REPORT NUMBER: FHWA-HI-EIS-76-03-F

KAUAI BELT ROAD

KALIHIWAI TO HAENA

FAP Route 56, Kauai, Hawaii

FINAL

Environmental Impact Statement

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION
Highways Division

ENVIRONMENTAL CENTER
University of Hawaii
2560 Campus Road
Honolulu, Hawaii 86822
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),

June 23, 1980

Date

Neil Dismough

Director
Office of Environment and Design
Federal Highway Administration
Region Nine
June 13, 1980

Mr. Donald A. Bremner, Chairman
Environmental Quality Commission
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Mr. Bremner:

Subject: Recommendation for Acceptance - Environmental Impact Statement for Kauai Belt Road, Kaliihiwal 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,

George R. Ariyoshi

be: Mr. Richard L. O'Connell
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SUMMARY

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 Kalihiwai to Princeville. This Final EIS presents "recommended" improvements for the Kalihiwai 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 18 feet to 22 feet, and adding 4-foot paved shoulders with 4-foot graded extensions between Kalihiwai 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 Kalihiwai 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 Kalihiwai 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 Kalihiwai 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 Kalihiwai 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.
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<tr>
<td>MANOA STREAM CULVERT</td>
<td></td>
<td>O O O O O O B M O 46</td>
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<td></td>
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<tr>
<td>REPAIR FORD</td>
<td></td>
<td>O O O O O O B M O 58</td>
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<tr>
<td>WIDEN FORD</td>
<td></td>
<td>O M O O O O O B M O 176</td>
<td></td>
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<tr>
<td>TWO-LANE CULVERT</td>
<td></td>
<td>O M O O O O O B M O 163</td>
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</tr>
</tbody>
</table>

O — 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.)
8/13/75  Public Hearing at Hanalei to receive formal testimony on proposed improvements from Kalihiwai to Hanalei. (See Appendix A for a list of persons giving testimony.)

10/22/75  Information Meeting at Hanalei to discuss all proposed improvements from Kalihiwai to Haena.

3/3/76  EIS Preparation Notice for Kalihiwai 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.)

3/21/77  Draft EIS for Kalihiwai to Haena section circulated for public review. (Appendix F of this EIS contains a list of all respondents, copies their comments, and evaluations where appropriate. Comments were accepted for approximately 75 days beyond statutory 30-day review period.)

4/20-21/77  "Combined Corridor and Highway Design" Public Hearings at Hanalei and Lihue to receive formal testimony on proposed improvements from Kalihiwai to Haena. (See Appendix F for excerpts of testimony relating to the Kalihiwai to Princeville section.)

8/24/77 to Present  On-going correspondence and informal consultation with the North Shore Belt Road Citizens Advisory Committee (established to coordinate citizen action regarding the proposed project).

3/22/79  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.
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 56) comprises the segment of the "belt" from Lihue to Haena, a distance of 38 miles. The proposed project involves improvements from near Kalihiwai 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 Kalihiwai 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 Kalihiwai; 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 Kalihiwai to Haena is inadequate; some degree of improvement is necessary. The following paragraphs describe the major deficiencies of the highway from Kalihiwai 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 Kalihiwai 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").
FIGURE 1
Vicinity Map
Scale: 1"=4 mi.
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 pot-holes 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>Ilanalei Bridge</td>
<td>Steel thru-truss</td>
<td>17</td>
<td>113</td>
<td>47</td>
<td>H15</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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</td>
<td>H15</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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</td>
<td>H15</td>
<td>8</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></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</td>
<td>H10</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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</td>
<td>HS20</td>
<td>--</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></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</td>
<td>H10</td>
<td>8</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></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</td>
<td>H15</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1957</td>
<td>1973</td>
</tr>
<tr>
<td>Wainiha Bridge #3</td>
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<td>12</td>
<td>146</td>
<td>NA</td>
<td>H15</td>
<td>8</td>
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<td></td>
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<td></td>
<td></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</td>
<td>NA</td>
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<td></td>
<td></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</td>
<td>NA</td>
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</tr>
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<td></td>
<td></td>
<td>1912</td>
<td>none</td>
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<tr>
<td>Manoa Stream Ford</td>
<td>Concrete on boulders</td>
<td>22</td>
<td>15</td>
<td>NA</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1912</td>
<td>none</td>
</tr>
<tr>
<td>Limahuli Stream Crossing</td>
<td>Flat Slab</td>
<td>17</td>
<td>15</td>
<td>NA</td>
<td>NA</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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. "H" is standard 2-axle truck, 14' between axles. "HS" 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

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<thead>
<tr>
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<td><strong>Improved Kuhio Hwy</strong></td>
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<tr>
<td>Anahola to Kalihiwai</td>
<td>2.00</td>
<td>2.41</td>
<td>0.97</td>
<td>0.81</td>
<td>1.30</td>
<td>1.27</td>
<td>1.64</td>
<td>1.48</td>
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<tr>
<td><strong>Unimproved Kuhio Hwy</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Kalihiwai to Haena</td>
<td>6.12</td>
<td>5.99</td>
<td>5.11</td>
<td>5.51</td>
<td>4.82</td>
<td>3.49</td>
<td>3.88</td>
<td>4.99</td>
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<tr>
<td><strong>Island of Kauai</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Overall</td>
<td>3.00</td>
<td>3.32</td>
<td>2.28</td>
<td>2.44</td>
<td>2.83</td>
<td>2.50</td>
<td>2.77</td>
<td>2.73</td>
</tr>
</tbody>
</table>

**Source:** "Traffic Accidents and Accident Rates for State-County Highway Systems, State of Hawaii" State Department of Transportation, Traffic Engineering Section (Published annually).

**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 (\( \sum R \)) for a series of segments \((1, 2, 3, \ldots, n)\) is obtained by:

\[ \sum R = \frac{L_1 R_1 + L_2 R_2 + \ldots + L_n R_n}{\sum_{i=1}^{n} L_i} \]
(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 capacity, 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;


"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.
Total No. of Accidents: 77
  No of Accidents: Unknown Circumstances: 4
  Known Circumstances: 73
    Involving Tourist: 15  20%
    Drinking While Driving: 16  22%
    Injuries Sustained: 39  53%
    Occurring at Night: 45  62%
    Multicar Related: 26  36%

Blacked out quadrant means the accident involved the respective item listed.
Double ring means the accident was multicar related.
Example:
A Tourist driver got in a multicar accident at night. No injuries were sustained and drinking was not a contributory factor.

- Circumstances unknown.

FIGURE 3
Accident Occurrences 1973 and 1974
### Kauai Belt Road
Kalihiwai 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>
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<td><strong>Section Length (mi.)</strong></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>
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<tr>
<td><strong>Capacity (Existing/Proposed (VPH))</strong></td>
<td>1180</td>
<td>560</td>
<td>800</td>
<td>580</td>
<td>1070</td>
<td>1070</td>
<td>1070</td>
<td>1200</td>
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<tr>
<td><strong>1975 Traffic Count (ADT)</strong></td>
<td>1148</td>
<td>1337</td>
<td>1777</td>
<td>1955</td>
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<td></td>
<td></td>
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<tr>
<td><strong>1977 Traffic Count (ADT)</strong></td>
<td>1568</td>
<td>1863</td>
<td>2563</td>
<td>2640</td>
<td></td>
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<tr>
<td><strong>1978 Traffic Count (ADT)</strong></td>
<td>1663</td>
<td>1874</td>
<td>2534</td>
<td>2794</td>
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<td><strong>Projected * 1980 ADT</strong></td>
<td>1085</td>
<td>1447</td>
<td>1159</td>
<td>3068</td>
<td>4716</td>
<td>3398</td>
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<td><strong>Projected * 1998 ADT</strong></td>
<td>1890</td>
<td>2520</td>
<td>2719</td>
<td>3435</td>
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<td>9725</td>
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<td>9776</td>
<td>13,426</td>
<td>8461</td>
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<tr>
<td><strong>Design Hr. Volume (VPH)</strong></td>
<td>227</td>
<td>302</td>
<td>252</td>
<td>272</td>
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<td>458</td>
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<td>893</td>
<td>778</td>
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<td><strong>% Peak Hr. Trucks (T)</strong></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>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>% 24 Hr. Trucks (T24)</strong></td>
<td>11.0</td>
<td>11.0</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
</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.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Kaluhiwai to Princeville</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exist.</td>
</tr>
<tr>
<td><strong>Design Data</strong></td>
<td></td>
</tr>
<tr>
<td>Design speed (MPH)</td>
<td>varies</td>
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<tr>
<td>Posted limit (MPH)</td>
<td>35</td>
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<tr>
<td>Pavement width (ft.)</td>
<td>18</td>
</tr>
<tr>
<td>Shoulder width (ft.)</td>
<td>2</td>
</tr>
<tr>
<td>Min. ROW (ft.)</td>
<td>50</td>
</tr>
<tr>
<td>Max. Grade (%)</td>
<td>8.3</td>
</tr>
<tr>
<td>Min. Grade (%)</td>
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</tr>
<tr>
<td>Length (Mi.)</td>
<td>1.91</td>
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<tr>
<td><strong>Cost Estimate ($1000's)</strong></td>
<td></td>
</tr>
<tr>
<td>Right-of-Way</td>
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</tr>
<tr>
<td>Prelim. Engineering</td>
<td>--</td>
</tr>
<tr>
<td>Construction</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>--</td>
</tr>
<tr>
<td>Benefit/Cost Ratio</td>
<td>--</td>
</tr>
<tr>
<td><strong>Community Impact</strong></td>
<td></td>
</tr>
<tr>
<td>Land Acquisition (Acre)</td>
<td>--</td>
</tr>
<tr>
<td>Parcels Affected</td>
<td>--</td>
</tr>
<tr>
<td>Homes Displaced</td>
<td>--</td>
</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 geometries 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

Graded Extension
Paved Shldr.

Varies (50' Minimum)**

**May be increased to 60' minimum to preserve eucalyptus trees.

ALTERNATIVE W2
KALIHIWAI TO PRINCEVILLE

*Guardrails & ditches as required

FIGURE 5
TYPICAL SECTIONS
EXISTING AND ALTERNATIVE W2
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, Waioli, 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 Kalihiwai 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 life style. 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>Kalihiwai 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 floodproofing.</td>
</tr>
<tr>
<td>Hanalei Town</td>
<td>New inland alignment.</td>
<td>No change to existing alignment.</td>
</tr>
<tr>
<td>Waioli 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>
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 Kalihiwai-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 Kalihiwai-Princeville Sections. The results of this investigation are reported in Appendix D and summarized in Chapter II.

OTHER RELATED PROJECTS

The preceding sections of Kuhio Highway have already been upgraded to modern design standards. The section terminating at Kalihiwai 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, Waiohi, 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 ʻāloalo 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.

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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 1998 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 106) 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-swell potential. Erosion potential ranges from moderate to very severe, depending on the slope: 59% 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 erodible. 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 Kalihiwai 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 790 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 implement 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.; installation of temporary berms and slope drains; sediment 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 recommended by the Soil Conservation Service are dwarf pangola grass (Digitaria decumbens), bermuda grass (Cynodon dactylon), St. Augustine grass (Stenotaphrum secundatum), centipede grass (Eremochloa ophiuroides), 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
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 2.3-3.6 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 Limahuli) 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 5.8 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).
tent of this flood is shown on Figure 7. The yearly floods cover the road with 2-2½ 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) (9). 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).
KAUAI BELT ROAD
KALIHIWAI TO HAENA

FIGURE 7
Flood of Record
November 1955
Scale: 1" = 2,000'

Kamoo Koleaka
Figure 7
Kauai Belt Road
Kalihiwai to Haena
Flood of Record
November 1955
Scale: 1" = 2,000'
Kamoo Koleaka

- Kolokolo Point
- Waimea Bay
- Lumahai Beach
- Makahoa Point
- Puu Ka Manu
- Waikoko Bridge
- Hanalei Bay
- Waipa Bridge
- Waioli Bridge
- Hanalei Landing
- Hanalei Park
- Waipoa Point
- Waipoa Beach Park
- Waipoa Beach
- Waipoa Stream
- Lumahai River
- Kauai Stream
- Kauai River
- Kauai
- Kauai
- Kauai
- Kauai
- Kauai
- Kauai
- Kauai
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 accidentally 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 Kaliihiwai 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*...
FIGURE 8A
Vegetation and Wildlife Habitat
Scale: 1" = 2,000'
LEGEND

- Guava - Java Plum Thicket and Introduced Forest Trees
- Dry Pasture
- Wet Pasture and Seasonal Waterbird Habitat
- Taro Pond and Primary Waterbird Habitat
- Developed Land

Source: NASA Color IR Aerial Photography 10/74

KAUAI BELT ROAD
KALIHIWAI TO HAENA

FIGURE 8B
Vegetation and Wildlife Habitat
Scale: 1" = 2,000'
Figure 8C
Vegetation and Wildlife Habitat
Scale: 1" = 2,000'
collina) and hala trees (Pandanus tectorius) 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 Waioli and Waipa Streams and the Lumahai and Wainiha 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 Waioli Stream (10 acres), Waikoko Stream (11 acres) and the Wainiha 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 koloa (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 (ie. 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 Waioli, 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 (oopu), shrimp, snails, fresh water limpets and worms. Tillapia, 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 8 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 $L_{10}$ dBA level ranges from 59 dBA to 62 dBA, depending on traffic volume. ($L_{10}$ is the noise level that is exceeded 10% of the time at a given point.) Spot noise measurements made in 1973 indicated an $L_{10}$ of only 56 dBA approximately 300 feet away from the highway at the residences on Honu Road.

b. **Impacts.** Predicted $L_{10}$ 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, $L_{10}$ 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 $L_{10}$ within the highway corridor (75 feet from the centerline) to $\pm$ 68 dBA from Kalihiwai to the Princeville Ranch Road. Since this level is within the Federal Design Standard of $L_{10}$ 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 Kuhio Highway and Honu Road, there is a cluster of six residences that will experience an increase in noise levels to $L_{10}$ 62-68 dBA, depending
**Kauai Belt Road**  
**Kauihawai to Haena**

### Existing Noise Levels

<table>
<thead>
<tr>
<th>Location</th>
<th>1975 L10 (dBA)</th>
<th>1998 L10 (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>59</td>
<td>63</td>
</tr>
<tr>
<td>2</td>
<td>59</td>
<td>66</td>
</tr>
<tr>
<td>3</td>
<td>62</td>
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<tr>
<td>4</td>
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<td>68</td>
</tr>
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</table>

### Predicted Noise Levels

<table>
<thead>
<tr>
<th>Location</th>
<th>1998 L10 (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>2</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>63</td>
</tr>
<tr>
<td>4</td>
<td>63</td>
</tr>
</tbody>
</table>

### Notes:
- Point 75 feet from centerline.
- Calculated from 1975 traffic volumes.
- As established for Island of Oahu by DOH.
- Potentially applicable to Kauai.

### Table Notes:
- **E** = Exterior
- **I** = Interior

### 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).
Figures 40A
Land Use

Scale: 1" = 2,000'

Source: North Shore Development Plan
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 9,788 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 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 Kaliihiwai 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 Kalihiwai-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
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 Kalihiwai 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 Waipa 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. 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. 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 Report 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


3. Ibid.

4. Ibid.


12. Ibid.

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
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 Kalihiwai-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 Kalihiwai 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 pull-outs 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.
Rejected Alternatives

FIGURE 11
KAUAI BELT ROAD
KALIHIWAI TO HAENA
Rejected Alternatives
Kaliihiwai - Hanalei Bridge
Scale: 1" = 2,000'
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 Kalihiwai-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 ration 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 Kalihiwai 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 unavoidable 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. 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 Kaliihiwai 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 (Kaliihiwai 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
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
      - Mr. Christopher Cobb  7/15/75
   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 & 9/16/75

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/ 7/75

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. Sellner, Kapaa, Kauai  
   7/19/75

k. Mrs. Alexander J. Veech, Hanalei,  
   Kauai  
   8/ 7/75

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 Bennett, Kauai

c. Mr. D.A. Carswell, for Princeville Corp.
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 (Kalihiwai 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 (Kalihiwai 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 (eg. 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

<table>
<thead>
<tr>
<th>Agency</th>
<th>Name</th>
<th>Dated</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Advisory Council on Historic Preservation</td>
<td>Mr. Louis S. Wall</td>
<td>4/7/76</td>
</tr>
<tr>
<td>b. Department of Agriculture</td>
<td>Mr. Francis C.H. Lum</td>
<td>4/8/76</td>
</tr>
<tr>
<td>c. Department of Defense</td>
<td>Mr. Ben D. Kosa</td>
<td>3/25/76</td>
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<td></td>
<td>Army Engineer District, Honolulu</td>
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<td></td>
<td>Mr. Kisuk Cheung</td>
<td>4/12/76</td>
</tr>
<tr>
<td>d. Department of Housing and Urban Development</td>
<td>Mr. Alvin K.H. Pang</td>
<td>4/12/76</td>
</tr>
<tr>
<td>e. Department of the Interior</td>
<td>Mr. Frank E. Sylvester</td>
<td>4/1/76</td>
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<td>Fish and Wildlife Service</td>
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<td></td>
<td>Mr. Maurice H. Taylor</td>
<td>5/20/76</td>
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<td>Geological Survey</td>
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<td>Mr. F.T. Hidaka</td>
<td>4/7/76</td>
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<td></td>
<td>National Park Service</td>
<td>6/15/76</td>
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<tr>
<td>f. Department of Transportation</td>
<td>Capt. H.G. Holmgren</td>
<td>5/11/76</td>
</tr>
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<td></td>
<td>Federal Aviation Administration</td>
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<tr>
<td></td>
<td>Mr. Joseph B. Nestor</td>
<td>4/2/76</td>
</tr>
</tbody>
</table>

#### 2. State of Hawaii Agencies

<table>
<thead>
<tr>
<th>Agency</th>
<th>Name</th>
<th>Dated</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Department of Accounting and General Services</td>
<td>Mr. Hideo Murakami</td>
<td>3/31/76</td>
</tr>
<tr>
<td>b. Department of Agriculture</td>
<td>Mr. John Farias, Jr.</td>
<td>4/7/76</td>
</tr>
</tbody>
</table>
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
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.
Dear Mr. Wright:

This is in response to your request of March 10, 1976 concerning the Environmental Impact Statement Preparation Notice for the Kauai Belt Road, Wana to Fakihuan, Island of Kauai, Hawaii.

It might be helpful to explain the role 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 in determining the Public Notice from the President and the Congress in the field of historic preservation. The Council was created by the National Historic Preservation Act of 1966 (80 Stat. 925, 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 considering an undertaking which would affect cultural resources to afford the Council an opportunity to comment on the undertaking prior to its approval. The issuance on May 13, 1971 of 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 contributed to the enhancement and preservation of non-federally owned cultural resources. In further required the head of any Federal agency to afford the Council an opportunity to comment on all undertakings which would result in the sale, transfer, demolition or substantial alteration of a property under his 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. For your information, copies of the procedures, the Act, Executive Order 11593 and a flow chart illustrating the steps to be followed by a Federal agency in obtaining Council comments are attached.

The Council on Environmental Quality's "Guidelines for Preparation of Environmental Impact Statements" (40 C.F.R. Part 1500) directs Federal agencies to forward their environmental documents to the Advisory Council for review if the undertaking will affect property included in or determined by the Secretary of the Interior to be eligible for inclusion in the National Register. The Council's review of those statements is limited to determining whether or not the responsible Federal agency has adequately demonstrated compliance with Section 106 and/or Executive Order 11593. Regardless of whether or not the particular Federal agency files an environmental assessment or impact statement under NEPA, it is responsible to demonstrate compliance with Section 106 and the Executive Order 11593 as applicable. The Advisory Council's comments on an environmental document should not be construed as comments pursuant to Section 106 or Executive Order 11593. The Council only provides those comments through the compliance process detailed in its procedures.

Ideally, Council comments will be secured by an agency at the time it prepares the environmental assessment or statement and will be included in the agency's environmental documentation when it is sent out for review and comment by other agencies.

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 13, 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 determined, 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 Mr. R. Alvey Wright
Kauai Belt Road

Kauai Belt Road

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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 Mr. R. Alvey Wright
Kauai Belt Road

Kauai Belt Road
May 14, 1976

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

Dear Mr. Wall:

Subject: Kauai 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,

[Signature]

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

Dear Mr. Wright:

Subject: Kauai Belt Road, Kalibwai to Haena
Environmental Impact Statement Preparation Notice

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-ranching operations. Effects may include: highway isolating small parcels of grassland, 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 segment Hanalei to Princeville.

3. The statement "A parallel elevated alignment (bridge or high fill) from Hanalei Bridge to Hanalei Town has been proposed as a possible solution to the annual 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. Lua
State Conservationist

April 28, 1976

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

Dear Mr. Lua:

Subject: EIS Preparation Notice for Kauai Belt Road, Kalibwai to Haena
Reference: Your letter of April 8, 1976

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

1. The alternatives will have minimal effects on cattle operations since they are located adjacent to the existing highway alignment. The proposed improvements may require acquisition of small areas of remnant parcels.

2. Providing erosion control is a normal design function and will be given due attention.

3. We are cognizant of the flooding problems at the Hanalei Bridge approaches. We are conducting a hydrologic study to assure that the proposed plans do not aggravate the flooding or flood areas in the valley not now affected by flooding.

Sincerely,

E. Alvey Wright
Director
Mr. E. Alvey 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, Kalilihi to Haena on 12 March 1976. Supplementing the suggestions in our letter of 27 August 1975 regarding the Hanalei to Kalihihi 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 Hanalei Town, be coordinated with us.

b. Structures or fill in stream crossings subject to tides will require Department of the Army permits under Section 10 of the River and Harbor Act of 1899 and Section 404 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 buffers that filter change and growth.

Thank you for the opportunity to provide comments.

Sincerely yours,
[Signature]
Chief, Engineering Division
Mr. Klaus Cheung, Chief
Engineering Division
Department of the Army
U.S. Army Engineer District,
Honolulu
Building 230, Fort Shafter
APO San Francisco 96858

Dear Mr. Cheung:

Subject: Kauai Belt Road, Haena to Kaliliwai
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,

E. Alvey Wright
Director
Mr. E. Alvey Wright
Director
Hawaii Department of Transportation
800 Punchbowl Street
Honolulu, Hawaii 96814

Dear Mr. Wright:

This responds to your letter of March 10, 1978, requesting comments on the Environmental Impact Statement Preparation Notice for the Hanalei Bridge Project, Kauai to Kihimai, Island of Kauai.

Our major concern is whether or not the proposed project will impact either the Hanalei Beach Park or the Hanalei State Park. Lands for both parks have been acquired with a grant from the Land and Water Conservation Fund (L&WCF). If either park is impacted, provisions of Section 6(f) of the L&WCF Act may be applicable to 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 4(10) assessment also would be necessary.

If either park would be affected by the project, 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

Federal Highway Administration, Hawaii.

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  
450 Golden Gate Avenue  
San Francisco, California 94102

Dear Mr. Sylvester:

Subject: Kauai Belt Road, Haena to Kalihivali  
EIS 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,

[Signature]

Director

---

United States Department of the Interior  
FISH AND WILDLIFE SERVICE  
Division of Ecological Services  
621 Mililani Street  
Honolulu, Hawaii 96813

May 20, 1976

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

Dear Sir:

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

Kalihivali to Hanalei Bridge, page 2. As long as the proposed action does not involve construction activity south of the present roadway from the intersection of the Po'olenalena 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. Blowing into the areas shown should be described with estimates of relative abundance. 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 taro does not grow in shade. In addition, litter dispersal, 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 horses 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 esthetic 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 roadways be designed and located in consultation with the Refuge Manager of the Hawaiian Islands National
Wildlife Refuges and other interested parties.

Hanalei River, page 3. Road construction activity along the course of the present roadway from Hanalei Bridge on the east to the power substation on the west would have the least impact on taro paddies and endangered waterbird 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 littering above the protection of the hedgerow. Elevation of the road would have less impact if a hedgerow 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 hedgerow. Roadside parking should not be permitted from the Hanalei Bridge to the western edge of the taro lands by providing a very minimum shoulder and appropriate signage. A public viewpoint on the south side of the road, approximately 2,000 feet west of the present bridge, would be acceptable. box culverts beneath the roadway would be required to minimize flooding of taro lands on the refuge.

Identification and Summary of Major Impacts, page 6. The statement should discuss the potential environmental impacts to fish and wildlife resources, particularly within the Hanalei River Valley. In addition, we suggest that the amount of wetlands affected under the various project alternatives be compared with respect to its impact on waterbirds. 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 turbidity and siltation would be controlled, as well as identify the impact 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 o'opu runs (late fall) and peak periods of endangered waterbird use of taro paddies and other waterbird habitat in the Hanalei River Valley (July through January).

Proposed Mitigation Measures, page 8. 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: RD (US), Portland
    EBMQ, Seabrook
    St. Krider
Subject: Kauai Belt Road, Haena to Kaliihiwai, 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,

E. Alvey Wright
Director
Mr. Ralph T. Segawa
Division Engineer
Federal Highway Administration
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

June 15, 1976

Dear Ralph:

Sorry that I seem to have lost your February 5 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 Kauai Belt Road, Kalalau to Haena, 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 Kauai 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 as National Historic 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, CFR 800.10.

The National Register of Historic Places and the National Registry of Natural Landmarks must be consulted to determine whether or not properties listed and/or eligible for listing on either register 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, CFR 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 Registry 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. Impacts upon cultural resources and Natural Landmarks should be thoroughly evaluated and well defined mitigation measures should also be included in the statement. The proper protective and mitigative measures for cultural resources are included in Title 36, CFR 800. The latest full listing of eligible and registered Natural Landmarks is the May 5, 1976, Federal Register. Additional sites have been listed in the February 9, 1976, Federal Register.

There are sites listed in the National Park System in American Samoa, but not in Guam. There is, however, a proposed National Historical Park on Kauai and the Department of the Interior has title to some of the lands therein. The enclosed, more-or-less obsolete map shows the proposed boundaries as of some four years ago. The proposal 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 (designed for other purposes, but helpful to you, I hope) of Hawaii Volcanoes National Park, City of Refuge National Historical Park and Puukohola Heiau National Historic Site, all on Hawaii, and Haleakala National Park on Maui are enclosed. One 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 Registry of Natural Landmarks and on the National Register of Historic Places in Hawaii, American Samoa and Guam. All preliminary environmental impact evaluations for projects should include consultation with latest listings of these properties as well as an archaeological survey over the project area. Further specific information please call me, or come on down and look at our maps.

We hope that this information will assist you toward the implementation of Section 102(2)(D)(iv) of the National Environmental Policy Act of 1969, as amended.

Sincerely yours,

Robert L. Barcel
State Director

Encl.
Subject: Kauai Belt Road, Haena to Kaliihiwai
Reference: Your letter dated May 11, 1976 (reference No. 5922)

Thank you for sending us the instruction booklet, "Permits for the Construction of Bridges Across Navigable Waters of the United States." Our permit applications will be submitted in accordance with your instructions during the design stage.

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

Sincerely,

R. Higashino
For E. Alvey Wright
Director
Dear Admiral Alvey Wright, USN (Ret.)
Director, Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96811

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 Kalihawai, 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,

Joseph Hester
Acting Director, APC-1

---

Honororable E. Alvey Wright
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

MAR 31 1976

Dear Mr. Wright:

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

This is in response to your letter no. HWY-PA 2.27558 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 548-5460.

Very truly yours,

HIDEO HURAKAMI
State Comptroller
The Honorable Hideo Murakami
State Comptroller
Department of Accounting and
General Services
P.O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Murakami:

Subject: Kauai Belt Road, Haena to Kaliliwal
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,

[Signature]

for E. Alvey Wright
Director

Enclosure
MEMORANDUM

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

FROM: R. ALVEY WRIGHT, DIRECTOR
    DEPARTMENT OF TRANSPORTATION

SUBJECT: KAUAI BELT ROAD, HAENA TO KALIHIWAI
       EIS PREPARATION NOTICE COMMENTS

Reference: 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. Higashino
for E. Alvey Wright

Rear Admiral E. Alvey Wright, USN, (Ret.)
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright:

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,

Valentine A. Steffenhagen
Major General, HANG
Adjutant General
Mr. E. Alvey Wright, Director
Department of Transportation
669 Punchbowl St.
Honolulu, Hawaii 96813

Dear Mr. Wright:

Subject: Request for Comments on Proposed Environmental Impact Statement (EIS) for Kualo Belt Road, Haena to Kalihiwai, Island of Kauai

Thank you for allowing us to review and comment on the subject proposed EIS. Please be informed that we have no comments or objections to this project at this time.

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

Sincerely,

[Signature]

James S. Kihara, Ph.D.
Deputy Director for Environmental Health
April 6, 1976

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 Haena-Kalihiwai section of the Kauai 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 halibut, opelu, crab and other species. Measures will also be necessary to prevent siltation of the river during construction. The EIS should also cover possible adverse effects to Haoli, Haipa, Lumarai, Naunia, Manoa and other streams.

Very truly yours,

[Signature]

Christopher Cobb
Chairman of the Board

cc: DONALD
Fish & Game
Historic Sites
State Parks

April 23, 1976

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

Dear Mr. Cobb:

Subject: Kauai Belt Road, Haena to Kalihiwai
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 Alvey Wright
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Mr. Wright:

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

We have reviewed the preparation 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.

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

Sincerely,

HIDETO KONO

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

Dear Mr. Kono:

Subject: Kauai Belt Road, Haena to Kaliihiwai
Reference: HWD letter no. 0999 dated April 26, 1976

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

Sincerely,

GEORGE N. ALEXANDER
Director
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.
MENORANDUM

TO: THE HONORABLE RICHARD E. HARLAND, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM: E. ALVEY WRIGHT, DIRECTOR
DEPARTMENT OF TRANSPORTATION

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

April 20, 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 are 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
TO:  MAYOR HALAPIT
FROM:  COUNTY ENGINEER
SUBJECT:  REQUEST FOR STUDY, KAUA'I BAY ROAD
HANALEI TO KALIHIWAI, ISLAND OF KAUA'I

DEPARTMENT OF PUBLIC WORKS
COUNTY OF KAUA'I

MENORANDUM

DATE:  MARCH 31, 1976

Our comments are limited to the engineering and roadway maintenance areas of the proposed action.

A. The section from Kalihiwai to Hanalei Bridge should follow a new alignment with the present roadway obliterated. Our reasons include:

1. Geometric features - horizontal and vertical alignment cannot adequately convey the present traffic.
2. Highway cross-section - shoulders are non-existent and obstacles are present in many locations.
3. Drainage - on-site drainage system is not available.
4. Pavement Structural Section - present pavement will require tremendous maintenance efforts in the future.
5. Emergency conditions - present alignment has required road closures due to fallen trees in the Princeville area.
6. Costs - a new alignment may be cheaper considering that no alternate routes are available during construction.

B. We concur that the Hanalei 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 Hanalei area is partly due to the limited capacity of the present bridge.

C. In addition to provisions for abating the annual flooding from Hanalei Bridge to Hanalei Town, a drainage system through the town taking flows to Hanalei 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 Hanalei Town to Iiheia section. Shoulders should be provided wherever possible. The scenic lookout at Waikoko Point has been the locality for many mishaps due to the narrow road and concentration of tourists.

The County's Hanalei 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 actions. Should further information be required, please call.

[Signature]

KSH: 08
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 Kalihiwai
Reference: Your letter dated May 13, 1976

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

A. Kalihiwai 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 Kalihiwai 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 thinking in terms of utilizing these trees as a control and shifting the roadway from them to provide safety requirements with a traveled way width of 22 feet and shoulder widths of 8 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 for 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 Kauai Belt Road, Kalihiwai to Haena.

Very sincerely,

Tad T. Miura
County Clerk, County of Kauai
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 as 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 Wainiha

The North Shore Development Plan proposes that new bridges over Wainiha 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. Wainiha 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.

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

Brian Nishimoto
Planning Director

cc: 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 Kaliiwai  
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 Waalha to Haena 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  
869 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 Kaliiwai on the Island of Kauai. The project does not appear to have any adverse effect on the Gas Company.

Very truly yours,

Francis Tanaka  
Environmental Coordinator

FT:jm
Mr. Edwin Nakano  
District Engineer  
State Highways Division  
P. O. Box 1711  
Lihue, Hawaii  96766  

Subject: Kauai Belt Road, Haena to Kailua, Island of Kauai  
Refer: HWY-PA 2.27558  

Gentlemen:  

With regards to your proposed highway improvements from Kailua 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,  

S. K. Salem  
Manager  

March 26, 1976

Admiral R. Alvey Wright, Director  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii  96813  

Dear Admiral Wright:  

Re: Environmental Impact Statement for the Kauai Belt Road, Haena to Kailua  

This is in reply to your letter of March 10, 1976 (HWY-PA 2.27558) 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 buildup and compare with State and Federal air quality standards.

Christian Seals Fight TB, Asthma, Emphysema, Air Pollution
Mr. James W. Morrow  
Director  
American Lung Association of Hawaii  
245 North Kukui Street  
Honolulu, Hawaii 96817  

Dear Mr. Morrow:  

Subject: Kauai Belt Road  
Haena to Kalihiwai  
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,  

[Signature]

E. Alvey Wright  
Director
Dear Mr. Wright

Re: HWY-PA 2.27558

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

1. Kaliihiwai to Hanalei 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 re-align 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.

We 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, Naipa 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 simple structural style should be retained.

The Wainiha 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 turn 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 Keuno, Vice-President for Preservation Services, National Trust for Historic Preservation, 740-748 Jackson Place, N. W., Washington, D. C., 20006 for assistance in scenic road planning.

Very truly yours,

Robert J. Schleck

President
Mr. Robert Schleck, President
Kauai Historical Society
P. O. Box 248
Lihue, Kauai, Hawaii 96766

Dear Mr. Schleck:

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

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

1. Kalalau to Hanalei 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. Hanalei Bridge and Approaches

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

3. Hanalei Town

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

4. Hanalei 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,

for E. Alvey Wright
Director
HANALEI BRIDGE

April 6, 1976

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 mistake 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-Kapaui Coast and the Hanalei-Kauai areas. As the plan for the North Shore (by E. V. Dean, A. L. Richardson, and William, Inc.) states: "The North Shore is a region of fantastic beauty." The accompanying Socio-economic Preliminary Study by Anderson, Barron and Lederer says: "Hanalei has in abundance beautiful coastline, mountains, and natural scenic beauty unexcelled anywhere else in Hawaii."

The North Shore Plan is thoughtful, well presented, and has many excellent features. However, most of the research was done in 1971 and early 1972— at least four years ago. A plan is just a plan— even the planners recognize that plans should not only 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 (Hawaii is often cited as a prime example). At the two public hearings on the proposed changes to the highway and the bridges on the North Shore, the sentiment was overwhelmingly against those changes. It seems 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 in the Waipouli-Paluu area and the planned development at Poipu-Koloa make it even less likely that major growth in tourism will take place in the Hanalei-Haena 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. Kalalau 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 be of similar construction. The bridge itself is not inundated during flood periods but only a short stretch of the road on the Hanalei side. This condition lasts for only a short time, and because the flow of water is unmeasured, no damage is sustained.

   A bridge on a viaduct downstream of the present bridge would not only require cuts into the steep sides 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 high fill) from Hanalei Bridge to Hanalei town seems to be most unsatisfactory. If the road were elevated on a bridge, debris being swept down could catch and clog under the bridge causing a backing up of the flood waters. A high fill could channel 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 their course have often proved disastrous and have also encouraged development in unsafe areas.

   In the past the location of the Post Office at the China Young Store has caused some inconvenience to through traffic and danger to pedestrians. However, the off-street parking provided at the new Post Office has taken care of this problem.
4. Hanauwai Town to Haena: Although the Waipa and Waikoko bridges are not particularly attractive structures, the Waipio Stream Bridge is characteristic of the rural atmosphere of Hanalei. Even more so are the bridges in the Wainiha area. If it is absolutely imperative that these bridges be replaced for safety reasons, we recommend that the new bridges be replicas of the old ones. There is great sentimental attachment in the North Shore area to these bridges, and the tourists are equally charmed by them—so much so that they must be considered part of the uniqueness of the North Shore. Rarely is there any problem crossing these. On the contrary, their quaintness and beautiful settings seem to encourage a politeness and deference that is seldom found elsewhere among drivers.

With widened and ugly steel and concrete bridges at Wainiha, would soon come new plans and pressures to straighten and widen the road clear to Ke'e. An ill-advised attempt was made some time ago to put the road through a hillside near Lumahai, and the ugly gash still remains and still causes siltation of the nearby ocean.

It appears that the only reason for widening these bridges was to allow tour buses access to Haena. Haena is a popular area with the people of Kauai for surfing, swimming, snorkeling, diving, fishing, and picnicking, and many would like to see the whole area preserved as a nature preserve.

Proposed Mitigation Measures:

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

2. and 3. Regarding erosion and siltation during the proposed construction, we realize that the State specifications and the grading and grubbing ordinance of the County of Kauai, if themselves, are good planning, however, we do not believe that these measures, even if meticulously enforced, could control soil erosion and siltation in the Lumahai-Haena area due to the high rainfall, the nature of the soils, the numerous stream beds that become channels even when it is raining, and highway and bridge building methods, i.e., cut-and-fill, embankments, pile driving, etc.

The area below the cliffs at Princeville, the northern section of Hanalei Bay, and all the shoreline along Haena have charming
Mrs. H. Roger Netzer, President
The Kauai Outdoor Circle
P.O. Box 921
Lihue, Hawaii 96766

Dear Mrs. Netzer:

Subject: Kauai Belt Road, Haena to Kalilihal
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. Kalilihal 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 problems. With the exception of a minor drainage project, we are not proposing any other highway improvements for this section.

4. Hanalei Town to Haena

We are considering two alternatives for this segment of Kauai Belt Road. Both alternatives will replace the existing structures with similar type of 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,

[Signature]

for E. ALVEY WRIGHT
Director
April 5, 1976

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

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

Gentlemen:

I would like to be a consulted party on the Kauai 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 the Project.

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

Respectfully,

Douglas Heller
Secretary
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-Joana area. At the same time it appears to be saying that if 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.

The State have 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 Economic Base Analysis with Resulting Population Projections for Kauai, 1970-1990, dated Dec. 1969, is obviously outdated. At a meeting for County officials on Nov. 8, 1975 (at Princeville), R. Senter, head of the Kauai Finance Dept., 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 1976 was $17 million and it was expected the budget would be $75-80 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 homeowners in Hawaii, which will mean an even greater loss of revenues for the counties unless they raise property tax rates, which would still leave Kaua'i County in financial straits.
The DOT says the General Plan for Kauai is geared to a population of 90,000 by 1990. According to the Kauai County Planning Dept. figures quoted in the Environmental Impact Assessment Report, Lihue Airport Master Plan Study (Nov. 1975) by Past, Karlick, Mitchell & Co., the population of Kauai is estimated to be 29,700.

The Planning Dept. projected an increase of approximately 4,300 for each five year period to 1985 (which would make a total population of approximately 51,300). Are we to assume then that the population would increase by nearly 39,000 between 1985 and 1990? "Hawaii '75 Annual Economic Review" by the Bank of Hawaii, August 1975, statistics show that the population of Kauai in 1973 was 52,006 and in 1979 it was 51,485.

The County Planning Commission is convinced that the best way to increase the tax base is to allow more development for tourism, even though developments already existing are in serious financial trouble. If more GIP's are needed for more tourist development, Kauai will continue to be in serious financial trouble and the down trend in population will continue.

Regarding the DOT data on plans for Princeville, on Pg. 42 of the Socio-economic Prelude of the North Shore Plan, is the following: "Resort-residential developments such as Princeville are a largely untried concept in Hawaii.----The future magnitude and impact of this community is difficult to assess, but it is highly intriguing since such an effort has yet to succeed in Hawaii."

The Socio-economic Study was initiated in Nov. 1971 and the field work was carried out in the first three months of 1972, so the predictions regarding tourism, which are substantially vague and conditional, are now four years old. In the meantime, many changes have taken place nationally 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 speculative money, many of whom were caught by the rapidly rising interest rates and increasing construction costs.

Figures from the North Shore Plan, which projected a full-time population with 7,000 dwelling units, 1,000 resort units and a 5-acre general commercial site at Princeville were included in the draft 215 (5/29/75). The contradictory 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 houses have been built and slightly over half are owner occupied (none by employees of Princeville). Of the

rent, some are for sale, some are used as vacation or weekend homes 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 started in the last year. Of the eight condominiums started in 1975, only two have been completed. Construction stopped some time ago on one and three are in very serious financial trouble. None have had the 70 to 80% occupancy rate necessary for financial success.

Hanalei Colony Resort at Haena is situated ideally on a point on a beautiful beach. It was built in 1969 and long before the project was completed all the units were sold to residents of Hawaii or others who are familiar with and love the North Shore. Of the 52 units, 48 are available to tourists. In its more than six years of existence, the resort complex 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 quiet, low-keyed style. The people who stay at Hanalei Colony and other tourist accommodations in Hanalei-Haena are, "repeat" visitors. The great majority of tourists who come to Kauai prefer to be in the Waimea-Jumpou or the Poipu-Koloa area. In speaking of the visitors to the North Shore, the Hanalei 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 a distant resort or the sun and sand of the tanning lotion burnt-out. Rather, they will be those despairing of the Waikiki congestion and similar instant Americanization; those who seek the essence of the real Hawaii in the real world without the pressures of real social pursuit. Nor will they be those who gush over contrived historical taboos or hokey simulated Hawaiian culture. Rather, they will be those tired of artificial paradise who seek only the experience of relaxation, recreation, and personal renewal amongst an honest, contemporary Hawaiian society which has neither lost its traditional spirit nor been cynically sold to only those who can express to impress or to express the rich. Will they 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 scopes, the stimulation and the encouragement of magnificent nature-embracing people and 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 Hanalei, the very thing that makes the North Shore, will be destroyed. The statement was not written by impractical dreamers but in 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 Gas & Oil, Inc. of Denver, Colorado) lost $2 million on the project last year. The permanent population remains the same. The consultant for Princeville, Mr. Don Carwell, spoke against the widening and straightening of the road between Kalihiwal and Princeville at the hearing and suggested a truss bridge in the style of the present bridge over the Hanalei River.

Princeville recently received permission from the Kaua'i Planning Commission to reactivate and lengthen an airfield between Kalihiwal and Princeville. The purpose of the airport 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 statements: "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 'social science fiction.'"

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

At a series of hearings before the Kaua'i Planning Commission during July 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, Fig. 10 of the North Shore Plan study. The consensus of opinion is: "Keep the development at Princeville", a position with which Princeville Corp. no doubt agrees. Yet, Princeville's request for 5 acres for a golf-course, instead of乐队the 0.9 acres recommended by the Planning Commission because the rate of development of the Princeville project does not warrant the change. The number of acres for urban zoning is 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 not less than 5 years and that adjustments be made in it according to the wishes of the residents. Though the plan was published in Sept. 1972, the plan as published in the 1970-80 economic decade, as stated previously, was completed 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 Jan Tan Bruggencate in the March 17, 1976 edition of the Honolulu Advertiser: "The Department's original plans for upgrading the North Shore of Kaua'i from Kalihiwal to the exit of Waimea at Haena ran into a solid wall of opposition at an informational meeting in Hanalei last year. 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 Kalihiwal and Hanalei does not have an adequate base----the pavement is too thin----and that because of this maintenance has been twice as expensive as that on other segments of highway on Kaua'i. 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 Napili (sic) as an experience that is "anticipatory and heightening....from uninformed, man-made, urban to dramatic, almost overpowering natural transformation.----An indelible experience. From the Kaua'i Temple to the Duggenheim Museum, this design principle has been consciously pursued wherever man has sought to emotionally and aesthetically express his fellow man. Through natural and cultural coincidence, the North Shore has achieved the same objective better and certainly more grandly than most human efforts.----The speed of movement in which the experience unfolds is as important as the route and direction. Both currently contribute to the overall experience, although new routes are not changed to add another dimension to the experience unessential to travel speeds (underlining added)."

A letter signed by E. Alvey Wright, Director of the State DOT (March 11, 1975) says: "We feel that a functional and attractive highway facility is required and such can 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 Kaliliwal to Princeville and replacing the bridges in the Hanalei-Hanaa 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 1973 between Hanalei and Kaliliwal (4 miles in length) resulted in fifteen 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 3.54 accidents per million vehicle miles in 1973. For comparison, on Kuhlo Highway between Kilauea and Wailua, an improved stretch (4.7 miles in length), there were ten accidents in 1973. These ten accidents resulted in four injuries and one fatality. This represents an accident rate of 3.72 accidents per million vehicle miles.

These statistics have little meaning because considering the small population on Kauai's statistics for other years could be very different. So far in 1976 there have been two fatalities in accidents on Kauai.---one between Lihue and Kauai and the other near Hanalei 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 substandard pavement widths and shoulders. A prime example is the section between Na Pali and Poipu 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 "improved" at this time? It is very obvious that improvement to this highway will raise the value (and taxes) of the adjacent land and as a consequence there will be pressure to urbanize the land. Obviously, too, aside from the desires of the land owners who hope to profit from land urbanization, the only explanation for this is a "pork-barrel" project...a shortsighted breed-off for those who expect to gain something other financially or politically.

The Draft EIS suggests that if the alignment chosen for the highway would pass a problem of air and noise pollution, the use of masonry construction, glassed windows and air conditioning for future public facilities along the right of way should be considered. In a place noted for its great beauty and its rural charm (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 more stringent in the future and automobile manufacturers will be required to adopt devices to control air pollution. Just the opposite is happening. Congress is constantly under pressure by the highway lobby, backed by the White House, to weaken or compromise on auto emission standards under the guise of the necessity to conserve fuel.

In the Sections on Temporary Project Water Pollution Control, there are the usual built-in escape clauses. Even if, by some miracle, these controls were strictly enforced, they would not stop soil erosion during heavy rains. Soils in the Kaliliwal to Hanaa area are predominantly unstable friable surface and silty clay sub-surface or of deep muddy Hanalei type. Before the construction of the Kaliiua section of Kuhlo Highway and the grubbing and grading of land on the cliffs at Princeville, the lagoon at Wainiha contained many live and beautiful coral heads. Now it is almost impossible to find any living coral inside the lagoon. Since there is practically no sewage going into the lagoon, it would seem the damage has been due to siltation.

The DOT letter of March 11, 1976 says: "The EIS points out that there are mitigation measures to reduce potential impacts. This is a proper function of the EIS; guaranteeing compliance is not a function of the EIS. Unfortunately, it appears that the function of the EIS is to try to prove that the proposed project is needed, wanted and will not be detrimental in any way and that the requirements of the EIS under the law have been met. Its function seems never to show that a project is mostly both environmentally and functionally and that everyone would be better off without it.

No cost/benefit analysis was included in the draft EIS. Perhaps if there had been one the conclusion would have been the same as that on the proposed Lihue airport plan—that the costs would outweigh the benefits. There are certain things to be considered in the proposed expenditures of state funds for this unwanted highway, which will be brought up later in these comments.

An EIS Preparation Notice with covering letter dated March 10, 1976 says on pg. 3, Hanalei Town: "Future road improvement from Hanalei Bridge through Hanalei Town to Wainiha Stream Bridge would conform to the concept of the North Shore Development Plan. A parallel elevated alignment (bridge or high fill) from Hanalei Bridge to Hanalei Town has been proposed as a possible solution to the annual problem of flooding.

The floods, usually one a year, have always taken place in Hanalei Valley. It is true that they do so off the road for periods of time that vary in hours but the people of the North Shore think of them as a temporary inconvenience. There
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 culverts under a fill there would be danger of clogging by debris and silt. Results could be inundation of the homes in the taro fields and the funneling of more water down to Hanalei Town.

Other problems would be cutting off the access road to the taro fields and houses 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 Hanalei side of the present highway. It was suggested at the meeting the highway and the County transportation representatives said they would consider this.

The area north of the highway comes under the jurisdiction of the Coastal Zone Management Committee 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 fund expenditures, by 1981 the annual deficits in the DOT will be between $67 and $107 million of which $70 million would be in highway programs unless the State gas tax goes to 21.5 cents per gal.

The study notes further that the DOT's plans into the early 1990's were based on expectations of the early 1960's, 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, increased 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 notes that by 1981 the capital investment required for master-plan requirements for existing highway, airport and harbor programs through 1981 will increase the total outstanding debt to $795 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. 14, 1976 (Honolulu Advertiser 1/15/76): "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 300 currently filled positions. It may also be necessary to terminate 520 additional filled positions which are currently involved in capital construction programs." (Underlining 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 practice while maintaining a favorable rate of interest." (Star-Bulletin & Advertiser, Feb. 1, 1976).

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

Helen C. Hopkins
P. O. Box 666
Hannolii, Hawaii 96714

Date March 30, 1976
Ms. Helen C. Hopkins  
P.O. Box 266  
Hanalei, Hawaii 96714

Dear Ms. Hopkins:

Subject: Kauai Belt Road, Haena to Kaliihiwai  
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(1), covered the section from Hanalei to Kalihiwai. We are now including all sections of the proposed highway improvements from Kalihiwai to Haena 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 Kaliihiwai to Hanalei at the public hearing held in August 1975. However, some support was received for the curve improvement and widening alternative at the October 1975 informational 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 Kaliihiwai 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 Kaliihiwai 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 Moloaa Road to Kilauea Road shows lower accident rates for 1974 and 1975. For your information, we are tabulating the most recent available data.
DESCRIPTION | SECTION LENGTH (MILES) | ACCIDENT RATE (PER MILLION VEHICLE MILES) | 1973 | 1974 | 1975
---|---|---|---|---|---
Anahola Rd. to Moloa Rd. | 4.93 | 1.10 | 0.84 | 0.74
Moloa Rd. to Kilauea Rd. | 4.89 | 3.72 | 1.10 | 0.89
Anini Rd. to Hanalei Bridge | 4.02 | 7.20 | 3.66 | 2.59
Hanalei Bridge to Moloa Rd. | 1.68 | 6.29 | 4.27 | 9.39
Moloa Rd. to Anae Rd. | 0.40 | 0.0 | 4.82 | 0.0
Anae Rd. to Wainiha Rd. | 3.22 | 11.24 | 7.40 | 7.37
Wainiha Rd. to Haena | 3.60 | 9.39 | 5.93
Island of Kauai | 115.00 | 3.319 | 2.282 | not available

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 Kalihualii and Haena 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 Kamehameha Highway between Kaneohe and Kaawa 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 Kalihiwai to Hanauma, Kauai.

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

A few new bridges means a few more big trucks, buses, and story bridges.

Please keep our Hawaii the way it has been—we have done enough damage.

Thane

John & Martha Ferry

Hanalei
Mr. and Mrs. John C. Ferby
4122 Stone Canyon Avenue
Simi Valley, California 91403

Dear Mr. and Mrs. Ferby:

Subject: Kamehamea Road, Honolulu to Kailua
Reference: Your letter received on March 31, 1976

Thank you for your note asking that the old bridges from Kailua to Honolulu be saved. Regrettably the existing structures are not structurally sound, nor are they 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]

E. Almy Wright
Director

Department of Transportation
869 Punchbowl St.
Honolulu 96813

Dear DOT People:

I wish to make my personal opinions known concerning the Kailihiwai-Heeia road project and the proposed Hanalei River Bridge.

Basically, I am opposed to any change whatsoever in this road or the bridge. The way I use it, the area has survived with its irreplaceable isolation and quietude without any great loss for centuries. I do not feel things have changed enough to warrant any road or bridge improvements.

However, I do not think that any tourist or resident, no matter what the state of inebriation or unfamiliarity, should be killed or injured in any way because of the unsafe condition of the highway or bridge. I believe that all measures should be taken to ensure the safety of these facilities.

I am opposed to changes, however, for these reasons, and I believe you should seriously consider these reasons before any decisions are made. You must understand how much a bridge and highway can alter a community's lifestyle. Any bridges in Hanalei and Wainiha and Heeia that allow tourists access to this area will certainly mark the real beginning of ruin. The highway would have to be widened and realigned over much of the route. And the advent of large numbers of buses and tourists can only mean one thing—a demand for tourist facilities and concessions. The traffic, even now very slow because of sharp curves, will increase considerably with tour buses. All the tacky businesses that come and go so quickly because of their dependence on quicky tourists will destroy the mood of this region that is so much prized by both residents and tourists. This area is mostly unspoiled, and I believe the tourists want to see it remain this way, and I know the locals feel this way as well. Since the end of the island is designated for incorporation into a state park, it would be defeating the purpose of this park to allow such an increase in tourist traffic on this new road and bridge system would provide.

Esthetically, the Hanalei bridge, the Waial-Whalako bridges, and the Wainih bridges are very pleasant and attractive; each in another reminder and indicator of the rural-ness, the unspoiled quality of this most beautiful place on the planet Earth. If they are unspoiled, I believe they should be made safe, but without detracting from their considerable charm. The people of Kauai, especially the North Shore, are very attached to these bridges in a way that the Vermonters are attached to their covered bridges.

It is transportation and communication that changes a given area. I ask that you allow the Hanalai region to remain unchanged and unspoiled.
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 35 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 Wainiha bridges and has any sensitivity could recommend replacement with a "swapping" structure such as pointed upon the Lumahai Stream. I also think that the weight limits should not be increased so as to prevent the crossings of tour buses, sates of large-scale construction, and ultimate despoilation 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.

Mahalo nui loa for considering my opinion, which I believe is the opinion of many other Kauians.

 Haluhia a me Aloha,

 William T. Lo Gro

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Dear Mr. Lo Gro:

Subject: Kauai Belt Road

Haena to Kalalau

Thank you for your letter of March 16, 1976. Your comments to improve the roadway only where it is absolutely necessary will be considered. We recognize the sensitive environment that exists 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. ALVEY WRIGHT
Director
John Welch,
Box 311 Kilauea
Kauai, Hawaii
9674

State of Hawaii
Dept. of Transportation
Highway Division
Planning Branch

April 29, 1976

Dear Sir:

Thank you for sending us the environmental impact preparation notice on the Kauai Belt Road Kalalau to Hanalei Project. I would appreciate your consideration of the following comments:

1. The pasture lands both makai and aina of the existing highway support the bulk 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 Kauai. I recommend that you consider only your third alternative, "to retain and widen the existing roadway with improvements to four curvess . . ."

2. The nature and the slow pace characteristic 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 trees that line and shade its path would be an effect taking away a source of pleasure and relaxation 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 trying to slow down. At a public hearing held by your office in Hanalei these people of the North Shore unanimously testified against any change to the alignment of this road. To consider the first two alternatives proposed and alignments after this public testimony would seem to be an affront to the people of the North Shore and a waste of tax money on a highway project that taxpayers don't want.

4. The people of Kauai have expressed over and over again their desire for slow growth, carefully controlled growth, and quality growth on their island. Kauai is trying to protect its combination, its special way of life, its agricultural lands and Kauai is trying to develop a selective and high quality visitor industry. To substantially alter the nature of our landscape 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 often put publicly expressed; their intent to hold onto their way of living in a peaceful rural atmosphere.

5. Kauai 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 road, our one lane wooden bridges would be taking away one of Kauai'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 community and to make the experience of visiting Kauai less personal.

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

7. I ask that you consider only improving the existing roadway from Kalalau to Hanalei without excessive removal of trees lining the highway. And construct a parallel elevated alignment from the Hanalei bridge to the town to help the flooding problem. I suggest that you retain all existing bridges that are repairable and that you use available funds for the necessary repairs. I recommend that bridges beyond repair 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 the project area.

Thank you for the opportunity to comment on your proposal.

Sincerely,

John Welch
Mr. John Wehrheim
Box 111
Kilauea, Hawaii 96754

Dear Mr. Wehrheim:

Subject: Kauai Belt Road, Haena to Kalihawai
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. 5. 6. 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 recommendations 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,

Alvey Wright
Director
State of Hawai‘i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai‘i 96813

March 23, 1976

Mr. Wright:

I am dropping a line in regard to the proposed improvements to the bridges and roads between Hanalei and Haena, Kaua‘i. Having lived here for a short time, but indeed with an eye for the artistic beauty of this place, I find the wooden truss bridge into Hanalei and the rustic 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 keep me posted of the date of this event.

Very truly yours,

Aloha A. Dejoe

Geraldine A. Wojno

Subject: Kaui Belt Road, Haena to Kaliihiwai

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 salvageable. 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. Higashikawa

Director
RE KALNIWAIA-MAEWA ROAD PROJECT SIRS PEOPLES DESIRES AND FACTS HAVE BEEN PRESENTED AND AS MY FAMILY OWNS OVER SEVEN ACRES IN HANALEI AREA STRONGLY URGE DENIAL OF UNNECESSARY MAJOR ROAD-BRIDGE RECONSTRUCTION -- MOST SPECIFICALLY HANALEI-WAIOLI-MAEWA AREAS. IF SO DONE -- FACT NOT THREAT OF PROBABLE MAJOR LAWSUIT FROM THIS FAMILY AND OTHERS

E.L. YATES

CPL 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 Kalihiwai 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.

A-59
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 Kalihiwai 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 Zeillemaker (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
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

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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 Kamehameha Highway near Kahuku on the Island of Oahu.

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 estimated for the base year 1975 and projected for the years 1980 ("critical year") and 1985 (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 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 8" issued in January, 1975. 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 resource study are as follows:

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

2. Convert motor vehicle traffic data to CO emissions and ambient air impact concentrations for the years 1975, 1980, and 1985 through highway diffusion modeling techniques.

3. Calculate RCO 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 adapted for estimating traffic-generated CO effects in a steady state Gaussian computation 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 at-grade (or flat-sectional) line sources have been specified, the air pollution concentration representing hourly averaging times at a downwind receptor location, can be determined by interpolating between 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 which made it possible to convert motor vehicle volume 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 Prineville due to the weight restriction on the Hanford 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 91.6 gm CO per vehicle-mile. The Hawaii 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 0.5 and 0.2 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 assumed a stability Class D which represents adverse dispersion conditions. The application of this stability category and the selection of maximum traffic flow volumes represent worst-case conditions which yield maximum estimated air quality impact concentrations.

A steady wind speed of 1 m/s (2.2 mile/hr) is assumed in the dispersion model. Wind speed and direction data at

Klamath Point typically average from 13 to 20 mph, with speeds of less than 4 mph observed less than 4% of the time (Tables 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.

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 three sites located in proximity to the road. Such sensitive receptors as school, public facilities, or residences, where persons might be subjected to one-hour or eight-hour exposures to diesel 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 minor changes in the existing road itself. Regardless of the specific alignment chosen, the changes in microscale carbon monoxide levels at roadside 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 (Windii Bridge) and the other the effect of a widened highway (Robins Highway at the Roundabout Roundabout).

The typical highway configurations are shown in Figures 5 and 7 of the EIS. The HAVAT 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 Kihuen 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 2 mph.

There has been an 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 pollutant-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 1985 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 4. These values indicate that the effect of increasingly stringent motor vehicle exhaust 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 1985 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 (critical year) and 1985 (highway design year).

b. EPA-based motor vehicle pollutant emission factors were determined for the years 1975, 1980 and 1985.

c. CO concentrations were estimated in ambient air at the site location, for both the build and no-build alternatives for 1975, 1980 and 1985. The year 1975, rather than 1970, 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 steps were added to the background concentrations to obtain total CO levels.

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

4. Example Calculations

Carbon Monoxide Concentration Calculations. At the present time automobiles make up on either side of the one-lane bridges, waiting to cross. For modeling purposes the bridge was considered to exert the same impact as a non-signalized intersection. In both cases, as demand-capacity ratio increases, queue formation is likely to cause increasing impact on nearby ambient CO concentrations. The capacity of the one-lane bridge cannot be accurately quantified. However, for the purpose of these calculations, the capacity was assumed to be one-half of one lane on the adjoining road.

Example Bridge Receptor Calculation. For the no-build alternative in 1988 the capacity of each lane of the adjoining road in 565 VPH/lane (see Figure 4 segment 68A in the EIS). Bridge capacity is taken to be 535/2 = 268 VPH. Design hour traffic demand in 344 VPH (172 VPH/lane), 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 queuing curve is 5.0 ppm. From Figure 2, assuming a cruising speed of 30 mph, the impact of the downstream lane at 10 meters is 1.0 ppm.

Lane dimension - four meters. 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 9 meters respectively. Correction values for conversion of "10 meters" CO values to the actual distances of 5 and 9 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>CO level at 10 meters (ppm)</th>
<th>Distance (meters)</th>
<th>CO level at Receptor (ppm)</th>
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<tr>
<td>1</td>
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<td>1.2</td>
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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 1975 emissions to 1988 values, 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 = 14 mg/m³
Background CO concentration (1 ppm x 1.14 mg/m³) = 1.14 mg/m³
Total peak one-hour CO concentration = 2.5 mg/m³

Example Roadside Receptor Calculation. For the build alternative the maximum six-hour traffic (65% of the AADT as determined from traffic counts): 1000 is 125 VPH/lane.

Lane capacity - 400 VPH/lane (segment 68B, Figure 4 of the EIS).

Lane dimension - four meters (approximately). The receptor distance to near edge of lanes 1 and 2 is 5 meters and 9 meters, respectively.

Correction factor for converting "10 meters" CO values to actual distances of 5 and 9 meters from the roadway edge are 1.2 and 1.0, respectively (see Figure 4).

V/C for each lane is 125/400 = 0.31. From Figure 5, the 10 meters impact of each lane is less than 1 ppm. Correcting the 10 meters values to account for actual distances from roadway edge, concentrations of 1.2 and 1.0 for lanes 1 and 2, respectively, were obtained.

<table>
<thead>
<tr>
<th>Lane No.</th>
<th>V/C</th>
<th>CO level at 10 meters (ppm)</th>
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TOTAL 1 HOUR IMPACT: 2.2 ppm

To convert to 8-hour averages, a meteorological persistence factor of 0.6 is assumed as suggested in the EPA "Guidelines."

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

Adjusted CO concentration
\[
\text{(} 2.2 \times 0.5 \times 1.14 \times 0.1 \text{)} \quad \Rightarrow \quad 0.8 \text{ mg/m}^3
\]

Background CO concentration
\[
(1 \text{ ppm} \times 1.1 \text{ mg/m}^3) \quad \Rightarrow \quad 1.1 \text{ mg/m}^3
\]

Total impact in less than
\[
1.9 \text{ mg/m}^3
\]

**Pollutant Burden Analysis.** An analysis of regional pollutant burdens of CO, hydrocarbons (HC) and nitrogen oxides (NOx) was performed for the years 1979, 1980 and 1998. The average daily vehicle-miles traveled for each year are summarized in Table 5.

The calculation methods employed are as follows:

**Pollutant emission factors**

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<th>Year</th>
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<th>HC</th>
<th>NOx</th>
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<td>31.0 g/mi</td>
<td>5.4 g/mi</td>
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<td>1998</td>
<td>11.3 g/mi</td>
<td>1.9 g/mi</td>
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**Sample Calculation**

For 1980 the estimated daily VMT = 31,343

- CO = 31,343 x 31.0 g/mi x 1 lb. x 1 ton = 1.1 ton
  \[
  \frac{454 \text{ g}}{2000 \text{ lb}} = 0.22 \text{ ton}
  \]
- HC = 31,343 x 5.4 g/mi x 1 lb. x 1 ton = 0.2 ton
  \[
  \frac{454 \text{ g}}{2000 \text{ lb}} = 0.0004 \text{ ton}
  \]
- NOx = 31,343 x 3.9 g/mi x 1 lb. x 1 ton = 0.1 ton
  \[
  \frac{454 \text{ g}}{2000 \text{ lb}} = 0.00009 \text{ ton}
  \]

A summary of vehicle pollutant emission burdens is presented in Table 6. It should be noted that the 1980 and 1998 traffic projections (Figure 4 of the EIS) assume that the proposed highway improvements would not in themselves induce traffic since the existing highway is not a limiting factor in utilization (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 Hanford Bridge. The traffic projections assume that by 1980 the Hanford Bridge will not limit bus traffic ("build alternative"). If the weight restriction of the Hanford Bridge is not lifted ("no build alternative"), traffic beyond the bridge could be greater than predicted since tourists, 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 is anticipated in the vicinity of the proposed improvements during the 20 year design period. For the no-build alternative, the incremental CO impact is similar to those of the improved highway until 1998. 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 VMT and Federal motor vehicle emission standards, the total CO emissions should decrease nearly 38% between 1975 and 1990. Hydrocarbon emissions will likely decrease by 37% while nitrogen oxide values should increase by 30%. For carbon monoxide, the maximum emission rates during the 1970 through 1990 period are currently being observed. Peak hydrocarbon emissions will be observed in 1978 while emissions of nitrogen oxides will gradually decrease throughout the 1976 to 1990 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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Calcs = .0417

Years of record - 1961, 1967, 1971
Number of observations - 1,085

Compiled from DMG data by:
THE AMERICAN IHOE ASSOCIATION OF HAWAI'I

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Years of Record - 1964, 1967, 1971

Number of Observations - 1,093

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<th>Direction</th>
<th>0-3</th>
<th>4-7</th>
<th>8-12</th>
<th>13-18</th>
<th>19-24</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>.0009</td>
<td>.0073</td>
<td>.0091</td>
<td>.0192</td>
<td>.0475</td>
<td>.0412</td>
</tr>
<tr>
<td>NE</td>
<td>.0037</td>
<td>.0091</td>
<td>.0192</td>
<td>.0475</td>
<td>.0412</td>
<td>.0192</td>
</tr>
<tr>
<td>E</td>
<td>.0009</td>
<td>.0119</td>
<td>.0539</td>
<td>.1260</td>
<td>.0685</td>
<td>.0210</td>
</tr>
<tr>
<td>SE</td>
<td>.0055</td>
<td>.0274</td>
<td>.1233</td>
<td>.1735</td>
<td>.0922</td>
<td>.0265</td>
</tr>
<tr>
<td>S</td>
<td>.0027</td>
<td>.0064</td>
<td>.0064</td>
<td>.0037</td>
<td>.0000</td>
<td>.0000</td>
</tr>
<tr>
<td>SW</td>
<td>.0017</td>
<td>.0110</td>
<td>.0137</td>
<td>.0037</td>
<td>.0000</td>
<td>.0000</td>
</tr>
<tr>
<td>W</td>
<td>.0027</td>
<td>.0027</td>
<td>.0082</td>
<td>.0055</td>
<td>.0004</td>
<td>.0018</td>
</tr>
<tr>
<td>NW</td>
<td>.0017</td>
<td>.0082</td>
<td>.0064</td>
<td>.0037</td>
<td>.0018</td>
<td>.0027</td>
</tr>
<tr>
<td>Total</td>
<td>.0217</td>
<td>.0840</td>
<td>.2402</td>
<td>.3639</td>
<td>.2055</td>
<td>.0721</td>
</tr>
</tbody>
</table>

Calcs = .0055

Years of Record - 1964, 1967, 1971

Number of Observations - 1,095

---

Compiled from NWS data by:

THE AMERICAN LUNG ASSOCIATION OF HAWAII

II-13

Compiled from NWS data by:

THE AMERICAN LUNG ASSOCIATION OF HAWAII

II-14
### Table 4

**SUMMARY OF STATE OF HAWAI'I AND FEDERAL AMBIENT AIR QUALITY STANDARDS**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Sampling Period</th>
<th>Federal Standards</th>
<th>State Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Primary&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Secondary&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>1. Suspended Particulate Matter</td>
<td>Annual Geometric Mean</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in Any 24 Hours</td>
<td>260</td>
<td>150</td>
</tr>
<tr>
<td>2. Sulfur Dioxide</td>
<td>Annual Arithmetic Mean</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in Any 24 Hours</td>
<td>385</td>
<td>260</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in Any 3 Hours</td>
<td>1300</td>
<td>400</td>
</tr>
<tr>
<td>3. Carbon Monoxide</td>
<td>Maximum Average in Any 8 Hours</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Maximum Average in Any 1 Hour</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>4. Hydrocarbons: Non-methane</td>
<td>Maximum Average in Any 3 Hours</td>
<td>160</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Photochemical Oxidants</td>
<td>Maximum Average in Any 1 Hour</td>
<td>160</td>
<td>100</td>
</tr>
<tr>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Nitrogen Dioxide</td>
<td>Annual Arithmetic Mean</td>
<td>100</td>
<td>70</td>
</tr>
<tr>
<td>(micrograms per cubic meter)</td>
<td></td>
<td></td>
<td>150</td>
</tr>
</tbody>
</table>

<sup>a</sup>Designed to prevent against adverse effects on public health.

<sup>b</sup>Designed to prevent against adverse effects on public welfare including effects on comfort, visibility, vegetation, animals, aesthetic values, and soil and deterioration of materials.

### Table 5

**EXISTING AND PREDICTED DAILY VEHICLE - MILES OF TRAVEL: (VAT)**

<table>
<thead>
<tr>
<th>Road Segment&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Length</th>
<th>1975</th>
<th>1980</th>
<th>1988</th>
</tr>
</thead>
<tbody>
<tr>
<td>12a</td>
<td>0.9</td>
<td>1,760</td>
<td>3,050</td>
<td>7,615</td>
</tr>
<tr>
<td>12b</td>
<td>0.9</td>
<td>1,241</td>
<td>12,083</td>
<td></td>
</tr>
<tr>
<td>12c</td>
<td>0.6</td>
<td>3,117</td>
<td>4,566</td>
<td></td>
</tr>
<tr>
<td>12d</td>
<td>1.3</td>
<td>2,310</td>
<td>9,601</td>
<td></td>
</tr>
<tr>
<td>13a</td>
<td>1.3</td>
<td>3,030</td>
<td>11,604</td>
<td></td>
</tr>
<tr>
<td>13b</td>
<td>0.4</td>
<td>3,059</td>
<td>3,999</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.5</td>
<td>298</td>
<td>2,298</td>
<td></td>
</tr>
<tr>
<td>15a&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.5</td>
<td>660</td>
<td>757</td>
<td>1,718</td>
</tr>
<tr>
<td>15b</td>
<td>0.3</td>
<td>348</td>
<td>816</td>
<td></td>
</tr>
<tr>
<td>15c</td>
<td>2.2</td>
<td>3,190</td>
<td>5,544</td>
<td></td>
</tr>
<tr>
<td>15d</td>
<td>0.4</td>
<td>450</td>
<td>570</td>
<td>1,098</td>
</tr>
<tr>
<td>16</td>
<td>3.2</td>
<td>3,472</td>
<td>6,010</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12.5</td>
<td>11,055</td>
<td>31,313</td>
<td>68,884</td>
</tr>
</tbody>
</table>

Notes:

<sup>a</sup> Refer to Figure 4, Traffic Volume Data, of the EIS.

<sup>b</sup> Representative receptors: Kahanu Highway and Haalei Plantation Road.

<sup>c</sup> Representative receptors: Waikiki Bridge
### TABLE 6
POLLUTANT EMISSIONS BURDENS - TONS/DAY

<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>NO₂</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

#### A. Burdens based on Projected Traffic (Figure 4 of the EIS)\(^{1}\)

#### B. Burdens contributed by Additional Buses \(^{1}\)

<table>
<thead>
<tr>
<th></th>
<th>1980 T/D</th>
<th>1990 T/D</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>0.008</td>
<td>0.016</td>
</tr>
<tr>
<td>HC</td>
<td>0.001</td>
<td>0.002</td>
</tr>
<tr>
<td>NO₂</td>
<td>0.000</td>
<td>0.012</td>
</tr>
</tbody>
</table>

**Notes:**

a. Includes buses and trucks; approximately 300 per day in 1980 and 800 per day in 1990 (12%).

b. Assume 100 more buses per day than projected for 1980 and 200 more buses per day than projected for 1990, to demonstrate small effect that buses have on pollutant emissions.

---

### TABLE 7
ESTIMATED MAXIMUM CO CONCENTRATIONS AT TWO CRITICAL RECEPTORS (Expressed as mg/m³)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Hr. Max.</td>
<td>8 Hr. Max.</td>
<td>1 Hr. Max.</td>
</tr>
<tr>
<td>Build</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>roadside receptor</td>
<td>-----</td>
<td>2.6</td>
<td>&lt; 1.9</td>
</tr>
<tr>
<td>receptor at bridge</td>
<td>-----</td>
<td>&lt; 2.4</td>
<td>&lt; 1.9</td>
</tr>
<tr>
<td>No-Build</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>
</tr>
<tr>
<td>receptor at bridge</td>
<td>&lt; 3.6</td>
<td>&lt; 2.6</td>
<td>2.4</td>
</tr>
</tbody>
</table>
FIGURE 3 RELATIVE CONCENTRATION OF CO VS. PERPENDICULAR DISTANCE FROM A TRAFFIC LANE NEAR AN UNSIGNALIZED INTERSECTION

FIGURE 4 RELATIVE CONCENTRATION OF CO VS. PERPENDICULAR DISTANCE FROM A TRAFFIC LANE WITH FREELY FLOWING TRAFFIC
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>(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>
</tr>
<tr>
<td>$I_{50}$ reference at 100 feet</td>
<td>49</td>
<td>28</td>
<td>52.5</td>
<td>31</td>
</tr>
<tr>
<td>Distance, width adjustment</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>78</td>
<td>13</td>
</tr>
<tr>
<td>$L_{10}$ reference at observer</td>
<td>60.1</td>
<td>42.5</td>
<td>61.8</td>
<td>45.5</td>
</tr>
<tr>
<td>Segment adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrier adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Miscellaneous Adjustments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gradient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foliage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rows of houses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceleration at Bridge</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>$L_{10}$ at observer, by veh. type</td>
<td>60.1</td>
<td>42.5</td>
<td>61.8</td>
<td>45.5</td>
</tr>
<tr>
<td>$L_{10}$ at observer, summed</td>
<td>60.2</td>
<td>61.9</td>
<td>59.2</td>
<td>58.7</td>
</tr>
</tbody>
</table>
### 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>
<thead>
<tr>
<th>Item</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L10</strong> reference at 100 feet</td>
<td>58</td>
<td>40</td>
<td>58</td>
<td>39</td>
</tr>
<tr>
<td><strong>Distance, width adjustment</strong></td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>L10 - L50 adjustment</strong></td>
<td>5.7</td>
<td>12.6</td>
<td>5.7</td>
<td>12.7</td>
</tr>
<tr>
<td><strong>L10</strong> reference at observer</td>
<td>65.2</td>
<td>54.1</td>
<td>65.2</td>
<td>53.2</td>
</tr>
<tr>
<td><strong>Segment adjustment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Barrier adjustment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gradient</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Road surface</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foliage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rows of houses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acceleration at Bridge</strong></td>
<td>+7</td>
<td></td>
<td>+7</td>
<td></td>
</tr>
<tr>
<td><strong>L10</strong> at observer, by veh. type</td>
<td>65.2</td>
<td>54.1</td>
<td>65.2</td>
<td>53.2</td>
</tr>
<tr>
<td><strong>L10</strong> at observer, summed</td>
<td>65.5</td>
<td>65.5</td>
<td>64.6</td>
<td>63.0</td>
</tr>
</tbody>
</table>
# TRAFFIC NOISE COMPUTATION TALLY

**NOISE LEVEL, dBA**

**Project:** Kuhio Highway (Kalihiwai-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>ALTS 1,2,W</th>
<th>ALTS A,B,W</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998 VPH</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Item</td>
<td>A</td>
<td>T</td>
</tr>
<tr>
<td><strong>I50 reference at 100 feet</strong></td>
<td>61</td>
<td>41</td>
</tr>
<tr>
<td><strong>Distance, width adjustment</strong></td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>L10 - L50 adjustment</strong></td>
<td>5.8</td>
<td>12.8</td>
</tr>
<tr>
<td><strong>L10 reference at observer</strong></td>
<td>68.3</td>
<td>55.3</td>
</tr>
</tbody>
</table>

**Barrier adjustment**

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

<table>
<thead>
<tr>
<th>Item</th>
<th>ALTS 1,2,W</th>
<th>ALTS A,B,W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L10 at observer, by veh. type</strong></td>
<td>68.3</td>
<td>55.3</td>
</tr>
<tr>
<td><strong>L10 at observer, summed</strong></td>
<td>68.5</td>
<td>67.8</td>
</tr>
</tbody>
</table>
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 Kalihiwai to Princeville, Halele'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 Kalihiwai 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
HHH:ds
Enclosure

D-2
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,

Suzumu 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,

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 Kalihiwai 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, Waioli, Waipa, 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 Princeville 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.)
Honoroble E. Alvey Wright  
Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Sir:

SUBJECT: Kauai Belt Road, Hanalei to Kalihiwai  
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
889 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 Kaliihiwai, 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,

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

Dear Mr. Sagawa:

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, Kalihiwai 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 airport/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, Kaliihiwa 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 wvilliana).

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 siltation 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 stilts 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.
APPENDIX F  COMMENTS AND RESPONSES TO THE DRAFT EIS

I. DRAFT EIS MAILING LIST  (Circulated 3/16/77)

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<td>801 19th Street, NW Suite 613 Washington, D.C. 20006</td>
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<td>Department of Commerce Attn: Dr. Sydney R. Galler Deputy Assistant</td>
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<td>Mr. Ernest E. Sligh, Director Environmental Impact Division Office of Environmental Programs Federal Energy Administration</td>
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<td>Hanalei Community Association President</td>
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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
P.O. Box 921
Lihue, Kauai 96766

Life of the Land and Sierra Club
Attn: Helen C. Hopkins
P.O. Box 266
Hanalei, Kauai 96714

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 4247
Honolulu 96813

Private Individuals
William T. Le Gro
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
## II. COMMENTS RECEIVED

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ORGANIZATIONS

American Lung Association 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 5/26/77

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
Brysone 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.
April 26, 1977

Mr. Ralph V. Segura
Division Administrator, Region 9
Federal Highway Administration
677 Alaka Place, Suite 513
Honolulu, Hawaii 96813

Dear Mr. Segura:

This is in response to your request of March 16, 1977, for comments on
the draft environmental statement (DES) for the proposed improvements to
Federal-Aid Primary Route 56, the Kohala Highway (Kaaik Milt Road), from
near Enuhale to the terminus of the road near Hana (Sam Beach), in the
Kauai District of the Island of Kauai, Hawaii. The Advisory Council on
Historic Preservation has reviewed the DES and notes that the undertaking
will affect the Fondal 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,
to the approval of the expenditure of any Federal funds on 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 for or included in the National
Register of Historic Places.

Until the requirements of the "Provisions 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 DES to be
incomplete in its treatment of historical, archaeological, architectural
and cultural concerns. To remedy this deficiency, the Council will provide
substantive comments on the undertaking's effect on the previously mentioned
properties through the "Provisions." Please contact Michael H. Sorensen
of the Council staff to assist you in completing this process as expeditiously
as possible.

Sincerely yours,

[Signature]

Evelyn A. Hall
Assistant Director, Office of Review and Compliance

The Council and the staff of the Office of Review and Compliance are not the
Department of the Interior, the Executive Branch of the Federal Government.
April 4, 1977

Gentlemen:

Enui Belt Road, Kaliihiwai to Haena Section,
P.O. Box 50, Suite 613
Hilo, Hawaii 96720

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. R. Chau
State Executive Director
Hawaii State ASCS Office

May 9, 1977

Mr. Ralph C. Toppan
Division Administrator
Federal Highway Administration, Region IX
U. S. Department of Transportation
677 Ala Moana Blvd., Suite 613
Honolulu, HI 96813

Dear Mr. Toppan:

Subject: Enui Belt Road, Kaliihiwai to Haena Section, P.O. Box 50, 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 solicitation of the potential impact of the project on the environment:

No mention is made of prime agricultural land lost to highway construction. For example, present highway and alternatives consider Makipii soils in terms of potential erosion, not loss of prime agricultural land. Makipii silty clay, 0 to 5 percent slopes, and Paokai silty clay, 0 to 8 percent slopes, are considered prime agricultural lands. Also, the taro and rice fields in the Makipii soils are considered to be unique lands.

The amount of acres of these soils and the taro and rice fields that will be affected by the highway should be mentioned. Any mitigating 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 P. Ema
State Conservationist
On page II-28 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 Kaliihwa to Princeville will take an estimated 7.3 acres of grazing land for new right-of-way (see Page II-28 of this Final EIS), of which approximately half is classified as Prime. This widening will not affect any faro or rice fields.

Mr. Ralph T. Segal, Division Administrator
H. E. Department of Transportation
Federal Highway Administration, Region Nine
677 Ala Moana Blvd., Suite 619
Honolulu, Hawaii 96813

Dear Mr. Segal:

We have received the Draft Environmental Impact Statement for Kaliihwa to Hana Section, as requested in your letter 915 EC, dated 16 March 1977. The Corps commented on the Environmental Impact Statement at Preparation Notice for this proposed project in a letter to Mr. L. Alway Wright, dated 12 April 1976. We feel that our comments were adequately addressed in this document and have no further comments to make at this time.

We appreciate the opportunity for additional input.

Sincerely yours,

K. KIKUCHI
Chief, Engineering Division
May 11, 1977

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 Sir:

The Draft Environmental Impact Statement for the Kual Belt Road, Kalihui to Haena Section, FAP Route 56 has been reviewed in accordance with the Intent of the procedures of the Department of Health, Education and Welfare as required by Section 701(2)(c) of the National Environmental Policy Act, PL 91-190.

The major concern of this Department is related to possible impacts upon the health of the public, services to that population, and changes in 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 D. Robinson
Regional Environmental Officer

cr: FG

April 1, 1977

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: Kalakaua Belt Road Kalihui to Haena Section
FAP Route 56, Draft Environmental Impact Statement

The proposed realignment and improvements covered in the Draft EIS for the 1/2 mile section on FAP Route 56 on Kauai was reviewed by this office.

The proposed action and alternatives considered in the Draft EIS do not impact on HUD projects or HUD areas of concern.

We look forward to receiving the Final Draft of the EIS.

Sincerely,

Ben S. Sim
Director
Mr. Ralph T. Segawa, Honolulu, Hawaii

The Section 4(f) statement should present definite commitments to replace Refuge land taken, and to mitigate any harm caused, at project expense. Details of mitigation measures should be developed in consultation with the U.S. Fish and Wildlife Service, and the concurrence of that agency should be evidenced in the 4(f) statement.

**Historic Sites**

We note that the Kauai Historical Society has recommended that the Hanalei, Waioli, Waipoo, and Wainiha Bridges, and the Hanalei Ford and the Liholiho 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 certain 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 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 Kauai 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 Design A, B, 2, 3A, or 3B. We oppose the selection of Design B because of its impact on endangered waterbird habitat. Mitigation measures should include recreation of 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 A or B would best preserve the existing habitat 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) in archaeological resources cannot be determined at this time. We would point out that, should significant
archaeological sites be discovered later in the planning process, additional section 6 comments may be required. We urge that adequate surveys be accomplished as soon as possible before the final statement is completed so that archaeological information will be available for the selection of alternatives and for adequate compliance with the requirements of section 6.

ENDANGERED SPECIES COMMENTS

The Department of the Interior is concerned with the possible adverse affects 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 waterbird habitat. Even if Design #4 is rejected 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 Highway 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 4068-4073, January 26, 1977.

In any event, the responsibility for determining project impacts on endangered species 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 Hanalei 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 fact replace habitat that is irrevocably lost with project development.

In figures 20, 6, and 16A, a portion of the Hanalei 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 Hanalei River below the existing bridge as shown in figure 11.

As noted on page 11-37, "Impacts to potential archaeological resources are as yet undetermined." This situation appears to be due to the stated policy ([1]-36, 37) that an archaeological survey will be conducted for the selected alternative only.

This means that cultural resources of an archaeological nature will not be a part of the planning process that selects alternatives, and that 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 ....", Instead, the plan is to select an alternative and then survey. If any 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 weighed 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 archaeological 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 archaeological 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 Hanalei Bridge westward to the end of the project is described as having unstable 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...
the heavier vehicles should be evaluated fully. The environmental statement should include an evaluation of adverse impacts of heavier vehicles on road surfaces, subgrade soils, and fill materials in relation to the unstable slopes and generally unsuitable soil conditions.

No discussion of a turn-around at the west end of the road was found. Since this is shown as an abrupt dead-end road on the maps, it might be advisable to consider the need for a turn-around for the tour buses that are anticipated on the improved road.

No mention of landslides was noted in the main body of the environmental statement, although unstable slopes were briefly referred to on page 11-1 (par. 2). We feel that the statement should contain a full evaluation of any potential geologic hazard of landslides in relation to the proposed earthwork. Sufficient information on the geology of the project area should be provided to relate landslide hazards or unstable slopes to underlying geologic conditions. Although the draft statement contains a section entitled "Geology and Soil Erosion" (p. 11-4 to 11-6), the discussion is largely confined to soils, information on underlying geologic materials being limited largely to brief references to volcanics and corals (for example, p. 11-4, par. 2).

SUMMARY COMMENTS

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 Manawai 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 (415-556-4100).
EVALUATION
U.S. DEPARTMENT OF THE INTERIOR (6/9/77)

A. B. These comments, relating to the Princetown to Hanau section of the highway, will be evaluated in a supplement to this Final EIS.

C. F. 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 Hanau Bridge, a final determination will be made in the Princetown to Hanau supplement Final EIS.

G. These maps have been corrected.

H. See response to D. above.

J. This will be provided for in the Hanau State Park.

K. Landslides are not a concern on the gentle topography of the Kailua-Kona to Princetown segment. Your suggestion on discussing the stability of road cuts from Princetown to Hanau will be discussed in the supplemental Final EIS covering that section.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MAR 31, 1977

Mr. Ralph T. Popas
Division Administrator
Federal Highway Administration
Region One
877 Ala Moana Blvd., Suite 611
Honolulu, Hawaii 96814

Dear Mr. Popas:

This responds to your letter dated March 16, 1977, transmitting a copy of the draft Environmental Impact Statement for the proposed improvements to Hanau Belt Road, Kailua to Hanau Section, on the Island of Kailua, 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 Princetown Airport, a private facility, is located within the project limits. So that there will be no further degradation of the existing airport/road clearances, 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,

R. BAYANA
Supervisory Roadway Engineer, AIC-620
The recommended highway widening from Kalibirai to Princeville will be made on the side of the road away from Princeville Airport, so there will be no interference.

Mr. Ralph T. Segawa
Division Administrator
Federal Highway Administration
677 Ala Moana Blvd.
Honolulu, Hawaii 96813

Dear Mr. Segawa:

Thank you for forwarding to my office a copy of the Environmental Impact Statement for the Kawai Heli Road, Kalibirai to Haena Section.

Although I do not have any comments at this time, I have noted the date for public hearing.

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

March 31, 1977
Dear Mr. Hawley:

The Environmental Protection Agency has received and reviewed the Draft Environmental Statement for the Kauai Belt Road, Kalihiwai to Haena Section (FAP Route 56) Kauai, Hawaii.

EPA's comments on the Draft Environmental Statement have been classified as Category LO-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 our 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 Port, EIS Coordinator, at (415) 556-6266.

Sincerely,

Paul De Falco, Jr.
Regional Administrator

Enclosure

cc: Council on Environmental Quality
cc: Ralph T. Segava, Div. Admin
Federal Highways Admin
677 Moana Blvd., Suite 613
Honolulu, Hawaii 96813

EIS CATEGORY CODES:

Environmental Impact of the Action

LO—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.

ER—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 is required and has asked the originating Federal agency to reassess these aspects.

EU—Environmentally Unsatisfactory
EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect 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).

Adequacy of the Impact Statement

Category 1—Adequate
The draft impact statement adequately sets forth 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.
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: Kalaeloa Road, Kaliihi to  
Honuapo Section, H-1 Route 56, Draft  
Environmental Impact Statement  

This is in response to your letter number 9158C requesting  
review and comments on the subject project.  

As the project will not involve any right-of-way or easement  
taking of land along Kalaeloa Elementary School and  
Manoa Community, we have no comments to offer.  

We would appreciate a copy of the final Environmental Impact  
Statement.

Very truly yours,

RIGGO HISHIDA  
State Public Works Engineer  

Harry  

May 4, 1977

Mr. O. Kaneko  
Assistant Division Administrator  
U. S. Department of Transportation  
Federal Highway Administration  
677 Ala Moana Blvd., Suite 613  
Honolulu, Hawaii 96813

Dear Mr. Kaneko:

Subject: Kalaeloa Road, Kaliihi to  
Honuapo Section, H-1 Route 56, Draft Environmental Impact Statement  

The Department of Agriculture has reviewed the subject draft  
impact statement. This agency concurs with the alternatives  
proposed by the same Department of Transportation because  
the impact upon the production area would be minimal.  

We would appreciate a copy of the final environmental impact  
statement.

Thank you for the opportunity to comment.

Sincerely,

J. H. EVANS, J.  
Chairman, Board of Agriculture  

Division of Transportation
Hi Mr. Korschut,

Assistant Division Administrator
H. S. Department of Transportation
Federal Highway Administration
677 Ala Moana Boulevard, Suite 613
Honolulu, Hawaii 96813

Dear Mr. Korschut:

Kalaeloa Belt Road

Thank you for sending us a copy of the "Kalaeloa Belt Road" Environmental Impact Statement. We have reviewed the publication and have no comments to offer.

Yours truly,

Yours,

[Signature]

Jay H. Sugiyama
Captain, TX, HARPO
Comrad & Legal Officer

Enclosure:

Hi Ralph T. Segura,

Division Administrator
Federal Highway Administration
Department of Transportation
677 Ala Moana Boulevard, Suite 613
Honolulu, Hawaii 96813

Dear Mr. Segura:

Subject: Kalaeloa Belt Road, Kalaeloa to Hooma Section, PAP Route 50, Draft Environmental Impact Statement

Thank you for allowing us to review and comment on the subject project.

In general the draft statement appears to be quite comprehensive. The air quality assessment is adequate. The secondary impacts due to the improved transportation facility might be expanded upon in the final statement.

Sincerely,

[Signature]

Shanti Shriroa, Chief
Environmental Protection & Health Services Division
This Final EIS for the Kalihini to Princeville section does discuss secondary (i.e. growth) impacts (see page H-1). A future growth-inducing impact may result from widening the Hanalei Bridge. This impact will be discussed in the supplemental Final EIS for the Princeville to Haena section.

This project will have an impact on Haena State Park. We should coordinate park development with the highway project. There are two main concerns:

1. Bridge improvement or relocation at Lmahuli Stream should be determined by park plans. The stream forms the park boundary and all roads beyond that point to Kee Beach will be park roads.

2. The existing roads and parking arrangements within the park are inadequate. If it becomes possible for buses to reach the park, the problem could become unmanageable. 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]

Chairman of the Board
Impacts to parks on the Princeville to Haena 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 Alakea Street, Suite 611
Honolulu, Hawaii 96813

Gentlemen:

EMERGENCY: Canoe Boat Road, Fallasuci to Haena Section, EAP Route 56, Draft Environmental Impact Statement

The Division of Fish and Game has reviewed the subject document and offers the following comments:

1. With respect to fishing values in the eight streams and rivers affected by the proposed project, no adverse effects are expected. It is requested that on Page 112, Lines 1 and 2 in referring to o'ahu, the word "highly sought after food fish" be used rather than "same type" 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 Design 31h, keeping the canals adjacent to that portion of the road between the Kauai Lava and Harborton as now exists. Other alternatives for the section to Princeville and Hanalei through Kauai are less crucial to wildlife. All alternatives, for which the Department of Transportation has expressed preference, would be next desirable from the standpoint of the protection of wildlife.

Thank you for the opportunity to review the subject document.

[Signature]
1. Your suggestion has been incorporated in the Final EIS, page H-18.

2. The comments regarding the Hanalei Bridge will be taken into consideration.

Mr. Ralph T. Segawa
Division Administrator, Region 9
Federal Highway Admin.
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Dear Mr. Segawa:

I appreciate this opportunity to comment on the draft environmental statement for the proposed improvements to the Federal-Aid Primary Route 56, the Kuhio Highway (Kauai Belt Road), from near Kalifval to the terminus of the road near Hanalei, Hanalei District, Kauai.

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. Silverman
Historic Preservation Officer
State of Hawaii

[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 Haana section.

MEMORANDUM

TO: E. Alvey Hight, Director
Department of Transportation

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

SUBJECT: Hanaii Belt Road, Kaliihiwai to Haana 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 Haena Valley. Residents have vividly expressed their opinions of protecting their tranquility and rural lifestyle. Yet, we are also aware of the short structural lives of the presently proposed bridges. Thus, in planning and selecting the 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:

HAENA BELT ROAD (p. 5-11)

The EIS indicates that the Federal Highway Administration will not pay for design 1A. Is it also applicable to design 12 or any other one-lane bridge proposal?

PLATE 19 b, 20

The copy does not have Plates 19 and 20.

WILDLIFE HABITAT (p. 61-68)

It is disturbing that 5% of the habitat will be directly and indirectly affected by the proposed alternate highway design.

Although this is a relatively small amount, loss of the habitat would be a significant adverse impact, since it is "critical habitat" for four endangered species. These waterbirds are endangered for the very reason that their habitat has been eliminated of
seriously reduced throughout the islands. No further loss of habitat can be considered insignificant, especially where that habitat is presently used by large numbers of these endangered species.

The realization of the potential impact on the endangered species is very important comment, especially in light of the State Environmental Policy Act (Chapter 344). We appreciate your full consideration of the refuge.

**FIGURE 1**

The figure illustrates accidents of 1973 and 1974. Although the total accidents are seventy-four for the entire strip of improvements, the number of accidents at the bridges is considerably low. Thus, data should depict the breakdown for bridge related accidents to accurately detail the existing hazard at the bridges and not the road itself.

**PAGE A-91**

In the response to Mr. Helen Hopkins comment, it states, "We will include a benefit-cost analysis in the final EIS." Our copy did not include such an analysis.

**SAFETY**

One of the main objectives of the proposed improvements is safety. However, if bridges can accommodate tour buses, there is a question of safety along the roads. The present road to Haleiwa is narrow and has many curves. Buses need more room for the curves so that it will prevent safety problems along the road itself. This is a potential hazard which may later be used to justify road widening costs. Has this been considered?

**PAGE A-129**

The EIS states,

A major concern of the Haleiwa-Haena residents is that with an improved highway tour buses 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. This, and other disagreements 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 a policy statement — not a fixed commitment that cannot be amended. Nor, it is a document that may be implemented. The draft passage suggests that your agency has no jurisdiction on the matter therefore it is not an issue. Your participation of the highway is related to the development plan that you are implementing some of its objectives. This should be treated lightly. Unfortunately 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 fairness 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 need not consider responses after the fourteen day response period. However, because of the controversial nature of the proposed action, 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 IRC may not be used for the con-
struction of one-lane bridges on the North Shore.

B. C. L. T. These comments relate to the proposed improve-
ments to the Princeville to Hanae section of the highway.
They will be given careful consideration in selecting alterna-
tives, and will be evaluated in the supplemental Final EIS for
that section.

D. The erosion control measures described in this Final EIS
(pages 11-2 & 3) will be employed, where appropriate, through-
out the construction period, and until the exposed slopes are
stabilized.

E. The benefit/cost ratios for the alternative improvements to
the highway 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 1.13.

F. The referenced comment regarding the North Shore Development
Plan was not intended to imply that the Department of Trans-
portation 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 issues 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 lesser in scope than shown on the Development Plan (see
pages 1-23 & 31 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 Associate Director
April 11, 1977

Mr. E. Alvey Wright
Director, Department of Transportation
State of Hawai'i
809 Punchbowl St.
Honolulu, Hawai'i 96813

Dear Mr. Wright:

Re: Kalani Holt Road, KAP Route 56, Haena to Kalihiwai
(4-PA 2.36223)

I have asked Dr. J. Ooka, Superintendant of the Kalani Research Station
of the College of Tropical Agriculture, to comment on the proposed Kalani
Holt Road, KAP Route 56, Haena to Kalihiwai.

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
watered areas may result in the degradation of the water supply used
by some growers in the area.

Would you please accept this written assessment in lieu of attendance
at a public hearing.

Yours sincerely,

H. P. Kefford
Acting Associate Director

cc: Dr. J. Ooka

AN EQUAL OPPTUNITY EMPLOYER
Your concern on the indirect effects to the water supply used by taro growers is acknowledged and will be noted in the supplemental Final EIS for the Princeville to Haena section.

The Environmental Center review of the above cited DEIS has been prepared with the assistance of C. Lamoreux (Botany), C.S. Papacostas (Civil Engineering), and Clare Shinoda (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-Hanalei 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, sight distance and cross-section discrepancies between the standards and the existing highway.
Table 2 of the draft EIS should be accompanied by a map which shows clearly the locations of the points defining all segments noted. Information about the improvements to section C1 and C2 which resulted in accident rate reductions should be included in the final EIS.

It is clear that the Kalilihi-Harina segment of the Kahila Highway has a disproportionately high accident rate which requires attention. Although "the accident rate in the project area is 3 to 12 times higher than the rate for segments of the Kahila Highway that have been improved" (p. 1-3), it cannot be assumed that all of the proposed alternatives are capable of reducing the accident rate of the project section to the levels prevailing on the improved sections.

The final EIS should attempt to quantify the potential of each alternative to reduce the current accident rates. To accomplish this, better accident statistics than those reported on Figure 3 are necessary. For example, it is not clear whether reported accident were caused by substandard geometry or whether they were due to driver error (e.g. exceeding the design limit, etc.).

We appreciate the opportunity to review this EIS and request copies of the final environmental impact statement.

cc: Reviewers
OGC

EVALUATION
ENVIRONMENTAL CENTER (5/10/77)

A. The alternatives which had the greatest potential for encountering previously undiscovered archaeological sites have been rejected in favor of minimal widening within (or slightly outside) the right-of-way from Kalilihi to Princeville. An archaeological reconnaissance has been conducted for the recommended alternative (Appendix I). If any artifacts are encountered during construction, work will be stopped and the SHPO immediately notified.

B. The pavement on the existing Kalilihi to Princeville segment is 18 feet wide compared to AASHTO standards allowing a 22 foot minimum. The existing shoulders are 2 feet wide compared to the standard 8 feet minimum. The curves that are to be realigned are examples of extremely poor geometrics ("broken back" curves and "S" curves without a tangent), and are not considered to be adequate highway design under AASHTO criteria.

C. The accident statistics in Table 2 have been revised to show more years and to eliminate the confusion caused by changes in designating segments. The improvements to the highway from Anahola to Kalilihi (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 not unreasonable to assume that the Kalilihi 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. R. Alvey Wright
Director
State Dept. of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Gentlemen:

Re: Kauai Belt Road, FAP, Route 56, Haena to Kalihiwai, Kauai

Based upon your findings and evaluation contained within the draft Environmental Impact Statement for the proposed highway and bridge improvement from Kalihiwai 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,

Edwin Nakano
Planning Director

cc: Mayor, P.I.A., Comm.
Mr. Ralph T. Segawa  
Division Administrator  
U.S. Department of Transportation  
Federal Highway Administration  
677 Ala Moana Blvd., Suite 613  
Honolulu, Hawaii 96813

April 22, 1977

Subject: Kualo Hula Road, Kalalau to Haena  
Section, HAP Route 56, Draft Environmental Impact Statement

Gentlemen:

The information provided in the Draft Environmental Impact Statement was very helpful in evaluating the various proposed alternatives in 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 undeniable alternatives: retain the existing economic base with its uncertain future or developing a new economic base with the potential of degrading the unique rural life-style."

That statement narrows the choices 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 lako. If lako farming is expanded and other specialized crops are introduced, there would be a definite need to improve the highway and bridge system 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 improvements 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,

BRIAN NISHIMOTO  
Planning Director

cc: Wayne  
Pltg. Engr.  
E. Alvey Wright, PBT  
Edwin Nakano, "
EVALUATION

PLANNING DEPARTMENT (4/21/77 and 4/25/77)

Your support of the preferred alternatives 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 II-27 to II-29).

COUNTY OF KA'UAI
DEPARTMENT OF PUBLIC WORKS
KAUAI PLANNING COMMISSION
1980, KA'UAI, HAWAII 96746
April 6, 1977

Mr. Ralph C. Segura
Division Administrator
Federal Highway Administration
677 Alpha Drive, Anchorage, Suite 600
Juneau, Alaska 99801

Dear Mr. Segura:

SUBJECT: HAME BUTTON ROAD, KA'UAI TO HAENA SECTION.
STATE ROUTE 56, DRAFT 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 Kalalau River in Haena should be traffic safety. We believe that for the highway improvement between Kalalau River and Kaanuie River, Alternative No. 2 with the downstream bridge crossing at the Kalalau River is the most desirable in meeting the needs and objectives of traffic safety.

Alternative No. 2 which realigns the highway away from the area of swaling trees should eliminate or reduce 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.

The alternative will eliminate the hairpin curve at the bluff overlooking Kaauie and the right angle bridge approach across the Kalalau River. Sight distance and road design will facilitate achieved operational speed of 25 MPH. posted speed limit at the beach coincides with the design speed and the introduction of confusion to the unexpecting driver will be eliminated. The motorist traveling downgrade where a vehicle actually violates will not be faced with a restriction on speed. I must be reduced drastically to negotiate a curve at the out of the bridge crossing.

2. At points of landings at Kaauie, Wainui, Haena, Kalihihau, Honu, Honuakai, Hanalei and Hanalei should have improved wharf to accommodate at least two lanes of traffic. Building a bridge that is one lane wide for a two lane highway...
It is not in the interest of traffic safety. Not only is there a 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.

1. We do not feel that the cost-benefit ratio of the cost to provide the safety improvement should govern and control the nature of the improvement. Cost and available funds should only dictate perhaps the incremental construction or the phasing of the entire project.

6. Between Wiliho Stream to where the roadway has a pavement width of 30 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 decrease with higher cross-sectional standards such as wider traffic lanes, shoulders, and structures. Further, tighter grades and curvatures reduce the variance in speeds of vehicles and decrease 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,

Mary Hiraia
County Engineer

Mr. E. Alvey Wright, Director
DEPARTMENT OF TRANSPORTATION
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

SUBJECT: TESTIMONY OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUA’I; KAUA’I BELT ROAD, KAUA’I TO HAENA SECTION, FAP ROUTE 56

We have been keeping close tab on developments proposed by the State Department of Transportation for the North Shore highways since this is such a vital link affecting so many of our constituents.

Although we may have previously expressed a desire to see a new alignment in the Kalalau 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 impetus is towards correcting single lane bridges because of the hazards they present.
Mr. E. Alvey Wright, Director

Page 2

April 20, 1977

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,

Henry Morita
County Engineer

cc: Mr. Ed Nakano

EVALUATION

DEPARTMENT OF PUBLIC WORKS (4/20/77)

4/3/77 1. In response to the North Shore community's desire for a minimum amount of change, the widening alternative has been selected for the Kailua to Princeville segment.

2. Your comments relating to the Princeville to Kamehameha segment of the highway will be considered in the supplemental Final EIS for that section.

4/20/77 Your support of the preferred alternatives is acknowledged.
April 26, 1977

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

Re: Kauai Belt Road, Kaliihuiwi to Haena Section,
FAP Route 56, 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 Hanalei and Haena will affect our waterlines, we will comment when the construction plans are submitted to this office for review. Therefore, we have no objections to this project.

Please keep us informed of the progress of this project.

William K. Kriilt Jr.
Manager and Chief Engineer

May 4, 1977

Mr. Ralph T. Segawa
Division Administrator
Federal Highway Administration
677 Ala Moana Boulevard, Suite 613
Honolulu, Hawaii 96813

Dear Mr. Segawa:

Subject: Kauai Belt Road, Kaliihuiwi to Haena Section,
FAP Route 56, 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 local air quality.

Sincerely yours,

James N. Marrow, Director
Environmental Health
Admiral E. Alvey Wright, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl St.  
Honolulu, Hawaii 96813

Dear Admiral E. Alvey Wright,

I am a Business Agent of Carpenters Union, Local 785, and also,  
the Chairman of the Kauai Building and Construction Trades Council,  
AFL-CIO, which represents approximately 600 construction workers. At  
present, 151 of our members are unemployed and Kauai is very much in need  
for construction jobs.

Our organization strongly supports the proposed improvements from  
Kauhiwai to Hanui. There is no question that the state highways and  
bridges are too narrow in the subject area and we feel that if money is  
available, we should widen the roads and shoulders and build concrete  
bridges. Many others, besides construction workers, feel that 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 in  
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 in meetings 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,

Hawaiian Building & Construction  
Trades Council, AFL-CIO

Kazuyo Sato  
Chairman, Kauai Division

ee: Eddie Robinson

EVALUATION

HAWAII BUILDING & CONSTRUCTION TRADES COUNCIL, AFL-CIO  
(4/20/77)

Your preference for concrete bridges will be considered in the selection  
of the recommended alternatives for the Princeville to Hanui highway  
Improvements.
H. S. Department of Transportation
Federal Highway Administration
Region Nine
677 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Attention: Mr. Ralph T. Seyer, Division Administrator

Dear Mr. Seyer:

Subject: Kualii Belt Road, Kalihawai to Kaena Section,
F.P. Route 56, Sectional Environmental Impact Statement

To assist you in your highway design, a set of plans of the existing roadway with
our facilities plotted on has been forwarded to Mr. Ronald Kealoha, Engineer with
the Department of Transportation, Land Transportation Facilities Division, Kalii
District Office.

It is planned, to Mr. Kealoha, 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 inconvenience (due to locating maintenance) and
aesthetic reasons. When designing the proposed highway, please consider the above
factors.

Should you have any questions or require additional information, call Mr. James
Yamaguchi at 245-2734.

Very truly yours,

[Signature]

James Tahulu
Supervising Engineer

cc:
Mr. H. B. Bokasti
My name is Peter Kolbeck and I am President of the Kauai Historical Society.

The Kauai Historical Society believes that the Hanalei-Hana area has great historic value. Also important is the scenic quality of this area.

In 1972 the National Register of Historic Places proposed a report in which it is emphasized that the road from Hanalei to Hana should be preserved. More recently, the National Register has encouraged the Society to complete a study for nomination of the bridge from Hanalei to Hana to the National Register, which has been completed and forwarded to the State Preservation Office in Honolulu.

It has also received information on survey underway and an existing federal designated, the highway from Kalaheo to Hana as a scenic highway for the people of Kauai.

It is requested that the Department of Transportation allow for more time to accomplish their goal.

EVALUATION

KAUAI HISTORICAL SOCIETY (5/25/77)

The historical aspects of the bridges will be addressed in the supplemental Final EIS for the Princeville to Hana section.
Department of Transportation
State of Hawaii
1904 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. E. Alvey Wright, Director

Subject: Kauai Belt Road, Hanu to Kaliihiwai, Island of Kauai

The Kauai Outdoor Circle, founded with and perpetuated by, the idea of preserving and enhancing the beauty of Kauai is naturally very concerned with the Department of Transportation's proposed changes for the Kauai Belt Road.

The Circle has made a very thorough review of the recently completed Environmental Impact Statement, (hereafter referred to as the EIS). We have found the EIS a well written, sensitive and preventive document. It is quite evident to us that the DOT has approached in good faith and with concern for the views of Kauai's Northshore residents expressed at last year's public hearings.

It is because of the Department of Transportation's (DOT) responsibility and respect for public views on the North Shore Belt Road proposal that the Kauai Outdoor Circle, by action of the Board of Directors, would like to make the following remarks and recommendations.

Revolutionizing the forthcoming recommendations is one basic premise. This premise is the one of reasoning throughout our suggestions on road improvement. It is that the Kauai Outdoor Circle recognizes the need for safety improvements but feels that the historical and scenic Northshore is created in part by the rural highway servicing it. The maintenance of the present road, in fact, is an essential ingredient to the total "feeling" of the area, and should be treated (but possibly designated) as a Rural Scenic Road.

Below are our recommendations for the stretch of road from Pali Highway to the Princeville entrance:

1. To allow for continuous 9 foot shoulders on each side of the road. This has become more and more visible on both sides of the road for centuries, but not generally recognized. The current curving or wiggly arrows have a construction line that follows the edge of a utility line that allows access. It has the understanding that this section is being used in various ways by the nature.

2. The present 9 foot lanes be increased to 10 foot lanes. It is imperative to us that this improvement not disturb the present row of Eucalyptus trees.

3. The cuts along the highway give it a rural character. We wish these cuts to remain. Of special concern in the retention of the "cut" at the back of the improved highway. This cut acts as an "entrance" to the scenic and rural Northshore.

4. Curve realignment:
   a. Curve A, at Tumble Bench, does not need realignment.
   b. Curve B, the "S" cut before Pauanui, road does need realignment. The realignment should be done material of the Eucalyptus trees not make as proposed. This would be more attractive, preserve the Eucalyptus tree, create a turnout, and less expensive.
   c. Curve C, before the Princeville entrance, does not need realignment. This curve forms the entrance of low speed to the Princeville entrance; we feel this is a positive factor.

5. We urge the utility lines be set underground for aesthetic and safety reasons.

6. The Eucalyptus trees now lining the road should be preserved at all costs. The trees should, however, be topped immediately and thereafter maintained as the falling branches create genuine driving hazards.

7. Existing tree stumps now left standing along the road should be removed.

8. It is recommended that a natural wood informational "Rural Scenic Road" sign be posted just after the Kaliihiwai bridge announcing the beginning of the scenic drive.

We will reserve our comments on the bridges until the State Historical Commission determines whether the bridges are historical structures worthy of preservation, and until the findings from the Federal Highway Administration's Bridge Replacement Study are submitted.

Our solutions of the road running from the Princeville entrance to Hanu Bridge follow:

1. The gravel stop on curveing a true bevel curve be placed on the ascent and descent side of the road scaling the last curve over the Pali Bridge function.

2. To cut the roadway at the Princeville entrance to the rural theme and capitalized allowing a true view of the valley.
3. Test the cut in the road made of the Manalei Bay lookout which is now marked by "Falling Rock" signs in order to
be improved in a planting manner. The East Manalei Sail
and Water Conservation Committee should be contacted
about this.

4. The present road is of ample width. Additional shoulders
should be introduced as they would encourage turn-offs
of the "stop-and-go" variety creating dangerous traffic
conditions.

Along with the road to upgrade the maintenance of the belt road in
a need for additional refuse containers. An area especially neglected
and receiving heavy usage by cyclists and surfers in the beach
turnoff opposite Snipe Chandler house and Keith Dewberry'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
as in our following letters.

In general we agree with the recommendations of the Manalei
Citizens Advisory Committee, and join them in requesting an exten-
son of the Ivy 11, 1977, temporary deadline.

Thank you for this opportunity to express our opinions on this matter.

Sincerely yours,

THE MANALEI OUTDOOR CIRCLE

THEKAHAI OUTDOOR CIRCLE

May 10, 1977

EVALUATION

KAHAI OUTDOOR CIRCLE (5/10/77)

Kaliihi 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 hollow tile 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 12-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 replaced by special landscaping, but to
leave such a 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 night distance.

b. The inset diagram for curve E was not published correctly
in the RIS. 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 infeasible measure.

6. The highway will be moved further away from the eucalyptus
trees, so the danger from falling branches will be reduced.
The trees will be trimmed as needed.
7. Tree stumps will be removed.
8. This suggestion will be considered along with an alternative means of retaining the North Shore "entrance".

Princeville to Hamakua Bridge:

These suggestions will be considered selecting alternatives for the Princeville-Hamakua 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 endorsing the need for improvements to the present highway between Kalihiwai and Haena. We herewith offer the following reasons and recommendations for your consideration:

1. **Harmonize**, wherever possible, a safe highway system with the unique scenic qualities and character of the Hamakua-Hamua area.

2. **Construction** of wider roadway and shoulder for emergency purposes and for the safety of bikers and cyclists who are on the increase. 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. **Elimination** of the sharper curves and steeper grades as they constitute a hazard to safe driving. The "Stop and
Admiral C. Alvey Wright
Department of Transportation
May 10, 1977
Page 2

4. REINFORCEMENT of the narrow obsolete bridges with twolane 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 Kaun residents whose objectives are to encourage friendly relationships, good will among the members and to encourage a social environment and free exchange of information between members which will be beneficial to the community and professionals.

We hope that the outcome of your decision on this matter will give the people of Kaun a safer highway system.

Sincerely,

[Signature]

[Name]
Chairman Legislative Committee

[Date]

The Garden Island

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National Trust for Historic Preservation

U.S. Department of Transportation
Federal Highway Administration
671 Alabama Boulevard, Suite 613
Honolulu, Hawaii 96813

May 9, 1977

Gentlemen:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Kaun Belt Road, Kalakaua to Haena 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 commended 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 accommodation 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 part 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 convincing. 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. Hawaii has 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 none.

4. Since access and permeability for development are interdependent, the control of growth cannot be ascribed totally to the powers of local government. They may have certain tools within their legislative
power. To regulate the environment, but not to put the full brunt of development pressures into their hands without recognizing the growth impact of the highway. The approach necessary to implement an effective growth management program. Development controls are most effective when a series of constraints (or inducements for alternative locations) are provided together. It becomes more and more difficult if pieces of the constraint or inducement package are left out. The responsibilities of the highway as a growth constraint or inducement should be better recognized, accepted and solutions within the context of the North Shore's future plans.

5. The choice given between a dying economy and one that exists for the accommodation of tourists may not fully take in what might be best for the North Shore area. To say that tourists must be accommodated or "the North Shore will become another playground for the wealthy, and residential reclass and a haven for the social dropout" is to ignore the growth potentials inherent in the existing population. Given the local people as an asset and beginning point rather than discounting them in the first place could set the stage for considerations regarding the stabilization of agricultural resources, development of new industries, development aid to support such new economies and the accommodation of tourists on the residents' terms rather than on the tourist industry's terms.

In conclusion, we would urge you to work closely with both the Advisory Council on Historic Preservation, Louis S. Hall, Assistant Director, Office of Review and Compliance, 2522 K Street N.W., Washington D.C. 20505 and the Hawaii State Historic Preservation Office, John Silverman, Department of Land and Natural Resources, P.O. Box 621, Honolulu, Hawaii 96810 and developing your Final IES.

Thank you again for letting us review the draft IES.

Sincerely,

Mitschi H. Nakaya
Assistant Director

cc: Jane Hoffman
Deputy National Trust Advisory Board II Inc. National Trust Advisor

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 aesthetics into account, as suggested.

2. Major consideration in being given to the bridges through the Section 106 review process, the results of which will be reported in the supplemental Final IES for the Princeville to Kamea 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 must not occur if existing environmental and institutional constraints are applied. This Final IES acknowledges the local community's lack of confidence in these constraints. However, any alternative engineering solution is improving the safety of the highway will also reduce its growth-inhibiting characteristics. Given the premise 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 embraced the proposed project.
The HIS Road or Scenic Type:

"The proposed widening or realignment from Kalilina to the Kalalau Bridge would eliminate the present "entrance" to the North Shore. The loss of this visual node would be an unavoidable adverse impact." II-32

We take the position that the Naena Road should definitely begin at the end of the present improved highway at Kalalau, not at Kalalau Bridge.

In order to achieve this, we have, in a limited amount of time, come up with a number of alternatives: Scaling with only the stretch of road from Kalalau Bridge to Princeville entrance, we note that the DOT proposed the 11 foot lanes with four foot paved shoulders. We suggest ten 10-11 foot lanes with only one shoulder, preferably of grass.

The DOT proposes to straighten three curves on this stretch. We propose a need to straighten only one of these curves.

We suggest that the landscaping trees be topped, the utility lines be put underground, and that adequate signage be posted both for information and for safety.

Because each section of the highway from Kalalau to Naena where the road ends is so unique unto itself, our committee to date has made only the above specific recommendations. We are requesting more time and your consideration of our continuing input.

Thank you.
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 proposed 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 Hamakua April 20, which I enclose in full. 3. The agenda of our last meeting of April 20, with the notation that we met halfway through it and will use it as our agenda for this Wednesday's meeting as well. 4. A copy of our letter to Roy Hiruma, 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 impact of the 1957 proposal, and the limited amount of time the community has had to review it, we have asked for an extension of the May 11 date to deliver our testimony. You have been very clear that your department needs some idea of what time of year to expect, so I will answer that first.

Road Improvement. I expect that we can deliver our suggestions on road improvement by mid-June, and hopefully sooner. We have about finalized our discussion on the segment from Kailua to Princeville, which I am including here. We will start discussing the segment from there to the Hamakua Bridge next week, and from the Bridge to Hamakua town the following one. It seems that after the initial discussion it helps to have a week to consider our recommendations and their consequences, and that revisions occur at the next meeting. I expect a final review of the enclosed recommendations at our next meeting.

During this whole course of events we are compiling a list of requested safety improvements to the section of the road from Hamakua town to Hamakua Bridge that we would like to initiate.

A priority for us throughout our meetings is a request to upgrade the maintenance of the North Shore Belt Road.

Bridges: We request a delay in any decision on any of the bridges, contingent on our being able to return to the following events:

The Hamakua Bridge is the only known example of a Standard Chambers Bridge. The small reinforced concrete bridges are some of the earliest known construction of that type in the Nation. Since these bridges seem to be of some considerable interest historically, the Hamakua Historical Society has recommended to the State Preservation Office that that office ask the State Historic Board to consider these bridges as well as the other bridges for the State and National Register. As results of this will affect our Committee thinking. We don't know when the Review Board next plans to meet, or what is on their agenda. We understand that they will consider these bridges a priority item if notified that time by of the essence, which should apparently come from you and the State Preservation Office.

The State Preservation Office is mailing receipt of the Bridge Replacement Study conducted by the Federal Highway Administration. They are recommending that this study be forwarded for review to the Historic American Engineering Review, within the Department of Interior. 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. And as you can see from our agenda, we will begin to tackle the many different factors involved in bridge discussion right away, but we can only develop general guidelines until we get the above information.

So although that is not specific in detail, 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 from Kailua to Princeville. They are as follows:

1. That there be a continuous 4 foot shoulder on each side of the road. That instead there be occasional sidewalks for pedestrians on each side of the road. You will note this differs from our original testimony. D

2. The recorded easements should be of grass rather than paved. We understand that there are several methods to create support foundations that allow grass cover. E

3. The cuts along the highway are best given it's rural character. We wish these cuts to remain, in particular we wish to retain. F
the "entrance" cut at the existing end of the improved highway.

4. There is unanimous agreement that the 11-foot lanes are excessive and unnecessary. We will re-discuss our recommendations at this Wednesday's meeting and get back to you.

5. We recommend that the utilities be put underground for aesthetic and safety reasons.

6. We recommend the following signs and markings:
   a. Unpaved reflector center lines, all the way to Haena.
   b. White and black lines, all the way to Haena.
   c. An Informational "North Shore Road" sign at existing end of improved highway. Possibly a good Darker Circle Project.

7. The Eucalyptus trees be topped.

8. Curve realignment
   a. Curve #1 to the Johnston's turn--does not need re-alignment.
   b. Curve #2--vp curve before powerline road--to be straightened out.
   c. Curve #3--before Princeville Entrance--does not need re-alignment. In fact, this curve serves to maintain low traffic speed in the Princeville Entrance approach, which we feel is a positive.

9. The EIS states that the pavement is structurally deficient. The surface could use improvements.

Coming out of our discussion with Chief of Police Roy Hirano and officers Al Yomlin, who were very clear that the matter of structural safety standards did not fall within their department, and so we were therefore speaking as laymen, we agreed to restate the following:

10. That there be a storage lane to the Princeville Airport, to be defined by the existing fence.

11. That Ne-Paul lines be put at the road by the Airport immediately.

12. That a traffic circulation plan for the new Shopping Center--Princeville Entrance be proposed, and a storage lane be planned to service this area.

Looking forward to your response.

Sincerely yours,

Carol H. Wilcox
Citizens Advisory Committee

Citizens Advisory Committee
P.O. Box 81
Kaua'i, Kaua'i, HI 96714

Admiral E. Alvey Wright, Director
Department of Transportation
869 Punchbowl 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 comment 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 Darlan Faiman on the historical interest of these bridges. Along with the enclosed article is also a letter from Bill Sugaya, of the National Trust for Historic Preservation.

Briefly, the philosophy of "It's old, so 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 undervalued by 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 II-6 : "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 theoretically facilitate urbanization."

Since the EIS bemoans 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.

(cont'd)
This scarcity of technical data led the committee to conclude that the information available is not enough to justify replacement of the bridges.

Consequently, the committee asked a local registered structural engineer, Jim Adams of James Adams International Structural Engineers, Honolulu, to help us examine each bridge. We want to be clear that we are not commenting on one- vs two-lane bridges, or design of replacement, or existing design problems. We are simply concerning ourselves, as does the EIS, 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 SOME 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 agree that it might now be a good time for your department and our committee to discuss these matters. We wish to invite you, Chuck Swanson, Mr. Harano, and possibly Clarence Yamamoto, to meet with us here in Hanalei 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. Wilcox

Carol Wilcox, Chairperson, Citizens Advisory Committee

cc: Edwin Nakano, County Engineer

P.S. In our letter of May 2 we made recommendations on road improvements from Kalihwai to the Princeville entrance. We draw your attention to the enclosed comments on the same road, from the Princeville entrance through Hanalei town.

HANALEI BRIDGE

THE CRITICAL QUESTION WHEN DISCUSSING THE HANALEI BRIDGE IS: HOW MUCH OF THE LOAD IS CARRIED BY THE MORE RECENTLY ADDED (1936 OR 1959?) 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 sandblasting 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

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
WAIOILI BRIDGE

OF ALL THE ELEVEN BRIDGES INSPECTED, THE WAIOILI 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 seeping 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 non-structural in 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 EIS CONTENTION THAT THIS BRIDGE HAS A THREE YEAR LIFE SPAN.

THIS COMMITTEE CANNOT ACCEPT THE CONCLUSION THAT THE WAIOILI BRIDGE NEEDS REPLACEMENT.

WE RECOMMEND FURTHER INVESTIGATION.

cc: Ed Nakano, County Engineer

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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-1914 increment

1. There are no weep holes on the bridge. Surface water is leaking through both parapets, causing extensive corrosion of the reinforcing.

2. The side of the bridge has exposed and corroded stirrups. The leaking water, as stated above, could be causing this damage.

3. There is a water pipe imbedded in the south side of the bridge.

4. The concrete piers are eroded 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-1912 increment

1. Some of the primary tension steel is badly corroded.

COMMITTEE COMMENTS

IT IS THE URGENT RECOMMENDATION OF THIS COMMITTEE THAT THESE BRIDGES BE IMMEDIATELY ANALYZED, TO VERIFY THE PRESENT LOAD CARRY CAPACITY AND FACTOR OF SAFETY.

WE CONCUR WITH THE EIS 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
WAIKOKO BRIDGE

THIS BRIDGE APPEARS TO BE IN CRITICAL CONDITION, REQUIRING IMMEDIATE ATTENTION.

THE WAIKOKO 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 WAIKOKO 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 ANALYSES ON LOAD TESTING, TO VERIFY ITS FACTOR OF SAFETY.

ACCESS BELOW THIS BRIDGE SHOULD BE RESTRICTED IMMEDIATELY.

cc: Ed Nakano, County Engineer

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THE WAINIHA BRIDGES

THE WAINIHA BRIDGES ARE IN SIMILAR CONDITION. WE WILL COMMENT ON THEM TOGETHER AFTER SEPARATING OUR INDIVIDUAL OBSERVATIONS.

WAINIHA 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 piers of the former bridge lie in the stream bed.

WAINIHA BRIDGE #2

1. Steel is moderately corroded
2. Chipping and painting maintenance is in progress

WAINIHA 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.


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 EIT has made no proposal for Haena Bridge #1. We note, also, that the EIT alternatives are repair or replacement. Jim Adams 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, requiring immediate attention. This bridge 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.

1. Critical spalling underneath the bridge.
2. The steel is corroded beyond use.
3. The parapet walls appear to be sound.

COMMITTEE COMMENTS

Jim Adams considers this bridge to be presently dangerous and unsafe. The Committee is concerned with the absence of any statement by both the EIT 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. Replacement 2. Reconstruction 3. A filled cement.

As a temporary measure we recommend immediate shutting up and posting of a weight limit.

cc: Ed Nakao, County Engineer

FROM THE DRAFT LIS REGARDING SAFETY OF THE BRIDGES AND FORDS AGAINST RIVER TO HAMLEI LANE.

HAMILI BRIDGE

Pr. 1-21: Constructed in 1912 and upgraded in 1934, its life of major repairs in 1967 and 1973. Serious corrosion of major structural elements has caused the bridge to deteriorate to a dangerous state. Even the bridge engineers had estimated the remaining life of the bridge to be less than 3 years. In addition to the danger of collapse, the Hamlei Bridge has sharp right-angle approach, a clear width of only 17 ft., and a posted capacity of 15 tons.

Pr. 1-31: Design B1A is essentially equivalent to "repairing" the existing bridge, because the steel members of the bridge are so badly deteriorated. For example, none have only 20% of their original cross sectional area remaining; and when the bridge was repaired in 1973, it was not painted because inadequately would have weakened it. For these reasons, it is improbable that any new eastern can be welded on. The bridge is approaching failure at so many points that to "repair" it would require replacement of the entire truss.

Pr. 1-14: It is very difficult for heavy construction equipment to get into the Hamlei-Hamlei area because of the weight restrictions on the bridges. Also, horses cannot cross the Hamlei Bridge...

Pr. 1-22: New or repaired bridges, either one or two-lane would have higher load limits and would be able to handle trucks, school buses, larger fire and farm trucks, refuse service trucks, construction equipment and other heavy vehicles.

Pr. 1-31: If the Hamlei Bridge is not replaced or repaired, it will collapse. State DOT engineers have inspected these bridges and have estimated their remaining life to be less than 3 years. Replacement is inevitable, either now, with carefully coordinated architectural design and the presence of the existing bridge to carry traffic during construction, or sooner in the near future as an emergency measure with little time to be concerned with appearance.

Table 1:

<table>
<thead>
<tr>
<th>Width, 17 ft.</th>
<th>Effective pavement width</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft.</td>
<td>in several feet long</td>
</tr>
<tr>
<td>ft.</td>
<td>ft.</td>
</tr>
</tbody>
</table>

Table 2: If Design B1A (essentially equivalent to "repairing") the present bridge is used, the speed limitation for trucks is: 10 ft. between axles.

Pr. 1
Vallo Bridge has damaged parapet walls, and the piers are scored at the water line.

Unapu bridge had cracks on the parapet walls, spalling of the concrete and badly corroded reinforcing steel. The concrete piles are eroded at the water line. The bridge was constructed in two increments (1912 and 1919) with different widths, which created a potentially hazardous condition.

Valbora bridge: The 1966 tsunami caused the collapse of the east abutment of the bridge. The remaining west abutment is cracked and reacting 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.

Page 1-3: Haila bridge: The tsunami of 1957 destroyed the bridge. The three existing bridges were constructed as emergency projects and were only intended as temporary structures. In 1960, timber and steel members were added to strengthen the bridges, and in 1973, the timber deck was replaced on all three bridges. New timber bridges reduced the capacity from 10 to 15 tons, and the new structural members on the bridges are now seriously corroded, and require replacement.

Page 1-4: Vallo, Unapu and Valbora bridges are one-lane concrete bridges with one to eight spans. The alternative of major repair would differ for each bridge, but would generally consist of patching cracks, reinforcing piles and abutments, and adding support where needed. The repaired bridges would only have a life of an additional 15 years.

Page 1-5: Haila bridges 1, 2, and 3. Steel with timber deck. All three show evidence of serious corrosion and subsequent weakening of the steel structural members. The alternative of repair, replacing the existing members by adding new steel by the torsion method of the steel structural members. Major repairs would add only 10 years to the remaining life.

Page 1-6: If the Vallo, Unapu, Valbora and Haila bridges are not replaced or repaired, they will collapse. State engineers have inspected the bridges and have recommended their replacement to be in less than 15 years. Replacement of these bridges is inevitable.

Page 1-2: Vallo Bridge has damaged parapet walls, and the piers are scored at the water line.

Table 1: Existing Stream Crossing Inventory

<table>
<thead>
<tr>
<th>Bridge</th>
<th>Type</th>
<th>Location</th>
<th>Span</th>
</tr>
</thead>
</table>
| Vallo Bridge | Flat slab, 16 ft. wide | 90 ft. long | Beam (a), 10 ft. long | Limit (b) 25 ft. | Postet 15 | Date Count, 1914: Latent Repairs none.
| Unapu Bridge | Flat slab, 14 ft. wide | 138 ft. long | Limit (b) 27 ft. | Postet 15 | Date Count, 1914: Latent Repairs none.
| Valbora Bridge | Flat slab, 17 ft. wide | 45 ft. long | Limit (b) 25 ft. | Postet 15 | Date Count, 1914: Latent Repairs none.
| Haila Bridge 1 | Steel truss-deck, 12 ft. wide | 62 ft. long | Beam (a), 10 ft. long | Limit (b) 45 ft. | Postet 15 | Date Count, 1914: Latent Repairs none.
| Haila Bridge 2 | Steel truss-deck, 12 ft. wide | 72 ft. long | Beam (a), 10 ft. long | Limit (b) 45 ft. | Postet 15 | Date Count, 1914: Latent Repairs none.
| Haila Bridge 3 | Steel truss-deck, 12 ft. wide | 72 ft. long | Beam (a), 10 ft. long | Limit (b) 45 ft. | Postet 15 | Date Count, 1914: Latent Repairs none.

Page 1-7: Haila Bridge 1, 2, and 3.

Page 1-8: The tsunami of 1957 destroyed the bridge. The three existing bridges were constructed as emergency projects and were only intended as temporary structures. In 1960, timber and steel members were added to strengthen the bridges, and in 1973, the timber deck was replaced on all three bridges. New timber bridges reduced the capacity from 10 to 15 tons, and the new structural members on the bridges are now seriously corroded, and require replacement.
**Li hawaii Stream Crossing**

Fig. 1-3: The li hawaii Stream Crossing shows signs of decay and is sub-standard in design.

Fig. 1-17: The major repair alternative would not alleviate the unsafe conditions created by a one-lane bridge without railings.

Table 1 Existing Stream Inventory

<table>
<thead>
<tr>
<th>Stream Name</th>
<th>Condition</th>
<th>Limitation</th>
<th>Postdate</th>
<th>Date Const.</th>
<th>Repair Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanalei Stream</td>
<td>Concrete on boulders; 22 ft. wide</td>
<td>Long limit NA; Design NA; posted --</td>
<td>1971</td>
<td>1912</td>
<td>Latent repairs none.</td>
</tr>
<tr>
<td>Lihue Stream Crossing</td>
<td>Flint slab; 17 ft. wide</td>
<td>Long limit NA; Design NA; posted</td>
<td>1971</td>
<td>1912</td>
<td>Latent repairs none.</td>
</tr>
</tbody>
</table>

**Table 1 Symbols**

- a. Rail-to-rail; effective pavement is several feet less.
- b. Theoretical (ideal conditions) maximum at the yield point stress.
- c. "H" is standard 2-axle truck, 14' between axles. "HS" is a 2-axle trailer and semi, 14'-30' between axles.

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**Citizens Advisory Committee**

P.O. Box 81
Hanalei, Kauai, HI 96714

**Director's Office**

May 31, 1977

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

Rt. 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 premised upon this 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 has been a primary concern expressed by residents. The area is rural in character, but improvements to the highway could theoretically facilitate urbanization." (EIS II-1)

And, further:

"...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. 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." (EIS I-3) (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 cart 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 signa 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 sign 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 by the Hanalei Bay lookout should be improved in a planting manner. The East Kauai Soil 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 in that the crews are using herbicides 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 we keep the grass trimmed in adequate width, 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 Kahili Mau, and across from the Trader.

Sincerely yours,
Carol M. Wilcox
Chairperson, Citizens Advisory Committee

Citizens Advisory Committee
P.O. Box 81
Hanalei, HI 96714

June 12, 1977

Chuck Swanson, Deputy Director
Department of Transportation
669 Punchbowl Street
Honolulu, Hawaii 96813

Re: North Shore Belt 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 Kauhalei to Hanalei. We emphasize that we are discussing road improvements only, not the bridges. We are meeting with Ralph Echler on the Hanalei to Kauhalei section on the 15th.

We will need a while to consolidate our recommendations, and so 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 ask 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 me in the position of speaking for the JRT, which is inappropriate.

We would like to restate that we have only begun to discuss the question of bridge replacement. That we have commissioned an independent analysis of the bridges which we delivered on June 3. That we now must have a response to our recommendations before we can tackle the questions of 1. replacement vs. restoration 2. one- vs. two-lane 3. 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 M. Wilcox

cc: Ed Nakano, County Engineer
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 Roadway" 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 offset such a proposal. We feel that this is to 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
Admiral E. Alvey Bright
Director
Department of Transportation
Richmond, Va. 23218

Dear Admiral Wright,

The Citizens Advisory Committee is very disappointed that you chose not to sit down with us and discuss the problems of the Department of Transportation's initial North Shore Belt Road proposal. We have been anticipating this meeting, promised by your Deputy Director and even presented formal recommendations on the bridges until we could discuss your engineering assessments.

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 testimony of April 20 and repeated for the past two months, an informative dialogue should be part of the process of public review of your plans. We were given assurance 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 Chase.

Sincerely,

Carol M. Wilcox
Chairperson

June 30, 1977

The Citizens Advisory Committee, concerned with the State’s plans for extensive highway improvements in the North Shore Belt Road, has met on a weekly basis since April to study, discuss and recommend that it feels are better ways to approach the North Shore’s road problem.

The Committee recognizes the need for safety improvements, but feels the historical and scenic North Shore is created in part by the rural highway servicing it. The D.O.T.’s recommended highway and bridge changes would change the total environment of the North Shore.

Our recommendation, in part, is based on the following statements in the E.I.S. (Page 11-1), "...The area is rural in character, but improvements to the highway could theoretically facilitate urbanization..." and E.I.S. (Page 11-4), "...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, although its limitation of certain types of vehicles, since the capacity of the highway is not being exceeded..."

We think improvements should be in response to substantiated need, and not in response to unsubstantiated need. Projected need can be translated all too easily into creating a need before the basic philosophy. The E.I.S. discussion of growth is unanswerable.

To help us study this new problem, the Citizens Advisory Committee (which in itself consists of representatives from a variety of Southside organizations) met with the following special resource people: Police Chief Roy Bright, District Forester Ralph Mudd, and Jim Adams, a registered structural engineer from Oldham. Out of these meetings have come valuable information and suggestions which the Committee submitted to the D.O.T., including an in-depth report on the eleven Laurel and Beuna bridges.

We have been assured that our reports and concern would open a dialogue between us and the D.O.T. Of particular importance to us are the engineering discrepancies we have found in the E.I.S. on bridge conditions and our own findings. It is the opinion of our consulting engineers that some of the bridges are structurally sound and can be repaired (as also pointed out serious problems with two bridges). We commend the opinion on the bridges of a Bill Nagoya, Resident Director, West Coast Office, Historical Trust for Historic Preservation that, "The original structure is important and a newly built replacement, even though a replica, should be considered only as a last resort." Needless to say, we are very concerned that the D.O.T. will not sit down with us and present...
June 21, 1977

Mr. Carol M. Wilcox  
Chairperson  
Citizens Advisory Committee  
P.O. Box 81  
Hanaulu, Hawaii 96713  

Dear Ms. Wilcox:

I wish to acknowledge receipt of your communication of June 13, 1977, concerning the possibility of designating the Kalani North Shore Belt Road as a "rural scenic road." I personally believe that such a formal designation would indeed significantly help to preserve Kalani's beautiful scenic heritage. Accordingly, I have contacted Mr. Gary Everhardt, director of the National Park Service of the U.S. Department of the Interior, to obtain his view on this possibility.

As soon as I hear from Mr. Everhardt, I shall be sure to recontact you.

Regarding the possibility of my visiting with your association, I would suggest that you contact Mr. George Kawahara, my local Kalani agent, to arrange a mutually convenient time.

Alpha,

By:  
Daniel K. Inouye  
United States Senator

DEI: yqhf

cc: George Kawahara

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June 30, 1977

Admiral E. Alway White  
Director  
Department of Transportation  
800 Peachtree Street  
Atlanta, Georgia 30308  

Dear Admiral White:

The Kalani Bridge has tremendous character that comes when one and age continue with good bridge design. It could be considerably more attractive with proper repair, and then a continued maintenance program.

This bridge is a fine example of a camel Prall Truss reinforced with a Warren Truss. It is historically interesting in that it may be one of the few remaining examples of a Kalani and Chamorro Bridge. Kalani and Chamorro was a major bridge manufacturer based in New York at the turn of the century. The fact that this bridge was designed and manufactured in New York, and transported 5000 miles, in 1912, to Kalani, where it was assembled and reused, given it added historical interest.

We recommend the following action on the Kalani Bridge:

1. THE MAULI BRIDGE SHOULD BE REPAIRED AND REPAIRED. We feel that, of all the bridges, it is most important to retain this bridge. We believe the State engineering analysis has been deficient.

2. We refer to our statement in paragraph 16, June 26, regarding a need for an ordinance to restrict certain kinds of traffic.

The Kalani, Waipio, Waikoloa Bridges, and the Kalani and Mauli Bridges are historically interesting as some of the very earliest examples of steel reinforced concrete bridges in the West. Preservation leaves us with some remarkable examples of turn-of-the-century technology that can be retained. We recommend looking each of these bridges as a vital part of our historical, cultural and scenic heritage.

MAULI BRIDGE

1. THE MAULI BRIDGE SHOULD BE REPAIRED AND REPAIRED. Of all the concrete bridges, this one seems to be in the best condition, and in fact there is no apparent structural problem.

2. To improve visibility, the approaches might be built up.

3. The sides of the Mauli Bridge need resurface repair, as there is spalling.

4. The necessary should be re-opened to allow the standing water to run off.
TAPA BRIDGES 1912 and 1914

THE TAPA BRIDGES SHOULD BE RESTORED AND MAINTAINED. Our structural engineer and the E.I.S. assured us that this is feasible.

BAINA BRIDGE

WE REPEAT OUR STATEMENT OF JULY 3 DECLARING THAT LOW ANALYSIS OF THIS BRIDGE IS DANGEROUS IMMEDIATELY. We again declare that access under the bridge is DISCOURAGED IMMEDIATELY, as it is highly dangerous, due to spalling of the surface.

THIS BRIDGE SHOULD BE RESTORED AND MAINTAINED.

MANNIA BRIDGES #1, #2, #3

THESE BRIDGES SHOULD BE RESTORED AND MAINTAINED. The primary need here is cleaning and treating, with a continued maintenance program thereafter. The existing condition is primarily a result of a lack of maintenance.

BAIROLA BRIDGES #1 and #2

WE AGAIN DEEMED RESTORATION AND REPAIR ANALYSIS OF BAIROLA BRIDGE #2. If it is an urgent as it appears, we recommend filling with a pipe culvert.

BAIROLA BRIDGE #1 SHOULD BE RESTORED AND MAINTAINED.

BAIROLA BRIDGE #2 SHOULD BE RESTORED AND REPAIRED.

BAIROLA STREAM TUNNEL

THE BAIROLA STREAM TUNNEL SHOULD BE LEFT AS IS.

LIHALOLI STREAM TUNNELING

WE REPEATED RESTORATION AND MAINTENANCE AS STATED IN THE E.I.S., WE DO NOT RECOMMEND TUNNELING.

We would like to emphasize that our concern with the Baino and Baisa BRIDGES is urgent. A lack of immediate analysis of these bridges may be considered negligence on the part of the D.O.T. We would like to reiterate that this will be done, as a matter concerning the safety of those who use them.

The further benefits of our recommendation is a financial savings, at a time when the State is strongly in need of economizing. We are using the costs as listed in the E.I.S. We can't find any material to justify these estimates, and in fact they don't logically correspond to the apparent repair and replacement problems we have noticed. So, although we are using them, we do not necessarily agree with them.

At the very least, however, the State can anticipate the following savings of our proposal over the D.O.T. proposal for the bridges:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost (K$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.O.T. Proposal</td>
<td>$3,600,000</td>
</tr>
<tr>
<td>Repair Proposal</td>
<td>$577,000</td>
</tr>
<tr>
<td>SAVINGS</td>
<td>$2,723,000</td>
</tr>
</tbody>
</table>

We understand that there would be greater federal participation with the D.O.T. proposal, so that the State would pay considerably less than the total; however, federal monies are still our tax dollars, and should be wisely spent.

We further note that a repair program will employ local skilled people, whereas the D.O.T. proposal for replacement will employ off-island and out-of-state personnel for the more complex problems that replacement presents.

Sincerely yours,

Carol M. Wiles
Chairperson
Citizens Advisory Committee
June 30, 1977

“C”

Admiral E. Alvey Wright
Director
Department of Transportation
R.D. Punchedown Street
Bremerton, Washington 98338

June 30, 1977

Page two

The Citizens Advisory Committee toured the above mentioned road from Bremerton to R.D. with Ralph Buchler, of the Forestry Department, and East Bremerton and Water Conservation leader, on June 22.

Following are our recommendations on the segment of road from Bremerton to R.D. We note that the D. O. T. proposes to replace all 10 bridges, but has made no road improvement proposals. We recommend that the bridges be repaired, not replaced, and that road improvements be initiated as follows:

1. Resurfacing of the entire road from and including Bremerton to 1000-foot before the R.D. Resurfacing to follow the alignment and width of the existing road. 3. Better pull-offs at all the bridges.

2. Horizontal telephone poles set into cement pillars, approximately 2-1/2 feet off the ground, for new and replaced guard rails.


5. Signs indicating severe blind curves at Bremerton and again at Bremerton.

6. Fill in pot holes along side of entire length of road. Walla Walla and Bremerton are particularly bad.

7. Create a look-out and small park at Bremerton end and again at Bremerton.

8. In more delicate in herbicide. There are numerous dead trees along the road, due to past herbicide. These should be cut and removed. All other cut trees should be restricted from herbicide. Consideration should be given to "sizing" all of these waysides.

9. Selective thinning of trees for viewing and aesthetics.


11. Big Walla Walla in one of the few remaining areas with Bulk on the primary vegetation. The encroachment of Bulk, Java Plum and grasses is becoming a threat to the vegetation. We recommend selective removal of these plants. Consult Ralph Buchler.

12. Check rock walls and build up where needed on the Bremerton side of the Walla Walla Bay.

13. Bremerton Park in a series of related problems presenting a hazardous and unsightly situation. The vendors and the parking on the dry cave create a hazardous traffic situation, not to mention a visual blight, and both should be prohibited. The new pavement around the tree at the Dry Cave is an abomination, and should be removed. Guard rails should be placed so that vehicles cannot pull into the area; there in parking available across the street. There is a tremendous lack of sensitivity operating in this area at the moment.

The Beach Park Parking Lot is congested. It is adequate in size, but some planning is required. We recommend guard rails along the road, with two or three access openings, so that cars could park in two rows instead of the present one row and double parking situation. The parking lot surface should be upgraded with crushed rock and paving.

There are 20 or more garbage cans, many without lids and all right on the roadside. They are unsightly and unsanitary. We recommend a compacting area and more effective containers.

14. Bremerton Skate Park — -- which is under development. We recommend that the existing road be discontinued except for emergency use from a place before Walla Walla and that Walla Walla, Bremerton, camping and playing areas be reached by foot, from a crushed rock surface parking lot.

We also urge that the old tote tracks across from Walla Walla be returned to land cultivation and/or be preserved as a bird sanctuary.

We note that the State Park system should feel that this area is worthy of very special treatment, since they are putting over two million dollars into the development of this park.

15. Walla Walla Bridge. This out but to improve visibility and view. Some attention should be given to the blocked up stream and the potential flood hazard this might create.

16. We also recommend, either in addition or within a "Rural Scenic Road" designation, that the tour buses be restricted from traveling this road. The critical question is one of safety, and the buses are a danger on these roads. They cannot navigate the road without going over into the oncoming lane. The bus itself is wider than the road in certain areas, and in other areas it can’t navigate the turns without passing a hazard to other vehicles. There is an area where there is room for a bus to stop and allow the
visitor to enjoy the views - without again creating a hazard, plus
taking up the total of the view-site parking area available. As
an alternative, we feel that the quality is better preserved for
visitor, and resident, by a mini-bus or limousine service.

We recognize that not all the above recommendations are within the 
D. O. T. jurisdiction. We ask that you send these on to the proper 
agency.

Sincerely yours,

Carol W. Ullman
Chairperson
Citizens Advisory Committee

EVALUATION

NORTH SHORE BELT ROAD CITIZENS ADVISORY COMMITTEE
(5/1/77, 5/2/77, 5/31/77, 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 Haena segment.
This 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 Kalihiwai to Princeville section.

A. A single shoulder would not provide an adequate purlin 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 purlin 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 boulder fill or a similar
method would appear to be no shoulder at all, and would not
serve the objective of providing security to the driver.

F. Box cuts 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 "entrance" 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 quality of the area, but because of the high cost, this proposal will need to be further evaluated. The estimated cost for overhead utilities is $120,000 compared to $500,000 to relocate them underground.

I. a. This recommendation has been implemented.
   b. Edge lines are not generally recommended for road width 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 final draft for curve F was not published correctly in the RIS. The final diagrams should have been turned 180 degrees.
   c. A horizontal 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 resurfacing 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-pass lines have been implemented.

O. If this is necessary, the developers 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 20-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 RIS), which has been revised to show actual 1977 traffic (i.e., two years after the projections were made). The 1977 AADT on the Kalawina-Princeville section was near or equal to the 1978 projected value, and the actual 1977 traffic on the Hau Geli 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 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 Kalawina to Princeville highway segment is clear. However, this impact is mitigable 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 interim repair 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 Hanalei supplemental Final RIS. The primary need for the improvements in safety, which has been substantiated.
Mr. D. Nakano
District Engineer
Department of Transportation
State of Hawaii
Hilo, Hawaii 96726

Dear Mr. Nakano:

This letter is submitted in response to your request for input on improvements to the Kaliihiwai to Hanaa section of the Kaliihiwai Road. Princeville Corporation is generally in agreement with the alternatives recommended by the Department of Transportation in the recent draft EIS submitted for review from Kaliihiwai to Princeville. We feel there is a need for the eleven feet traveling lane and four foot shoulder delineated in alternative W-2. It is hoped that the pavement can be substantially improved and that the shoulders when stabilized, can be grassed. There has always existed a stretch.

We feel that it is aesthetically and historically important to rebuild the bridges in a historical flavor, hence, would have no objection to design D-A of the Hamakua Bridge. We would prefer single lane bridges from Waimea to Hanaa.

We also request that turn 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,

[Signature]

Dean A. Carroccii
Executive Vice President

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Subject: Kaliihiwai Road, Kaliihiwai to Hana Section (PAP Route 56, Kaumal, Hawaii) - Draft Environmental Impact Statement.

Gentlemen:

The following comments regarding the above subject were prepared for the Terra Club, Hawaii Chapter, for use of the land and for myself as a resident and land owner on the North Shore of Kaumal.

ACCIDENT STATISTICS: Pt. I-3, Draft EIS gives accident statistics for the unimproved section of Kuhio Highway in the years 1973 and 1974, but says the accident rate in the project area is 3 to 12 times higher than the rate for segments of Kuhio Highway that have already been improved. In Table 2 the accident rates for the areas with the highest accident rates (Kauai Bridge to Kuhio to Hana) are given for 1975, but not for 1973 and 1974. The area with the third highest accident rate, (Kalihiwai Rd. to Hana) has the accident rates for all three years, 1973, 1974 and 1975. Why weren't the statistics listed for Section B2 and B4? According to Kauai's Chief of Police Roy Hirau, the section of the road, Kalihiwai to the Hamakua Bridge, had a speed limit of 50 mph in 1973 and 1974, whereas after 1973 the speed limit was reduced to 45 and 25 mph. The speed limit was extreme for the area.

It is obvious that the areas with the highest accident rates in 1975 (Hamakua Bridge to Hana) are the areas where the greatest number of people are concentrated and where there is the most traffic congestion along the SHDS of KUHIO HIGHWAY. There are only three houses on the highway between Kaliihiwai and Hamakua town and the only side roads with the exception of cattle crossings are at the entrance to Princeville airport, Kaua'i at Princeville and Plantation Drive. None of these areas are places where cars are parked on the roadside.

Between Hamakua Bridge and Hana there are many houses, some tourist cottages, stores, shops, restaurants, churches, two gas stations, the post office and many other places where people congregate. Off-street parking is severely limited at the grocery stores, gas stations, the restaurant and none of the shops. Cars and trucks parked along the highway often protrude onto the highway and are parked in a hazardous manner. During the day there
are many residents and tourists walking along and crossing the highway. The accident occurrences (Fig. 1 of the EIS) do not tell us if the accidents involved cars, bicycles or pedestrians. Were there serious injuries to passengers, drivers, or were some of them merely dented fenders? How many were due to cars sliding into the ditch on the mauka side of the highway across from the only "night club", Tahili Nui?

According to news items in the Garden Island paper between 1/29/76 and 4/20/77 there were 14 accidents on Kaua‘i involving 1) fatalities and various injuries ranging from critical to minor. Of these 6 accidents, nine were one-car accidents of which six crashed into utility poles or guard rails, or slid into ditches. (In these accidents there were four fatalities.) Only 2 of these 9 accidents happened on the North Shore and in one of these the driver and three passengers were treated for minor injuries and released.

As stated in my comments in the EIS, A-B1, the number of statistics involved in accidents on Kaua‘i is so small that they can be skewed by 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 Island of Kaua‘i. The concern is charged on the responsibility for 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 to the people who use our highways and roadways and is in their own hands. It is my contention that no matter how safe we in government make the highways and roadways, it is still the responsibility of the people to provide and practice full safety."

**Benefit/Cost Ratio:** On Pg. 1-16 the EIS discusses these figures for the Kalihiwai to Princeville Alternatives A, W1 and W2 and from Princeville to the Hanalei Bridge for Alternatives A, W1 and W3. These figures are meaningless to the general public because no information is given on how the ratios were achieved. Is the unique rural beauty of the North Shore considered and if so, what in it worth? Benefits/costs were not given on proposed improvements from Hanalei River to Hanalei Town, nor on the proposed improvements to the bridges and fords.

**Traffic Projections and Princeville:** The EIS says (Pg. 1-24) 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 visitor use."

However, in answer to the suggestion from the Kaua‘i County Engineer (Pg. A-50) that road widening and shoulders wherever possible should be considered in Hanalei Town to Haena section, the State DOT reply to the Mayor of Kaua‘i is: "There are no road improvements that should be considered in the Hanalei Town to Haena section. From a highway capacity viewpoint, traffic projections do not warrant anything more than our proposed bridge replacements. Unfavored 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. II-1 of the EIS) it is: "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 hearing meeting, Mr. Donn Dorwell, Project engineer 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 Pg. 1-21 of the EIS, it is stated: "The Development Plan (North Shore) assigns first priority to improvement of the Kuhio Highway to Hanalei including a new bridge over the Hanalei River." (Paren added).

This statement is to be questioned. Throughout the North Shore Development Plan and its accompanying Socio-Economic Preliminary is reiterated over and over the need to retain the gravy and low-keyed life style of the residents of the North Shore. Regarding the highway, the plan contains the following:

"The Development Plans recognize the State's alignment for Kuhio Highway from Kalihiwai Stream to Hanalei but recommends realignment in two places. From Waialii Stream to Waikoko it is recommended that the existing road realignment remain and be improved and the proposed realignment further inland be considered as a less desirable alternate route." (Pg. 101). (Underlining added).

According to the Public Hearing Fact Sheet for Kaua‘i Belt Road Kalihiwai to Hanalei, April 20-21, 1977, planning studies were initiated for various highway sections between Kalihiwai and Waialii in 1966. The North Shore Plan is dated Sept. 30, 1972 and the Socio-Economic Preliminary, 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.
The road alignment from Kailua to Kaneohe should remain essentially unchanged to retain the scenic views of the coastline. The only exceptions would be at the mouth of the valley and the approach to the main all-lane highway which would allow the coastal road to become an access road to the ocean.

All roads should be improved not to detract from the character of the North Shore.

The movement pattern structures the environmental experience. The most important characteristics of that pattern in the North Shore area is its basic simplicity and direction control. As in that same route is not available and that the logic of both location and direction is readily apparent—controlled in that access and access areas 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 an important part of the route and direction. Both currently contribute to the overall experience, although new road alignments could begin to give an undesirable uniformity to travel speed.

Underlining added.)

HIGHWAYS AND GROWTH CONTROLLING FACTORS: The EIS says (pg. D-1, 1.);

"Also, buses cannot cross the Kailua Bridge so there is presently no demand in Kailua for the type of tourist facilities that cater to large tour groups."

As a matter of fact, the big tour buses do cross the Kailua Bridge in spite of the weight restrictions. Some of them go so far as to use the bridge. 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 Kailua River bluff to the end of the road at Kailua there is virtually no section of the North Shore that is not subject to flooding, tsunami inundation, unstable soil or steep unstable slopes... The County zoning codes and building ordinances (eg, 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 Kailua in the areas of restricting development in flood plains, tsunami prone-areas and slopes. However, the codes are not so strict as to stop development in these areas and numerous exceptions have already been given (including two subdivisions). Obviously widening the highway and the bridges would accelerate this process.

The zoning ordinance states: "General Commercial shall find uses and services which are less frequently used and which are normally prohibited by and dependent upon the aggregate activities of a central commercial center served by several residential neighborhoods and which are less compatible with the environmental qualities of residential districts."

This zoning can lead to pressure for further zoning. Zoning is not the province of the DOT but the following new regulations to residents of the North Shore in regard to their concerns about development (EIS, pg. D-2) in 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 in an intrusion of the privacy area and a real estate display to the large tour buses in the area. On the other hand, tourism is an important element of the area's economy and its increase is viewed by other residents as very desirable. (The North Shore residents believe that tourism is a good thing for them in and out of the scope of the DOT's responsibility). There are many residents of Kailua who do not want to see their main and perhaps, ultimately only industry, become tourism."

It is a recognized fact that highway construction and improvement does accelerate growth. The ESI, San Francisco Agency) showed: "Land use and transportation planning are mutually consistent and compatible. Each serves to fulfill the speculations of the other." Population trends are the foremost consideration in transportation planning. Transportation planning, which is the major determinant of land use. The argument presented in that a highway is needed to serve existing traffic needs. But highways are built to serve future traffic as well, traffic that is to a large extent created by the very existence of a highway.

Highways and improved highways cause land values to rise. The Socioeconomic Planning to the North Shore Development Plan states: "As land values rise, so do property taxes which are levied on 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 its 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 a 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 value. 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. 30).

On Pg. II-3 of the EIS it 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-86): "Should substantive events cause a significant increase in traffic predicted over the next 20 years, we will reconsider the portions of the project that have not yet been implemented." (Paren. added).

The land at Princeville was conveyed to Eagle County Development Corp., a Colorado corporation, by deed from the Linho Plantation Company, Ltd., a Hawai'i Corp., and recorded in the Bureau of Conveyances of the State of Hawai'i in Lib. 3054, Pg. 91, on March 1, 1971, and development began that year. A 20-year projection would be to 1991. According to Table 5, in the Draft EIS, the Construction Schedule the progress of the project and the estimated completion date of 1980. How do you reorganize portions of a project that have not been completed AFTER it has been completed?

Regarding the DOT's paragraph 14 (A-88) in the EIS, I do indeed consider the figures in the North Shore Plan regarding Princeville contradictory. The Plan says a "shopping center will be developed in Princeville in the next 20 years, but it also predicts a population of 6,700 full time residents. The plans for Princeville include a number of single family residences including second homes, retirement homes and some full-time residents, also condominium and hotels. On Pg. 44, the North Shore Plan says: "The future magnitude and impact of Princeville is difficult to assess, but also highly intriguing since such an effort has yet to succeed in Hawaii."

In reply to my comments of March 30, 1976, the DOT says (A-88): "Thank you for the correct 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. The "opinion" was not mine but that of the authors, of the North Shore Plan, who say on Pg. 44: "Who are these tourists and will they come?" Unlike the typical tourist who comprises the traditional backbone of the Hawaiian market, they now seek the essence of the real Hawaii in the real world with real people engaged in real social pursuits. They will be those who increasingly need the seclusion and the peace, the stimulation and the encouragement of magnificent natural scenery embracing 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 figures have been: $791,000 in 1976; $761,000 in 1977 and $406,000 for the first nine months of 1975. Of the seven major multifamily developments, all have had "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 B-8 of the Jan. 7, 1977 Honolulu Advertiser.

Princeville is one of the three prime tourist areas designated in the County Plan and has the largest area of land in residential, commercial, and recreational zoning -- the Village Center and 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 RR-20 (hotel).

The Dept. of Education has dropped plans to move the Hanalei and Kilauea schools to Princeville due to opposition by parents. A shopping center is being built at Princeville (which it is hoped will stimulate growth of Princeville) and a shopping center is being built at Kilauea, (and the owner of the land at Kilauea 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.

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merger with Consolidated Oil and Gas, Inc. of Denver (Consol-i-rated 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 48 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 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.

SUMMARY MEASURES, Under Primary Impacts, G, Pg. II-3 E of the EIS, the DOT may in regard to SOIL EROSION AND SITULATION, that cuts and fill in on the Hanalei River bluff could be reduced with retention walls or cribbing, but this would preclude revegetation and would be more costly. The KIS also says (II-5) of the Anini Stream 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 rotting the face of the cliff. Pg. II-6, 7 and 8 discuss soil erosion control, such as mulching, installation of temporary berms and slope drains, sediment traps and mitigation ponds, seeding with fast growing grasses, etc.

Both the County and State have alliteration and soil erosion control measures. 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 the suggestion that the lack of cuts on Hanalei River bluff could be reduced to give a more natural appearance and to reduce erosion, it would have been better left unaltered. The steep cuts in the area of Lumahai Beach are a good example of what happens when steep slopes are cut into. Has the State tried to alleviate this problem in the areas from Lumahai to Wainiha?

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 31 years they result in crop damage, livestock loss, and the isolation of Hanalei. Fig. 12 shows the flood of record, Nov. 1955. It should be noted that the 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 600 acres.
the site of the one-way bridge, noise is not now a problem, but houses with their noisy motors would destroy the serenity of these areas.

Under mitigation measures (Pr. II-23) the EIS says the proposed highway improvements "would not have an adverse noise impact, no 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 a contradiction as the DOT is ignoring the noise impact on the many already 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.

SOCIO/ECONOMICS: On Pr. 24, the EIS says that in 1974, 1,150 persons resided on the North Shore. According to the Office of Economic Development of Hawaii, this is an estimate and includes transients who lived in any kind of structure, though not tourists.

The EIS says: "...the Hanalei Cenial Tract (the North Shore and the Kilauea area) experienced "phenomenal growth" over this period (1970-1974), a 42.0% increase. The majority of this increase (in population) can be attributed to an influx of persons from the Mainland." (Paron. Added) This information is taken from the "Hanalei Development Plan, Socio-economic Preliminary." The "phenomenal growth" coincides with the discovery of the North Shore by the so-called "young nodle transients" most of whom lived for varying lengths of time at "Taylor's Camps" in Hanalei. Others lived in tents, lean-tos, etc., along the Na Pali Coast and in Hanalei and Haena-Hil.

Before this population increase in the early 1970's, the population in the Hanalei Cenial tract, the residents of the North Shore numbered 805. 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 moved on welfare and many subside on allowances, usually in communes. However, the majority are still in the category of "floating" population.

The EIS says (II-28): "In Hanalei, approximately 19% of the residents are employed full or part-time in the tourist industry. This figure comes from "Hanalei Development Plan, Socio-economic Preliminary."" Anderson, R. R., et. al., University of Hawaii, Departmental Paper 2, September, 1972. The Socio-economic Preliminary dated May 1972 (Anderson, R. R., et. al.) given the figure of 19% employed in tourism and the largest group employed in tourism, was Naoli (Caucasian). Young haole still constitute the largest group working in tourism and "other" employment in the area from Kulliwi to Haena-Hil. As the Socio-economic Preliminary says (Pr. 9, #5): "...most construction workers will come for the planned development and next private residence will not come for a long time, nor will they find it advantageous for their family. The new residents will have 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 will have to endure the noise for a long time for the majority of the jobs will be filled by young haole, not the same ones all the time.

It is apparently the policy of management at Princeville (as it is at Haena-Hil) to employ "local" people wherever possible. However, many of the jobs are seasonal and most of these jobs are filled by young haole, not the same ones all the time.

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 Hawaii in those years. The plan makes it very clear that the local people have (as the EIS says on Pr. II-23) "given top priority to maintaining or 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 level or length of residence and it is still true.

Hawaii is very dependent on the mainland for food and prices are particularly high on the larger islands. Food costs are in recent years more expensive and more people (and some not young) are moving to the small scale farming. This interest in the 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 uncontrolled development, which in many cases is out of control by the landowners, is not only taking over their open space and bounties but also their valuable agricultural land. Being pushed off the land by resort development and increased tourism, many people, particularly the young, believe there is even more opportunity in working on the land than in being waiters, busboys and cleaners.

Kilauea, (where the improved section of the highway is) was formerly a major plantation. After a fire burned most of the plantation in the early 1960's, the land was sold by R. Brewer and large parcels were sold and resold, with the price of the land constantly escalating until the land was sold to the Governor, a realtor from Princeville, and a former United Nations soldier. The zoning of the land was changed and the people who have lost out to the developers, pressure. (See attachments 6, 7, 8 and 9).

The EIS speaks of a "climate of tension between community growth policies that have generated controversy over the proposed highway improvements." (Pr. II-25) This remark about a climate of tension is taken from the North Shore Plan and is out of context. Pr. 11 and 14 of the Socio-economic Preliminary points out the resentment by the long-time residents, the retired and semi-retired Haole and the employed newcomers who intend to remain for a
number of years, against the "transients." The long-time residents object to Kalani who have brought up beach property and put up "no trespassing" signs. The Preliminary said: "In addition to the fragmentation observed, further development 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 Sociocultural Preliminary says (p. 27): "Surprisingly there were very few differences in the rankings given by various subgroups of respondents. Age, education, and income did not cause any significant differences in ranking community needs. The community needs (Table 13) 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>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>Opportunity for family outdoor recreation</td>
<td>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>Low Priority</td>
</tr>
<tr>
<td>Keep the population safe</td>
<td>9</td>
</tr>
<tr>
<td>Resort development even if some agricultural land is given up</td>
<td>10 - Undesirable</td>
</tr>
</tbody>
</table>

There has been little or no controversy over the proposed highway improvements in the community. The controversy is between the community and those few investors inside the community and outside the community who want more development on the North Shore.

In speaking of the constantly changing views the EIS (p. 31) says: "Even at a conservative speed of 30 mph, it is 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 concludes that the highway must be widened, realigned, etc. and that the county highway must be replaced for safety reasons.

No where in the FIS is there any mention of the dangerous conditions that would occur if the bridges were widened. As stated by the Planning Director of Hanalei, with the improvements, buses would travel all the way to the end of the road at Ke'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 Waimea Bay the road consists of a series of sharp curves with a high bank on the land side and steep drop-offs on the oceon 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 an accident.

Some tour bus drivers say the tourists come to Hanalei to see the famous "South Pacific Beach" at Lumahai. However when it is suggested to them that tourists could be transferred to mini-buses at a staging 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 Hawaii 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 motion of the road from Lumahai to Ke'e in the future if the funding becomes available. This would be an ecological disaster for the fringing and barrier reefs along the coast, not to mention a probable irreversible scarring of the thickly vegetated hills.

The EIS says on p. 31-33 under mitigation measures that removal of the existing bridges is unavoidable. However, the EIS has presented the alternative of repairing the bridges which in what the people indicated they wanted at the public hearings and information meetings. On the inside back cover of the pocket holder, "why we have public hearings", the State of Hawaii, DOT Highway Division says: "...a sincere and reasonable objection, asking questions with an open mind, or simply putting oneself on record in favor of, or opposed to a proposal, will be significant contributions. These contributions will aid us in making certain that the project's final design 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 Highway Division, and will be based on factual information, including findings uncover-
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 aesthetic, 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 in unique in that the entire cost in borne by those who use the facilities; that Federal Trust Fund monies 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 make 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 allotted 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 ample 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? Opponents of the proposed and widened for public participation in transportation policy making at the local level with a stronger role for citizens and municipalities. The aesthetic considerations have not been adequately evaluated in the public hearing. In this is unique in that it has already happened to agricultural land in the Kiluena area.

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 (p. A-37). The probable loss 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 Kiluena area.

At the Public Hearing of August 1975, the Public meeting of October 1975 and the Public Hearings in Nahalei on April 20, 1977 and in Lihue on April 21, 1977, the public testimony was overwhelmingly against the DOT's proposal. The people concerned, (see Attachments 7 and 11). The EIS says that petitions received strongly favor an improved highway but that the petitioners against an improved highway were identified as either North Shore residents or visitors, "while the origin of those favoring the project was not identified."

EMERGENCY INVOLVEMENT: Regarding the Federal Highway Administration requirement that the DOT (Hawaii Ed 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 Advertiser (1/15/76), as saying that if money for highway projects are not found, approximately 250 currently filled positions will have to be eliminated and perhaps 50 additional positions will also have to be terminated. (As of March 17, 1976 the State DOT employs 1,146 people according to Honolulu Star Bulletin writer Jerry Turner). The same edition of Advertiser (1/15/76) says: "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 improvement 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 disapparance of some types of jobs. Construction jobs are of a "boom or bust" type of employment. Many construction workers are "flouters". They go where the jobs are and unfortunately some remain behind after the jobs are finished and become unemployed and welfare rolls.

It is becoming more and more obvious that because of restrictions and shortages 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, quotes E. Alvey Wright, State DOT Director as saying he has no preference concerning the width of improve bridges and roads (in the North Shore area) and that the DOT should build two-lane bridges, (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 either North Shore residents or visitors, while the origin of those favoring the project was not identified."

FUNDING: As stated in the EIS, funding of the proposed improvements to the road, bridges (Nanalei, Waipio, Haleiwa, Waikou and Vailihia), if built to Federal standards would be 70% Federal and

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White and which would not be funded by the State.

The Chief, Engineering Division of the U. S. Army Engineer District, Honolulu said (A-19), "we suggest that the EIS consider the beneficial aspects of the old roads as historic and aesthetic resources and an buffers that filter change and growth". The Kauai Planning Director said, (A-56) "...the North Shore… warrants strong growth control measures, and the highway is one of the major factors... Too many improvements to the highway may have negative impact 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 Waimea, would be more preferable and would definitely control growth. It must be recognized that increased developments could be detrimental to the sensitive environment that exists on the North Shore". The Planning Director also suggested the following recommendations for widening or realigning the road, Hanalei Bridge and approaches, Hanalei Town (road), widening of the bridges Hanalei to Lumahai, Lumahai to Waimea, or Waimea to Hanalei.

The Director of the State Office of Environmental Quality Control, Dr. Richardson Marland, suggested to the DOT Director (A-46) that: "Another alternative should be discussed in the possibility of transferring the jurisdiction of the highway in 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 Kauai County, then perhaps the residents 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 highways and bridges, which would make them safer for motor vehicles and which would not intrude on the drama of the whole North Shore experience for both residents and visitors.

On the highway, (unimproved section) Anini Rd. to Hanali Bridge, reflectors are needed on the medall 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. Tree stumps at highway level should be removed and the trees along the right-of-way trimmed. Occasional pull-off areas, where possible without cutting into the banks, should be provided in an inconspicuous manner as possible for emergency use only.

"Scenic highway" signs should be used---to start before entering the "box-cut" after the bridge at Kualihawa. The "S" curve should be realigned into a simple, gradual curve, slightly more than the present alignment. Off-lanes should be provided on the mauka side of the Princeville Airport and also on the mauka side of Princeville (to provide for future traffic to the shopping center).

Reflectors should be placed on the guard rail, from the beginning to the end of the rail at the hairpin turn on the Hanalei River Bluff. The possibility of planting the bluff on the mauka side at the turn should be explored. Signs warning of and showing the nature of the curve should be posted from both directions. The view of the highway from Lumahai from the junction of Kauai Highway and Plantation Rd. should be improved by trimming back the planting at the corner.

At the approach to Hanalei Bridge, there should be a sign that says: "One Way Bridge" rather than "Narrow Bridge". (All the one way bridges should have such signs on all approaches.)

From Hanalei Bridge to Waimea Bridge there should be turnouts in several places for distressed cars (also as inconspicuous as possible). Some culvert walls are too close to the highway and should be set back and the culverts over the third creek from the Hanalei Bridge should be realigned. Owners of shops, stores and the restaurant in Hanalei should be encouraged by the County to provide safer off-street parking for patrons. Signs should be posted in the town to remind motorists that they must watch for pedestrians. The ditches on the mauka side of the road by the town should have some type of curb, markers or shields to prevent cars from sliding into them.

The Waimea and Waipo Bridges should have a series of rustic design barriers at right angles to the ends of the bridges with reflectors and the narrow section of Waipo Bridge (the bridge is two different widths) should be replaced to match the wider portion. Medall reflectors should be installed on the road from Hanalei River to the end of the road at Ke'e. Hanalei Bridge No should be widened because it is in close to the entrance to Hanalei Colony. The ford at Mauoa and Limahuli Stream 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 alert motorists of their nature.

The Kauai Visitors Bureau should be invited to cooperate by pointing out to tourists that the North Shore area is a very special place --- a place to slow down and enjoy the rural atmosphere and the friendly people. Part of that friendliness is encountered at the one-way bridges where the situation brings out a kind of amused camaraderie in both 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 DOT and the County of Kauai perhaps the North Shore could qualify for this status.
Because Hawai‘i in committing itself to an increased and long-range future of tourism as one, perhaps its main, source 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 resilient population that does not feel resentment and animosity toward not only the tourists but toward those who are presenting tourism.

Hopefully, the State BPD will overcome its zeal to “improve” what cannot be improved on—to recognize that it does not have to carry its construction plans to every nook and cranny of these islands. Emma in the end and it will remain in the end. There is no place to go from there.

Sincerely,

Helen C. Hopkins

For LIFE OF THE LAND
HAWAI‘I CHAPTER, SIERRA CLUB

Helen C. Hopkins (Mrs.)
F. O. Box 266
Hanalei, Hawai‘i

c. Mr. E. Alvrey Wright, Director
State Dept. of Transportation

Life of the Land

Sierra Club

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'No need' seen for Hanalei up-zoning

Speakers against General Commercial zoning for Larry Ching's property at Hanalei all emphasized that there is no need for any more development in the town than the present Neighborhood Commercial zone provides.

Speaking at the Tuesday night hearing of the Council Planning Committee, they insisted that the general commercial area a few miles down the road at Princeville is sufficient to supply the needs of their small community.

Nick Beck, chairman of the North Shore Improvement Committee, reported that a group of “shocked” to hear the Planning Commission “totally ignored all recommendations and planning by all involved agencies” and “without justification” approved the change.

Beck named the Kauai Planning Department, U of H study on the North Shore, the North Shore Improvement committee and the North Shore plan itself, which was approved by the County Council, as all favoring Neighborhood commercial and opposing general commercial.

To illustrate the difference, he listed the uses which are now permitted: restaurants, retail stores, service stations, theaters, supermarket, and “other adequate shopping facilities” for the area.

With General Commercial, Beck said, some additional permitted uses would be light manufacturing, warehouses, terminals, auto sales and hotels.

Though Ching says he wants to build a supermarket, Beck challenged that rezoning of 29 acres is not necessary for a supermarket.

Charles Forward of Hanalei insisted there had been no “proof of need” from the applicant that the present Neighborhood Commercial zone is insufficient for the needs of Hanalei.

The sugar problem of falling prices and debits instead of profits led Mr. Forward to the conclusion that tourism will become the growth industry and the town must keep its unique charm in attempt to attract tourists.

He told the Council they grant Commercial Zoning for one land owner, all the rest will say, "Hey Bitch! How bout me? You put me inside too!"

Mr. Forward was one of the speakers to point out that Mr. Ching's 'baby landsman' would overwhelmed therequests and to ask for a denial of the change until the sewage problem is solved.

He referred to a letter from James Kunegal, Deputy Director of Health for the State, who said the proposed development is located in low land with high water-tables not conducive to adequate surface and underground sewage.

Kunegal wrote that establishments generating large amounts of sewage have histories of eutrophication problems, and his department has no objection to a grocery store to replace Ching Young store.

WITHOUT addition of any establishments which generate large amount of sewage, such as restaurants and bakeries.

Planning Committee Chairman Bob Yutani asked if the sewage problem was taken care of. Would Forward withdraw his objections?

Forward would only admit that if the sewage problem were taken care of.

"It might be worth taking a second look at it. But I doubt it."

Rutem Hanini, Director of the Waialii House Mission said he felt the "best planning Department in the State has been overruled and challenged." He asked the Council to re-examine arguments against a change for which he felt would have been more effective to preserve what is "historical, traditional and historic about Hanalei.

Bob Wade, manager of the Hanalei Trader presented a petition against the change signed by approximately 100 residents of the area. He said they were people who came into his store who signed without any canvassing on his part.

"People don't want up-zoning in Hanalei Valley." Wade stated. He was also concerned about sewage problems.

Hanalei resident Robert Hopkins reported that Princeville "looks better yesterday" for a commercial development and any needs in Hanalei could be met by Neighborhood commercial zoning. Commercial zoning would open up the area to construction that will be incompatible to Hanalei, he feared.

Attorney Courtney Kahr reminded the Council that John Connally has been denied General Commercial two years ago and told to come in for zoning changes as he did not see what he had changed in the interval to make General Commercial desirable now, especially since he would destroy the very being of Hanalei.

Larry Ching's lawyer, Walter Long, who was asked to be the last speaker, pointed out that some people feel "Don't let progress be held up on our lifestyle." But he said "you can't stop progress. Hanalei needs additional commercial services, he said, and it was done by a variety of people if it were done by a variety of people it could become a "bargain prize.""
Councilman Louis Gonzales asked the Ching zoning amendment be pulled from the Planning Commission and acted on for final reading.

Planning Commission head Yusuda had instead asked the matter be deferred to the next council. He gave the reasons:

1. Sewerage conditions as stated by the State Department of Health.
2. Negative recommendations of the North Shore Improvement Committee.
3. Incompleteness of goals and objectives at the North Shore Plan relative to commercial space for Hanalei.
4. Contemplated uses are permissible under a Neighborhood Commercial Classification with a use permit.
5. Negative recommendations by Planning Department and vote by Commission overturning the staff recommendation.
6. Questions regarding compliance to shoreline protection rules and regulations.

Only House support for Yorkusha 3rd reading was demanded.

The Ching suggestion was drawn up by Jean Holmes on the Planning Commission and acted on for final reading.

In one of the shortest, concluded sessions Jerome Ho suggested four amendments to the Planning proposal. Those of them said only that Ching must comply with the CZU, State Department of Health and Water Department rules. The fourth would have forbided apartments, motels or hotels for the next five years.

In another session House Shaw had a chance to speak against the change.

"I am not against development," she said, "but this same Council voted for Neighborhood Commercial for Hanalei. That was two years ago and I doubt that Hanalei does not feel differently. Every year the people who have spoken have felt that.

Mrs. Shaw said the Council had a "responsibility to research the facts and come up with a fair plan." The Planning Commission had a "political body" voted on a split vote.

She called the Ching suggestion "oldest and unwritten" and said when the shopping center can be constructed under the present zoning, the public would not understand the need for a change, and when she asked had never received an answer as to why.

"Is it a political decision," she charged, "or based on the input of the community or planning and zoning facts?"
THE GARDEN ISLAND NEWSPAPER

WE MIGHT BE WRONG, BUT

by Jean Holmes

The outgoing Council left in a blaze of glory... . . . the life blood of the democratic process on Kauai.

AGAINST THE EXPRESSED wishes of the people of Hanalei, in opposition to opinions expressed by residents all over the Island, they granted General Commercial zoning to Larry Ching for 2.3 acres at Hanalei.

Mr. Ching already has Neighborhood Commercial which would enable him to build anything he says he wants to build.

Special use permit could be issued when variances are needed. But, according to Mr. Ching, it is "too much trouble" to follow the Democratic rules, other people do and say for the permits.

The Planning Staff, the North Shore Advisory Council, the University of Hawaii, the Health Department... and other bodies... opposed the General Commercial.

NOT ONE PERSON spoke for it... not ONE. Hundred opposed, by letter, petition and in person, appearing to the Council not to grant the zoning. It is an issue which united all groups of people, ranging from malahinis to missionary-town kamaaina.

Yet five members of the Council ignored the voice of the people and listened only to Larry Ching.

But Toruyama, Abel Medeiros and Louie Gonsalves did not even try to justify their vote. Their master had spoken.

Roger Lee rambled on about the land being owned by the Chings for 30 years, and that they had always paid their taxes. AFTHER PLANNING STAFFER Avery Youn had explained clearly... most of us... the difference between a regional supermarket and a local supermarket (which Mr. Ching's developers indicate is plan and which is permitted under the present zoning), Jerome Fehr said he did not understand and did not want zoning which "depended on interpretation of words." How else to justify his vote with the weak excuse that he does not want the people of Hanalei to "pay resort prices at Princeville."

Did the people of Hanalei ask him to save them from "resort prices"? Has he cheated prices at Ching Young Stove? And, does he think that General Commercial instead of Neighborhood Commercial zoning will lower prices?

WE CONGRATULATE Ross One Shaw (who will be missed on the next Council) and Robert Yotsuda for their efforts to stop this change being ramrodded through against the people's wishes.

Mrs. Shaw made it clear she is not against development per se, but against this upzoning as being premature and flouting the wishes of the people.

Among the other points Robert Yotsuda made is that several zoning cases in the same area are before the Council, and delay is needed to study how they inter-related. Upzoning granted to one can be used as a precedent for up-zoning others, especially when it is granted for no reason at all. Why then should anyone have to give reasons?

WE FOUND TWO THINGS especially interesting:

When the Ching upzoning first came before the Council, a two year limitation on beginning construction set by the Planning Commission was removed... "Temporarily" Louie Gonsalves said, until after the public hearing to find out how the people felt.

The restriction disappeared somewhere in the Council maneuverings, and was never heard from again.

Secondly, when Mrs. Shaw made the amendment that hotels, motels and apartments be eliminated in the permitted area and "a recession" was immediately called.

During the discussions that went on around the room, Ching's lawyer, Wallace Ching, was heard to say this.

"We don't like it but we will accept it."

"Accept" the decision of the County Council? Wow! Shaw's what's in charge now?

HAD THIS NOT BEEN almost two years from election day, we don't think even the intimates five would have dared give the voters the shaft. But, they figure the voters have short memories, and will forget by election 1978.

We will never tell you whom to vote for, but if any of these five stand up at campaign time and say they are sitting for your vote to serve you... "to do the will of the people"... follow your impulse to laugh sincerely... or throw up?

ONE MORE TIME... the names of the guys who ignored the people of Kauai are... Louie Gonsalves, Roger Lee, Jerome Hew, Abel Medeiros and Toruyama.

THE GARDEN ISLAND - MONDAY, JANUARY 3, 1977 - PAGE 3

Don't let Hanalei upzoning slip by

To the Forum:

I am appalled at the action taken by the County Council on December 21 and 27, the last meetings held by the outgoing council.

The alleged issue, Larry Ching's request for rezoning of 2.3 acres in Hanalei from Neighborhood Commercial to General Commercial. I have nothing personal against Mr. Ching, and although I haven't seen his development plans, I fear that they are quite nice. So nice, in fact, that he would have been allowed to build his "supermarket" under the present zoning.

So what's the real issue? Not just the zoning change, which under the terms of the C.O.O. will allow other landowners to argue convincingly for similar zoning changes in Hanalei and set a pattern for gradual destruction of Hanalei's unique character, but mostly, in my opinion, the manner in which this rezoning request was approved.

Why? There simply was no good reason for approval, since Mr. Ching would have been unshamed without it, while there are several good reasons against approval, all of which have been stated to the public and the press numerous times, inclusive of its being in direct conflict with the C.O.O., the North Shore Development Plan, the North Shore Advisory Council opinion, the Planning Department's opinion, and tremendous public opinion in opposition.

Only two members of the Council opposed the change, and tried to hold the decision over for the new council.

Ross One Shaw, an outgoing "home boy" whose reason was not at all crippled, and Robert E. Yotsuda, who listed several good reasons in opposition. Immense honor to you both.

To the other five members voting aye, the following:

BRIAN YOUNG: I thank you for letting me speak on December 21, and present the Council with a petition from 75 Hanalei residents opposing the zoning change.

Not that you or the other four voting for it look it up in the public hearing into reconsideration. Why were you completely silent about your reason for voting "aye"?

DOUG HESS: Being a "home boy" I stripped you of any reasoning power. You stated that Larry Ching has owned the land a long time and should be allowed to develop it. Why do you think the C.O.O. and other zoning laws exist?

JERMAINE Hsu: So, a developer shouldn't be at the mercy of "intimidation of words" Avery Youn, and the Planning Department try to and Director told you that Mr. Ching could implement his plan under the present zoning.

Do you doubt the accuracy of that "intimidation of words" Mr. Ching could implement his plan under the present zoning?

Do you doubt the accuracy of that "intimidation of words" Mr. Ching could implement his plan under the present zoning?

I hope sincerely that wasn't your real reason, but you didn't advance any other.

LOUIE GONSALVES: You talked a lot about merit, and then didn't cite any reasons this zoning change was merited, limiting yourself to personal attacks on Your Councilman Shaw and Yotsuda. Is this how you're charting the council next year?

TO THE PUBLIC: I wish you'd all keep a record. Please try and attend council meetings. What used to be just great entertainment is becoming.

Ask yourselves why, when the last meeting of the year was usually for fun and games, the "gaiety" this year went into extended time to the tune home boy who sided with LBJ could map Hanalei's future. As for the zoning change itself, there is always a recourse.

First, lobby the Mayor to veto it. Second, a petition to the Council by one of the LBJ gang would allow the new council to decide the question for them.

Third, we now have referendum votes on Kauai. It's worth a try.

Fourth, there's always impeachment, and the last resort, the courts.

Whether you don't let this one slide. The new council will need to know you give a damn, or look out!

E. Courtney Kake

ATTACHMENT #2
Hopes that Mayor will veto Ching up-zoning

To the Forum:

Jean Holmes deserves the Councilman Cottle Award for so bravely stepping on the toes of the Mayor.

I too had the affected community is not equally articulate, but the feeling is there and this will be remembered, even if the Mayor does veto it, as I truly hope he will.

Sincerely,

A. B. Harrock

-Veto Ching up-zoning

To the Forum:

Jean Holmes' bold comments regarding the County Council's disregard for both public and professional opinion in rezoning Hanalei are emphatically endorsed by this resident of the North Shore.

Councilman L. Shaw and Bob Yotsuda are to be commended for their insight and honesty in fulfilling their mandate to protect the public interest. I sincerely hope that Mayor Malapiti will stand by them and veto the Council action.

Joseph Jeremy Harrock, Jr.

It's criminal to cheat people

Mr. Councilman:

From what I am given to understand, your vote concerning the Ching up-zoning is directly opposed to what the majority of the people want.

It is criminal to cheat and deceive the people you are responsible to.

Please change your vote.

Sincerely,

Theodore Reed

Readers express displeasure with Hanalei up-zoning

Mayor Edward Malapiti

County Building

Lihue, Kauai

Mayor:

I was shocked and dismayed at your decision to inflict Hanalei with general up-zoning.

I had put very little effort into the attempt to petition your veto of the up-zoning, assuming that the questionable reasoning and ethics behind the request would certainly compel you, as a lawyer and man of moral responsibility, to veto this action.

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 local businesswomen, politicians who advocated the up-zoning in the name of "local" interests will be responsible in part for the violence and frustration that is predicted to follow rapid urbanization in Hanalei.

Mayor, why don't you go to Hanalei or Waimea and ask some of the more active local girls there why they like to keep the bodies and see if they say it's because the bodies don't like development?

But even if the people of Hanalei don't want it, you should have the backbone to do what you think is right.

In granting this up-zoning you are creating a vacuum that, to be filled, will need a great increase in transportation, utilities and population.

I listened to your press conference and found that it avoided or glossed over the basic issues. There is presently no need for general commercial considering the fact that Larry Ching CAY build his new store without a zoning change, and the "back room" politics surrounding the Council's action were as illusory as the public and in-the-voters and should have been grounds enough for a veto in light of the application's lack of merit.

Mayor, it is of little importance but I want you to know that I actively solicited votes for you during the last campaign, claiming that you were sincerely concerned with the social and environmental ecology of Kauai.

I now find it quite ironic, after having just published an article to this effect in our Alaska magazine, illustrated with a photograph of Hanalei valley and bridge, that you would sign into law an ordinance seriously threatening this valley - an ordinance so weakly rationalized and thinly disguised that if there were a substantial motivation behind the up-zoning, those involved did not want it known publicly.

John Wehrheim

ATTACHMENT #4
TO THE EDITOR:

REGARDING THE HANALEI UPRZONING . . .

JAN, 17, 1977

To the Forum:

Am I right in thinking that the County's General Plan and Zoning law by the votes of the people, states that changes can be made only "with good reason"?

Am I right in thinking that the uprising in Hanalei town was granted by the Planning Commission, County Council, and Mayor, "without ANY real reason given" - good or bad?

Am I right in thinking that when the voters' wishes are so blatantly disregarded and our laws taken so lightly, we now have a chance via our new referendum process, to ask the new Council to vote on the issue again and/or put the question on the ballot?

TO THE EDITOR:

HANALEI BAY 2001 . . .

March 14, 1977

Historic Hawaii photo reprinted by request

To the Forum:

This picture, originally published in the "Historic Hawaii News," is a real shocker and some may scoff at the idea, but we saw it happen on Kauai and Maui. Is Kauai to be next? Shall we allow the North Shore Plan to be nibbled away piece by piece? And what about the rest of Hawaii?

If you really love Kauai please join the more than 1,000 people who have shown their wishes and by signing the Referendum Petition. The Petition asks the County Council to repeal Ordinance 203, which needlessly snatched 29 acres of land in the heart of Hanalei Town from the Qadbond Commercial to General Commercial. Call us at 632-618 for petitions and information.

Hanalei Referendum Hui
David K. Aina, President
Brewer sess land cost increase if moratorium ok'd

by alan matsuoka

Imposing a moratorium on Kilauea agricultural subdivisions is unnecessary and would damage farmers by escalating land costs, C Brewer officials said Monday.

In addition, they said, the firm would be forced to temporarily suspend its operations at Kilauea if the County Council approved an ordinance calling for the moratorium.

But other speakers voiced fears that subdivided parcels could eventually be "consumed" with a price tag unattainable by the bulk of Kilauea residents, and asked for a halt to further subdivisions until an acreage development plan can be completed.

BREWERS PLEDGED to consult with enough Kilauea residents before beginning work at Kilauea, they said, and has left some questions unanswered primarily the availability of sufficient water for a large-scale agricultural venture.

The comments were made Monday night during a County Council public hearing conducted at Kilauea School to hear testimony on a proposed ordinance which would stop any action on agricultural subdivisions at the North Shore community until a development plan is prepared and adopted.

STURGEON BAY, 150 PEOPLE attended the five-hour meeting, 20 speaking in favor of the ordinance and nine opposed.

During the meeting, Planning Committee chairman John Yumura introduced his panel after attorney Walter Hong accepted her of bias and said she should unbiases herself as chairman of the hearing.

Hong representing several Kilauea landowners noted that the county chairman had been involved in two suits which sought a halt to the subdivision of some Kilauea lands.

HONOLULU STAR-ADVERTISER reporter Ralph Lynds noted the county chairwoman had been involved in two suits which sought a halt to the subdivision of some Kilauea lands.

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A moratorium is not needed because Brewer and the State have already done extensive planning, he said. Luscomb said that the proposed three-month moratorium could work against Kilauea farmers.

A moratorium would cause delays in those parts of the program not directly involved in the agricultural subdivision, he said. Delays in the subdivision would undoubtedly cause further increases in costs which would increase the ultimate selling price of the land.

But Kenneth Martin, representing the Kilauea Farm Bureau Federation, which supports the moratorium, said he suspected the land might not be good for farmers anyway.

"MARTIN SAID MOST of the prime agricultural lands bought by Brewer and others at Kilauea have no available water, causing him to believe the land has little or no agricultural value at this time. "Speculation is a game of whirling and dealing," he said. "There's no room for down-to-earth farmers."

One way the entire situation could be resolved, he said, is for the Federal government to guarantee a multi-million dollar loan to the State so it could purchase the Brewer land at Kilauea.

Martin said he was concerned that none of the landowners approached the county to get its input, and said he supported a moratorium for a year or more so Brewer officials, farmers and private landowners could discuss the future of Kilauea.

THE GAP IN communication was voiced by others also, including County Councilman Lom Petevala, who said it appeared Brewer went to talk to "everybody" in the State of Hawaii except the Council.

You try to degrade us or believe us. I don't know an issue because after one Brewer official testified, if you expect us to stand firm, I think the simplest thing you can do is forget the Kilauea for a little while and come and see the Council, the people that represent the people."

Luscomb, at the end of the meeting, responded to several concerns voiced during the five hours. He said C. Brewer has contracted a consultant to study the existing irrigation system, and estimated that it would cost $175,000 to repair. Enough water will be available for agriculture, he said.

TENTATIVE PROVISIONS in the restrictions would be placed prohibiting reversion of subdivided parcels or re-division of the land, which will remain in agricultural use. Brewer vice president Bud Helberg said, though, that the firm would be "philosophically opposed to an anti-speculation clause in the deed."

The Brewer officials said beach accesses would be made available.

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Vice president Hilleberg said he would support a 30 day moratorium on the introduction of livestock and other crops until negotiations begin with the Brewer officials and possible models for the Project 100 plan are ready.

"Without a 30 day moratorium, we can't do any work," he said.

He said Malia and Miloia products would be available for incorporation into agricultural use.

KHMRU 3 & IV in opposition: Thaddeus on the issue of malia products, he said, "We have to be careful. It could cost us a lot of money."

KHMRU 3 & IV in opposition: The member of the Kilauea Management Co. A moratorium will only cost more delays. People want to get on the land."

He said Landowners planned three subdivisions this year and the 30 day moratorium would cost us a lot of money.

KHMRU 3 & IV in opposition: likewise concerned about the moratorium saying, "We have to be careful. It could cost us a lot of money."

KHMRU 3 & IV in opposition: Thaddeus on the moratorium saying, "We have to be careful. It could cost us a lot of money."

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KHMRU 3 & IV in opposition: Thaddeus on the moratorium saying, "We have to be careful. It could cost us a lot of money."

Continued from Attachment #8

VINCENT LOBAN (in support): said CZU section allowing one house on a three acres of agricultural land would result in "country estates," as well as gentlemen farmers who have no real intention to produce food. Would result in higher land prices and eventually when money is not made, when money is not made, when money is not made, when money is not made, when money is not made, when money is not made, when money is not made, when money is not made, when money is not made, when money is not made, when money is not made, when money is not made."

A.P. LEE (in support): owner of 912 acres of Kilauea forest reserve land under negotiation with state for incorporation into an agricultural park. Said his only concern was that a three month moratorium was not enough to develop a plan. Kilauea, he said, has no time planning for a moratorium, and he would support the project if it is not profitable.

WILLIAM TAI (in opposition): said that the moratorium would have "enough time to decide what to do with the land. Said the first moratorium should have been placed on "hoopi camps" and the second moratorium on the destruction of the Kilauea School. No moratorium on agricultural subdivisions.

OTHERS speaking in favor of the moratorium were John Weilheim, Sidney Akagi, Fred Quinn, Temmatsu Goshiken, Spencer Goshiken, Joseph Enose, Nellie Bouzani, David Sprad, Kevin Kim, Linda Sprad and Brad Ahlers.
Kilauea plan affects all agriculture

To the Forum:

When I attended the public hearing in Kilauea last Monday, I observed a depressing trend. Essentially, I saw the slow death of a dream, a dream caused by the disease of greed. The symptoms are quite clear. They appear as a rash of subdivisions, a fever of speculation, and a loss of vision.

Since the original proposal for the creation of an Agricultural Park covering 900 acres of Kilauea land, drastic changes have happened. First, the idea seemed to gain great popular support. From dawn to dusk in Mayor Matapiti, the politicians indicated commitment to the concept. Was it all just wishful thinking?

To give the State credit, it attempted to condemn the land in question, unfortunately, when used in court, the State lost its case and was forced to abandon that strategy. Now the fate of that land depends on whether or not it is truthfully because subdivided.

According to Mayor Matapiti's Position Paper on the Ag Park, strict enforcement of the current CEO will not prevent speculation. His paper also indicates that it might be wise to prevent the subdivision of any parcels larger than 50 acres.

According to a letter by Gov. Arakaki, the situation in Kilauea could seriously affect the future of agricultural development throughout the State.

According to the Conceptual Master Plan, small individual farms of 8 acres or so have little chance for success. It recommends a community type of development that includes an economic infrastructure. Without such an infrastructure, agriculture cannot prove viable under existing conditions. It states that in order to develop an Ag Park subdividing in that subdivisions provide no infrastructure.

It has finally arrived at the point where the Council is debating the passage of a three-month moratorium on all subdivisions in the Kilauea area. Perhaps I should leave more optimistic, but I do not have much hope. First, a 3-month moratorium is not nearly long enough. At least a year is needed. Second, the controversy seems to have degenerated into an argument between C. Brewer and the Kilauea residents.

However, if a longer moratorium is granted, and if the proposed Kilauea Development Park is drawn up specifically with the Ag Park in mind, I might begin to believe diversified agriculture has a chance on the island of Kauai.

Sugar stands in need of aid. If it fails, all we have left to depend on is tourism. That because our major source of jobs and revenue, it is only a matter of time until our island will become a mini Waikiki.

If the Ag Park is not saved, we are in serious trouble. Perhaps the land out there could be used to grow an alternative cash crop such as soybeans.

I am no agricultural expert, but it seems to me that the islands are worth serious study and consideration.

In other news, after all the aloha and frustration, I fear that the Ag Park is doomed. We may all live to witness the death of our dreams. The disease of greed is cancer. After it has killed Kilauea it will spread. There is no known cure for it. Left untreated, it is fatal. But if detected in time, cancer may respond to treatment its growth may be controlled.

Will the Council act as a physiologist to start immediate treatments? If so, will the people provide enough treatment in time? The future is in the hands of those seven people. Your fate and mine depend on their decision.

Keala Kanaa

Kilauea Moratorium killed 6-1

The Kilauea moratorium was "defeated indefinitely" Tuesday evening by a vote of 6 to 1. The vote was taken after lengthy debate in the Planning Committee.

According to the Seoul News, the Councilman said that the moratorium would not harm C. Brewer's plans, since they said the guava and pineapple farm would continue no matter what happened to their planned subdivision.

"We are satisfied that the Council had confidence enough in C. Brewer's plans to defer the moratorium indefinitely," he said. He added that he did not feel that the moratorium was particularly directed at Brewer that nobody was "playing games" to get a moratorium. Brewer but that the proceeding was sincere in their motivation.

"The problem was, Brewer is the biggest landowner on Kauai and that affected the most," he said. He then moved the moratorium question out of the Planning Committee, where it was started by Kilauea and Mala, which was moved by third member Burt Tsuchiya.

Tsuchiya told the Council that he felt a question of such major importance should be left to the residents to decide. He agreed with the mayor, Councilman, and Brewer that the moratorium was unnecessary.

"Instead, he added, is continued when more information was needed, but all facts had been gathered and C. Brewer had not made any changes in his subdivision plans in writing. He then felt the deferment of the vote was to be continued (Continued on Page 2).

"This is the first concrete program for Kilauea since 1970 when sugar production ceased," he said.

Speaking in opposition to killing the moratorium bill, John Yuki, who was not on the Council at the time, said they were unable to develop an agricultural plan "before the area was fragmented.

"We are concerned," he said. "It is in the public interest to preserve Kauai Island for agriculture.

"Many farmers are interested in the possibility of swelling the food supply of the island, for the very real overall reality of the food, energy, waste and corporate enterprise picture."
Kilauea population would double under proposal, LUC told

by Bob Pickard

The State Land Use Commission held a day-long hearing Wednesday on Hana Financial Corp.'s petition to change almost 36 acres of Kilauea land from the agricultural district to urban district, for a proposed 10-unit residential subdivision located behind Kilauea School.

Staff Planner Curtis Ako said the County Planning Department recommended the approval of the petition, labelling it "preliminary." He said that if all the residential subdivisions that have already received final or tentative approval in Kilauea were actually built and sold out, the present population of the area could leap from its present figure of 20 people to 1,467.

If Hana's petition is granted and all the lots eventually sold, Ako said, that could add another 800 people to the area, swelling the potential population of Kilauea to 2,667 people within the next five years.

Hana's petition was a "preliminary" in the sense that it was not part of the plans for the "Rambling Homestead," a subdivision of the subdivision already approved.

A "final" subdivision would mean that the subdivision would be "ready to go," according to Ako, and that the subdivision would be "on the market." A "preliminary" subdivision, on the other hand, would mean that the subdivision would be "on the market" but not "ready to go," according to Ako.

Deputy County Attorney Mike Belyas asked Bennington if he would agree to a condition of approval that the subdivision would remain within the $14,600 average price range.

"No," Bennington said. "It's against my principles. If I want to win, I must know how to win, and I don't say I would.

The State Department of Planning and Economic Development gave the "preliminary" condition of approval, although it said in its report that "an overall state concern is the urgent need to preserve and make available agricultural land in the Kilauea area for agricultural use at prices consistent to that goal.

The condition of the HPED required that the HPED must be turned over to the subdivision on the sale of one of three remaining agricultural lots in Kilauea. The company has already sold the last lot without such a condition.

"Our one major condition is the one parcel of Kilauea in the Zoning District is, and that the subdivision will be 20 more to receive final approval in about a month.

Hana Financial wanted the urban subdivision instead now, he said, so they could get the 16 lots on the market by 1987. He said he expects Hana's current inventory of lots to be sold by 1982.

"It will cause a false inflation in lot values if there's not enough supply to meet the demand," he said.

First priority in lot sales will go to Kilauea residents, Bennington said, and then Kilauea, North Shore and Kauai residents will have first choice from the remaining lots.

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Kilauea (Continued from Page 1)

from the Governor," said James Kirkchoder, a planner with the State Department of Agriculture. "It's to deal with all the Kilauea landowners on agricultural subdivisions to guarantee an agricultural future for Kilauea.

Bex Financial attorney Walton Hong said the company would be open to negotiations if attempts were made to put new restrictions on the ag parcels that already have been bought by the state. He said he would be "interested in negotiations to extend" the subdivision to include agricultural land.

"What's the State's attitude on blackmail?" LUC Chairman Edie Tomen asked Kirkchoder.

Tomen also reminded the Planning Department for not attending the pre-hearing conference on Oahu.

Belyas said he requested that the meeting be held on Oahu since most of the principals were on Oahu, and that County has had to cut back on Oahu trips due to budget considerations.
Road protests calmer at Lihue

Most speakers at Thursday night's public hearing at Lihue on Hanalei highway improvements once again objected to the Department of Transportation's proposals, but they did so in a much calmer tone than at Wednesday night's hearing in Hanalei.

At that meeting, angry Northshore residents had stormed out DOT Kauai District Engineer Edward Yasukawa as he presented several alternative plans to widen Hanalei's roads and bridges, and Councilman Billy Fernandes received the same treatment when he tried to resume the meeting to order.

During public testimony Thursday night, forward-thinking charged that the project would be more readily available for Hanalei residents if the improvement project remained small and confined to returning present roads and bridges, because the bigger project proposals would more likely go off the island to Kauai because people just spill out of them. She said the bridges should be widened, but the buses should be restricted to certain areas.

Planning Director Brian Namimoto told the DOT that the Planning Department supported all their alternatives, and he asked those opposed to the improvement plans to consider safety first.

"Think about this situation," Namimoto said. "If a child or parent is killed in an accident, and the primary cause is a narrow bridge, and he or she happens to be yours, then how would you feel about a narrow, one lane bridge?"

E. Courtney Kahr told the audience of about forty people that the present one-lane bridge system in Hanalei is probably better than the proposed double lane bridges.

"In my experience as a lawyer, I've seen that traffic accidents relate mostly to speeding and drunk driving," she said, so we should slow the cars down. It's more likely that cars would go slower on a one lane bridge.

Harris said the County should charge a toll for cars going past Princeville, but the charge should be only for tourists, not residents. He said the County should establish a tram system into the North Shore area so tourists could "naturally see the North Shore."

"This could generate $40 million a year in revenues if it ran properly," Harris said.

Karen Graham agreed that wider bridges would be more convenient, but she said she didn't want to see more houses in Hanalei because people just spill out of them. She said the bridges should be widened, but the buses should be restricted to certain areas.

Planning Director Brian Namimoto told the DOT that the Planning Department supported all their alternatives, and he asked those opposed to the improvement plans to consider safety first.

"Think about this situation," Namimoto said. "If a child or parent is killed in an accident, and the primary cause is a narrow bridge, and he or she happens to be yours, then how would you feel about a narrow, one lane bridge?"

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"In my experience as a lawyer, I've seen that traffic accidents relate mostly to speeding and drunk driving," she said, so we should slow the cars down. It's more likely that cars would go slower on a one lane bridge.
EVALUATION

SIERRA CLUB, LIFE OF THE LAND AND HELEN HOPKINS (5/28/77)

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 lateral repairs to the Hanalei Bridge will not induce growth, since the capacity will only be raised to what it has been in recent years.

E. The growth inducing impacts of the proposed improvements from Princeville to He’ana will be discussed in the Final EIS for that section.

F. The point of this comment is unclear.

G. The wind record from Kilauea was the most accurate data available. Bones were taken into account in the air quality assessment.

H. The noise assessment shown that by 1998 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 an 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 He’ana segment will be evaluated in the supplementary Final EIS for that segment.

K. See evaluation D, above. The example of Kilauea is more of the result of losing an agricultural economic base and having it replaced by urbanization. The role of the improved highway is insignificant. If anything, rerouting 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. Metal 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 alignment 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-He’ana segment will be evaluated.
Dept. of Transportation

Chief, Highway Administration, Region 9

Ralph H. Shaller

Dear Sir:

Recent property owners in the

area have been informed of

the proposed highway from

Sunset to Encino and are

extremely concerned over the proposal

of the transportation department with

removing the bridge and reversing and

continuing roads from Reseda to

the end of the South road.

Considering one of the existing bridges

and roads should add great value to the

community which is the

greatest asset this area.

We are very concerned about traffic

standards create conditions that, too, of our

countryside and have difficulty to tolerate. Communication,

with all its complications, should not and must

not be of the few remaining areas in

the Island that is available now, for its

continued beauty.

Sincerely,

Phil and Jo Barker

3535 Stonewood Br.

Sherman Oaks, CA 91403
U.S. Dept. of Transportation
Federal Highway Admin. Region 9
677 Ala Moana Blvd
Suite 613
Honolulu, Hi 96813
Subject: D.O.T. Belt Road, Island of Kauai, from Kalaiwai to Hanalei Section, Proposed Project

I want to be placed on record as of the above date April 14, 1977, as being opposed to any and all improvements of the proposed project.

At the present time and since 1924, the maintenance of the present highways and bridges has been very poor. Often large potholes remain in the highway for many weeks. Drainage ditches remain filled with heavy growth for many years. Example: Drainage ditch from State Highway Hanalei, town to Kauai Pkwy plugged and closed since state took over highway from County of Kauai.

During the days of county control of Belt Road the vegetation was cut out of the roadway allowing sea views to be enjoyed by all. This is no longer the case. Example: Lookout to Hanalei Bridge is liking on to a tunnel with only the roar adequate 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. When needed, the bridge goes for periods of time (years) without painting at Bridge and general repainting at Bridge and general repairs.

If the bridge receives annual painting (and rebar in concrete, etc.) it may not last many years more to say the least.
I have spoken out on this project fore and will again in the future it should be. In the mean time leave our
beautiful Hanalei - Hanalei area alone
it try to make a Honolulu style high-
way and do further damage to
life-styles and peaceful living.

Yours, your superhighways on Oahu
West Maui and Kona (Big Island)
are the areas are already badly
uglyed. Just don't make a mess
of this beautiful area of Kauai.

Sincerely

Charles H. Forward Jr.
Box 459
Hanalei, Kauai, Hi. 96714
D. WAIOLA, WAIWA, WAIKOBO BRIDGES: SECOND ALTERNATIVE ONLY;
E. WAHIA BRIDGES #1, #2, #3: THIRD ALTERNATE ONLY;
F. HAKIA BRIDGES #1 and #2: ALTERNATE #1 ONLY;
G. MAAKU STREAM FORD: ALTERNATE #2 ONLY;
H. LIMAHOLI STREAM CROSSING: ALTERNATE #1 ONLY.

As is well known to the Department of Transportation, it has been repeatedly demonstrated that the residents and individual property owners must depend upon the strict control of development... through existing environmental and regulatory land 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 potential profiteers who sign developmentally-inspired petitions. They are usually neither residents, nor property owner-taxpayers of the area.

Sincerely,

H. P. Greenback, M.D.

Mrs. Marjorie L. Greenback

Marjorie L. Greenback
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 pullouts along the road to enable cars to stop for precaution taking, to protect bicycle riders and other tourists. The many tourists treasure the unspoiled and undeveloped parts of the islands.

JMs. Know the first is a source of satisfaction. Irrespective of the importance of balance from the standpoint of overall tourist appeal, it appears to be very short-sighted for the State of Hawaii to place itself at the mercy of a single industry, namely tourism. The need for increased supply, which tourism depends on may be in short supply within the years. The availability of agricultural land would then become essential both for industry and food.

We hope you will see the advantages of whole future development at Hawaii.

Yours very truly,

[Signature]

[Address]

4315 Maple Rd
Kahal, HI 92181, NC

10/17

[Letterhead]

DEPARTMENT OF TRANSPORTATION

Dear Mr. Clark,

You are probably a civil engineer and have been to Hawaii. I think that having traffic accidents is very desirable, usually it is.

But sometimes efficiency should take a back seat to other values. The single-lane bridges in the highland area serve as effective valves, regulating the flow of traffic development. Speed in that single lane.

Sincerely, has shown that no matter how much we hurry, the number of cars always goes to...
Please do not open the flood gates to greedy speculators who need easy access to a beautiful region.

The last thought: Our world is shrinking, speeding up. Can "aloha" survive a lifestyle that sends us whizzing by each other in aerial boxes? It's refreshing to see a happy design feature that makes courteous attention a necessity: "After you, please."

It's always good to remind Hawaii Schoolchildren a year. The Island Honeys are in session. Let's think! (And us!) We.

Onward to Honolulu?

Please send me a copy of the final EIS, when available.
May 10, 1977

The following statement is in response to the Draft EIS for the Kualii to Mauna Road Project - Kualii to Kualii to Kualii. A basic cost-benefit analysis applied to the findings of the EIS will reveal one undeniable conclusion.

The main reason 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 Kualii, 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 girder bridge crossing the Hanalei River, downstream of the existing structure. Also proposed is the removal of several historic bridges between Hanalei and Hanalei, 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 statement, along with those of several residents who have said that the projected traffic increase has not materialized (see Appendix to EIS), 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 "...restrict the passage of certain types of vehicles such as large buses, heavy trucks and cranes..." But, is there really a need for those vehicles in this area? The adverse impacts of large tour buses travelling through this small rural community are plain - noise, smoke, and dust pollution as well as increased traffic and population. The easy access to large trucks and cranes will with certainly mean increased construction, and I am sure such plans are already in progress.

Accident occurences for the Kualii to Mauna 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 Kualii, I would like to suggest that these accidents should not be attributed mainly to the narrowness and condition of the road. The facts state that 82% of the accidents occurred at night, and while most of the other major roads of Kualii are well lit, this area is notorious for its lack of street lights. Well placed street lights that blend into the surroundings is surely a relatively inexpensive solution that will go far 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 lifetime. 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., resurfacing and minimal road widening. Where bridges need improvement, I would suggest replacement in kind - and of no larger size, as it is the quaint nature of those one lane bridges that provides much of the esthetically pleasing rural atmosphere of the Hanalei area. Indeed, residents have said that the one lane bridges have always worked fine for them, and tourists still have access with rental cars. This alternative also provides the attractive benefit of the lower 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 view 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 concluded that improving the highway would not result in increase in development because of natural restraints i.e., flooding,
transmit foundation, 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 constraints, 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 slows down upon 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 home to four species of endangered waterfowl, and construction here would greatly set back any programs 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 shoreline 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 harm 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 reason for the change 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 has done. Other things leave me, but it abides; other things change, but it remains the same. For me its balmy airs are always blowing, its summer seas flashing in the sun; the pulsing of its surf heat in my ear; I can see its garlanded crags, its leaping cascades, its plump-palm drowsing by the shore, its remote sunsets flashing like islands above the cloud rock; I can feel the spirit of its woodland solitudes, I can hear the splash of its brooks; In my nostrils still lives the breath of flowers that perfumed twenty years ago."

Will this beauty be lost?

Craig G. Nakamura

David Nakashima
717-217th Avenue
Honolulu, Hawaii 96816

Scott Eise
5147 Puna Street
Honolulu, Hawaii 96821
EVALUATION

CHAIR: NAKAMURA, AND OTHERS (5/10/77)

A. At no point has increased access been presented as a justification for the proposed improvements.

B. Least extensive improvements have also been proposed. The recommended widening from Kailua to Princeville is the minimum improvement that will meet safety objectives.

C. The need for the project is safety and improved structures, not traffic increases.

D. Comments relating to the Princeville to Hanalei section will be evaluated in the supplemental Final EIS for that section.

E. Lighting is one contributory factor, but poor roadway geometry is more important, and can not be corrected except by widening the roadway and improving the dangerous curves.

1) F & G. See D, above.
April 15, 1977

Director, Department of TRANSPORTATION
869 Punchbowl Street
Honolulu, HI 96813

RE: Kaaani Belt Road

Dear Sir,

I am pleased that the Department of Transportation has listened to the community of Kaaani 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.

Kaaani and Haena are places of great beauty, a beauty one should take time to enjoy. I believe that road approaches from Kaaani 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 larger vehicle to the mini-bus. The smaller vehicle could provide more jobs. The change station could be at Princeville, or at the Scenic turnout. A larger bus would give the visitor the advantage of a scenic view of 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 border to accommodate short time visitors demonstrates great insensitivity to the feelings and desires of the residents and their future investment, the children of Kaaani.

Sincerely,

[Signature]

EVALUATION

MAHLYN POLLACK (4/15/77)

A. Lower speeds will be used where feasible. Space for emergency turn-outs will be provided on the shoulders from Kaaani to Princeville.

B. The type of buses allowed to operate in the area is a function of the Public Utilities Commission, which has indicated a reluctance to restrict access to certain types of vehicles.

C. Development and growth are controlled by the land use policies of the County. The highway plans merely reflect these policies. The State in cognizant of the need to provide transportation facilities that preserve the resources of the North Shore.
R.S. Dept. of Transportation
Federal Highway Admin., Region Nine
477 Ala Moana Blvd., Suite 613
Honolulu, Hawaii 96813

Atttn: Mr. Ralph L. Segawa

Subject: Kaual Bell Road Kalihilani to Hanaa Section Project

Dear Mr. Segawa,

My wife and I are vehemently opposed to the proposals to widen the bridges and highway as contained in some of the earlier proposals part of the subject project.

Our objections are registered as frequent visitors to the area, and owners of real property in the subject area. While severe property might temporarily benefit from the expansion of pl

lant, Hanaa, in the long run we, along with the residents, would lose the very thing that makes the area dear to our hearts.

Building dual basins are not needed on the north shore. Only Kaual's north shore and Hana are left for those of us who want to escape to live or to relax. The quaint beauty of "South Pacific" would be destroyed forever if the road and bridges were widened. The very health, the tour bus operators would like to sell would be destroyed by their presence.

As taxpayers, we oppose the unnecessary and wasteful spending of tax dollars and the conversion of precious energy sources and materials for such needless purposes. As an example, one proposal for the Kalihilani bridge calls for an expenditure of $966,000 versus $87,000 to provide needed maintenance only. If the $966,000 is amortized over 20 years, the annual cost excluding interest, present value calculation, etc., is $26,890. The maintenance would provide 7-10 years of life. Even at seven years this is only $6,200 annually. Overall the projected cost comparisons are $16,471,000 versus $5,450,000 for maintenance. This represents ten times and a half million dollars of potential waste — not worth the waste of wasted destruction in the name of "progress".

The residents are, in fact, opposed to any extensive widening project. The environmental study confirm damage will occur. Funds needed elsewhere would be worse than wasted. Who, in question, really wants the wider bridges and highway and for what reason?

It is rare indeed when we fully agree with the staunch environmentalist. This time, however, they are right.

Please reconsider our vigorous objections to and protest against any widening of the bridges and highway contained in the subject project area.

Sincerely,

[Signature]
Jeanette E. Houton
2746 S. Indigo Ave.
Hacienda Heights, CA 91745

[Signature]
G.L. Houton

May 7, 1971

Skooli
814 Pearlridge Mall
Hilo, Hawaii

Director of Transportation
State of Hawaii

May 9, 1977

State of Hawaii

Attn: Mr. Ralph L. Segawa

Subject: Kalihilani to Hanaa Section Project

Dear Sirs:

I am in Hawaii on a business trip and have been to the Islands of Kauai, Maui, and Oahu. I have been to Maui with my family several times in the past for combination business/vacation trips. Maui has changed greatly since my last trip there and for the worse. I would not care to spend a vacation here. If ever there was a city that desperately needed a good public transit system, it is in Honolulu.

Kauai 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 Hanalei 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 Hanalei who made my stay there even more pleasant because of the knowledge 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 irreparably spoiled by urban sprawl and highway traffic.

Hopefully some 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 request that you leave the Hanalei area as is. At the same time, "speed kills" and people should be encouraged to slow down and enjoy the magnificent scenery.

Sincerely,

[Signature]
414 Pearlridge Mall
Hilo, Hawaii
U.S. Dept. of Transportation
Alii Kona Blvd.,
Hilo, Hawaii

April 18, 1977

Dear Mr. Ralph Segawa:

BEGINNING THE PROPOSED HIGHWAY AND BRIDGE CONSTRUCTION OF KALILILALIL
TO NACIAL

As property owners of Wainiha, Kauai tax lot 5-5-8-12-7, we are vitally interested in opposing the upgrading of existing bridges and roads in local 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 Hanalei to Haena 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,

Harry and Kathleen Steward

Alana from:

ERNIE WENCK

April 19th, 1977

U.S. Dept. of Transportation
Alii Kona Blvd.,
Hilo, Hawaii

Dear Mr. Ralph Segawa,

Regarding the proposed highway and bridge construction of Kalili to Haena-Hali.

As a property owner of Wainiha, Kauai, Hanalei Colony Resort, I am vitally interested in opposing the upgrading of existing bridges and roads in local 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 Hanalei to Haena area.

I also feel maintaining the status quo could best meet the interests of the taxpayers.

Sincerely Yours,

[Signature]

ERNIE WENCK

3713 So. Gaffey St., 5
San Pedro, CA 90731

SHORE POINT YACHTING SERVICES, INC.

SAN PEDRO, CALIF. 90731
Another thing which I'd like to emphasize is one others did last night and realize is that if we are concerned - and we are about jobs for Kauaians, we have a better chance to keep the jobs for local people if the jobs are smaller - rather than the costly jobs of the bigger bridges and wider roads.

Let's also help direct the Federal funds which are NOT free to other human sites - like mental health needs.

Also, as it was emphasized last night, another safety factor about not using the road is to keep people driving slower - enjoying the view - and using a fuel tax as our President Carter pointed out the necessity yesterday! This not only prevent unnecessary accidents, but will help us not to lose the aloha it. By this I mean that it is so nice to stop at the bridges to let our pass by save to each other with the kind of courtesy that is fast disappearing.

And the gardens on the road give us a chance to say "thank you" to our Creator for his gifts of the natural resources and the friendliness and aloha between and among peoples.

In closing I want to say one more thing. I've gone to many public hearings - often the agency personnel or commission members listening seem angry, uninterested, or unconfident if the speakers are saying what seems against what they are proposing. However, at this hearing and the last one in Lihue in 1975, I believe, I find Mr. Charles Summa to be friendly, and genuinely listening to what is being said and I just want to express my appreciation. His smiling face and acknowledgments are very refreshing!

---

I do realize the necessity of safety - of straightening some of the bad corners and of straightening the bridges if that is necessary and perhaps it is - if they are all coved. However, let's please keep the picturesque where and maintain as best as possible the historical significance and beauty of the bridges and their areas.
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 may-be 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...."
Mr. Howard Yamaguchi, Yamaguchi Bus Service

"...On the first increment, the Kalihiwai-Hanalei area, there is one point a little past the Hanalei-Princeville airstrip 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 Kalihiwai 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, 30 years after, where are we? From Lihue to Kalilihiwai, 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 grand-children 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 Kalilihiwai with modern roads, modern designs, then all of a sudden the State reverts itself and says now let's build a secondary road from Kalilihiwai 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, resiting 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...."

The full transcripts of these hearings are available for review at the office of the State Department of Transportation.
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.