
economic category, on Page II-27, a portion of the second  
paragraph reads as follows:  

"The North Shore appears to be faced with two  
undesirable alternatives: retain the existing  
economic base with its uncertain future or  
develop a new economic base with the potential  
of degrading the unique rural life-style."  

That statement narrows the choice only between two  
alternatives. Another alternative is available and should  

be stated in the Impact statement. The existing economic  
base can be expanded and diversified further. Some of  
the soils in this region are suitable for specialized crops  
such as taro. If taro farming is expanded and other  
specialized crops are introduced, there would be a definite  
need to improve the highway and bridge systems to transport  
the agricultural products. An expansion of the economic  
base in this direction will not degrade the unique rural  
life-style of this region even with some proposed improve-  
ments to the highway.  

In our opinion, the "preferred alternatives" as  
presented by the State Department of Transportation at its  
public hearing on April 20th and 21st on Kauai, is the type  
of improvements that could achieve this objective.  

Sincerely,  

[Signature]  

[Name]  
Planning Director  

cc: Mayor  
City Council  
[Other names and titles]
EVALUATION
PLANNING DEPARTMENT (4/21/77 and 4/22/77)

Your support of the preferred alternative is acknowledged. With regard to the future options for the North Shore, the referenced comment on the uncertainty of the existing agricultural economy has been revised (see pages H-27 to H-29).

COUNTY OF KAUA'I
DEPARTMENT OF PUBLIC WORKS

April 6, 1977

Mr. Ralph F. Sugama
District Administrator
Federal Highway Administration
877 Ale Noa Boulevard, Suite 60
Lihue, Kauai, Hawaii 96762

Dear Mr. Sugama:

SUBJECT: MAIWA NEXT HOOL, KALIBIHOU TO HANNAH SECTION,
THE HOAIE 56, HAYT ENVIRONMENTAL IMPACT STATEMENT

We have the following comments to offer on the subject draft environmental impact statement:

1. The primary concern for improving the highway between Kalibihou River to Hanoa should be traffic safety. The alternative most desirable to meeting the needs and objectives of traffic safety.

Alternative No. 7 which calls for the re-routing of the highway, should eliminate or reduce the accidents between a vehicle and a fallen tree or branch. This will also minimize the closure of the highway due to a fallen tree or large branches.

2. The alternative will eliminate the baiaplus form at the bluff overlooking Kalibihou and the right angle bridge approach across the Kalibihou River. Both alternatives and road design will facilitate vehicular operation speed of 25 mph. Beach speed limits of 35 mph will not be used even with the design speed and the introduction of non-permission to the non-permitting driver will be eliminated. The motorist traveling along a vehicle usually will be the one to adjust for safe travel conditions of the Kalibihou bridge crossing.

3. A bridge at Buana, Waianae, Waianae, Waianae, Hanoa, Hanoa and Lihue should have a width of not less than two lanes of traffic.

Adding a bridge that is one lane wide for a two lane highway...
Facility is not in the interest of traffic safety. Not only is there liability for damages by the State but more importantly the personal property and lives of the motorists are jeopardized when a one lane bridge is provided.

3. We do not feel that the cost-benefit ratio or the cost to provide the safety improvement should govern and control the nature of the improvement. Cost and available funds should only dictate phasing the incremental construction of the phasing of the entire project.

4. Between Wiliamu Street to Hanalei the roadway has a pavement width of 18 feet or less, roadway shoulders are nonexistent in many locations, and there are several sharp horizontal curves in the roadway alignment. These conditions should also be improved. We believe that vehicular accidents generally occur with higher cross-sectional standards such as wider traffic lanes, shoulders, and structures. Further, steeper grades and curves reduce the variance in speeds of vehicles and increases sight distances which will also contribute to the safety of the highway.

We thank you for the opportunity to comment on the draft Environmental Impact Statement.

Very truly yours,

[Signature]

County Engineer

We have been keeping close tab on developments proposed by the State Department of Transportation for the North Shore Highways since this is a vital link affecting so many of our constituents.

Although we may have previously expressed a desire to see a new alignment in the Kalibwai to Hanalei Bridge Section, we believe that the downgraded version presented as the preferred alternative is acceptable and a fair compromise with expressed public sentiments for minimizing improvements. For safety considerations, we would recommend that correction of existing vertical curve deficiencies be considered. The preferred double lane bridge alternatives are also acceptable. We strongly recommend against considering replacement with single lane structures. The national impact is towards correcting single lane bridges because of the hazards they present.
Mr. E. Alvey Wright, Director
April 20, 1977
Page 2

We would recommend that increased shoulder widths to
four (4) feet with a minimum of eleven (11) feet for structures
be considered, since this will allow for safer passage of
bicycles if only on the structure itself.

Very truly yours,

[Signature]
HENRY MORITA
County Engineer

cc: Mr. Ed Nakano

4/8/77 1. In response to the North Shore community's desire for
a minimum amount of change, the widening alternative
has been selected for the Kalihuiwi to Princeville segment.

2,3,4. Your comments relating to the Princeville to Heena
segment of the highway will be considered in the
supplemental Final PRR for that section.

4/20/77 Your support of the preferred alternative is acknowledged.
April 26, 1977

Mr. Ralph T. Segawa
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
677 Ali Iona Boulevard, Suite 613
Honolulu, Hawaii 96813

Re: Kamehameha Highway, Kalihi to Haena Section, Island of Oahu, Draft Environmental Impact Statement

Thank you for allowing us to review and comment on the draft E.I.S. Although portions of the proposed road and bridge improvements between Kalihi and Waimea will affect our waterlines, we will comment when the construction plans are submitted to this office for approval. Therefore, we have no objections to this project.

Please keep us informed on the progress of this project.

Walter C. Bryant Jr.
Manager and Chief Engineer

May 4, 1977

Mr. Ralph T. Segawa
Division Administrator
Federal Highway Administration
677 Ali Iona Boulevard, Suite 613
Honolulu, Hawaii 96813

Dear Mr. Segawa:

Subject: Kamehameha Highway, Kalihi to Haena Section, Island of Oahu, Draft Environmental Impact Statement (February 2, 1977)

We have reviewed the subject EIS and are satisfied that an adequate air quality impact analysis was conducted. Furthermore, we believe the results represent a reasonable estimate of the magnitude of the project's impact on ambient air quality.

Sincerely yours,

James W. Horner, Director
Environmental Health
Dear Admiral E. Alvey Wright,

I am a Business Agent of Carpenters Union, Local 745, and also, the Chairman of the Kauai Building and Construction Trades Council, AFL-CIO, which represents approximately 600 construction workers. At present, 25% of our members are unemployed and Kauai is very much in need for construction jobs.

Our organization strongly supports your proposed improvements from Princeville to Lihue. There is no question that the state highways and bridges are too narrow in the subject area and we feel that if funds are available, we should widen the roads and build concrete bridges. Many times, these concrete bridges are more permanent and in the long run, would cost the taxpayers less to maintain.

We firmly believe that a final decision on this subject matter is your prerogative, and are confident that your decision will be based on the best interest for Kauai and its taxpayers. Most of the people who spoke against this project are new comers to this island, who have been protesting and will continue to protest on all developments. They are a minority and do not speak for the rest of the population of Kauai.

I respectfully request that you make a favorable decision on this subject matter, and give Kauai something that all of us could appreciate.

Very truly yours,

Kauai Building & Construction
Trades Council, AFL-CIO

Emura Seisakusai
Chairman, Kauai Division

Keith
cc: Eddie Bokami
HAWAIIAN TELEPHONE COMPANY

EVALUATION

HAWAIIAN TELEPHONE COMPANY

April 20, 1977

877 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Attention: Mr. Ralph T. Segawa, Division Administrator

Dear Mr. Segawa:

Subjects: Kool Belt Road, Kailua to Hanna Section,
FHWA Route 56, Draft Environmental Impact Statement

To assist you in your highway design, a set of plans of the existing roadway with
our facilities plotted in has been forwarded to Mr. Ronald Ashland, Engineer with
the Department of Transportation, Road Transportation Facilities Division, Kool
District Office.

As stated to Mr. Ashland, relocating our facilities in the heavily wooded area
on the makai side of the existing highway would be very undesirable for Hawaiian
Telephone Company due to economic, locational and aesthetical reasons. Thus designing the proposed highway, please consider the above
factors.

Should you have any questions or require additional information, call Mr. James
Yamashita at 295-2731.

Very truly yours,

James Tobita
Supervising Engineer

cc: R. Ashland
Subject: EVALUATION

Kauai Historical Society

Sirs:

I am Robert Redlich and I am President of the Kauai Historical Society.

The Kauai Historical Society believes that the Kauai-Nanakuli area has great historic value. Also important is the scenic quality of this area.

In 1977, the National Register of Historic Places prepared a report indicating that the need for action in Hawaii should be pursued. Since recently, the National Register has encouraged the Society to complete the nomination of the bridge from Nanakuli to the Kauai Historical Society, which, upon completion, will provide proper protection to the area.

The Board also requests information on

Kuakini Roadway and its working towards

preparing a report and an action plan.

Designating the highway from Kauai to Oahu as a scenic highway for the protection of Kauai as a scenic highway for the protection of Kauai.

In addition, the Department of Transportation allows three to four years to

accomplish these goals.
Department of Transportation
State of Hawaii
560 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. E. Alvey Wright, Director

Subject: Kaauai Belt Road, Princeville to Lihue, Island of Kauai

Cautions:

The Kaauai Outdoor Circle, founded with and perpetuated by, the idea of preserving and enhancing the beauty of Kauai is naturally concerned with the Department of Transportation's proposed changes for the Kaauai Belt Road.

The Circle has made a thorough review of the recently completed Environmental Impact Statement, which is referred to as the EIS. The Circle has attempted to respond in a sensitive and professional manner. It is quite evident to us that the EIS has been developed with careful consideration of the views of Kauai's residents.

It is because of the Department of Transportation's (DOT) responsibility and request for public views on the Belt Road proposals that the Kauai Outdoor Circle, by action of the Board of Directors, would like to make the following remarks and recommendations:

1. The beginnings of recommendations are our first request. This request is in the name of reasoning. Throughout our suggestions on road improvement, we recognize the need for safety improvements, but feel that the interest and scenic beauty of Kauai is to be preserved in the same manner. The Kauai Belt Road, in fact, is an essential ingredient to the total "feeling" of the island and should be treated such as a scenic road.

Below are our recommendations for the stretch of road from Princeville to Kauai:

1. That the 9 foot lane be continued to the north side of the road, that there should be a safety barrier to prevent the Kauai residents from reaching the road at all times.

2. The present 9 foot lane be increased to 10 foot lanes.

3. The cuts along the highway give it a rural character. We wish these only to remain. Of special concern is the retention of the "boc cut" at the end of the improved highway. This cut acts as an "entrance" to the scenic and rural Kauai.

4. Curve realignment:
   a. Curve AI, at Turtle Tank, does not need realignment.
   b. Curve AE, the "S" curve before Powersline road, does need realigning. The new alignment should be done with the Eucalyptus trees.

5. The utility lines be put underground for aesthetic and safety reasons.

6. The Eucalyptus trees near Kukui Grove should be preserved at all costs. The trees should be protected immediately and thereafter maintained at the existing condition of the roadway.

7. Existing trees along the road should be protected.

8. The Eucalyptus trees are to be maintained.

The Kauai Outdoor Circle's "Rural Scenic Road" sign be posted just after the Kukui Grove bridge announcing the beginning of the scenic drive.

We will reserve our comments on the bridge until the State Historic Preservation Office completes a study on whether the bridge is historic and structures worthy of preservation.

We urge the Department of Transportation to consider all of our recommendations and to make the necessary changes to the Belt Road.
EVALUATION
KAHAI OUTLOOK CIRCLE (10/10/77)

Kalalau to Princeville

1. The suggested treatment of the shoulders can not be implemented for several reasons. First, a continuous paved shoulder is needed to accommodate bicycles. Secondly, the random nature of vehicle breakdown makes it necessary for there to be an adequate shoulder along the entire length of highway, not just at scattered points. Finally, without almost weekly mowing, a grassed shoulder stabilized with hibiscus would appear to be no shoulder at all, and would not serve the objective of providing security to the driver.

2. The recommended widening is to two 11-foot wide lanes in the direction away from the row of eucalyptus trees.

3. The present road cuts can not be maintained if the highway is to be widened and provided with shoulders. The present "entrance" might be maintained by special landscaping, but to leave this bottleneck between two improved sections would be very hazardous.

4. a. Both the horizontal and vertical curves at this location are substandard with regard to sight distance.

b. The inset diagram for curve #2 was not published correctly in the EIR. The inset diagram should have been turned 180 degrees.

c. A horizontal curve that can be negotiated safely at the design speed is necessary.

5. The high cost of installing and servicing underground utilities makes this an uneconomic measure.

6. The highway will be moved farther away from the eucalyptus trees, so the danger from falling branches will be reduced. The trees will be trimmed as needed.

Thank you for this opportunity to express our opinions on this matter.

Sincerely yours,

THE KAHAI OUTLOOK CIRCLE

[Signatures]

 Maui County, District Highway Engineer

[Signatures]

Department of Transportation
March 10, 1977

3. Test the cut in the road south of the Kahului Bay lookout which is now marked by "Haliloe Rock" signs in order to determine if there is indeed a landslide area with many falling rocks. The area should be improved in a sheltering manner. The Maui Coastal and Water Conservation Advisory Committee should be contacted about this.

4. The present road is of ample width. Additional shoulders should be considered to further encourage turn-offs of the "stop-and-go" variety creating dangerous traffic conditions.

Along with the need to upgrade the maintenance of the belt road is a need for additional refuse containers. An area especially neglected and receiving heavy usage by swimmers and surfers is the beach turnoff opposite the Chamberlain house and Keith Hardman's house. Although this is just one very obvious area there are several other areas that need refuse containers. We will be more specific on this in our following letter.

In general we agree with the recommendations of the Kahului Citizens Advisory Committee, and join them in requesting extension of the May 11, 1977, tentative deadline.

Thank you for this opportunity to express our opinions on this matter.

Sincerely yours,

THE KAHUI OUTLOOK CIRCLE

[Signatures]

[Signatures]

Maui County, District Highway Engineer

Mr. Douglas Sato

[Signatures]
Kauai Outdoor Circle

7. Tree stumps will be removed.
     a. This suggestion will be considered along with an alternative means of retaining the North Shore "entrance".

Princeville to Hanalei Bridge

These suggestions will be considered selecting alternatives for the Princeville-Hanalei section, and will be evaluated in the supplemental Final EIS for that segment.

---

Dear Admiral Wright:

The Kauai Society of Professional Engineers, Architects and Land Surveyors feel that the people of Hawaii are entitled to safe access into the beautiful North Shore area and, therefore, would like to go on record expressing the need for improvements to the present highway between Kailua and Hanalei. We herewith offer the following reasons and recommendations for your consideration:

1. MAUNAKOA, wherever possible, a safe highway system with the unique scenic qualities and character of the Hanalei-Hanaa area.

2. DEMANDED widening and shoulder for emergency purposes and for the safety of hikers and cyclists who are on the increases. The North Shore is a rural area where gas stations are few and far between. A wider shoulder is necessary to accommodate a safe off-roadway parking for vehicles requiring mechanical breakdown services.

3. LIMITATION of the sharper curves and steeper grades as they constitute a hazard to safe driving. The "stop and
Admiral K. Alvey Wright  
Department of Transportation  
May 10, 1977  
Page 2

The effect they create makes it unnecessarily hard on broken and slow down on gas mileage.

4. Replacement of the narrow obsolete bridges with two-

lane concrete structures because, the present bridges

are not only dangerous and inadequate, but are expensive
to maintain.

The Society of Professional Engineers, Architects and Land
Surveyors is made up of more than sixty Ema residents whose

objectives are to encourage friendly relationships, good will
among the mainland and to encourage a social environment and free
exchange of information between members which will be beneficial
to the community and profession.

We hope that the outcome of your decision on this matter will
give the people of Ema a safer highway system.

Sincerely,

James M. Shinno, Chairman
Legislative Committee
A. M. Abbott

cc: The Garden Island

National Trust for Historic Preservation
WEST COAST OFFICE  9500 BROADWAY  SANTA MONICA, CALIFORNIA 90403

May 9, 1977

U.S. Department of Transportation
Federal Highway Administration
677 Ala Moana Boulevard, Suite 613
Honolulu, Hawaii 96813

Gentlemen:

Thank you for the opportunity to comment on the Draft Environmental
Impact Statement for the Ema Belt Road, Kalanianaole to Honoakina Section.

In general, we found the draft EIS a well thought out document taking
into consideration many of the concerns we have regarding the highway's
scenic and historic values. The accommodation of these values in the
proposed improvements is to be encouraged although we would like to
emphasize the following points as especially important for your final
assessment:

1. The scenic quality of the highway. Traffic engineering standards

need not always be the determining factor in road design and accom-

modation for views, vistas, vegetation, land forms and water courses

should be made in the final design.

2. The bridges should be carefully considered because of the integral

port they play in the scenic value of the highway. The original

structure is important and a newly built replacement, even though a

replica, should be considered only as a last resort.

3. The discussion of growth and growth control is inconclusive. To

say that the "highway itself would not induce growth or development

in the area" (page 11-1) belies the very factors which growth depends

upon. Even for a limited area for growth and with increases in

population, pressures to develop will become greater and greater.

All the island will be affected and the inevitable link between
development location and accessibility will become evident - development
will go where there is access, it will not go where there is little

or no access.

4. Since access and pressures for development are interdependent, the

control of growth cannot be assessed totally to the powers of local
government, they may have certain tools within their legislative
EVALUATION
NATIONAL TRUST FOR HISTORIC PRESERVATION (5/9/77)

1. Traffic engineering standards establish the need for highway improvements. The design of the improvements will take aesthetic into account, as suggested.

2. Major consideration is being given to the bridges through the Section 106 review process, the results of which will be reported in the supplemental Final EIS for the Pineville to Lima section.

3 & 4. There presently is access to the North Shore, though not for all types of vehicles. The DOT recognizes that growth can occur with an improved highway, but holds that it need not occur if existing environmental and institutional constraints are applied. This Final EIS acknowledges the local community's lack of confidence in these constraints. However, any alternative engineering solutions to improving the safety of the highway will also remove its growth-inhibiting characteristics. Given the promise that a safe highway is the primary objective, the control of growth must rest on the environmental and institutional constraints.

5. An improved highway will accommodate whichever economic future the people of the North Shore choose, whether expanded agriculture, tourism, "no change", or any other option. The selection and encouragement of this future is the responsibility of the community and its locally elected officials. Recognizing the beneficial role that an improved highway can have, the County Planning Department has endorsed the proposed project.

In conclusion, we would urge you to work closely with both the Advisory Council on Historic Preservation, Louis S. Hall, Assistant Director, Office of Policy and Compliance, 1922 F Street N.W., Washington, D.C. 20505, and the Illinois State Historic Preservation Office, Jane Silverman, Department of Land and Natural Resources, P.O. Box 621, Havana, Illinois 61911, on developing your final EIS.

Thank you again for letting us review the draft EIS.

Sincerely,

[Signature]

Cc: Jane Silverman
   Assistant Director, National Trust Advisor
   Robert H. Bass, National Trust Advisor
We have formed a committee of concerned citizens of Kailua, as well as representatives of the following groups:

Kailua Kihei Society
Kailua Bay Association
Kailua Community Association
Kailua Historical Society
Kailua Bay Church

The purpose of forming this committee is in response to Kailua's request for citizens' input. We applaud the Department of Transportation's awareness and sensitivity to the fragility of transportation's intrusion on the fragile environment. In this regard, we endorse the Kailua Kihei Society's statement of support for the Kailua-Ka'a'a Inland Sea Project. We advocate a more balanced approach to transportation that prioritizes the preservation of our natural environment.

We request that the highway be set back from the shoreline and that the adjacent area be preserved as a natural landscape. The beauty of this area is a treasure that we must protect for future generations.

We urge the Department of Transportation to consider the following recommendations:

1. The proposed widening or realignment from Ka'a'a to the Hikinaakala Bridge would eliminate the present 'outdoor' environment to the North Shore. The loss of this visual amenity would be an irreversible environmental impact."

2. We take the position that the Scenic Road should begin at the end of the present improved highway at Kailua, not at Hikinaakala Bridge.

3. In order to achieve this, we propose a new route that would use only the portion of the highway that is currently under construction. This route would use only a portion of the Kailua-Ka'a'a Inland Sea Project.

4. We suggest that the recommended trees be planted, the utility to be undergrounded, and that adequate plans be made to access the area for safety.

Thank you.
Citizens Advisory Committee
P.O. Box 81
Hilo, Island, HI 96724

Admiral A. A. Wright, Director
Department of Transportation
Box 1791
Hilo, Island, 96723

Dear Admiral Wright,

I am including several enclosures so that you can have a full understanding of how this Committee is proceeding and the direction it is taking. 1. I have noted on the proposal agenda of our first meeting of April 20, some of what happened at that meeting. 2. The outcome of that meeting was clearly defined in our testimony at the Public Hearing at Hilo. 3. The agenda for our last meeting of April 26, the notation that we got in writing that will be submitted as our agenda for the May 3 meeting as well. 4. A copy of our letter to Roy Hirayama, Chief of Police, who attended our last meeting.

At the hearing we made two specific requests. Our second request was that, considering the complexity and extent of the DOT proposal, and the limited amount of time that the community has had to review it, we have asked for an extension of the May 3 date to deliver our testimony. You have been very clear that your department needs some idea of what sort of time we require, so I will answer that first.

Hilo Improvement: I expect that we can deliver our suggestions on Hilo Improvement by mid-June, and hopefully sooner. We have almost finalized our discussion on the segment from Kailua to Puna, which I am not including here. We will start discussing the segment from there to the Hilo Bridge next week, and from the Hilo Bridge to Hilo Island town the following one. It seems that after the initial discussions it helps in our work to consider our recommendations and their consequences, and that we be in a position to present our findings at the next meeting. I expect a final version of the enclosed recommendations at our next meeting.

During this whole course of events we are compiling a list of requested Hilo Improvement to the segment of the road from Hilo Island town to Hilo that we would like to initiate.

An example of what we are trying to upgrade the infrastructure of the North Shore Belt Road.

Brigade: We request a delay in any decision on any of the bridges, contingent on our being able to react to the following events.

The Hilo Bridge in the only known example of a Hilo Bridge. The structure of bridges is metal and not of steel. This type of construction is found in Hawaii. Since these bridges are of some considerable interest historically, the Hilo Historical Society has requested to the State Preservation Board that they consider these bridges as well as the Lahaina Bridges for the State and National Register. The results of this will affect our Committee's thinking. We don't know when the State Board will meet, or what is on their agenda. We understand that they will consider these bridges a priority item if notified that the bridge is on the list. As far as we are concerned, this should happen even before you and the State Board can meet. The State Preservation Office is waiting receipt of the bridge proposal study conducted by the Hawaii State Department of Transportation. They are recommending that this study be forwarded for review to the Historic American Engineering Inventory, within the National Register of Historic Places. Once again, the report from this source will greatly affect the Committee's thinking.

Once these reports are made available to us, I would imagine that we will need about a month to develop our input. As you can see from our agenda, we are in a phase where we can identify the key factors involved in bridge development. We can then only develop general guidelines until we get the above information.

The, although that in not specific as to dates, it is the best we can do to define the type of extension we are requesting.

At our second meeting of April 27, we reviewed our recommendations for the segment of road from Kailua to the Puna, which is as follows:

1. That there be a continuous 9-foot shoulder on each side of the road. You will note this makes the road safer than we originally had planned.
2. That the road has enough shoulders to be safe rather than merely exist. We understand that there are several methods to create support bases that allow green cover.
3. The use of the bridge and what gives it its rural character. We wish them to remain. In particular we wish to remain...
the "entrance" out at the existing end of the improved highway.

6. There is unanimous agreement that this 11-foot lane is expensive and unnecessary. We will re-discuss our recommended width at this Wednesday's meeting and get back to you.

7. We recommend the following signs and markings:
   a. Reflective crosshatch lines, all the way to Keala
   b. White side lines, all the way to Keala.
   c. An informational "Hard Stand Road" sign at existing end of improved highway. Possibly a good Outdoor Circle Project.

8. The Buxus trees be topped.

9. The EIS states that the pavement is structurally deficient. The surface could use improvement.

Coming out of our discussion with Chief of Police Roy Hina and officer Al Tovaha, who were very clear that they lacked structural safety elements did not fall within their department, and so were therefore speaking as laymen, we agreed to recommend the following:

10. There be a storage lane to the Princeville Airport, to be defined by the existing fence.

11. That Hu-Tuu Lane be put at the road by the Airport immediately.

12. That a traffic circulation plan for the new shopping center be proposed, and a storage lane be planned to service this area.

Looking forward to your response,

Sincerely yours,

Carol H. Uilex
Citizens Advisory Committee

Citizens Advisory Committee
P.O. Box 81
Makai, Kauai, HI 96735

Admiral Z. Alvey Wright, Director
Department of Transportation
1055 Punahou Street
Honolulu, Hawaii 96813

RE: North Shore Belt Road

Dear Admiral Wright,

Thank you for your extension of June 15, and longer if necessary, so that the Citizens Advisory Committee can consent on the North Shore Belt Road.

We are submitting here our initial review of the bridges. I am enclosing a copy of the newspaper article by Barnes Huneke on the historical interest of these bridges. Along with the enclosed article is also a letter from Bill Spengler of the National Trust for Historic Preservation.

Briefly, the philosophy of "it's old, ergo it must go" is no longer acceptable when dealing with old structures, especially when they have historic and/or cultural or aesthetic significance.

When the replacement of these structures, be they commercial buildings or homes or bridges, will create a secondary impact of a nature undesired per those affected, that becomes an equally important factor when considering replacement.

In the DOT proposal for the North Shore Belt Road, we have just this situation, fully documented, of historically interesting bridges, the replacement of which would have an adverse impact, as stated in the EIS, page 11-1: "The secondary effects of the improved highway on the quality of life on the North Shore has been a primary concern expressed by residents. The area is rural in character, but improvements to the highway could potentially facilitate urbanization."

Since the EIS bases the need for replacement of the bridges on structural inadequacies, we searched the EIS, the Bridge Inventory Sheets, the Bridge Inspection Reports, and the Bridge Appraisal Reports for technical data to support that premise. We have pulled out all data on the bridges in the EIS and enclosed it, to illustrate how little of it is of technological nature.
The committee asked a local registered structural engineer, Jim Adams or James Adams International Structural Engineers, Honolulu, to help examine each bridge. We want to be clear that we are not commenting on one- or two-lane bridges, or design of replacement, or existing design problem. We are simply concerning ourselves with the structural integrity and lifespan of each bridge.

We are concerned with discrepancies between our findings and those in the EIS. We particularly draw your attention to the potential sudden collapse on one of the bridges and structural soundness of others.

We are enclosing our report on each bridge, along with Committee comments. We hope that, after reading this, you will accept that it might be a good time for your department and our committee to discuss these matters. We wish to invite you, Chuck Swenson, Mr. Nakano, and possibly Clarence Yamasato, to meet with us here in Hanaelei as soon as possible, preferably before June 15th.

If you could call me regarding the above, at 826-6394, I will be able to make the necessary arrangements.

Sincerely yours,
Carol M. Wilson
Chairperson, Citizens Advisory Committee

cc: Edwin Nakano, County Engineer

P.S. In our letter of May 2 we made recommendations on road improvements from Kailiwi to the Princeville entrance. We draw your attention to the enclosed comments on the same road, from the Princeville entrance through Hanaelei town.

HANALEI BRIDGE

The Critical Question When Discussing the Hanalei Bridge is:
How Much of the Load is Carried by the Newly Recently Added (1974 or 1975) Warren Truss?

1. The 1912 Pratt Truss is badly corroded. The sway bracing and vertical member at panel 2-3 is damaged by collision.

2. The Warren Truss is in good condition.

3. The EIS does not refer to the condition or carrying capacity of the Warren Truss.

4. Ed Nakano, County Engineer of Kauai, is of the opinion that the Warren Truss carries the total of the live load. The Warren Truss does not carry the 1912 structure.

5. If Mr. Nakano's opinion is the case, then it is the conclusion of Jim Adams that the 1912 Pratt Truss has a minimal function at this time, if any.

6. If the Pratt Truss proves to be non-structural, the argument presented on page 1-9 of the EIS, i.e., that camouflaging would weaken the supporting structure, is invalid.

7. If the Warren Truss is not carrying the entire load at present, it can be upgraded and reinforced to meet these requirements.

8. The Pratt truss can be preserved and maintained for aesthetic and historic purposes with cleaning, treating, and maintenance.

9. There is evidence of movement of the abutment on the North Princeville side.

COMMITTEE COMMENTS

Since the EIS Had 1. Treated the Pratt Truss as the Only Supporting Structure
2. Ignored the Structural Capabilities of the Warren Truss;
the Committee Cannot Accept the Conclusion as Presently Stated that the Hanalei Bridge Needs Replacement.

The Committee Recommends an Analysis of the Warren Truss.

cc: Ed Nakano, County Engineer
MAIOLE BRIDGE

OF ALL THE ELEVEN BRIDGES INSPECTED, THE MAIOLE BRIDGE APPEARS TO BE IN THE BEST CONDITION

1. Jim Adams' opinion is that this bridge is in good condition, that its lifespan is indeterminable if maintained properly.

2. There is surface cracking of the piers at the water line. This is non-structural in nature, and could be repaired with an epoxy paint.

3. The finishing cap and the parapet walls are damaged. This is of structural significance, but should be sealed.

4. Water leakage observed at the old road level. The water drainage holes have been plugged. This is causing some corrosion.

5. There are cracks in the abutment.

COMMITTEE COMMENTS

OBSERVATION DOES NOT SUPPORT THE CONCLUSION THAT THIS BRIDGE HAS A THREE YEAR LIFE SPAN.

THIS COMMITTEE CANNOT ACCEPT THE CONCLUSION THAT THE MAIOLE BRIDGE NEEDS REPLACEMENT.

WE RECOMMEND FURTHER INVESTIGATION.

cc: Ed Nakano, County Engineer

THE WAIPA BRIDGES

THE WAIPA BRIDGES APPEAR TO BE IN CRITICAL CONDITION, REQUIRING IMMEDIATE ATTENTION. THESE BRIDGES COULD BE IN DANGER OF SUDDEN COLLAPSE, OR, ON THE OTHER HAND, THERE IS A POSSIBILITY THAT THE TENSION CAPABILITY OF THE CONCRETE ITSELF IS ADEQUATE TO CARRY THE ANTICIPATED LOADS.

Waipa Bridge-1973 Improvement

1. There are no weep holes on the bridge. Surface water leaking through both parapets, causing extensive corrosion of the reinforcing.

2. The sides of the bridge has exposed and corroded nurtures. The leaking water, as stated above, could be causing this damage.

3. There is water pipe imbedded in the south side of the bridge.

4. The concrete piers are scored at the waterline. The large gaps below the waterline are gaps between the piers which appear to be the way they were originally constructed.

5. The center beam is spalling and badly corroded.

Waipa Bridge-1973 Improvement

1. Some of the primary tension steel is badly corroded.

COMMITTEE COMMENTS

IT IS THE RECENT RECOMMENDATION OF THIS COMMITTEE THAT THESE BRIDGES BE IMMEDIATELY ANALYSED, TO VERIFY THE PRESENT LOAD CARRY CAPACITY AND FACTOR OF SAFETY.

WE CONCUR WITH THE FINDING STATEMENT OF PAGE 1-4 THAT REPAIR OF THIS BRIDGE IS POSSIBLE BY "PATCHING CRACKS, REINFORCING PIERS AND ABUTMENTS, AND ADDING SUPPORT WHERE NEEDED".

WE FURTHER RECOMMEND THAT THE IMBEDDED WATER PIPE BE INSTALLED ON THE OUTSIDE OF THE BRIDGE.

cc: Ed Nakano, County Engineer
MAIKOKO BRIDGE

THIS BRIDGE APPEARS TO BE IN CRITICAL CONDITION, REQUIRING IMMEDIATE ATTENTION.

THE MAIKOKO BRIDGE MAY BE IN DANGER OF SUDDEN COLLAPSE, OR, ON THE OTHER HAND, THERE IS A POSSIBILITY THAT THE TENSION CAPABILITY OF THE CONCRETE ITSELF IS ADEQUATE TO CARRY THE ANTICIPATED LOADS.

ENTRY UNDER THE BRIDGE IS EXTREMELY HAZARDOUS. CHUNKS OF CONCRETE FALL TO THE GROUND AT THE SLIGHTEST DISTURBANCE.

COMMITTEE COMMENTS

THE MAIKOKO BRIDGE IS HISTORICALLY VERY INTERESTING AS AN ILLUSTRATION OF THE FORCE OF THE TSUNAMI THAT THIS AREA IS EXPOSED TO. IT SHOULD BE PRESERVED AS AN EDUCATIONAL EXAMPLE FOR EVERYONE.

THIS COMMITTEE RECOMMENDS IMMEDIATE SHORING UP AND ANALYSIS OR LOAD TESTING, TO VERIFY ITS FACTOR OF SAFETY.

ACCESS BELOW THIS BRIDGE SHOULD BE RESTRICTED IMMEDIATELY.

cc: Ed Nakano, County Engineer

THE MAIHIHA BRIDGES

THE MAIHIHA BRIDGES ARE IN SIMILAR CONDITION. WE WILL CONSIDER THEM TOGETHER AFTER SEPARATING OUR INDIVIDUAL OBSERVATIONS.

MAIHIHA BRIDGE #1

1. Some of the tension rods are seriously corroded.
2. The main steel beams show evidence of minor to moderate surface corrosion.
3. The abutments appear to be sound and have a base of approximately 12 feet more than the existing bridge deck.
4. The stream bed is partially blocked and the water lies stagnant.
5. Broken planks of the former bridge lie in the stream bed.

MAIHIHA BRIDGE #2

1. Steel is moderately corroded
2. Chipping and painting maintenance is in progress.

MAIHIHA BRIDGE #3

1. Seriously corroded due to lack of maintenance and salt air.
2. Losing about 20% of one flange due to corrosion.
3. Abutments are approximately 12 feet wider than the bridge deck width.

COMMITTEE COMMENTS

ALL THESE BRIDGES CAN BE REINFORCED FOR HIGHER TONNAGE AND A LONGER LIFE SPAN.

IF A CONTINUING MAINTENANCE PROGRAM IS INITIATED, AS RECOMMENDED IN THE BRIDGE INSPECTION SHEETS OF 1973, THE CORROSION CAN BE BROUGHT UNDER CONTROL.

THese bridges should be analyzed to determine their existing capacity.

cc: Ed Nakano, County Engineer
HAENA BRIDGE #1
1. The bridge has broken and been patched.
2. There are signs of settlement in the west abutment.
3. There is spalling under the bridge.

COMMITTEE COMMENTS
THE COMMITTEE NOTES THAT THE DOT HAS MADE NO PROPOSAL FOR
HAENA BRIDGE #1. WE NOTE, ALSO, THAT THE HIS ALTERNATIVES
ARE FOR REPAIR OR REPLACEMENT. JIM AHANS STATES THAT THIS
BRIDGE COULD BE REPAIRED, EVEN THOUGH DIFFICULT.
IT IS RECOMMENDED THAT THE LOAD CAPACITY AND FACTOR OF
SAFETY BE VERIFIED.

HAENA BRIDGE #2
THIS BRIDGE APPEARS TO BE IN CRITICAL CONDITION, REQUIR-
ing IMMEDIATE ATTENTION. THIS BRIDGE COULD BE IN DANGER OF
SUDDEN COLLAPSE, OR, ON THE OTHER HAND, THERE IS A POSSIBIL-
ITY THAT THE TENSION CAPABILITY OF THE CONCRETE ITSELF IS ADE-
quATE TO CARRY THE ANTICIPATED LOADS.
1. Critical spalling underneath the bridge.
2. The steel is corroded, beyond use.
3. The parapet walls appear to be sound.

COMMITTEE COMMENTS
JIM AHANS CONSIDERS THIS BRIDGE TO BE PRESENTLY DANGEROUS
AND UNSAFE. THE COMMITTEE IS CONCERNED WITH THE ABSENCE OF
ANY STATEMENT BY DOH OF THE HIS AND THE DOT ON THE APPARENT
CRITICAL CONDITION OF THIS BRIDGE. WE WOULD BE INTERESTED TO
KNOW IF THERE IS FURTHER ANALYSIS THAT WE ARE NOT AWARE
OF.
IF THE BRIDGE, UPON ANALYSIS, PROVES TO BE UNSAFE, THE
ALTERNATIVES APPEAR TO BE:
1. REPAIR
2. RECONSTRUCTION
3. A FILLED CULVERT
AS A TEMPORARY MEASURE WE RECOMMEND IMMEDIATE CLOSING UP
AND-posting of a weight limit.

cc: Ed Hatake, County Engineer

FROM THE DRAFT HIS REGARDING SAFETY OF THE BRIDGES AND FIND
HIS ALIAS REFER TO LETTER SENT.

HAENA BRIDGE #1
Pr. 1-7: Constructed in 1912 and upgraded in 1934, in spite
of many repairs in 1957 and 1973, serious corrosion of steel
and structural elements has caused the bridge to deteriorate to a dan-
gerous state. Since the bridge replacement has eliminated the remaining
life of the bridge to be less than 5 years. In addition to the danger
of collapse, the Haena Bridge has deep right-angle approaches, a
clear width of only 18 ft, and a posting capacity of 15 tons.
Pr. 1-9: Design J1 is essentially equivalent to "repairing"
the existing bridge, because the steel members of the bridge are
so badly deteriorated. For example, some have only 20% of their
original cross-sectional area remaining and when the bridge was re-
paired in 1973, it was not painted because the bridge would have
weakened it. For those reasons, it is improbable that any new
members can be welded on. The bridge in approaching failure at
many points, and "repair" it would require replacement of the
entire truss.

Pr. 11-1: It is very difficult for heavy construction
equipment to get into the Haena area because of the weight
restrictions on the bridges. Also, cannot cross the Haena Bridge.

Pr. 11-2: How or repaired bridge, either two or two-lane,
would have higher load limits and would be able to handle four
lanes, larger school buses, larger fire and police trucks, refuse ser-
vice trucks, construction equipment and other heavy vehicles.

Pr. 11-3: If the Haena Bridge is not replaced or repaired,
it will collapse. Since DOT engineers have inspected the bridge and
estimated their remaining life to be less than 5 years, replacement is inevitable.

Table 1:

<table>
<thead>
<tr>
<th>Description</th>
<th>Weight Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length, 111 ft.</td>
<td>47 tons</td>
</tr>
<tr>
<td>Load restrictions, limit 47</td>
<td></td>
</tr>
</tbody>
</table>
Pavement width would be 11 ft.
Shoulder width: 17 ft.

Table 1 Existing Stream Crossing: Inventory

<table>
<thead>
<tr>
<th>Bridge ID</th>
<th>Description</th>
<th>Length (ft)</th>
<th>Width (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Steel truss</td>
<td>120</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>#2</td>
<td>Steel truss</td>
<td>120</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Pavement width would be 5 mph and stop or yield signs would be posted.

Unko bridges have stopped on parapet walls and the piers are secured at the waterline.

Vallejo Bridge: The 1964 tunnel caused the collapse of the east abutment of the bridge. The remaining west abutment is cracked and rotted from boulders with large voids. There are large cracks in the parapet walls and spalling of a large area of the slab bottom. The reinforcing steel in the slab and the west abutment is corroded beyond use.

Vialli Bridge: The tunneling of 1967 destroyed the bridge. The three existing bridges were constructed as an emergency project and were only intended as temporary crossings. In 1969, a new bridge was added as a permanent solution. The bridge was replaced on all three bridges. This in 1971, the timber decking was replaced on the three bridges.

Pavement width would be 5 mph and stop or yield signs would be posted. The alternative of major repair would differ for each bridge, but would generally consist of raising the deck, adding support for the deck, replacing the piers and abutments, and adding support for the deck structure. The west abutment would have a life of an additional 10 years.

Vialli Bridge: The roadway was designed to carry 12,000 vehicular loads per day. The roadway was designed to carry 12,000 vehicular loads per day.

Pavement width would be 5 mph and stop or yield signs would be posted.
LEAHELI STREAM CROSSING

Pg. 1-31 The Leaheili Stream crossing shows signs of decay and is sub-standard in design.

Pg. 1-37 The major repair alternative would not alleviate the unsafe conditions created by a four-lane bridge without railings.

DATA FROM THE LEAHELI STREAM CROSSING - Table 1 Existing Stream Inventory

MARUA STREAM CROSSING: Concrete on boulders; 22 ft. wide; 35 ft. long; limit 14 ft. Design 14 ft. Posted ---
Date Const. 1912. Latest repairs none.

LEAHELI STREAM CROSSING: Flat steel; 17 ft. wide; 35 ft. long; Limit 14 ft. Design 14 ft. Posted ---
Date Const. 1912. Latest repairs none.

TABLE 1 Symbols:

a. Fail-to-rail; effective pavement is several feet lean.
b. Theoretical (ideal conditions) failure at the yield point stress.
c. "H" is standard 2-axle truck, 14' between axles. "Hr" is a 2-axle trailer and yard, 14'-30" between axles.

Citizens Advisory Committee
P.O. Box 61
Honolulu, Oahu, HI 96714

DIRECTOR'S OFFICE

Admiral E. Alroy Wright
Director
Department of Transportation
699 Punchbowl Street
Honolulu, Hawaii 96813

RB North Shore Belt Road

Dear Admiral Wright,

This letter is a continuation of our committee's recommendations on road improvements, as initiated in our letter of May 2. We would like to re-emphasize that we are making recommendations upon the basis of being a "Rural Scenic Road." This Rural Scenic Road designation we feel is in the interest of, and does not conflict with, the safety, economic growth, and community desire.

A further premise, not clarified in our May 2 letter, is in response to the following statements in the EIS.

"The secondary effects of an improved highway on the quality of life on the North Shore have been a primary concern expressed by residents. The area is rural in character, but improvements in the highway could theoretically facilitate urbanization." (EIS II-1)

And further:

"...A basic condition of the projections was that by 1990, 65% of the residential units and 45% of the commercial units will be developed. In the process of traffic assignment, it was found that the existing highway does not presently limit the traffic volume to the North Shore, albeit its limitation of certain types of vehicles, since the capacity of the highway is not being exceeded. (EIS I-4) [italics mine]

We think that development should be in response to need, and not in response to projected need.

Projected need can translate very easily into creating need. A sort before the horse philosophy. Also, that a re-evaluation in light of the energy crisis and President Carter's proposals may be appropriate.
Our opinions on the road running from the Princeville entrance to Hanalei Bridge are as follows:

1. That signs representing a true hairpin curve be placed on the ascent and descent side of the road, marking the large curve at the Hanalei Bay Lookout.
2. That the road on the west side of the road descending from the above lookout be trimmed and maintained, allowing a scenic view of the river and valley.
3. That the cut in the road made of the Hanalei Bay Lookout should be improved in a planting manner. The East Kalal Trail and Water Conservation Committee should be consulted on this.
4. The present road is of ample width. Additional shoulders should be discouraged as they would encourage turn-offs of the stop-and-go variety, creating a dangerous traffic situation.

Recommendations on the section of road from the Hanalei Bridge through Hanalei Town are as follows:

1. The first three culverts coming off the bridge should be widened. The need to widen the third culvert is of special importance.
2. Again, the present road is of adequate width. We recommend you do not put additional shoulders. There is ample room for distress pull-overs on the grass banks, which is how they are now used.
3. Although we don't know if this is in your jurisdiction, the present situation is that the streams are using harborside right-down to the edge of the Hanalei River. We recommend a set-back from the river to protect its waters from contamination.
4. The maintenance program in Hanalei needs to be upgraded. The grass needs to be cut more frequently and gravel fill needs to be placed in the numerous washed-out areas along the shoulders.
5. In those areas where the ditch is close to the road, and poorly marked, vehicles frequently slip into the ditch. Although just keeping the grass trimmed to adequate in most areas, there are certain areas where additional protection is advised. We recommend that for additional protection telephone poles be laid horizontally between the road and the ditch in the following areas; across from the Post Office, across from the Tahiti Nui, and across from the Trader.

Sincerely yours,
Carol Wilcox
Chairperson, Citizens Advisory Committee

c/c Ed Nakano, County Engineer

Citizens Advisory Committee
P.O. Box 88
Hanalei, HI 96714

Jan 17 85 AR '77

Chuck Swanson, Deputy Director
Department of Transportation
869 Punchbowl Street
Hawaii, Hawaii 96813

Hi North Shore Bell Road

Dear Chuck,

I am writing pursuant to our conversations of June 8 and 9. Our committee has submitted its testimony on the road from Kulamoku to Hanalei. We emphasize that we are dissuming road improvements only, not the bridges. We are meeting with Delbert Hirsch on the Hanalei to Poe section on the 15th. We will need a while to consolidate our recommendations, and we ask for an extension to July 1 to submit them.

We are proceeding on the assumption that we have been, or will be, granted this extension. We would, however, like to add that this and future responses to our Committee's proposals and requests be in written form. The present situation of verbal communication exclusively is putting us in the position of speaking for the DOT, which is inappropriate.

We would like to re-state that we have only begun to discuss the question of bridge replacement. That we have received an independent analysis of the bridges when we delivered on June 3. That we have not made a response to our recommendations before we can tackle the questions of replacement vs. reconstruction, one vs. two-lane. Replacement-in-kind vs. new design. That we have been very clear that our requests for extensions are on road improvement recommendations, and that bridge recommendations will follow only after serious dialogue with your department, as requested in our original testimony of May 1, 1977.

Sincerely,

Carol N. Wilcox

Jan 17 85 AR '77
Citizens Advisory Committee
P.O. Box 81
Haiku, Maui 96714

Admiral Z. Alvery Wright, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright,

The Citizens Advisory Committee would like to work with the Department of Transportation on exploring the possibility of designating the North Shore Belt Road, from Kahului to Haiku, as a "Rural Scenic Road." The Historical, Cultural, and Scenic Importance of this area has already been recognized by the County in its designation as a Special Treatment Zone.

To the best of our knowledge, this idea of a "Rural Scenic Road" would be an innovative venture in the national sense. We feel that it has great merit, and feel that the State of Hawaii would be an appropriate one to initiate such an undertaking.

The Hawaiian had an ancient saying, which translates:

If you must see Hana before you die
And then you may die in peace.
For you have seen all the beauty there is.

The area we are dealing with is, beyond dispute, one of the most beautiful in the world. It has been often recognized as such by history's world travelers, and today by the Hawaii Visitors Bureau.

The area is further unique in that its beauty has been largely unblemished by high density development.

There are many factors that have allowed the character of this area to remain somewhat protected. Among these are citizen participation, continued agricultural use, land ownership patterns, water table, Jenna AA interior, remoteness, exposure to erosion and flood, and county planning. Not the least is restricted accessibility.

There have been threats on all the above controls. And now the proposal is to make a major change in that one most effective control: that of transportation. The JOT proposal, if implemented, will create greater traffic, a far greater development capacity, and an irreversible negative impact on this very special area.

In order to protect this area from the above, and to set a precedent for other similar areas, this committee suggest exploring a "Rural Scenic Road" designation.

Our goals would be as follows:

1. To establish a new category of "Rural Scenic Roadways" for special areas, in which the Federal Government will be able to participate.

2. To have an ordinance passed on the State and/or County level to support a "Rural Scenic Road" for this historical, cultural, and scenic special treatment zone.

3. To support the local population's expressed and documented feeling that they wish to retain the life style of their home, that they live here by choice, that they wish control of their environment.

Within these broad goals, we at the moment recognize some more specific ones in regard to transportation and the North Shore Belt Road. We would be glad to discuss these with you.

We hope that the DOT will combine its efforts with ours to effect such a proposal. We feel that this is in the best interest of our economy, our tourist industry, our present population, and our future as a viable State.

We urgently ask for your response in this matter.

Sincerely,

Carol M. Wilcox
Spokesman, Citizens Advisory Committee
Abiral K. Alvey Night
Director
Department of Transportation
620 Paul School Street
Downtown, Nevada 89503

Dear Abiral Night,

The Citizens Advisory Committee is very disappointed that you choose not to sit down with us and discuss the problems of the Department of Transportation's Eiel North Shore Toll Road project. We have been anticipating this meeting, promised by your Deputy Director and even posted final recommendations on the bridge until we could discuss your engineering assessments.

The Citizens Advisory Committee was aware of the road and bridge problems if the Department had been able to discuss them with us. We would like to suggest that the B.O.T. develop new guidelines for discussions with groups and individuals truly concerned in giving input.

We urge you to reconsider the suggestion of discussion on road and bridge changes with members of this Committee, as we stated in our original letter of April 20 and repeated for the past two weeks, an informative dialogue should be part of the process of public review of your plans. To meet given assurances by your Deputy Director that we would have such an opportunity.

I am including the Committee's completed recommendations, a summary sheet, as well as a copy of a letter we received last week from Senator Clark.

Thank sincerely,
Carol M. Evers
Chairperson

CITIZENS ADVISORY COMMITTEE
P.O. Box 81
Henderson, Nevada 89009

June 20, 1977

R

The Citizens Advisory Committee, concerned with the State's plans for extensive highway improvements to the North Shore Toll Road, has not met on a weekly basis since April to study, discuss, and recommend what it feels are better ways to approach the North Shore highway problem.

We are exploring the possibility of designating the highway from Eiel to Eiel as a "Scenic Road." To do this, we have asked the State Department of Transportation to gather information on such a designation. We have written (and received a favorable reply) from Senator Beans, the "Scenic Road" designation, the Committee believes, in the interest of safety, economic growth, and community desire.

The Committee recognizes the need for safety improvements, but it feels the historical and scenic North Shore should be created in part by the rural highway serving it. The B.O.T.'s recommended highway and bridge changes would change the total environment of North Shore.

Our reasoning, in part, is based on the following statements in the K.C.S. (June 1-4), "...the area is rural in character, but improvements to the highway could theoretically facilitate urbanization." (and) K.C.S. (June 1-4), "...in the process of traffic management, it was found that the existing highway does not presently limit the total volume of traffic to the North Shore, but its limitation of certain types of vehicles, since the capacity of the highway is not being exceeded."".

To think improvements should be in response to unplanned need, and not in response to unplanned need, projected need can be translated all too easily into creating a rut before the horse philosophy. The K.C.S. discretion of growth in nourishing.

To help us study this problem, the Citizens Advisory Committee (which in itself consists of representatives from a variety of community organizations) set with the following special resource people: Public Chief Roy Brown, District Director High DeNecker, and Jim Adam, an advisory structural civil engineer from Eiel. Out of these meetings has come valuable information and suggestions which the Committee submitted in the B.O.T., including an in-depth report on the eleven Eiel and Eiel bridges.

We have been assured that our reports and concern would open a dialogue between us and the B.O.T. Of particular importance to us are the engineering specifications we have found in the K.C.S. on bridge conditions and our new findings. It is the opinion of our consulting engineers that most of the bridges are structurally sound and can be repaired or replaced to solve the stated and all traffic problems with two bridges. We refer to the opinion of the citizens of Eiel 1011 N. Topaz, Antelope Director, West County Office, National Trust for Historic Preservation, that, "the bridge is important. It is a perfectly constructed, even though necessary, should be considered only as an interim measure." Realizing to our regret, we are very concerned that the B.O.T. will not sit down as we proposed.

Carol M. Evers
Chairperson

625 19
Mr. Carol M. Wilcox
Chairperson
Citizens Advisory Committee
P.O. Box 81
Hanalani, Hawaii 96714

Dear Mr. Wilcox:

I wish to acknowledge receipt of your communication of June 21, 1977, concerning the possibility of designating the Kualii North Shore Belt Road as a "rural scenic road." I personally believe that such a formal designation would indeed significantly help to preserve Kualii's beautiful scenic heritage. Accordingly, I have contacted Mr. Gary Everhart, director of the National Park Service of the U.S. Department of the Interior, to obtain his views on this possibility.

As soon as I hear from Mr. Everhart, I shall be sure to reconact you.

Regarding the possibility of my visiting with your association, I would suggest that you contact Mr. George Kawakami, my local Kualii agent, to arrange a mutually convenient time.

Sincerely,

Daniel K. Inouye
United States Senator

cc: George Kawakami
[Page two]

K. A. Wright
June 30, 1977

The Writing Office

The writers wish to express their appreciation for the time and effort you have put into this project. We believe that the final product will be of high quality and will be beneficial to all involved.

We understand that the budget for this project is limited, and we have taken steps to ensure that our work will be completed within the allocated funds. We have reviewed our plans and have made adjustments where necessary to stay within the budget.

We also appreciate the support and encouragement we have received throughout the process. Your guidance and feedback have been invaluable in helping us to refine our work.

Thank you again for your trust and confidence in us. We look forward to working with you in the future.

Sincerely yours,

[Signature]

[Position]

[Company Name]
Dear Admiral Wright,

The Citizens Advisory Committee toured the above mentioned road from Honolulu to Kaa to inspect and report improvements. We recommend that the bridges be repaired, not replaced, and that road improvements be initiated as follows:

1. Reinforce the entire road from and including Kaa to just beyond the Kaa Bridge. Reinforce to follow the alignment and width of the existing road.

2. Better pull-offs at all the bridges.

3. Horizontal alignment of land into curvilinear, approximately 2-3 feet off the ground, for all new and replaced guard rails.

4. Guard rail on the north side of the Kaa Bridge.

5. Signs indicating severe blind curves at Kaa and again at Hanalei.

6. Fill in not less than one mile of the entire length of road. Kaa and Hanalei are particularly bad.

7. Create a beach and small park at a point where the road cuts into the beach before the Hanalei Bridge.

8. Trees and vegetation in both areas. There are many trees along the road, due to past headwatering. All trees outside the road should be restricted from headwatering. Consideration should be given to planting grass and shrubs.


K. A. Wright
June 30, 1977

11. Big Wakea in one of the few remaining areas with rain on the primary vegetation. The location of new, deep pools and groves in Waimea should be studied. Consult Ralph Blocker.

12. Check rock falls and build up where needed on the upper, right side of Waimea Park.

13. Waimea Park is a series of rather definitely presenting an unsightly and aesthetically pleasing situation. The western edge of the property is in need of a brush clearing. Consult Ralph Blocker.

14. The present road is an inadequate one, but more prominent is required. As recommended guard rails along the road, with two or three access openings, at that point would not allow. Further inspection of the proposed new road and provide a parking area near the road.

15. Lahaina Road — which is under development. We recommend that the existing road be improved and extended for access to the beach. Consult Ralph Blocker.

16. The final report should be given to the State Planning Board and the potential land uses should be considered.

K. A. Wright

June 30, 1977
June 30, 1977

E. A. Wright
Page three

visitors to enjoy the views - without again creating a hazard, plus
taking up the total of the view-side parking area available. As
an alternative, we feel that the quality is better preserved for
visitors and residents, by a shuttle or limousine service.

We recognize that not all the above recommendations are within the
B. O. T. jurisdiction. To ask that you and these on to the proper
agency.

Sincerely yours,

[Signature]
Carol D. Wilcox
Chairperson
Citizens Advisory Committee

EVALUATION

NORTH SHORE HILL ROAD CITIZENS ADVISORY COMMITTEE
(5/17/77, 5/2/77, 5/31/77a, 5/31/77b, 6/12/77a, 6/12/77b, 6/30/77a,
6/30/77b, 6/30/77c)

Note: The preceding letters were submitted within the time exten-
sion granted to the Committee. There has since been on-
going correspondence between the Committee and the State
and Federal highway departments dealing primarily with the
proposed improvements to the Princeville to Kailua segment.
The correspondence and related comments in the preceding
letters, will be evaluated in the supplemental Final EIS for
that section of the highway. The comments evaluated here
relate to the Kailua to Princeville section.

A. A single shoulder would not provide an adequate pullout for
disabled vehicles.

B. All three curves require varying degrees of improvement,
some of which can be accomplished within the present right-
of-way.

C. The trees will be trimmed as required. The high cost of
installing and servicing underground utilities makes this an
unfeasible measure in this case. The signing needs of the
highway is being reviewed.

D. Occasional pullout areas, in lieu of continuous shoulders on
each side of the road is not appropriate. This type of
design is below generally acceptable minimum standards.

E. Without almost weekly mowing, which would be too costly,
a grassed shoulder stabilized with berm fill or a similar
method would appear to be an shoulder at all, and would not
serve the objective of providing security to the driver.

F. Bus stops will be considered, but the present road cuts can
not be retained if the highway is to be widened and provided
with shoulders. The present "median" might be replaced
by special landscaping, but to leave this bottleneck between
two improved sections would be very hazardous.
G. The pavement width should be consistent with generally accepted safety standards. Landscaping can be used to obtain an appropriate visual edge, and create an awareness of speed.

H. Underground utilities would improve the visual qualities of the area, but because of the high cost, this proposal will need to be further evaluated. The estimated cost for overhead utilities is $130,000 compared to $500,000 to relocate them underground.

I. a. This recommendation has been implemented.
   b. Edge lines are not generally recommended for road widths less than 20 feet wide inasmuch as this can result in a hazard on narrower pavement widths.
   c. This type of informational sign is presently considered non-conforming. (See Q, below)

J. Rather than topping the trees, it is recommended that the trees be trimmed on the roadside up to a limited height. The cost to top would be considerably more than the $25.00/tree estimated cost if only trimming is done.

K. a. Both the horizontal and vertical curves at this location are substandard with regards to sight distance.
   b. The inset diagram for curve #2 was not published correctly in the RIS. The inset diagram should have been turned 180 degrees.
   c. Neither curve that can be negotiated safely at the design speed is necessary and compatible with your request of Item 12.

L. The pavement is definitely in need of structural reconstruction. If only repaving is done, it would be a superficial treatment to the major problem which exists below the black top.

M. Traffic to the Princeville Airport does not warrant a left turn storage lane. The developer of the airport may, however, install a left turn storage lane at his own cost under a work permit which we would be glad to issue.

N. The suggested no-parking lines have been implemented.

O. If this is necessary, the developer of this enterprise should be responsible for installing this improvement.

P. The traffic projections made by the State Department of Transportation are conservative, in that they reflect only a portion of the total Princeville complex being developed in the 25-year projection period. This is generally the best approach when it is felt that projections by others are too high or where there is a great amount of uncertainty in the ultimate development. The conservative nature of the traffic projections made in 1975 is demonstrated in Figure 4 (page 1-13 of this Final EIS), which has been revised to show actual 1977 traffic (i.e., two years after the projections were made). The 1977 AADT on the Kahaliiwai-Princeville section was near or above the 1978 projected value, and the actual 1977 traffic on the Hanalei-Thulea section was higher than the 1980 projections. However, these facts notwithstanding, the primary justification for the proposed improvements is safety, not traffic increase. The fact that a safer highway will also have a greater capacity is unavoidable.

Q. The route in question has previously been designated on the State's Scenic Highway network. However, as it is also a Federal-Aid Primary Highway serving as a rural minor arterial it should conform or have the potential of conforming to safety standards consistent with anticipated average operating speeds, average daily traffic, and other related characteristics.

R. See Q, above.

S. That the recommended widening will change the appearance of the Kahaliiwai to Princeville highway segment is clear. However, this impact is mitigatable through careful design and landscaping. The recommended highway widening will not induce growth, and will therefore not change the total North Shore environment. Likewise, the intertidal realm of the Hanalei Bridge will not be growth inducing since the capacity will not be increased over what it has been in recent years. The growth inducing impact of ultimate restoration or replacement of the Hanalei Bridge will be discussed in the Princeville to Hanau supplemental Final EIS. The primary need for the improvements in safety, which has been substantiated.
Mr. D. Naka
District Engineer
Department of Transportation
State of Hawaii
Hilo, Hawaii 96726

May 4, 1977

Dear Mr. Naka:

This letter is submitted in response to your request for input on improvements in the Kalihewai to Kauai section of the Kualoa Belt Road. Princetown Corporation is generally in agreement with the alternatives recommended by the Department of Transportation in the recent draft EIS submitted for review from Kalihewai to Princeville. We feel these are needed for the slower foot travelling lanes and four foot shoulder delineated in alternative W-2. It is hoped that the pavement can be structurally improved and the shoulders stabilized, can be gained. These bad curves exist in this stretch.

We feel that it is aesthetically and historically important to rebuild the bridges in a historical manner, hence, would have no objection to design 1-A of the Hanalei Bridge. We would prefer single lane bridges over Wainiha to Hana.

We also request that four lane be provided at the entrance to Princeville, Princeville Center and Princeville Airport. We would request further time to study the specific route design alignment and details when finalized.

Yours truly,

Dana A. Cordwell
Executive Vice President

P.O. Box 173, Hanalei 96714; Telephone 826-9333; 6561

U.S. Dept. of Transportation
Hawaii Division
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Mr. Ralph T. Sogawa, Division Administrator

Subject: Kalihewai Belt Road, Kalihewai to Kauai Section (Kaua'i Belt Road, Kaua'i, Hawaii) - Draft Environmental Impact Statement.

Gentlemen:

The following comments regarding the above subject were prepared for the 'Ilima Club, Hawaii Chapter, for Life of the Land and for myself as a resident and landowner on the North Shore of Kaua'i.

ACCIDENT STATISTICS: pg. 1-3, Draft EIS gives accident statistics for the improved section of Kauai Highway in the years 1973 and 1974, and states the accident rate in the project area is 3 to 12 times higher than the rate for segments of Kauai Highway that have already been improved. In Table 2 the accident rate for the areas with the highest accident rates (Hanalei Bridge to Akui Rd. and Hanalei Bridge to Wainiha) are given for 1975 but not for 1973 and 1974. The area with the highest accident rate, (Wainiha Rd. to Hanalei) has the accident for all three years, 1973, 1974 and 1975. Why weren't the statistics listed for Sections B2 and D4? According to canoe Chief of Police Roy Hirao, the section of the road, Kalihewai to the Hanalei Bridge had a speed limit of 50 mph in 1975 and 1974, whereas after 1975 the speed limit was reduced to 35 and 25 mph. The speed limit was not extreme for the area.

It is obvious that the area with the highest accident rates in 1975 (Hanalei Bridge to Wainiha) are the areas where the greatest number of people are concentrated and where there is the most traffic congestion along the SHORE OF KAUAI HIGHWAY. There are only three houses on the highway between Kilohana and Hanalei Town and the only side roads with the exception of cattle crossings, are at the entrance to Princeville airport, Kauai Station. These houses are located where cars are parked on the roadside.

Between Hanalei Bridge and Wainiha there are many houses, many tourist camps, stores, shops, restaurants, churches, gas stations, the post office and many other places where people congregate. Infrastructure is severely limited at the grocery stores, gas stations, the restaurant and some of the shops. Cars and trucks parked along the highway often protrude onto the highway and are parked in a haphazard manner. During the day there...
are many residents and tourists walking along and crossing the highway. The accident occurrences (Fig. 1) of the KIS do not tell us if the accidents involved cars, bicycles or pedestrians. Were there serious injuries to passengers, drivers, and vehicles, or were none of the merely dented fenders? How many were due to cars sliding into the ditches on the mauka side of the highway across the only "night club", Tooti Frooti?

According to news items in the Garden Island paper between 1/26/76 and 4/20/77 there were 18 accidents on Kaua'i involving 13 fatalities and various injuries ranging from critical to minor. Of these 18 accidents, nine were car-car accidents of which six crashed into utility poles or guard rails, or slid into ditches. These accidents happened on the North Shore and in one of them the driver and three passengers were treated for minor injuries and released.

As stated in my comments in the KIS, A-81, the number of fatalities involved in accidents on Kaua'i is so small that they can be ascribed to a single accident. In answer to written comments by the Outdoor Circle, Kaua'i Chapter, a letter from the office of the State DOT Director says: "We feel highways should be designed to accommodate all drivers in relative safety, including reasonable provisions for human error due to drinking, drugs, personal problems, etc." (Emphasis added).

In a letter to the editor of the Garden Island, Cayetano Gerardo, Administrative Assistant to the Mayor of Kaua'i, said: "I have received numerous complaints concerning the safety of our highways and roadways throughout the islands of Kaua'i. The government is charged with the responsibility of making our highways and roadways as safe as possible. However, this function is limited to a percentage of the total safety picture. The greater percentage of safety belongs with the people who use our highways and roadways and this is to say that safety is really the responsibility of people themselves. It is my contention that no matter how safe the highways and roadways, it is still the responsibility of the people to provide and practice full safety."

BENEFIT/COST RATIOS: On Fig. 1-18 the KIS discusses these figures for the Kalihiwai to Princeville Alternatives A, E, and W. These figures are meaningful to the general public because no information is given on how the ratio was achieved. In the unique rural beauty of the North Shore considered if so, what is it worth? Benefit/cost were not given on proposed improvements from Hanalei River to Hanalei Town, nor on the proposed improvements to the bridges and roads.

TRAFFIC PROJECTIONS AND PRINCEVILLE: The EIS says (Fig. 1-29) that traffic projections indicate a significant increase in future traffic due primarily to the development of the planned community of Princeville. "Also contributing to traffic increases are the development of other areas of the North Shore, the normal growth in population and vehicle usage, changes in travel patterns and an expected increase in visitation use."

However, in answer to the suggestion from the Kaua'i County Engineer (Pg. A-50) that road widening and shoulders where possible should be considered in the Hanalei Town to Waimea section, the State DOT reply to the mayor of Kaua'i in: "In Hanalei Town to Waimea: From a highway capacity viewpoint, traffic projections do not warrant anything more than our proposed bridge replacement. Widening of the existing road was considered in our earlier studies. Unfortunately, the low traffic projections and high estimated costs made this alternative economically unfeasible."

Further on (Pg. 11-1 of the EIS) in: "The Princeville area is the only part of the North Shore that is suitable for development, and an improved highway would benefit this development - providing that the scenic qualities of the North Shore are not degraded by the highway." (Underlining added). At the August 13, 1975 public information meeting, Mr. Don Caswell, Project Manager for Princeville stated that Princeville neither wants nor needs the proposed improvements.

HIGHWAY IMPROVEMENTS AND THE NORTH SHORE PLAN: As further justification for the proposed highway and bridge improvements on Fig. 1-23 of the EIS, it is stated: "The Development Plan for the North Shore assigns first priority to improvement of the Kuhio Highway to Hanalei including a new bridge over the Hanalei River." (Underlining added).

This statement is to be questioned. Throughout the North Shore Development Plan and its accompanying Socio-Economic Plan it is reiterated over and over the need to retain the scenic beauty and the low-keyed life style of the residents of the North Shore. Regarding the highway, the Plan contains the following.

"The Development Plan recognizes the State's alignment for Kuhio Highway from Kahiliwai Stream to Hanalei but recommends realignment in two places. From Waipio Stream to Waimea it is recommended that the existing road alignment remain and be improved and the proposed alignment further inland be considered as a less desirable alternate route." (Pg. 101). (Underlining added).

According to the Public Hearing Fact Sheet for Kuhio IMaui Road Kalihiwai to Hanalei, April 29-30, 1977, planning studies were initiated for various highway sections between Kalihiwai and Waimea in 1966. The North Shore Plan is dated Sept. 30, 1972 and the Socio-Economic Plan is dated May 1972. The study began in 1971 and the plan was enacted into law Dec. 1974. The authors of the plan were acknowledging but not necessarily recommending the plans of the DOT.
Other remarks in the North Shore Plan regarding the highway area:

Fig. 19. "The road alignment from Hanalei to Haena should remain essentially unchanged to retain the scenic views of the coastline. The only exceptions would be Waipa and, Wainiha Valleys, where a more wainiha alignment would allow the coast road to become an access road to the ocean*."

Fig. 20. "All roads should be improved but not to the detriment of the landscape or result in the elimination of the rural character of the North Shore*."

Fig. 33. "The movement pattern structures the environmental experience. The most important characteristics of that pattern in the North Shore area is its basic simplicity and directional control...simple in that alternate routes are not available and that the center of both location and direction are usually, although not always, controlled in that access and egress are along the same route (although the experience is different) and that there is termination rather than continuity. The acquired design logic is profound and effective*.

"The speed of movement and sequence in which the experience unfolds is as important as the route and direction. Both currently contribute to the overall experience, although new road alignments could begin to give an undesirable uniformity to travel speeds".

"(Underlining added.)"

HIGHWAYS AND GROWTH CONTROLLING FACTORS. The EIS says (p. D 1-1. A): "Now, buses cannot cross the Hanalei Bridge so there is presently no demand in Hanalei for the type of tourist concessions that cater to large tour groups."

As a matter of fact, the big tour buses do cross the Hanalei Bridge in spite of the weight restrictions. Some of them even go as far as Lumahai. The EIS goes on: "The present inadequacies of the highway are therefore growth-controlling factors. However, the highway is not the only (nor the best) growth-controlling factor operating on the North Shore. From the Hanalei River bluff to the end of the road at Haena there is virtually no section of the North Shore that is not subject to flooding, tsunami inundation, unsuitable soil or steep unstable slopes...The County zoning codes and building ordinances (e.g., the North Shore Development Plan Ordinance) recognize these limitations and restrict development accordingly.."

The zoning codes in the North Shore Development Plan are (and refer to) the same codes of the County of Kauai in the areas of restricting development in flood plains, tsunami prone areas and slopes. However, the codes are not as strict as to stop development in these areas and numerous exceptions have already been given (including two sub-divisions). Obviously widening the highway and the bridges would accelerate this process.

Several times in the EIS reference is made to the North Shore Plan and the County zoning ordinance in the context of growth control, ignoring the fact that exemptions can be made to zoning codes. In a special "last duck" session (12/22/77), the County Council of Kauai voted 3-2 to approve the widening of 2,9 acres of land on Kuhio Highway in the heart of Haena Town, from Neighborhood Commercial to General Commercial. The approval was approved by the Mayor and no rezone were given for this action. To quote the Garden Island of Dec. 27, 1976: "The Planning Staff, the North Shore Advisory Council, the University of Hawaii, the Health Dept., among other bodies opposed the General Commercial. Not one person spoke for it—not one. Hundreds opposed, by letter, by petition and in person. (See attachments No. 1, 2, 3, 4 and 5.)"

The zoning ordinance says: "General Commercial shall include uses and services which are less frequently used and which are normally supplemented by and dependent upon the aggregate activities of a central commercial center serving several residential neighborhoods and which are less compatible with the environmental qualities of residential districts."

This upcoming can lead to pressure for further upcoming. Zoning is not the province of the BNA but the following reply to residents of the North Shore in regard to their concerns about development (EIS, pg. 11-2) is an irresponsible rationalization: "...the highway itself would not induce growth or development in the area. Growth in tourism is a "problematic" impact because many local residents view tourism as an intrusion of the privacy and present being "on display" to the large tourist masses on the other hand, tourism is an important element of Hawaii's economy and it is necessary to encourage and facilitate it..." (After North Shore residents that tourism is good for them is also outside the scope of the BNA's responsibility). There are many residents of Hawaii who do not want to see their rain and perhaps ultimately, only industry, becomes tourism.

It is a recognized fact that highway construction and improvement are major land use determinants of land use. The argument presented is that a highway is needed to serve existing traffic needs. But highways are built to serve future traffic needs. The argument is made by the BNA. It is a large extent is created by the very existence of a highway."

Highways and improved highways cause land values to rise. The Socioeconomic Prologue to the North Shore Development Plan says: "As land values rise, so do property taxes which are levied on an ad valorem (in proportion to value) basis. At some point, the combination of higher land value and increased taxes is likely
to lead the landowner to sell his property, or at least convert it to use...generally this is beneficial to society as more compact development reduces costs of constructing, maintaining and using roads, schools and other public services. A hotel or service station placed in the midst of rural land will cause surrounding land speculation and expectations of future gains. The landowner is caught in the middle. His property taxes are being used to provide or improve public services he may already consider to be adequate...seemingly the only way to emerge a winner is to give up, sell the property and reap the appreciation in land values. However, for the many farmers and residents with leaseholds, even this solution is not available...the lease holders are paying for property they do not own and as the property values escalate the taxes go up. (Socioeconomic Prelude, Pg. 39).

On Fig. II-3 of the EIS is: "With an increase in commercial facilities at Princeville, growth in tourism can be expected". There are several references to Princeville in the EIS. If the highway plans are primarily to benefit Princeville perhaps that is why there are no benefit/cost figures in the EIS on the plans for that part of the highway from the north side of the Hanalei River to Limahuli Stream crossing.

In response to my comments of March 30, 1976 (incorporated into the Draft EIS) regarding development at Princeville, the DOT replied (A-56): "Should substantive events cause a significant decrease in traffic predicted over the 20-year design period (of Princeville) we will reconsider the portions of the project that have not yet been implemented". (Paren added).

The land at Princeville was conveyed to Kauai County Development Corp., a Colorado corporation, by deed from the Lihue Plantation Company, Ltd., a Hawaii Corp., and recorded in the Bureau of Conveyances of the State of Hawaii in Liber 74, pg. 57, on March 1, 1972, and development began that year. As the printing plant Phased Improvement would be finished by the end of Dec. 1980. How do you reconsider portions of a project that have not been completed after it has been completed.

Regarding the DOT's paragraph 14 (A-09) in the EIS, I do indeed consider the figures in the North Shore Plan regarding Princeville contrary. The Plan says that Princeville is anticipated to continue as a second home and resort community, but it also predicts a population of 5,000 full time residents. The plans for Princeville include a number of single family residences including second homes, retirement homes and some full-time residents, as well. On pg. 46, the North Shore Plan says: "The future population and extent of this community is difficult to assess, but it is highly intriguing since such an effort has had yet to succeed in Hawaii."

In reply to my comments of March 30, 1976, the DOT says (A-09): "Thank you for the current information on the status and occupancy conditions at Princeville and your opinion on the preferences of the tourist who come to the North Shore area". The "opinion" was not mine but that of the authors, of the North Shore Plan, who say on Pg. 67: "Who are these visitors and why will they come? Unlike the standard tourist who comprises the traditional backbone of the Hawaiian market, they will not be seeking the status of the Mauna Kea and many of the smaller hotels...rather, they will be those desirous of the Kohala connection and similar smaller, American.... those who seek the essence of the real Hawaiian in the real world with real people living in real social patterns...they will be those who increasingly need the exhilaration and the peace, the stimulation and the encouragement of magnificent nature-loving people, their creations and their activities. The North Shore will not be for everyone and it shouldn't try to be".

The current information on Princeville is no better than it was in March 1976. Princeville's leases have been $791,000 in 1976 $761,000 in 1975 and $516,000 for the first nine months of 1975. Of the seven major multi-family developments, all have "tough times", according to Mr. Henry A. Perry, president of the Princeville Corp. Four of these condominium projects have gone into bankruptcy (one of them twice) and one of the projects has not been completed. Land sales and resident starts have been lagging. This information was printed in section A-6 of the Jan. 17, 1977 Honolulu Advertiser.

Princeville is one of the prime tourist areas designated by the County Planning and has the largest area of land in resort/residential zoned - nearly 1,000 acres. A request by Princeville for a change of zoning from agricultural to urban on nearly an additional 1,000 acres was denied by the Planning Commission because the first increment was not developed as expected in the six years of its existence. Princeville has not yet been successful in attracting any buyers for the 2 areas zoned MH-20 (hotel).

The Dept. of Education has dropped plans to move the Hanalei and Kaua'i schools to Princeville due to opposition by parents. A shopping center with 21,000 ft. of space under roof is being built at Princeville (which it is hoped will stimulate growth of Princeville) and a shopping center is being built at Lihue, (and the owner of the current commercial zoned land at Princeville says he intends to build a shopping center). The population of the North Shore is not big enough to support three shopping centers and it is unlikely that the people at Kilauea and Hanalei will patronize the center at Princeville. -7-
The latest efforts to shore up Princeville involves a merger with Consolidated Oil and Gas, Inc. of Denver (Consolidated already owns 97% of Princeville Corp., and was operating it as a subsidiary). Princeville shareholders will receive one share of Consolidated common stock for each two Princeville shares they hold.

Hanalei Colony Resort on the beach at Wainiha, with 88 units available to tourists is the only other major resort destination on the North Shore. The data on the resort show that it has never been financially profitable and that the owners and tourists alike like its low-keyed style and the serenity of the area. Many of the guests return year after year because it is so quiet and off the beaten track.

MITIGATION MEASURES: Under Primary Impacts, G., pg. II-3 of the EIS, the DOT says in regard to SOIL EROSION AND SEDIMENTATION, that cuts and fills on the Hanalei River Bluff could be reduced with retention walls or cribbing, but this would require reevaluation and would be costly. The EIS also says (II-5) of the Saint Eileen and the Hanalei River Bluff: "These areas are too steep and rocky to have developed much of a soil cover. Mitigation measures for the River Bluff suggested by the DOT are rounding off or piling the face of the cuts. Pg. II-6, 7 and 8 discuss soil erosion control, such as mulching, installation of temporary bases and slope drainage, sediment traps and siltation ponds, seeding with fast growing grasses, etc.

Both the County and State have mitigation and soil erosion control measures. However, with the best of intentions, given the rainfall on the North Shore, the nature of highway construction and costs of delays to contractors, it would be extremely difficult, if not impossible, to control soil erosion in areas too steep and rocky to have developed much of a soil cover.

As pg. II-5 directly above the ocean where wind speeds of less than 3 mph were "observed less than 5% of the time...", a place where no one but a caretaker lives. The wind patterns and speeds are very different in Hanalei Town where the majority of the population lives (and including Princeville) in Hanalei.

FLOODS IN HANALEI: On pg. II-9 and 10 of the EIS, data is given on floods in Hanalei Valley, which says that on an average of every 36 years they result in crop damage, livestock losses, and isolation of Hanalei. Fig. 12 shows the flood of record, Nov. 1955. It should be noted that Hanalei County of Kauai has allowed construction of numerous houses in the flood plain shown on this map. In the winter of 1975 a flood covered approximately the same area. There was no loss of crops, cattle, or people's lives. The crops (taro) are always raised in fresh running water and the cattle move to higher ground as the water rises. Floods in the Wainiha area are much more dangerous in terms of loss of life, primarily because young family (strangers) transiently occupy fragile huts in low lying areas in the path of potential floods. Either they are unaware of or indifferent to the danger.

As the EIS says: "Seasonal flooding generally causes only inconvenience and closure of the highway for several hours". In a letter to the Mayor of Wainiha (April 1974), the DOT says: "We are willing to cooperate in a flood control project with the County and/or the U.S. Corps. of Engineers." It would be disastrous to attempt to attempt such a plan and would be the end of the town growing in Hanalei Valley. The Mayor speaks of flooding in the new post office. This flooding is caused by improper drainage of the water from the taro fields and not from the Hanalei River.

AIR QUALITY AND IMPACTS: Pg. II-19 of the EIS says: "Under the projected traffic volumes and the Federal Polar vehicle emission standards, the total CO emissions should decrease nearly 38% between 1975 and 1991..." The Clean Air Act Amendment (S. 3219, H.R. 10990), were not enacted into law by the Senate in 1976 and the auto industry, in planning its 1978 model, has acted as though air pollution controls will be weakened in the future. In early 1977 the administration (in Washington) asked for delays in auto emissions standards (until 1979 for carbon monoxide and nitrogen oxides). The auto industry and pressure from labor unions have had great influence on Congress toward delaying the needed standards. Obviously, no more cars are manufactured under inadequate standards, the time when pollutants are decreased will be delayed.

Widening the bridges from Hanalei River to Haena-Hu would obviously make the area accessible to many more tourists and "stretch-out-out" which would increase the costs of many in the quiet residential area of Hanalei Town to go to the "black pot" beach and other areas. The Inland of Puu Poa I in Kauai Community Center means to leave the motors of tour buses running---and they are left running on the alinement, will not be turned off. Air pollution thus created would adversely affect Hanalei Town and the public park particularly during the summer and fall Kaua period.

ROAD PAVEMENT: This would definitely be a problem in Hanalei Town, Wainiha and in Haena-Hu. Because it is necessary that people travel more slowly when approaching and leaving
the sites of the one-way bridges, noise is not now a problem, but buses with their noisy motors would destroy the serenity of those areas.

Under mitigation measures (pg. 11-23) the EIS says that the proposed highway improvements "...would not have an adverse noise impact, as noise mitigation is not required. To prevent Future impact, no residences or public facilities should be constructed closer than 75 feet from the highway centerline without including noise attenuating measures into the design."

This is in contrast to the DOT in ignoring the noise impact on the many existing residences and public facilities that are closer than 75 feet from the centerline of the highway. If the DOT did not feel the obligation to supply noise attenuating measures, those affected by the noise would be left to endure the noise or to try to mitigate the noise themselves, at their own expense.

SOCIODEMOGRAPHY: On pg. 28, the EIS says that in 1974, 1,150 persons resided on the North Shore. According to the Office of Economic Development of Hamai'li, this is an estimate and includes transients who lived in any kind of structures, though not tourists.

The EIS says: "...the Hamai'li Census Tract (the North Shore and the Kilauea area) experienced "phenomenal growth" over this period (1970-1974), a "3.6% increase." The majority of this increase (in population) can be attributed to an influx of persons from the Mainland. "(Pam, added). This information is taken from the "Hamalei Development Plan, A Socioeconomic Preliminary." The "phenomenal growth" coincides with the discovery of the North Shore by the so-called "young maile transients," many of whom lived for varying length of time at "Taylor's Camp" in Hamai'li. Others lived in tents, lean-tos, etc., along the Na Pali Coast in Hamai'li and Hamai'li.

Before this population increase in the early 1970's, the population in the Hamalei Census Tract, the residents of the North Shore, numbered 895. It is difficult to predict what the population trend will be. Some of the transients have moved into more permanent types of dwellings either because they have found jobs or because they are on welfare or living on subsidized housing allowances, usually in caves. However, the majority are still in the category of "floating" population.

The EIS says (11-26), "In Hamalei, approximately 10% of the residents are employed full or part-time in the tourist industry ..." This figure comes from "Hamalei Development Plan, A Socioeconomic Preliminary," Anderson, R. H., et al., University of Hawaii, Departmental Paper 2, September, 1972. The Socio-economic Preliminary dated May 1973 (Anderson, R. H., et al.) gave the figure of 1% employed in tourism and the largest group employed in tourism was Mālela (Guamian). Young maile still constitute the largest group working in tourism and "other" employment in the area from Kalalau to Hamalei. As the Socio-economic Preliminary says (pg. 9, 15), "...most construction workers for resort development and most private residences will not come from within the community, nor will they find it advantageous to move there."

With the exception of the work force now employed in building the shopping center at Princeville, the great majority of the construction workers involved in building both houses and condominiums have been hired by contractors who are also maile.

It is apparently the policy of management at Princeville (as it is at Hamalei Colony), to employ "local" people wherever possible. However, many of the jobs are seasonal and most of these jobs are filled by young maile, but not the same ones all the time.

Though the North Shore Plan has been a valuable source of information regarding the area, it is now nearly five years old and many changes have taken place in Hamai'li in the last five years. The plan makes it very clear that the local people have not (as the EIS says on pg. 11-23) "given top priority to maintaining and increasing small-scale agriculture and have assigned lowest priority to expanding tourist facilities." This was true of the majority of all ethnic groups without regard to income levels or length of residence and it is still true.

Hamai'li is very dependent on the mainland for food and prices are particularly high on the outer islands such as Hamai'li. In recent years, more and more young people (and some not so young) are turning to small scale forestry. This interest is due primarily to the realization that our resources are becoming more scarce and more expensive has spread to people of all ethnic backgrounds and has led to a concern for the land. The people are beginning to realize that unrestricted development, which has resulted from agricultural open space and beaches but also the valuable agricultural lands being pushed off the land by resort and second home development, is resulting in resentment toward the political structure and increased tourism. Many people, particularly the young, live on land which is more suitable for agriculture and are working on the land and in the tourist industry.
number of years, against the "transplants". The long-time resi-
dents object to visits from people who have brought up exis-
ting property and put up "no trespassing" signs. The Prelude says: "In addition to
the fragmentation observed, further disintegration within the
community is brought about by land speculation and the profit
motive. Some land in Hanalei has been acquired for the sole
purpose of selling at higher prices for resort development or
other development possibilities. Not all these investors are
from outside the community; some are long time County residents".

The Sociological Prelude says (pg. 27): "Surprisingly there
were very few differences in the rankings given by various sub-
groups of respondents. Age, education, and income did not cause
any significant differences in ranking community needs. The
community needs (table 1) ranked as follows:

<table>
<thead>
<tr>
<th>Community needs</th>
<th>All residents ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep agriculture as an important activity in Hanalei</td>
<td>1</td>
</tr>
<tr>
<td>Keep the scenic beauty</td>
<td>2 High priority</td>
</tr>
<tr>
<td>Better housing</td>
<td>3</td>
</tr>
<tr>
<td>Ease in getting to shopping and medical services</td>
<td>4</td>
</tr>
<tr>
<td>Opportunities for family outdoor recreation</td>
<td>5 Medium priority</td>
</tr>
<tr>
<td>Chance for residents to meet and discuss community needs</td>
<td>6</td>
</tr>
<tr>
<td>Opportunity for youth to stay in area after high school</td>
<td>7</td>
</tr>
<tr>
<td>Opportunities for youth recreation</td>
<td>8 Low priority</td>
</tr>
<tr>
<td>Keep the population the same</td>
<td>9 Undesirable</td>
</tr>
<tr>
<td>Resort development even if some agricultural land is given up</td>
<td>10</td>
</tr>
</tbody>
</table>

There has been little or no controversy over the proposed
highway improvements in the community. The controversy is be-
tween the community and those few investors inside the commu-
nity and outside the community who want more development on the
North Shore.

In speaking of the constantly changing views the EIS (pg.
11-31) says: "Even at a conservative speed of 30 mph, it is
difficult to take it all in. (This is where the narrow pavement
and sharp curves pose a hazard)." In all fairness, the DOT
stresses in the EIS the scenic value of the North Shore and
admits that many of the proposed improvements would affect that value.
However, the DOT still concluding that the highway must be widened,
realigned, etc., and that the one way bridges must be replaced for
safety reasons.

No where in the EIS is there any mention of the dangerous
conditions that would occur if the bridges are widened. As stated
by the Planning Director of Kaua'i, with the improvements, buses
would travel all the way to the end of the road at Ko'e. The road
through Hanalei Town, flanked by businesses, homes, churches, etc.,
on one side and the drainage ditches on the other would be made
hazardous for residents and visitors in the area. The road from
Hanalei Town is inadequate to handle the huge tour buses. From the
east side of Hanalei Bay to Hanalei the road consists of a series
of sharp curves with a high bank on the land side and steep drop-offs
on the ocean side. The tour buses could not negotiate most of these
curves without driving in the center of the road or crossing the
center line, therefore there would be the possibility of many people
being injured in one accident.

Some tour bus drivers say the tourists come to Kaua'i to see
the famous "South Pacific Bench" at Lumahai. However when it is
suggested to them that tourism could be transferred to mini-homes
at a resting area such as Princeville, the answer is that it would
take too much time. Why should the people of the North Shore or
of all Kaua'i sacrifice one of its most unique areas so that tourists
can spend a few minutes taking pictures of Lumahai, while on a half
or one day tour of the island, and then rush off to the next scenic
destination?

Apparently the DOT hopes to widen the section of the road from
Hanalei to Ko'e in the future if the funding becomes available. This
would be an ecological disaster for the fragile barrier reef's
along the coast, not to mention a probable irreversible scarring of
the thickly vegetated hills.

The EIS says on pg. 11-37 under mitigation measures that ren-
oval of the existing bridges is unavoidable. However, the EIS has
presented the alternative of repairing the bridges which is what the
people indicated they wanted at the Public Hearings and Information
meeting. On the inside back cover of the packet titled: "Why we
Have Public Hearings", the State of Kaua'i, DOT Highways Division
says: "...an honest and reasonable objection, asking questions with an
open mind, or simply putting pressure on the record in favor of, or
against a proposal, will be significant contributions. These
contributions will aid us in making certain that the project's
final plan will have the benefit of analysis by the citizens of
the area." Yet, the inside front cover says: "The responsibility
of selection of the final solution rests with the Highways Division,
and will be based on factual information, including findings uncovered.
ed through the public hearing. The DOT seems to be saying that in truth, "reasonable objections or simply putting oneself on record in favor of, or opposed to a proposal will have little or no bearing on final decisions. Apparently anathema, concerns in regard to air, water, noise, etc. pollution, lifestyle or even the possibility of destroying what the tourists come to see, are not relevant.

The public is told that the joint State-Federal highway program is unique in that the entire cost is borne by those who use the facilities; that Federal Trust Funds money come from taxes on motor fuel, oil, garbage, new buses, etc. Actually the money comes from the direct and indirect taxes paid by every tax payer, not just from the above listed revenues. There is an income-tax deduction for gasoline taxes, which makes road-user charges in a privileged position. You cannot deduct the cost of riding public transportation from your income tax. We are also told that grant-in-aid funds for use in State and County Highways are allocated to the states in accordance with formulas that give weight to population, area, and postal route mileage.

The population of the North Shore is small, the area is unique and there is no home postal delivery. Still the fact that the people of the area have already demonstrated over a period of nearly two years that they do not want the proposed highway improvements, which will be detrimental to them environmentally, economically and socially is not to be taken into consideration? Opportunities also can be improved and widened for public participation in transportation policy making at the local level with a stronger role for citizens and municipalities. The socioeconomic considerations have not been adequately covered in regard to the proposed highway improvements. The DOT has not done, or at least does not consider all the reasons for opposition to improving the highway, or the political pressures that are pro-highways.

In the case of concerns about agricultural lands: The DOT says K (in answer to the State Dept. of Agriculture, A-36) that it will address the impact on pasture lands in the EIS (Pg. A-27). The problems of pasture lands would not be due to the physical fact of the highway improvements, but because an improved highway would facilitate pressures to urbanize many acres of land, now leased for pasture, for so-called "gentlemen's estates." This has already happened to agricultural land in the Kailua area.

At the Public Hearing of August 1975, the Public Hearing of October of 1975 and the Public Hearings in Kailua on April 23, 1977 and in Honolulu on April 21, 1977, was opposed unanimously against the DOT's proposed plans. (See Attachments 10 and 11). The EIS says that petitions received strongly favor an improved highway but that the petitioners against an improved highway were identified as a large North Shore residents or visitors. "While the origin of those favoring the project was not identified, many of the signatures were illegible but those that could be read were checked and none were from the North Shore area."

**Minority Involvement:** Regarding the Federal Highway Administration requirement on minority involvement in highway projects (EIS A-126), I believe that it should be pointed out that in Hawaii's ethnic background cannot be determined by surname because of the large number of inter-racial marriages.

The State Director of Transportation was quoted in the Honolulu Star Bulletin writer Jerry Toms that "The number of State workers and the State payroll are growing at a much faster pace than the total State population, family budgets, private per capita income and the cost of living..." Opponents of increased indebtedness for capital improvements projects (and particularly for speculative expensive housing that serves as tax right off mostly for mainland investors) are accused of causing or increasing unemployment. Ever since the industrial revolution, new inventions, cost-cutting methods, automation, etc. have caused unemployment and even the total disappearance of some types of jobs. Many construction workers are "interim". They go where the jobs are and unfortunately some remain behind after the jobs are finished and join the unemployment and welfare roles. It is becoming more and more obvious that because of restrictions and shortening of energy in the future, many kinds of jobs will be eliminated and other kinds of jobs will take their place. At any rate, highway construction should not be used as an excuse for "make work" jobs.

The Garden Island news of April 27, 1977, quoted K. Alvey Wright, State DOT Director as saying he has no preference concerning the width of improved bridges and roads (in the North Shore area) and, "As far as I'm concerned, they can build one-lane bridges..." However, the article continues, Wright explained that the project must include two-lane bridges or the DOT will lose Federal funding. Accordingly, the new items, the DOT Director said he would leave the North Shore area alone and use the construction funds for coastal if he could but "the only problem is that the bridges are going to fold." In the EIS the alternative of repairing the Waioli, Waipio, Waikoko and Wainiha bridges 1, 2 and 3, would increase the expected life span of 1-2 years to 20 years and replacing the Wainiha Bridges 1, 2 and 3, would increase the expected life span of 2-3 years to 10 years. The question then comes down to which in more important, the Federal funds or the preservation of the North Shore's uniqueness. Comparing the cost of the alternatives to the bridges, it seems that the bridges could be required any times over far less than the cost of constructing modern, two-lane bridges.

**FINISH:** As stated in the EIS, funding of the proposed improvements to the road, bridges (Kailua, Waioli, Waipio, Waikoko and Wainiha), if built to Federal standards would be $704 Federal and...
Construction of shoulders, repaving from Kamalani Bridge to Lihue Town, Kamehame Bridge #1 and #2, Puna and Mililani Stream ferries, would be funded by the State. If repair of the present bridges or replacement in kind (in the same way), were chosen by the DOT, they too would be funded by the State.

The Chief, Engineering Division of the U.S. Army Engineer District, Honolulu, said (April 10): "We suggest that the EIS consider beneficial aspects of the old roads as historic and aesthetic resources and as buffers that filter change and growth." The Kauai Planning Director said, (April 15), "the North Shore...would maintain strong growth control measures, and the highway is one of the major factors...The many improvements to the highway may have negative impacts on the area. It would generate more traffic, thus stimulating more residential or other developments and further taxing our public facilities and parks. Improvements to the existing roads as compared to widening and realignments between Kamalani and Lihue, would be more preferable and would definitely contribute to the growth. It must be recognized that increased developments could be detrimental to the sensitive environment that exists on the North Shore...The Planning Director does not make a positive recommendation for widening or realigning the road, Kamalani Bridge and approaches, Kamalani Highway (road), widening of the bridges Kamalani to Lihue, Lihue to Wailua, or Wailua to Haena.

The Director of the State Office of Environmental Quality Control, Dr. Richard Harland, suggested to the DOT Director (April 10) that he refer the jurisdiction of the highway to the County of Kauai.

Since your proposed improvements make it necessary to conform to federal standards and specifications, one lane bridges will be replaced by two lane bridges. However, if the jurisdiction was given to the county, then perhaps they may be able to have their one lane bridges and retain their existing lifestyle.

Obviously the people of the North Shore are not totally insensitive to the need for safety measures on highways. However, there are a number of things that can be done to improve the existing highway and bridges, which would make them safer for motor vehicles and which would not intrude on the charm of the whole North Shore experience for both residents and visitors.

The highway, (improved section) Anini Rd. to Kamalani Bridge, reflectors are needed on the median strip and on guard rails. White lines should be painted along the outer edges of the highway. Some utility poles are too close to the highway and should be moved back further. Trees on the highway should be removed and the trees along the right-of-way trimmed. Occasional pull-off areas (where possible without cutting into the bank) should be provided in inapproposites a manner as possible for emergency use only.

"Scenic Highway" signs should be used to start before entering the "no-cut" after the Bridge at Kalihiwai. The "S" curve should be realigned into a simple, gradual curve, slightly higher of the present alignment. Off-licence should be provided on the mauka side to the Princeville Airport and also on the mauka side of the Road to Princeville (to provide for future traffic to the shopping center).

Reflectors should be provided on the guard rail, from the beginning to the end of the rail at the highway turn on the Kamalani Bridge, from the beginning of the rail to the head in turn on the Kamalani Bridge, and from the beginning of the rail to the head in turn on the Kamalani Bridge.

At the approach to Kamalani Bridge, there should be a sign that says "One Way Bridge" rather than "Narrow Bridge". (All the way bridges should have such signs on all approaches.)

From Kamalani Bridge to Waimea Bridge there should be turnouts in several places for disincluding cars (also an inconspicuous as possible). Some culverts with are too close to the highway and should be set back and the culverts over the third creek from the Kamalani Bridge should be realigned. Doors of shops, stores and businesses should be realigned. Doors of shops, stores and businesses should be realigned.

N unusually safe off-street parking for residents. Signs should be provided for safe parking. They should be placed in the town to remind motorists that they have paid for parking. The signs on the mauka side of the road by the bare patches should have some type of curbs, markers or shields to prevent cars from sliding into them.

The Waimea Valley Bridge should have flared, rustic design. The signs are needed at the top angles to the road at the beginning of the bridge with reflectors and the narrow sections of the bridge (where the bridge is in different directions) should be replaced to match the wider section in the right-of-way. Median reflectors should be installed on the road from the bridge to the end of the road at Keo's. Kamehame Bridge #1 Kamalani River to the end of the road at Keo's. Kamehame Bridge #1 should be widened because it is so close to the entrance to Haena. The river at Haena and Kamalani streams should not be replaced—they are unique and fit into the area very well. They should be repaired if necessary and signs should be posted to show those of their nature.

The Kauai Visitor Bureau should be asked to cooperate by pointing out to tourists that the North Shore area is a way off-street place—a place to slow down and enjoy the rural atmosphere of the friendly people. Part of that to influence is encountered at this one-way bridge where the situation being improved out a kind of among the residents and tourists.

President Carter proposes to introduce comprehensive legislation establishing a "National Heritage Trust" to protect historic areas. With a little cooperation from the State and the County of Kauai perhaps the North Shore could qualify for this status.
Because Hawai‘i is committing itself to an increased and long-range future of tourism as one of its main sources of income, the State should be looking at things in new ways, trying to encourage “quality” tourism and to preserve the things that will bring that type of tourism to Hawai‘i. One of the most important ingredients for successful tourism is a resident population that does not feel resentful and anxious toward not only the tourists but toward those who are promoting tourism.

Hopefully, the State DOT will overcome its zeal to “improve” what cannot be improved—recognizing that it does not have to carry its construction plans to every nook and cranny of these islands. Hana is the end and it will remain the end. There is no place to go from there.

Sincerely,

Helen C. Hopkins
For LIFE OF THE LAND
HAWAI‘I CHAPTER, SIERRA CLUB

cc: Mr. E. Alvy Wright, Director
State Dept. of Transportation
Life of the Land
Sierra Club

‘No need’ seen for Hanalei up-zoning

Speakers against General Commercial zoning for Larry Chang’s property in Hanalei all emphasized that there is no need for any more development in the town than the present commercial-commercial will provide. Speaking at the Tuesday night meeting of the County Planning Commission, they insisted that the general commercial area be preserved as it is in order to keep the town from sprawling and to keep the island intact.

Mr. Louis N.Restr, chairman of the North Shore Improvement Committee, reminded the commission that without local zoning, the town would be swamped by: “stray cattle, garbage, noise, and fires.”

Mr. N. Restr also pointed out that the town is already overcrowded and that the residents do not want more people.

Mr. Alfred H. Wong, chairman of the Planning Commission, remarked that the town is already “overdeveloped” and that there is no need for any more development.

Mr. N. Restr also emphasized that the town is already “overdeveloped” and that there is no need for any more development.

Mr. H. K. Wong, representative of the Hanalei Merchants Association, stated that the town is already “overdeveloped” and that there is no need for any more development.

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Ching up zoning ok, Council splits 5-2

Ching, a lawyer, asked the Council...
We might be wrong, but—
by Jean Holmes

The outgoing Council left a stain on the... the life blood of the democratic process on Kauai.

Against the expressed wishes of the people of Kauai, in opposition to opinions expressed by residents all over the island, they granted General Commercial zoning to Larry Chang for 18 acres at Hanalei.

Mr. Chang already has Neighborhood Commercial which would enable him to build anything he says he wants to build.

Special use permits could be issued if variances are needed. But, according to Mr. Chang, it is “too much trouble” to follow the democratic route other people do and apply for the permits.

The Planning Staff, the North Shore Advisory Council, the University of Hawaii, the Kauai County Council, the Planning Department, the Police... among others... opposed the General Commercial.

One and only one person spoke for it... one USC, hundreds opposed, by letter, print, and in person, opposing the Council not to grant the zoning. It is an issue which has united all groups of people, ranging from Maluhia to miscellaneous time latecomers.

Yet four members of the Council ignored the voice of the people and listened only to Larry Chang.

Bill Tschopp, Neil Mendenhall and Louis Geidt were not even tried to justify their vote. Their masses had spoken.

Roger Lee ranted on about the land being owned by the Chungs for 25 years, and that they had always paid their taxes. After Planning Staffs against You had explained clearly... in detail... the difference between a regional supermarket that permitted in Neighborhood Commercial and a large supermarket that Mr. Chang’s drawings indicate his plans and which is permitted under the present zoning. Jerome How did not understand and did not want zoning which “depended on interpretation of words.”

Chang also tried to justify his vote with the weak excuse that he does not want the people of Hanalei to “pay resort prices at Palmetto Bay.”

Did the people of Hanalei ask him to save them from “resort prices”? Has he checked prices at Ching Young? And, does he think that General Commercial instead of Neighborhood Commercial zoning will lower prices?

We CONGRATULATE Rose Oon Shaw (who will be missed on the next Council and Robert Yatsuda for their efforts to stop this change being ramrodded through against the people’s wishes.

Mr. Shaw made it clear she is not against development per se, but against this zoning as being premature and诊ing the wishes of the people.

Among the other points Robert Yatsuda made in that several zoning cases in the same area are before the Council, and delay is needed to study how they affect related. Upcoming grant grants in one can be used as a precedent for up-zoning others, especially when it is granted for no reason at all. Why should anyone have to give reasons?

We FOUND TWO THINGS especially surprising:

1. When the Planning Board, the Council, and the Planning Department... among others... opposed the General Commercial.

2. One person spoke for it... one USC, hundreds opposed, by letter, print, and in person, opposing the Council not to grant the zoning.

So what’s the real issue? Not just the zoning change, which under the terms of the C.O.O. will allow other homeowners to argue constructively for similar zoning changes in Hanalei and set a pattern for gradual destruction of Hanalei’s unique character, but solely, in my opinion, the manner in which this zoning change was approved.

Why? There simply was no good reason for approval, since Mr. Chang would have been unacceptable without it, while there are several good reasons against approval, all of which have been stated to the public and the press numerous times, including its being in direct conflict with the C.O.O., the Hanalei Development Plan, the North Shore Advisory Council opinion, the Planning Department’s opinion, and tremendous public opinion in opposition.

Only two recusals of the Council opposed the change, and tried to hold the decision over for the new council. Rose Oon Shaw, an opponent of “zone change,” where reason was not at all clogged, and Robert K. Yatsuda, who noted several good reasons to oppose. Perhaps his vote is for both.

To the other five members voting yes, the following:

HUKILUHANA: Thank you for letting me speak on December 21, and present the council with a petition from 15 Hanalei/Kaua‘i residents opposing the zoning change.

But you or the other four voting for it look at or the public hearing into consideration. Why were you completely silent about your reasons for voting “yes”?

HUGGER HERE: Doing a “zone change” stripped you of meaning power. You stated that Larry Chang has owned the land a long time and should be allowed to develop it. Why don’t you block the C.O.O. and leave it to the zoning law?

JEFFERSON HINOKI: So, a developer shouldn’t be at the mercy of interpretations of “planning” and “zoning.”

The Planning Department report and statement false it said that Mr. Chang could implement his plan under the present zoning law.

Do you doubt the accuracy of that “interpretation” or are you now both a planner and mathematician?

AUAU HUMBER: Another “zone change.” When asked why you supported the zoning change, you should have said “Did you see how few votes I got in Hanalei?” I hope sincerely that you won’t rely on real vote, but you didn’t advertise any such.

LOUIS GIZOLLES: You talked a lot about merit, and then didn’t cite any reasons this zoning change was needed, listing yourself to personal attacks on Councilperson Shaw and Yatsuda. In this base you’ll be chuckling the council next year.

TO THE PUBLIC: Listen, you’re all here. Please try to attend council meetings. That used to be the best entertainment for leis and leis.

Ask yourselves why, where the last meeting of the year to usually 7 or 8 fans and guests, the “good” group your year went from extended time to the usual. A garden and the L&D could stop Hanalei’s future.

As for the zoning change, there is always a possibility. First, talk to Mayor to veto. Second, a resolution to Rescind by one of the L&D groups would allow the new council to decide the question. Third, the people who want to return vote on issue. Finally, there is always a possibility.

Whatever you do, don’t let this one slide. The new council will need to know you are a voice, or they just won’t!
Readers express displeasure with Hanalei upzoning

Mayor Edmund Maloia
City Manager
Liberty, Hanalei

I was shocked and dismayed at your decision to upzone Hanalei with general commercial zoning.

I had put very little effort into the attempt to petition your vote on the upzoning, meaning that the considerable expense and efforts behind the request would certainly mean you, as a lawyer and ex-law enforcement chief, have to face the consequences.

It is now well documented that higher taxes, crime and social tensions increase in direct proportion to the degree and rate of urbanization throughout the State.

The legal and economic interests who advocated the upzoning in the name of "growth" interests will be responsible for the violence and frustration that is predicted to follow rapid urbanization in Hanalei.

Maloia: why don't you go to Hanalei or Waimea and ask some of the non-active local people why they like to keep the turkeys and see if they say it's because the turkeys don't like development?

The last election certainly proves that Hanalei residents represent a majority opinion on this island that says whatever speaks the most must be the "best guy..." you got what you deserve.

Don't blame the politicians for their predicament... when you're spending a bunch of money you want to make sure you get a good return on your investment... even if the job you're after... no position anything. As in Mr. W. Smith's final paragraph in last Sunday's paper "I respect Mayor Maloia's decision. To consider it a vote..." Ha! You see how easy it is to get the impact of a particular column, but it has no meaning for it... but this is a family paper!

Happy upzoning to your vaccine... no to larger and taller buildings... don't count on any votes or representation to the values of the people because with a few exceptions you just don't put that much pressure on other people to sit... or can your heart out!

Glenda Melgares

ATTACHMENT #8
Readers express displeasure with Hanalei upzoning

Mayor Edna Kauapii

To the Editor:

I am shocked and dismayed by your decision to upzone Hanalei with general commercial zoning.

I believe our county government should be better informed and more thoughtful in making such decisions, especially when they have such a significant impact on the community.

Sincerely,

Mayor Edna Kauapii

To the Forum:

The question is - if the mayor had to make a decision, what did he do by signing it?

Sam Aro

To the Forum:

Odd isn’t it how people are only interested in the who’s in charge, not the how and why.

Art Kauapii

To the Forum:

You know, you can’t please everyone. You have to make decisions that are best for the community as a whole.

Mary Aro

To the Forum:

No, you can’t please everyone. But I do think it’s important to listen to the concerns of the community and try to make decisions that will benefit the majority.

John Steiner
To the Editor:

 REGARDING THE HANALEI UPONING...

 TA-DAAAA!

 BARBARA SAY, HANALEI

HANALEI BAY 2001....?

Bay looking toward Princeville

Historic Hawaii photo reprinted by request

March 18, 1977

To the Forum:

This picture, originally published in the "Hawaiian News", is a real shocker and some may recall the incident. Is Hanae to be next? MUST we allow the North Shore Plan to be robbed away from the public? And what about the rest of Maui?

If you really love Maui please lend the more than 1,000 people who have signed the above letter to the Haleakula Welfare Association. The Continental Bailout fund is up in arms against the plan. The beard, which incites an urgent public meeting, is a front for the Maui Welfare Association. Call us at 854-735 for petitions and information.

Hanalei Welfare Association
David A. Kane, President

F-73
Continued from Attachment #6

VINCENT LILIANA (in support): said 200 section allowing one house on three acres of agricultural land would result in “country suits” and separate issuance of quit claims, which would be “extremely confusing.” Would result in higher land prices and eventually result in lower land values as the people are now planning to sell or hold their property, which is not profitable.

WILLIAM M. LILIANA (in support): stated that the county has already experimented with small water systems on agricultural land. Said the county was concerned that the three-month period was too long to allow for the development of agricultural land.

MAY 14, 1977

Farm Bureau supports Kilauea

To the Forum:

Due to our interest in the survival and growth of agriculture in Hawaii, we, the members of the Kauai Farm Bureau have been paying close attention to the welfare of the Kilauea district. We feel that it is the responsibility of the farmer and the consumer to support agricultural activities. We urge theforum to consider the needs of the people who depend on agriculture for their livelihood.

SECOND, while we endorse the lowering of standards for agricultural subsidies because they are necessary for sustainable agricultural operations, we also recognize that a more efficient and effective use of these funds is needed. The removal of subsidies will allow for a more competitive market for farm products.

AFFIDAVITS & OPINIONS

WILLIAM M. LILIANA (in support): stated that the department of land and natural resources should be responsible for the planning and development of agricultural land.

WILLIAM M. LILIANA (in opposition): also concerned with the job situation, said there should be a plan for the development of agricultural land.

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Kilauea plan affects all agriculture

Kilauea Moratorium killed 6-1

The Kilauea moratorium was "delivered indefinitely" Tuesday, capping a week-long debate. Mayor plans for a gunara and prune farm, plans for an agricultural subdivision.

Kilauea was marbled. Junior Hirn and the Council vote was 4-1, with Bob Yamasaki a surprise vote on the "yea" side. Junior Nakamura complained about the weather and corporate enterprise picture.

Councilman Yamasaki said all his questions had been answered when he rose to address the council with a member of the Governor's staff and a representative of C. Brewer.

The moratorium would have put a three-month halt on all subdivision into Kilauea, and stalled plans for C. Brewer for the gunara orchard and processing plant, the prune farm, and the Kilauea Sugar Company lands. The council's action permits the moratorium to be expired after a year.

For C. Brewer, Harold F. Laun&shy;van, vice president for Planning, said: "We are delighted that the council had enough sense to do this.

He said he was not satisfied with the possibility of the moratorium being lifted or even renewed, because "...we have not come to a point where we believe there is a need for it."

Next immediate need, he added, is to develop the prune farm. C. Brewer plans the Kilauea area is the best location for a prune farm. The future of the farm depends on its development.

"We are in the process of making arrangements with the council," Laun&shy;van said. "We have been in touch with the council, and they have been very cooperative."

He said that the court case was "more or less a matter of putting pressure on the council."

The problem, he said, is that the council has not made a decision on the moratorium.

At a meeting of the council, Mayor Mal&shy;lap used the moratorium to express his dissatisfaction with the council's decision. He said he was not satisfied with the possibility of the moratorium being lifted.

Mayor Mal&shy;lap said the future of the prune farm depends on its development. C. Brewer plans to develop the prune farm in the Kilauea area. However, he said, the moratorium has not been lifted.

Mayor Mal&shy;lap used the moratorium to express his dissatisfaction with the council's decision. He said he was not satisfied with the possibility of the moratorium being lifted.

He said that the court case was "more or less a matter of putting pressure on the council."

On the moratorium, Mayor Mal&shy;lap used the moratorium to express his dissatisfaction with the council's decision. He said he was not satisfied with the possibility of the moratorium being lifted.

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On the moratorium, Mayor Mal&shy;lap used the moratorium to express his dissatisfaction with the council's decision. He said he was not satisfied with the possibility of the moratorium being lifted.
Kilauea population would double under proposal, LUC told

by Bob Pickard

The Department Leeward Community Board and the Conservation Department of the State of Hawaii has proposed a plan to increase the Kilauea population by more than 50 percent in the next 20 years. The plan, which has been approved by the Department of Transportation, would allow for the construction of new roads and bridges on the North Shore, leading to an increase in the number of Kilauea residents. The plan has been met with mixed reactions from residents, with some expressing concern over the potential for increased traffic and pollution.

The State Department of Planning and Economic Development has been working on the proposal for several years, and has met with opposition from some residents who feel that the plan will negatively impact their quality of life. The Department has argued that the proposed infrastructure improvements are necessary to accommodate the growing population and to enhance economic development in the area.

Meanwhile, some residents have expressed concern over the potential for increased traffic and pollution. "It's a big deal," said one resident. "We don't need more traffic or pollution." Others have expressed support for the plan, saying that it will improve access to the North Shore and enhance the area's economy.

The Department has also been criticized for not involving residents in the planning process. "They haven't really listened to our concerns," said one resident. "They just want to push the plan through without hearing our input."}

Wright says Hanalei road plan attacked

by Bob Pickard

Haleiwa residents sharpened their protest to a scaled-down Department of Transportation plan to improve Hanalei's roads and bridges. At a public hearing Wednesday night at Haleiwa High School, the DOT had come up with "very strong" alternative for a new design, which would not affect the existing road from the west to the Hanalei Valley. The new design would be in place by the end of next year.

The DOT's original plan, which would have required the construction of a new bridge, was met with strong opposition from residents. The new design, which would involve the construction of a new road, was met with less opposition.

"We're very pleased with the DOT's new plan," said one resident. "It's a big improvement over the original plan." Other residents agreed, saying that the new plan was a "necessary step" in improving the road to Hanalei Valley.

The DOT's new plan, which would involve the construction of a new road, was met with less opposition than the original plan. The new plan was also met with less opposition from the state's Environmental Protection Agency, which had previously opposed the DOT's plan.

"We're very pleased with the DOT's new plan," said one resident. "It's a big improvement over the original plan." Other residents agreed, saying that the new plan was a "necessary step" in improving the road to Hanalei Valley.
Hanalei-Haena

Road protests calmer at Lihue

4/27/77

Most speakers at Thursday's public hearing in Hanalei on Kauai highway improvements were again opposed to the Department of Transportation's proposal, but they did so in a much calmer manner than at Wednesday's meeting in Hanalei.

At that meeting, angry friday residents had stormed out of DOT Kauai District Engineer Edwin Nakama's presentation and disrupted a public meeting on Hanalei's road and bridge projects. County Councilman Billy Fernandez, in a prepared statement to the community, praised the community for its cooperation and calmness.

During public testimony Thursday, Charles Farrow criticized the DOT's plan for an overpass at Hanalei School, saying the proposed overpass would be too expensive and would negatively impact the community.

Nakama agreed that the proposed overpass would be too expensive and would negatively impact the community. He noted that the DOT's plan would require the destruction of local homes and businesses.

Farrow said the DOT should consider alternatives to the proposed overpass, such as a roundabout or a bypass.

The DOT hearing was held to gather public input on the proposed highway improvements, including the overpass at Hanalei School. Many residents expressed concerns about the impact of the improvements on the community and its natural beauty.

The DOT plans to consider the public's input in its decision-making process.
A. Table 2 has been revised to show 1972-1978 traffic accident rates. The highway segment designations were changed in 1975, resulting in confusion when the accident rates are reported by small segments. This confusion has been eliminated by combining the data for all unimproved segments and comparing it with the adjacent improved segment. The accident rate in Hanalei Town is higher than on the Kalihiwai-Princeville section, but both have higher rates than on the improved highway. The rate of accidents is used for comparison, rather than the simple number of accidents, precisely because it is not easily skewed.

B. Traffic projections are taken into consideration in the planning of all highway projects. However, the primary justification for the recommended widening from Kalihiwai to Princeville is the poor condition of the highway, rather than a need for more capacity.

C. The North Shore Development Plan is presently the guiding document for planning, and the alternative proposals are in conformance with that plan. In response to the community's desire for minimal improvement, the widening alternative has been selected.

D. The recommended widening from Kalihiwai to Princeville will not induce growth, since the present highway does not limit traffic flow or types of vehicles. The interim repair to the Hanalei Bridge will not induce growth, since the capacity will only be raised to what it has been in recent years. The growth-inducing impacts of the proposed improvements from Princeville to Hanalei will be discussed in the Final EIS for that section.

E. The Kalihiwai to Princeville widening project will not require major cuts or fills, so the erosion control measures described in this EIS will have a high probability of success. The need for a large and fill on the Hanalei River bluff will be reevaluated.

F. The point of this comment is unclear.

G. The wind record from Kilauea was the most accurate data available, but uses were taken into account in the air quality assessment.

H. The noise assessment shows that by 1988 the improvements would cause only 2 decibels increase over the peak noise level that would exist without the improvements. This is not a significant difference, hence the conclusion of no adverse impact from the project. This is not to say that the normal increase in traffic noise (which would occur with no project) will not be an annoyance.

I. This clarification of population trends on the North Shore is helpful information.

J. Comments dealing with the Princeville to Hanalei segment will be evaluated in the supplemental Final EIS for that segment.

K. See evaluation D, above. The example of Kilauea is more the result of losing an agricultural economic base and losing it replaced by urbanization. The role of the improved highway is insignificant. If anything, routing the highway around the town preserved its rural character.

L. The justification for the project is not to provide jobs, but to provide a safe highway.

M. See J, above.

N. The County is in support of the proposed improvements.

O. Medall reflectors have been installed. Edge striping on a narrow roadway is not recommended, since it tends to further constrict the lane width. Utility poles and other obstructions will be moved a safe distance from the highway. Occasional pull-off areas are not adequate for disabled vehicles. The signing needs of the highway will be carefully reviewed. The "S" curve will be realigned. The traffic volume into the airport does not justify the provision of turn lanes. Recommendations for the Princeville-Hanalei segment will be evaluated.
April 30, 1938

U. S. Department of Transportation

U.S. Highway Administration.

Region 3

Alfred T. Segarda.

Dear Sir:

Since property owners in the vicinity are not included in the

insurer's area, would you agree to the proposal for the

Transportation Dept. dealing with

remaining islands and one island distant from Barneveld to

end of the North road.

Leaving one of the existing bridges

and making a new bridge on the

highest chain of hills of the area

which is so greatly needed.

June 5, 1938

Sincerely,

Phil & Jo Barber

3535 Stonewood Dr.

Sherman Oaks, CA 91403
U.S. Dept. of Transportation
Federal Highway Admin. Region 4
677 Ala Moana Blvd
Suite 613
Honolulu, HI 96813
Subject: D.O.T. Belt Road, Island of Kauai from Kalihimai to Hanua Section

I want to be placed on record as of the above date April 14, 1972, as being opposed to any and all improvements of the proposed project.

At the present time and since 1964, the maintenance of the present highway and bridges has been very poor. Often large pot holes remain in the highway for many weeks. Drainage ditches remain filled with heavy growth for three or four years. Example: Drainage ditch from State Highway, Hanalei, north to Hanua, plugged and closed since state took over highway from County of.

During the days of county control, the condition was not Coot poisoned by herbicide. Back from roadway allowing views to be enjoyed by all. This is no longer the case. Example: Lookout to Hanalei Bridge is like looking through a tunnel with a roof.

A disgrace to say the least. The most neglected and important area of the highway is the Hanalei Bridge itself. It is of great historic value, as are all the other bridges in the proposed project area.

Other than occasional rebar being broken or rusted, the bridge goes for many years without any maintenance, painting or repair of any kind. If the bridge received a good care and rebaruing weeding etc., it would last many years more than the less
I have spoken out on this project quite a bit and will again in the future it may be. In the mean time leave our beautiful Hanalei-Hana area alone. It's a home and do further damage to its life-styles and peacefulness living. Place your superhighways on the West Maui and Kauai (Big Island) areas are already badlyigested. Just don't make a mess of this beautiful area of Kauai.

Sincerely,

Charles Forward Jr.

Box 459

Hanalei, Kauai, Hi 96714

May 4, 1977

U.S. Department of Transportation
Federal Highway Administration, Region Nine
677 Ala Moana Boulevard, Suite 613
Honolulu, Hawaii 96813

Reg: Kalilani to
Hana Section Project

Attention: Ralph T. Segawa, Division Administrator

Dear Mr. Segawa:

I am writing to give our strong preferences and recommendations concerning the DOT project identified above. We are property owners, some to be full-time residents of the Hanalei area (Waihuna Inn Land Ltd and Mt. Iao, Kauai). We are fully aware of the Environmental Impact Statement.

In choosing this area for a permanent residence, out of all the locations in the world, we did so for several overriding reasons:

(a) the incomparable beauty; (b) the lush, tropical, unspoiled, rural setting; and, (c) the strict preservation of the 25-ton zoning feature, which, if it is truly preserved, will save this area from the widespread despoliation of the natural beauty we have seen occur in Maui, Oahu, and elsewhere from build-ups, condominiums and other properties of low-grade tourism.

If there is to be a remaining spot in the Islands of Paradise, let it be this area, protected from "Progress" by strict, restrictive, preservation of the rural character of single lane roads leading directly to the beaches and to the homes of those who love it.

I. DEFEAT: ALTERNATIVE B, HIGHWAY KALUHIWAI TO PRINCEVILLE, INCLUDING ALTERNATE A AND ALTERNATE W.

II. APPROVE:

A. ALTERNATE 3, SEGMENT PRINCEVILLE TO HANALEI BRIDGE;
B. HANALEI BRIDGE TO HANALEI TOWN, 4 FOOT SHOULDER,
    CHAIN LINK, REPAIRS;
C. HANALEI BRIDGE DESIGN ONLY.
H. S. Department of Transportation
Attention: Mr. Ralph T. Segawa
Regarding: Kinau Trail Road Rehabilitation
in Kiana Section Project
Page Two

D. WAIKI, WAIKA, WAIKOKO BRIDGES: SECOND ALTERNATIVE ONLY;
E. WAIHOA BRIDGES 11, 12, 13: THIRD ALTERNATE ONLY;
F. WAIHOA BRIDGES 11 and 12: ALTERNATE 11 ONLY;
G. MAHOA STREAM FORCING: ALTERNATE 11 ONLY;
H. LIMAHUII STREAM CROSSING: ALTERNATE 11 ONLY.

An it is well known in the Department of Transportation, it has been repeatedly demonstrated that the residents and individual property owners should depend upon the strict control of development through existing environmental and regulatory and use constraints as managed by the county of Kauai’s Planning Department.

In closing, let us plead that the preferences of the residents of the north shore, whose investments and continuing taxes highly qualify them, should be given overwhelming preference over the self-serving pettiotors who sign developmentally-inspired petitions. They are usually neither residents, nor property owner-taxpayers of the area.

Sincerely,

[Signature]

H. P. Greenstock, M.D.

[Signature]

April 24, 1977

Dear Sir:

We have just completed five days of vacationing on the island of Kauai, northern part.

We learned from persons living in Hanalei that outside interest are attempting to further exploit this unique area, the first step being to widen Kauai for highway traffic.

Kauai should preserve its prime areas and other distinctive features. It is needed in its wild appeal. It soon be no big mistake to exploit, even pristine beach and valley as it should be to blended Diamond Head with its new apartments.

The tempo of life should prosper.
Slow down in this beautiful pastoral setting. The narrow bridge acts as a deterrent to fast driving, thus constituting a safety factor. Of course, there should be a few wide spots along the road to enable cars to stop for picture-taking, to protect bridge railings, etc.

Many tourists treasure the sun-baked and undeveloped parts of the island, and knowing this is a source of satisfaction. Irrespective of the importance of balance, from the standpoint of overall tourist appeal, it seems to us very short-sighted for the State of Hawaii to place itself at the mercy of a single industry, namely tourism.

Just for our record upon which tourism depends may be in short supply within two years. The availability of agricultural land would then be essential both for industry and food.

We hope you will use your influence to eliminate further development at Hanalei.

Yours very truly,

Royer W. Hicken
President C. Hicken
PLEASE DO NOT OVER THE FLOOD
gates to green speculators who
need easy access to a beautiful
region.

ONE LAST THOUGHT: Our world is
in danger, speeding up, can "Hawaii"
survive a lifestyle that sensors
us whizzing by each other in
mirrored boxes? It's refreshing
to see a human design feature
that makes genuine interaction
a necessity: "After you, please.

What always lull us to sleep
is how we treat our kids. When
people drive, they are
visually, and emotionally, cocooned.

Let them, (and us), fly.
May 10, 1977

The following statement is in response to the Draft EIS for the Kahili Belt Road Project - Ho'oma to Kahili. A basic cost-benefit analysis applied to the findings of the EIS will reveal one undeniable conclusion.

The main reasons presented justifying the proposed changes are: 1) The need for easier access to the area, 2) The unsafe nature of the highway in this area, as determined by the high accident rate when compared to the remainder of the road, and 3) The deterioration of the bridge and highway construction.

To alleviate this problem, overly drastic improvements are proposed, i.e., a two lane concrete grade bridge crossing the Hualalai River, downstream of the existing structure. Also proposed is the removal of several historic bridges between Hualalai and Ualena, to be replaced with two lane bridges.

Upon reviewing these proposed "improvements," I believe we must ask ourselves several questions:

First, is there really a need for these major improvements? On page 1-4 of the Draft EIS, it is stated, "In the process of traffic assignment, it was found that the existing highway does not presently limit the total volume of traffic to the North Shore. This study, along with that of several residents who have said that the projected traffic increase has not materialized (see Appendix to EIS, I-6), leads to the conclusion that indeed, the existing structures are large enough to handle the area's traffic volume."

That same paragraph further states that the current road does not restrict the passage of certain types of vehicles, such as large buses, heavy trucks and cranes. But, is there really a need for these vehicles in this area? The adverse impacts of large tour buses traveling through this small rural community are plain: noise, smoke, and street pollution as well as increased traffic and population. The easy access to large trucks and cranes will likely mean increased construction, and I am sure such plans are already in progress.

Accident occurrences for the Kahili Belt Road for 1973 and 1974 are shown in Figure 3 of the Draft EIS. While it is true that the number of accidents are high in proportion to the other areas of Kona, I would like to point out that these accidents should not be attributed solely to the narrowness and condition of the road. The facts are that 66% of the accidents occurred at night, and that most of the other major roads of Kona are well lit. This area is notorious for its lack of street lights. Well placed street lights that blend into the surroundings are surely a relatively inexpensive solution that will pay off in reducing the number of accidents.

The deterioration of the present road structure is perhaps the only justification for the proposed changes that has merit. If State Highway assessments are to be believed, some of the structures have only a remaining three year life span. However, as stated earlier, because there is really no need for drastic changes in these structures, I would suggest only minor modification, what are classified "safety improvements" in the Draft EIS, i.e., reinforcing the rail guard wideners. These bridges need improvement, and I would suggest replacement in kind and of no larger size, as it is the quiet nature of these one lane bridges that provide much of the esthetically pleasing rural atmosphere of the Hualalai area. Indeed, residents have said that the one lane bridges have always worked fine for them, and tourists still have access with relative ease. This alternative also provides the attractive benefit of the lowest cost.

The next question we must address, is whether the proposed changes are wanted. In Chapter II, the EIS states that local residents view tourism growth as an invasion of their privacy and that they give top priority to maintaining small scale agriculture and lowest priority to expanding tourist facilities. Should not the overwhelming demand of the residents in the area be complied with? Or shall we, from afar, force them to live in an environment we have provided for them?

In Chapter II, the EIS also speaks of growth being controlled presently by the inadequate highway. This section concludes that improving the highway would not result in increase in development because of natural restraints i.e., flooding.
 tsunami inundation, unsuitable soil and steep unstable slopes, and the County Zoning Codes which limit construction around these natural constraints. This is clearly a shortsighted and unjustifiable conclusion. Today's architects and engineers can easily overcome these natural restraints, and zoning codes can always be changed. Thus if the proposed changes are made, an increase in development is inevitable, contrary to the wants and needs of the Hanalei population.

The final question to address is what are the unavoidable adverse impacts of the proposed improvements? For assistance in answering this question, I shall consult Chapter IV of the Draft EIS, and add to its somewhat biased presentation.

Of major concern is the replacement of the historic Hanalei Bridge, which for years has symbolized the gateway to tranquil Hanalei, and indeed, of which many have said, "everything else is but a passing over the Hanalei Bridge". The loss of this historic landmark would destroy the rural atmosphere of the area, not to mention the permanent damage to the adjacent Hanalei National Wildlife Refuge. This refuge is the home of four species of endangered waterfowl, and construction here would greatly set back any progress they have made.

Another major impact is the previously discussed growth of development, which is not only self-destructive, but unwanted by most of the resident population.

Construction of replacement bridges is on the immediate horizon as well as close to that shore in all instances. Because of this, I do not believe it is possible to make an unqualified statement that "the project would not produce any unavoidable adverse impacts to the coastal zone." The construction alone would do much to damage the existing ecosystem, as well as permanent damage that would be done due to the changes.

We must now look at a cost-benefit analysis of the proposed changes. The only truly justifiable benefit of the changes would be the improvement of the deteriorating road conditions. The costs due to such a change include damage to the rural and aesthetic beauty of the area.

Increased pollution, unwanted development, and great expense to the taxpayers. A reasonable and relatively inexpensive alternative would seem to be the addition of street lights in dangerous areas and replacement in kind or repair of the existing structures. We must take into consideration the wants and needs of the residents, and not haphazardly create the space for development that once started, will be impossible to stop.

In conclusion, as Mark Twain was quoted in the Sierra Club book, "Kauai:"

"No alien land in all the world has any deep strong charm for me but that one, no other land could so longingly haunt me, sleeping and waking, through half a lifetime, as that one does here. Other things have come, but it abides; other things change, but it remains the same. For me its bay airs are always boiling, its summer seas flashing in the sun; the pulsing of its surfbeat is in my ear; I can see its garlanded crests, its leaping cascades, its plump palms dancing by the shore, its rosy sevants floating like islands above the cloud shelf; I can feel the spirit of its woodland sojourns, I can hear the plains of its breezes; in my nostrils still lives the breath of flowers that perished twenty years ago."

Will this beauty be lost?

Craig G. Nakamura
David Nakashima
Scott Enzer

Hono

96816
EVALUATION

CHARI NAKAMURA, AND OTHERS (S/10/71)

A. At no point has increased access been presented as a justification for the proposed improvements.

B. Less extensive improvements have also been proposed. The recommended widening from Kahului to Paia is to Princeville in the minimum improvement that will meet safety objectives.

C. The need for the project is safety and improved structure, and traffic increases.

D. Comments relating to the Princeville to Hana section will be evaluated in the supplemental Final EIR for that section.

E. Lighting is one contributory factor, but poor roadway geometry is more important, and the roadway and improving the dangerous curves.

F & G. See H, above.

P & G. See H, above.

April 21, 1971

Edith Stano
State Highways Engineer
Department of Transportation
Hono, Hawaii

Sir:

I am writing in favor of the proposed two-lane bridges and widening of the roads from Kahului to Hana.

Reasons Favoring the Proposal:

Safety:

Wider roads allow for more maneuvering and clearance between opposing vehicles. If a truck and a large car pass each other, the car usually forced onto the grassy shoulder. And if it has been raining, that can be critical. There is this reasoning that as the roads get bigger, our feet get heavier. That being the case, let's blame our foot and ourselves.

Convenience:

I wish to create the roadways without having to step out and wait at the bridge for a string of cars. This type, some say that one-lane bridges slow the traffic down, but the reverse is true--the traffic is actually quickened.

Countless number of times I have observed two vehicles approaching from opposite sides of Kalakaua and Kalima bridges and upon meeting the other, actually speed up to be the first one there and then continue on without having to brake, stop, and wait for the other to pass.

The eventual "over the bridge first winner" is usually:

1) the one with more guts
2) a large truck or pickup
3) a large car
4) or a rented out junk show insurance is covered by the State anyway.

not rarely a "no matter what" driver.

In closing, I feel that the North Shore having one of the fastest growing areas in the State should have an improved roadway system.

Yours truly,

Baron H. Kaname

Marina, Hawaii
April 15, 1977

DIRECTOR’S OFFICE

Director, Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813

REG: Kauai Belt Road

Dear Sir,

I am pleased that the Department of Transportation has listened to the community of Hanalei and Haena, and that you have changed your specifications on the road also that you have submitted alternatives on the bridges. I believe all bridges replaced should be of the same style and one-lane, in the same location.

Hanalei and Haena are places of great beauty, a beauty one should take time to enjoy. I believe that road approaches from Kauai to the top of the hill at Princeville should be maintained as is and lower speed limits be enforced. Emergency turn-outs could be constructed where they would not interfere with the natural beauty.

In terms of buses, mini-bus type would be advisable to use in the valley, transferring from the large vehicle to the mini-bus. This smaller vehicle could provide more jobs. The change station could be at Princeville, or at the Seaside turnout. A smaller bus would give the visitor the advantage of seeing the scenery in a more intimate way and the North shore would be remembered as a unique experience.

The Governor has publicly advocated a limit to growth and the need to preserve our wonderful natural beauty. Widening the road and doing away with the rural and picturesque feeling of the North shore in order to accommodate short time visitors demonstrates great insensitivity to the feelings and desires of the residents and their future investment, the children of Kauai.

Sincerely,

Marilyn Pollock

PH: 735-2747
May 7, 1977

R.G. Dept. of Transportation
Federal Highway Admin. - Region Nine
670 Ala Moana Blvd., Suite 643
Honolulu, Hawaii 96813

Att'n: Mr. Ralph T. Segawa

Subj: Kaalani Belt Road Ballihale to Moana Section Project

Dear Mr. Segawa,

By this letter, I am hereby opposed to the proposal to widen the bridges and highway as shown on the plans proposed for the project.

Our objections are registered as frequent visitors to the area. Taxpayers, as owners of real property in the subject area, feel that our property may temporarily be displaced from the expansion of public facilities. When therose is sold, we are left with nothing. The present beauty of our Pacific treasure would be destroyed forever if the road and bridge were widened. The beautiful tree that makes the area unique to our hearts.

Building roads is not needed on the north shore. Only Kaalani's north shore and San is left for those of us who want to escape to live or to relax. The quiet beauty of Hawaii Pacific would be destroyed forever if the road and bridge were widened. The very beauty of the tree now operates would like to exist. We would be destroyed by their presence.

As taxpayers, we oppose the unnecessary and wasteful spending of tax dollars on the expansion of public facilities and materials for such overbuilt purposes. As an example, we propose for the Kalanai Bridge estimate for an expenditure of $900,000 versus $47,000 to provide needed maintenance only. If the $900,000 is not needed over 20 years, the annual cost of operation, present value calculation, etc., is $52,800. The maintenance would provide 7-10 years of life. Even at seven years this is only $62,000 annually. Overall the projected cost is $14,477,000 versus $5,000,000 for maintenance. This represents over eight and a half million dollars of potential waste -- money, resources, of waste destruction in the name of progress.

The residents are, in fact, opposed to any active widening project. The environmental study confirms this view. Plans needed should be used to expand the area as needed. This would be a waste of construction in the name of progress.

It is rare indeed when we fully agree with the planning environmentalists. This time, however, we are right.

Please register our vigorous objections to the widening of the bridges and highway covered in the subject project area.

Sincerely,

[Signature]

John H. Roberts, M.D.

2765 S. Yamato Ave.
Marina Heights, CA 92135

May 7, 1977

S. F.W. Hilldale Blvd.
San Dimas, CA 91773

Director of Transportation
State of Hawaii
501 Punchbowl St.
Honolulu, Hawaii

Dear Sirs,

I am in Hawaii on a business trip and have been to the islands of Maui, Molokai and Lanai. I have been to Oahu with my family several times in the past for combination business/vacation trips. Oahu has changed greatly since my last trip here and for the better. I would not care to spend a vacation here. Over there was a city that desperately needed a good public transit system, it is Honolulu.

Maui is a small replica of Waikiki and I do not enjoy having to stay in a hotel there. Business associates in Honolulu suggested that I visit the Island of Kauai. I have just spent four days there in the Kauai district, a place so beautiful and unspoiled that I intend to come back as soon as possible with my family to spend more time there.

I was fortunate enough to meet some of the so-called "local" people in Kauai who made my stay there so much more pleasant because of the kindness of the area and the past history. From them I learned that your department has plans for widening and straightening the road and widening the unique one-way bridges. As a resident of the State of California, I know from experience what easy access by way of improved roads can do to rural areas. Much of my beautiful state has been irrevocably spoiled by urban sprawl and highway traffic.

Hopefully none of the rural areas of the United States can be preserved so that our children and grandchildren can enjoy them as we did when we were children. I would like to suggest that you leave the Hawaiian area as it is. As the saying goes, "stop talk" and people should be encouraged to slow down and enjoy the magnificent scenery.

Sincerely,

[Signature]

5450 West Hiliadele Blvd.
San Dimas, CA 91773
Dear Mr. Ralph Sagawa:

Regarding the proposed highway and bridge construction of Kalihau to Honalu, Hawaii.

As a property owner of Kalihau, Honalu, Kalalau Colony Resort, I am vitally interested in opposing the upgrading of existing bridges and roads in load capacity and lane widths on the grounds that it would change the overall atmosphere and life style of the residents as well as destroy the attraction it holds for tourists.

It is also clear to us that the existing low speeds directly reflect the low incidence of fatalities and serious injuries in the Kalihau to Honalu area.

We also feel maintaining the status quo could best meet the interests of the taxpayers.

Please include us on any mailing list of activities or information concerning these subjects. Thank you.

Sincerely yours,

Harry and Kathleen Steward
Much of what I want to say was said last night and tonight especially, so I'd like to add a few words.

I have felt that the north shore is a very special place - a kind of deal that is going to he needed more and more by people not only of Kauai, but of the nation and the world. As other places are filled up with concrete, parking lots and artificial turf, we are all going to need a place where we can go for recreation, meditation, and/or communing with nature to refresh our souls.

My family's only vacation spot is Kauai where we spend two to three weeks every summer where we have gone for more than 20 years. My husband always says, "Why should we go anywhere spending lots of money to really enjoy a vacation? Many good hundreds of dollars to come to Kauai - to the most beautiful island - and we are so fortunate to have Hanalei Bay right in our own back yard!"

I know who have been on the north shore and/or anywhere on Hanalei have much of the beauty and tranquillity of Kauai for granted. I would have had not our children and I had gone to the mainland to its west and returned with renewed appreciation for the mountains, valleys, and the beautiful seasides. They have helped us to see our island with new eyes.

As someone said last night, Hanalei Bay is indeed God's gift to us and that he has given us for our painting brushes as he cannot improve on God's work.

Keeping the one lane bridges and the present roads will control the growth and keep Kauai the beautiful island that it is - which is our Governor's goal. I believe.

Our Mayor Higashig wants to increase tourism as he has stated a couple of years ago - let's not let them destroy what tourists come to see on this lovely island.

I realize the necessity of safety - of strengthening some of the old bridges.

Mr. Harold Kamakahi, the bus driver and Mr. Robinson pointed out last night that is necessary and perhaps it is - if they are all restored. However, let's please keep the picturesque and maintain as best we possibly the historical significance and beauty of the bridges and their spans.
III. PETITIONS

Following circulation of the Draft EIS, the State Department of Transportation received four petitions and "form letters", three in favor of the proposed highway improvements (565 signatures) and one opposed (658 signatures). The petition statements are given below (the petitions themselves may be reviewed at the State DOT office).

1st. Petition

"We, the undersigned, hereby support the concept of the complete realignment of roadways and the construction of concrete bridge leading into Hanalei for the following reasons:

1. Provide the people of the County a first-class federal highway through the North Shore for safe and efficient services;

2. Eliminate the hazardous curves and narrow road shoulders considered to be unsafe and dangerous;

3. Minimize the cost of maintenance and repairs of a concrete versus steel constructed bridge.

4. Provide for better ambulance service."

No Date, 493 signatures, all from Kauai communities outside of the North Shore.

2nd. Petition (Form Letter)

"This is a written testimony in favor of a new Hanalei Bridge. Recently there were two accidents within a span of a week. Fortunately no one was killed. The old bridge is a menace and very dangerous to the citizens and school children of Hanalei. I believe that some day the State of Hawaii will have a large lawsuit on it's hands if this situation is not rectified.

F-93
Another situation that should be taken care of is the drainage system in the Hanalei Town area. If the drain ditches are dug deeper we would not have cesspool problems and drainage problems."


3rd Petition (Form Letter)

"This is to go on record that I am in favor of the Department of Transportation's improving the Hanalei to Haena Roadway and two-way bridges for the safety of the travelling public.

Presently the roadways are too narrow with inadequate shoulders for emergency stops and to provide adequate guardrails along sheer side slopes. The recent mishap of a vehicle plunging 150 feet to the beach would not have happened if adequate safety facilities were provided. The Hanalei, Waikoko and Wainiha Bridges are inadequate and hazardous with low load limits and poor guard rail provisions. Merchandise and materials being trucked to Hanalei cost considerably more because of the low load limit allowed on the bridges which affects all the residents of Hanalei to Haena.

The people objecting to the safety improvements are being obviously selfish and are not concerned of the safety of others who live and visit Hanalei. Life of people are too precious to forego the much needed and belated improvements. Your concern of the safety and well being of everyone is appreciated."

Dated 5/11/77, 10 signatures, no addresses.
4th Petition

"We the people of Kauai consider the roads and bridges to the end of the road in Haena, scenic, beautiful, and fully capable of handling all our needs. We the under-signed protest the widening and drastic expansion of the roads and bridges, resulting in the inevitable damage to the delicate environment of the North Shore."

Received 6/14/77, 658 signatures with addresses, all but a few from Hanalei and other North Shore communities.
IV. EXCERPTS OF PUBLIC HEARING TESTIMONY RELATING SPECIFICALLY TO THE KALIHIWAI TO PRINCEVILLE SECTION

Hanalei, April 20, 1977

Mr. Robert Schleck, Kauai Historical Society

"...We have also received information on scenic roadways and are working toward designating the highway from Kalihiwai to Haena as the scenic highway for the people of Kauai...."

Ms. Pam Beck, North Shore Belt Road Citizens Advisory Committee

"...We of the Committee take the position that the scenic road should definitely begin at the end of the present improved highway at Kalihiwai. In order to achieve this, we have, in a limited amount of time, come up with a number of alternatives.

Dealing with only the stretch of road from Kalihiwai Bridge to the Princeville entrance, we note that the DOT proposes two 11-foot lanes with 4-foot paved shoulders. We suggest 10 or 11-foot lanes with only one shoulder, preferably of grass.

The DOT proposes to straighten three curves on this stretch. Its up on the map here. We propose the need to straighten only one of these curves. We've driven along and the only one that we could find was a problem of the three, one maybe needs to be straightened out.

We suggest that the Eucalyptus trees be topped, for safety; that the utilities be pub underground; and that adequate signs be posted both for information and for safety...."

F-96
Mr. Howard Yamaguchi, Yamaguchi Bus Service

"...On the first increment, the Kaliihiwai-Hanalei area, there is one point a little past the Hanalei-Princeville air- strip that we feel is dangerous. Now, the reason is that it's not -- not that it's not wide, but that's the area where the drivers start picking up speed, okay, because of that curve, and they can't see it.

On your way -- let's see -- on our way to Kapaa, that's when the drivers usually come to our lane, okay...."

Mr. Jeremy Harris

"...It's my contention that, first of all, Dr. Marland's suggestion that possibly the roads could be transferred to the County. I feel that should be further explored both by Pam Beck's Committee and by the Department. And I think that only after a very in-depth analysis of that possibility should any further decisions be made.

If that proves impossible for some unforeseen reason, I would recommend that no change is needed on the Kaliihiwai to Hanalei bridge section.

In reviewing your statistics, the accident rate per million vehicle miles in this stretch of road is only .15 higher than that for the entire island, which I don't believe is statistically significant...."
Lihue, April 21, 1977

Mr. Jack Rodrigues

"... First of all, how many of you realize when this Federal-aid program came to Hawaii, to Kauai, especially. It started way, way back, 1938. 1938, 39 years after, where are we? From Lihue to Kalalau, 28.5 miles. Thirty-nine years to construct this number of miles. Now we got 13 miles to go to Haena. At this rate we should see another 18 years.

Well, I'm glad I represented my great grandchildren because I might be a great great grandfather. Now, I'm not trying to point a finger at anyone but I think Kauai has been a stepchild when it came to having Federal funds on highways. That's secondary, but I don't understand the State's plan. First we build a primary highway from Lihue to Kalalau with modern roads, modern designs, then all of a sudden the State reverts itself and says now let's build a secondary road from Kalalau all the way to Hanalei Bridge and past Hanalei Bridge is something that's pretty deep and I can't get involved too far right now, but I want to speak to Hanalei Bridge.

Why a secondary road? Fifty-feet right-of-ways. Does the State realize that the County subdivision ordinances require 50-feet right-of-ways? Just for subdivisions. Road pavement's 20 feet, someplace 22 feet, that's wider than what you planning for the primary road all the way to Hanalei...."

Mr. Charles Forward Jr.

"...Another thing, I'm amazed with the energy crisis that we're obviously facing in the United States now and Hawaii being an insular state or being an island state, will be particularly hit by this energy problem, that the State is even contemplating wider highways. It just don't make sense, that's all...."
Mr. Arnold Nurock

"... The prime consideration in all this supposedly is safety and a lot of accident statistics have been put up, but they're rather vague. And the answers presume to be to widen the road, straighten the road and improve and widen the bridges because I think that's the way engineers think about things. But a careful analysis of the actual causes of accidents in those areas and where precisely they did occur would be rather interesting and might lead to the conclusion that precisely the things they're talking about doing would increase the accident rate. And I don't think that any shred of evidence has been given thus far to indicate one way or the other whether that's true.

Mr. Paul George

"... I feel sure we do need a lot of repairs in the road because of minor accidents due to the faults in the road, but I feel knocking it down and putting a whole new road would really not help the safetyness at all, as the other people have said...."

Mr. William J. Sollner

"...So I'm taking the position that whatever you do on the North Shore or anywhere else in the state from this point on, provisions for bikeways should be included in plans for highway construction improvement, restint of existing routes, whatever...."
Ms. Jenny Hutchings

"...I have seen in Ohio, where my family lives, roads that have been straightened from lovely curving roads to one lovely straight highway where my car can go 80 miles an hour if they don't catch me. I mean it's really neat and all the curves are gone and all the pleasure is taken from it in the name of progress. Technology today is an octopus that is growing into everybody and slowly squeezing out their life. It's taking away your green grass. It's taking away your trees. Look at your parking lot with your big supermarkets. How many trees do you see there any more. I get very unhappy about it.

If you want to beautify your hills in Hanalei and on the way up the road to Hanalei, why don't you take the red dirt that has been left from the new roads that have been built to straighten the old roads and plant some bougainvillea, some Filipino orchids, put the natural plants back. They're all gone. There's nothing left but the red dirt.

Someone else mentioned the mountains slowly eroding and falling down because you build your new roads and you leave the red dirt lying there to be eroded..."
V. UNRESOLVED ISSUES

For the Kalihiwai to Princeville segment of the project, the primary unresolved issue is the treatment of the "entrance" at the beginning of the project. The loss of this visual node is an unavoidable adverse impact. The desire to the Outdoor Circle and the Citizens Advisory Committee is to keep it as it now is, giving the highway a definite rural atmosphere. However, to retain the narrow box cut will not be possible with the improved highway cross section, and the access road to the Anini Vista Estates Subdivision. The State Department of Transportation will continue to work with these two groups to arrive at an acceptable landscaping approach that will preserve the character of the area.

The question of archaeological resources can not be fully resolved until ground is broken, since there could theoretically be subsurface remains. A reconnaissance has been conducted, and no sites were found. If any artifacts are uncovered during construction, work will be stopped and the SHPO notified.

For the Princeville to Haena segment of the project, a supplement to the Final EIS (includes Section 106 requirements) would have to be prepared and approved before implementing any major action.

F-101