March 11, 1994

Mr. Eugene McCain
Kukuihaele Development Company
P.O. Box 44394
Kawaihae, HI 96743

Dear Mr. McCain:

RE: Final Environmental Impact Statement for Amanresort
Kanahonua and Waikoskoe, Hamakua District, Hawaii
Tax Map Key: 4-8-6; 3, 13, 43, 44, por. 9 & 11

This is to notify you of the acceptance of the Final Environmental Impact Statement for the Amanresort project as satisfactory fulfillment of the requirement of Chapter 343, Hawaii Revised Statutes. This environmental impact statement will be a useful tool in the process of deciding if the action described therein should 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 necessarily constitute an endorsement of the proposed action.

Upon notice of the decision in the OEQC Bulletin, we will be acknowledging receipt of the various applications and proceeding with their review.

Sincerely,

Virginia Goldstein
VIRGINIA GOLDSTEIN
Planning Director

RKN:mjs

xc: Office of Environmental Quality Control
Sandra Schutte, Esq.
March 11, 1994

FINAL ENVIRONMENTAL IMPACT STATEMENT ACCEPTANCE REPORT

PROJECT: Amanresort

APPLICANT: Kukuihaele Development Company

LOCATION: Kanahonua and Waikoekoe, Hamakua District, Hawaii

TMK: 4-8-6:3, 13, 43, 44, por. 9 & 11

A. BACKGROUND

Kukuihaele Development Company proposes the following uses on approximately 113 acres in Kukuihaele on the Hamakua Coast: 1) retreat resort consisting of Amanhideaway, a 36-unit resort hotel located near the cliff edge with views of the beautiful coastline, and the Plantation Inn, a 4-suite inn in the renovated and preserved 85-year old Plantation Manager's Estate; 2) 1-acre lots (38 residential-agriculture lots and 7 residential-resort lots) to be sold in fee simple; and 3) various community benefits including boundary adjustments for existing residents bordering the project site, improvements to the Social Hall and Kukuihaele Park for community use, donation of land for expansion of cemeteries, establishment of a property tax trust fund to offset increases in property taxes resulting from the project, contribution of in-lieu affordable housing fee, granting of a lifetime license to an existing elderly Kukuihaele resident, and voluntary commitment to comply with recommendations relating to Waipio Valley tours. The project site makai boundary follows the cliff top edge and excludes the cliff area to the shoreline. The design and operation objective is to integrate the project into the rural character and community of Kukuihaele. This resort project will add to the Amanresort chain which has eleven other world-ranked resorts in Thailand, French Polynesia, Bali, and other areas.

Most of the project site consists of abandoned fields of sugar cane. The structures that do exist include: the 85-year old Plantation Manager's Estate, which will be preserved and converted into the Plantation Inn; a residence currently leased to an elderly resident, which will not be disturbed during the lifetime of the resident; and the Community Social Hall, which will be improved and dedicated to community use. The extensive landscaping and low scale architecture will maintain the open space character of the area and minimize the view of the resort from Waipio Valley. Landscaped areas will buffer adjacent uses, including the existing Kukuihaele town, two cemeteries, and the Roman Catholic Church, from the resort.

The project is outside of the SMA. The project will require State Land Use District Boundary Amendment, General Plan Amendment, and rezoning.
B. PROCEDURE

1. The Notice of Availability of the Environmental Impact Statement Preparation Notice (EISPNI) for this project was published in the August 8, 1993 "OEQC Bulletin."

2. The 30-day consultation period for this project expired on September 7, 1993. During this period 19 letters were received which offered comments. The substantive comment letters as well as the responses to them are included in the Final EIS.

3. The Notice of Availability of the Draft EIS for this project was published in the November 23, 1993 "OEQC Bulletin."

4. The 45-day review period for this project ended on January 7, 1994. The Applicant responded to 38 letters of comment. These letters and the responses are included in the Final EIS.

5. The Notice of Availability of the Final EIS for this project was published in the March 23, 1993 "OEQC Bulletin."

C. ENVIRONMENTAL IMPACT STATEMENT CONTENT

The Final EIS consists of one volume. As required, this document contains:

1. Summary sheet
2. Table of contents
3. Statement of purpose and need for action
4. Project description
5. Discussion of known alternatives to the proposed action
6. Description of the environmental setting
7. A statement of the proposed actions' relationship to the land use plans, policies, and controls for the affected area
8. A statement of probable impact on the environment
9. Relationship between local short-term uses and enhancement of long-term productivity
10. Discloses all irreversible and irretrievable commitments of resources
11. Addresses all probable unavoidable adverse environmental effects
12. Description of mitigation measures to minimize impacts
13. A summary of unresolved issues
14. A list of organizations and individuals consulted in preparation of the Environmental Impact Statement
15. Reproductions of all substantive comments and responses made during the Environmental Impact Statement review period

The County of Hawaii Planning Department, as the Accepting Agency, has determined that the content requirements of the Environmental Impact Statement, as specified in Section 11-200-17 of
the Environmental Impact Statement Rules, have been met.

D. RESPONSES TO COMMENTS

The Applicant has responded to all substantive comments made during the review period of the Draft Environmental Impact Statement. Copies of the substantive comments and responses are included in the Final EIS.

The County of Hawaii Planning Department, as the Accepting Agency, has determined that this Environmental Impact Statement has fulfilled the public review requirement of Chapter 200 of Title 11, Administrative Rules, Environmental Impact Statement Rules.

E. UNRESOLVED ISSUES

1. Offsite infrastructure
   a. Road-- The Applicant, community, County, and State Department of Transportation need to agree on the access road and extent of improvements.
   b. Water-- The Applicant and Department of Water Supply need to agree on a feasible water supply option.
   c. Electrical/Telephone-- The Applicant needs to determine its power requirements in greater detail, negotiate with HELCO on the extent of improvements, and decide whether to use HELCO's system or investigate alternative energy sources.
   d. Civil Defense-- The Applicant and County must determine the need and location of a civil defense warning siren.

2. Access easement. Although the Applicant acknowledges the access easement rights of the landlocked 2.119-acre lot surrounded by the Project Site, the specific nature and location of the easement through the Project Site has not been determined. The land burdened by the easement is currently owned by the Roman Catholic Church and leased to the Applicant. The Applicant will resolve this access issue with the owner of the 2.119-acre lot when the Applicant obtains legal title from the Roman Catholic Church. Any changes to the site plan, if necessary, to accommodate the easement will not be significant.

3. Soil stability. The extent of setback from the cliff edge and/or appropriate structural mitigation measures need to be determined on the basis of a soils engineering study. The study would be conducted only upon securing the various land use approvals. The setback and/or structural mitigation measures would be checked at Plan Approval.

4. Affordable housing in-lieu fee. The amount of the fee would need to be resolved during the rezoning process.

F. SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
After this Final Environmental Impact Statement for the Amanresort project is accepted, a supplemental environmental impact statement shall be prepared if there is a major or substantial change to the proposed project, or if new or different environmental impacts are anticipated.

Any supplemental environmental impact statement shall be reviewed in accordance with Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Hawaii Administrative Rules, Environmental Impact Statement Rules.

G. DETERMINATION

The Planning Department, as the Accepting Agency, hereby determines this Final Environmental Impact Statement for Amanresort to be acceptable under the procedures established in Chapter 343, Hawaii Revised Statutes.

Virginia Goldstein
Planning Director
FINAL
Environmental Impact Statement

Amanresort

Waikokekoe and Kanahonua, Hamakua District, Hawaii

February 7, 1994
Final
Environmental Impact Statement

AMANRESORT
Kanahonua and Waikoeoke, Hamakua District, Hawaii

Prepared For:
Kukuihaele Development Company
Kawaihae, HI

EIS Consultant:
Roy R. Takemoto
P.O. Box 131
Hilo, HI 96721

February 7, 1994

This document has been prepared pursuant to Chapter 343, Hawaii Revised Statutes, for submission to the Hawaii County Planning Department.

Submitted by:
Roy R. Takemoto
2/7/94
Date
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SUMMARY

1. **APPLICANT:** The Applicant is Royal Coast Resorts Corporation and Silverlink Holdings Limited ("Silverlink"), dba Kukuihaele Development Company. Silverlink is the holding ("parent") company of Amanresort, an international resort hotel chain. Amanresort will operate the resort upon completion of construction. The applicant's petition for a General Plan amendment triggers Chapter 343, Hawaii Revised Statutes.

2. **ACCEPTING AUTHORITY:** Planning Department, County of Hawaii

3. **LOCATION AND OWNERSHIP**
   a. **Region:** Waikoloa and Kahanu, Hamakua District, Island and County of Hawaii, within the vicinity of Kukuihaele town.
   b. **Project Site:** The Project Site is comprised of six parcels (TMK: 3/4-8-6:3, 13, 43, 44, por. 9 & 11) totaling approximately 113 acres. The Project Site makai boundary follows the cliff top edge and excludes the cliff area to the shoreline.
   c. **Ownership:** The applicant currently owns in fee simple about one-third of the Project Site, and has a lease with an option to purchase with the Roman Catholic Church for most of the remainder of the property.

4. **PROJECT DESCRIPTION**
   During the Consultation Period, the Applicant modified the project in response to comments received. The modifications consisted primarily of replacing the resort "villa" lots with agricultural lots, proposing a new access route to the project, and substantially enhancing the community benefits package.
   a. **Retreat Resort Facilities.** The proposed retreat resort facilities consist of two components: 1) Amanhideaway, a 36-unit one-story luxury resort located at the cliff edge with views of the ocean, coast, and Waipio Valley; and 2) Plantation Inn, a 4-suite inn in the renovated and preserved 85-year old Plantation Manager’s Estate. Characteristic of other Amanresorts around the world, the design and operational objective for this resort is to create a low-scale, low-density resort using indigenous architecture to blend with the surrounding environment and culture.
   b. **1-Acre Lots.** In addition to the retreat resort facilities, the Applicant proposes to develop 38 agricultural lots and 7 residential-resort lots to be sold in fee simple. The lot owners would be subject to design covenants to ensure compatibility and acceptable quality of development. The agricultural lots, zoned A (agricultural) under the County’s zoning ordinance, would maintain Kukuihaele’s rural character; transient uses would also be restricted on these lots. The residential-resort lots, zoned Resort, would allow transient uses and thus would be available as overflow for Amanhideaway or the Plantation Inn.
   c. **Community Benefits.** The Applicant has committed to provide the following:
      i. Property tax trust fund to offset potential increases in property taxes resulting from the resort;
      ii. Boundary adjustments for certain Kukuihaele residents bordering the Project Site;
      iii. Improvements to the Social Hall and Kukuihaele Park with input from an Advisory Committee of community representatives;

Summary-1
iv. Contribution of in-lieu affordable housing fee and construction of limited employee housing onsite;
v. Voluntary commitment to comply with agency recommendations relating to Waipio Valley tours;
vi. Donation of additional land for expansion of cemeteries;
vii. Granting of a lifetime license to an elderly Kukuihaele resident; and
viii. Allowing public access on certain mauka-makai roads running along the boundaries of the Project Site.
d. **Infrastructure.**
i. *Roads.* The Applicant will construct a new road from Highway 240 to access the project. This new access will minimize impact on the Old Route 240 since visitors to the project would cross the Old Route 240 at only one intersection. Internal roadways would be private.

ii. *Water.* The existing County system has capacity to serve the proposed project; however, the system needs to be upgraded to meet the federal Safe Drinking Water Act standards. An alternative is for the Applicant and County to jointly develop a deepwell source.

iii. *Wastewater.* The hotel would use a private package treatment plant with effluent disposal by a subsurface leaching field. The 1-acre lots would use individual wastewater systems.

iv. *Drainage.* The drainage along the roadways would be directed to drywells. The hotel may also use drywells.

v. *Electrical/Telephone.* The distribution lines from the Honokaa substation may need to be upgraded in capacity. Onsite distribution will be overhead lines.

5. **ENVIRONMENTAL SETTING**
a. *Climate.* The Project Site is located on the northeast side of the island exposed to the prevailing northeasterly tradewinds. The elevation at the top of the cliff is about 500' above mean sea level. The area receives moderate rainfall with an annual median of 59 inches. This area of the Hamakua Coast is in a relatively "dry" pocket compared to the average annual rainfall in excess of 100 inches north of Waipio Valley and south of Honokaa.

b. *Soils and Topography.* The soil in the area is classified as Pauhau silty clay loam with moderate slopes of 6 to 12% and 12 to 20% (PaC, PaD), with steeper slopes confined to the gullies (PaE). A small portion is classified as Kukaiuau silty clay loam, 12 to 20% (KuD). The Land Study Bureau ranks this soil as Class C (fair) for overall agricultural suitability. The State Department of Agriculture ranks this soil as prime agricultural land under the Agricultural Lands of Importance to the State of Hawaii (ALISH) system.

c. *Hydrology and Wetlands.* According to the Aquifer Classification System adopted by the State, the Project Site is in the Honokaa Aquifer System in the East Mauna Kea Aquifer Sector. This Sector has abundant groundwater resources which have been successfully exploited, though to only a very limited degree. Sustainable yields of this fresh water lens far exceed the quantity pumped. The current sources for domestic water in the area is a perched aquifer feeding a spring to supply the County system at Kukuihaele, a deep well in Haina to serve the County system at Honokaa, and the Honokaa Ditch to serve Pauhau. The Project Site is not in the Critical Wastewater Disposal Area. The intermittent Waikoeoke Stream transects the mauka portion of the

Summary-2
Project Site. There are no wetlands within the Project Site.

d. Flora and Fauna. There are no endangered species.

e. Natural Hazards. According to the Flood Insurance Rate Map (FIRM), the entire Project Site is in Zone X (outside the 500 year flood plain). The Project Site is in lava flow hazard zone 8 (on a scale of 1 to 9 with the greatest hazard in zone 1).

f. Archaeological/Historical Resources. An archaeological inventory survey identified four archaeological or historical resources within the Project Site. Three of the sites are within gulches and would not be impacted by the project. Interim preservation measures will be taken to protect these sites. The fourth site is the Plantation Manager’s Estate, which is on the Hawaii State Register of Historic Places. This site will be rehabilitated in accordance with the State’s rehabilitation standards for historic buildings.

g. Scenic Resources. Waipio Valley is a significant scenic resource in the vicinity of the Project Site.

h. Socioeconomic Characteristics. Kukuihaele’s population has declined over the last fifty years from 590 persons in 1950 to 316 in 1990. The ethnic diversity of the current population is characteristic of its plantation labor force. Kukuihaele’s adult percentage of 70% (over 18 years old) is comparable to the island-wide norm. Kukuihaele’s elderly percentage of 20% (over 65 years old) is higher than the island-wide norm of 13%. Kukuihaele’s median family income of $8,463 is less than the island-wide norm of $13,169.

6. IMPACTS AND MITIGATION MEASURES

The following list organizes the impacts and mitigation measures according to the party responsible for implementing the suggested mitigation measure. For example, all the mitigation measures within the power of the Applicant to implement are grouped together. Besides the Applicant, other parties who would implement mitigation measures include the hotel operator (Amanresort), the Applicant’s designers (architects, engineers), and the various agencies who administer environmental permits.

<table>
<thead>
<tr>
<th>IMPACTS/CONCERNS</th>
<th>SUGGESTED MITIGATION MEASURES</th>
<th>EIS §</th>
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<tbody>
<tr>
<td>Mitigation Measures to be implemented by Applicant (with commitment memorialized by a Letter of Commitment (see Appendix H); at the discretion of decisionmakers, the commitments may be enforced as permit conditions):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in property taxes.</td>
<td>None required. The Applicant agreed to establish a trust fund on specified conditions and amounts.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
<tr>
<td>Community participation in design and management of important cultural landmarks—Social Hall and Kukuihaele Park.</td>
<td>None required. The Applicant agreed to establish an Advisory Committee comprised of community representatives for the design, maintenance, and operation of the facilities. The terms of this commitment need to be detailed in a management agreement or other appropriate instrument.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
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Summary-3
CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY. SEE FRAME(S) IMMEDIATELY FOLLOWING.
Project Site. There are no wetlands within the Project Site.

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<td>§3.2 (Socioeconomic Characteristics)</td>
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Summary-3
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<th>EIS §</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on cemetery.</td>
<td>None required. The Applicant agreed to donate land for expansion of the cemetery.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
<tr>
<td>Loss of agricultural lands.</td>
<td>Reduced impact. The Applicant agreed to seek State Land Use District Boundary Amendment from Agriculture to Urban for four separate areas totaling 24,844 acres instead of all 77 acres within the State Land Use Agriculture district as originally proposed.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
<tr>
<td>Loss of privilege to use backyard &quot;encroachment&quot; area.</td>
<td>None required. The Applicant agreed to adjust property boundaries by surveying, deeding, and re subdividing affected properties.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
<tr>
<td>Impact on animal raising.</td>
<td>None required. The Applicant agreed to seek rezoning to A (agriculture) instead of resort for most of the 1-acre lots.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
<tr>
<td>Impact of construction vehicles.</td>
<td>None required. Construction vehicles will use the proposed access from Highway 240 instead of the Old Route 240.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
<tr>
<td>Dislocation of elderly resident.</td>
<td>None required. The Applicant agreed to allow resident to live his lifetime in the current residence.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
</tbody>
</table>

Mitigation Measures to be Implemented by Hotel Operator (with commitment memorialized by a Letter of Commitment (see Appendix I)); at the discretion of decisionmakers, the terms of the agreement may be enforced as permit conditions and recorded in the Bureau of Conveyances:

| Public access to historic Plantation Manager's Estate. | None required. The Applicant agreed to public access to the Plantation Inn. | §3.1.6 (Archaeological/Historic Resources) |
| Cultural education of visitors and hotel management; forum for community relations. | None required. The Applicant agreed to establish a standing community relations committee comprised of representatives of the community and hotel management. | §3.2 (Socioeconomic Characteristics) |
| Impact on Waipio Valley. | None required. The Applicant agreed to abide by the recommendations of the Waipio Task Force or other applicable agency. | §3.2 (Socioeconomic Characteristics) |
| Commitment to hire local residents. | None required. The Applicant agreed to give preference in hiring in the priority order determined with the community. | §3.2 (Socioeconomic Characteristics) |

Summary 4
<table>
<thead>
<tr>
<th>IMPACTS/CONCERNS</th>
<th>SUGGESTED MITIGATION MEASURES</th>
<th>EIS §</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment to raise qualifications of local residents.</td>
<td>None required. The State DLIR provides job training that will be supplemented by the hotel operator's training program.</td>
<td>§3.2 (Socioeconomic Characteristics)</td>
</tr>
<tr>
<td>Mitigation Measures to be implemented by Applicant’s Designers and checked at Plan Approval (at the discretion of decisionmakers, the commitments may be enforced as permit conditions):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal grading.</td>
<td>Review grading plan.</td>
<td>§3.1.2 (Soils and Topography)</td>
</tr>
<tr>
<td>Blending with surroundings with earthtone colors and low buildings.</td>
<td>Review pertinent architectural plans submitted for building permit.</td>
<td>§3.1.7 (Scenic Resources)</td>
</tr>
<tr>
<td>Location of wastewater treatment plant to minimize odor problems.</td>
<td>Review site plan.</td>
<td>§3.3.3 (Wastewater)</td>
</tr>
<tr>
<td>Inventory of exceptional plant species and protection during construction, if necessary.</td>
<td>Review landscaping plan.</td>
<td>§3.1.4 (Flora &amp; Fauna)</td>
</tr>
<tr>
<td>View impact of structures near cliff.</td>
<td>Review landscaping plan to ensure cliff vegetation preserved or replaced to serve as a landscape screen. Review pertinent architectural plans to ensure the building height of the resort hotel is limited to 1-story.</td>
<td>§3.1.7 (Scenic Resources)</td>
</tr>
<tr>
<td>Preserving public shoreline access.</td>
<td>Review civil engineering plans to ensure that the access road is designed to County dedicatable standards; approve perpetual easement or other document to ensure public access if the road to the chlorination station is proposed to be private.</td>
<td>§3.3.10 (Recreation and Public Access)</td>
</tr>
<tr>
<td>Mitigation Measures Implemented by Permit: Compliance:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal water quality impact of erosion and sedimentation control during construction; dust control.</td>
<td>Grading Permit; NPDES Permit</td>
<td>§3.1.2 (Soils and Topography)</td>
</tr>
<tr>
<td>Groundwater quality impact of subsurface discharge of wastewater effluent and storm water; odor impacts.</td>
<td>DOH Wastewater System Approval; UIC Permit</td>
<td>§3.1.3 (Hydrology); §3.3.3 (Wastewater)</td>
</tr>
<tr>
<td>Adequate drainage facilities to prevent impact on downstream properties and streams.</td>
<td>Compliance with County drainage standards as part of subdivision, grading, or building permit.</td>
<td>§3.1.5.1 (Flooding Hazards)</td>
</tr>
<tr>
<td>Structural adequacy for earthquakes.</td>
<td>Building Permit</td>
<td>§3.1.5.3 (Earthquake Hazards)</td>
</tr>
<tr>
<td>IMPACTS/CONCERNS</td>
<td>SUGGESTED MITIGATION MEASURES</td>
<td>EIS §</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Appropriate rehabilitation of historic Plantation Manager’s Estate; adequacy of interim preservation plans for archaeological sites.</td>
<td>Division of Historic Sites review and approval (HRS §6E-10 review).</td>
<td>§3.1.6 (Archaeological/Historic Resources)</td>
</tr>
<tr>
<td>Impact of well on sustainable yield; drinking water quality of well.</td>
<td>Well drilling permit; Safe Drinking Water approval.</td>
<td>§3.3.2 (Water)</td>
</tr>
</tbody>
</table>

7. ALTERNATIVES
Three alternatives in addition to the proposed project were considered:

a. No Project. This alternative would preserve the status quo, at least for the immediate future, at the expense of lost opportunities related to the proposed project (e.g., jobs, improvements to the Social Hall, boundary adjustments of affected residents). Depending on economic forces, Kukuihaele could diminish upon Hamakua Sugar Company’s closing similar to Hawai’i’s experience when Kohala Sugar Company closed, or could expand if other economic opportunities arise. If Kukuihaele grows, the full build-out under existing zoning would result in a potentially larger population than the proposed project.

b. Alternative Site Location. This alternative was rejected on the basis that it was highly unlikely that a suitable site could be found on the Hamakua Coast that could be consummated within an expeditious time period and would have less impacts than the proposed site.

c. Diversified Agriculture. Based on an analysis by the State Department of Agriculture (DOA), the estimated acreage to meet the market potential for diversified agriculture on Hawaii Island is 12,000. The DOA and Department of Land and Natural Resources (DLNR) have plans to lease 7,000 acres on the Hamakua Coast for diversified agriculture. The prospects for the Roman Catholic Church to offer terms competitive with the State to attract diversified agricultural ventures on the lands within the proposed Project Site is not favorable in the immediate future.

Compared with the alternatives, the proposed project will provide substantial economic and community benefits while minimizing adverse impacts.

8. COMPATIBILITY WITH LAND USE PLANS, POLICIES, CONTROLS
State Land Use Commission:
Existing: Agriculture (approx. 77 acres); Urban (approx. 36 acres)
Proosed: Agriculture to Urban: hotel site (15.0 acres); residential-resort lots and employee housing (8.757 acres); boundary adjustment for residential lot mauka of County road (0.25 ac.); boundary adjustment for residential lots makai of County road (0.837 ac.)

County General Plan:
Existing: Extensive Agriculture (approx. 5 acres); Intensive Agriculture (approx. 48 acres); Low Density Urban (approx. 60 acres)
Proposed: Extensive Agriculture to Resort (approx. 2 acres) [hotel site]; Intensive Agriculture to Resort (approx. 13 acres) [hotel site]; Low Density Urban to Resort (approx. 27 acres) [Plantation Inn, residential-resort lots,}

Summary-6
County Zoning:

Existing: A-40a (approx. 87 acres); RS-15 (approx. 26 acres)

Proposed: A-40a to V-18 (15.0 acres) [hotel site]; A-40a to V-43 (approx. 12.5 acres) [residential-resort lots, employee housing]; RS-15 to V-43 (approx. 14.5 acres) [Plantation Inn, residential-resort lots]; A-40a to A-1a (51.982 acres) [1-acre agricultural lots]; A-40a to RS-7.5 (2.656 acres) [boundary adjustment Tiger Camp lots]; A-40a to RS-15 (0.837 + 0.25 acre) [boundary adjustment for existing residential lots]

The State Plan and County General Plan both support the development of visitor facilities that are compatible with the physical and social environment. Although both plans also support diversified agriculture on important agricultural lands, in reconciling these policies it must be noted that the soils within the Project Site are considered marginal agricultural lands (LSB Class C). The County General Plan specifically supports a retreat resort within the Hamakua District.

9. UNRESOLVED ISSUES

a. Offsite infrastructure— the following issues would be resolved during the rezoning process:
   i. Road— The Applicant, community, County, and State Department of Transportation need to agree on the access road and extent of improvements.
   ii. Water— The Applicant and Department of Water Supply need to agree on a feasible water supply option.
   iii. Electrical/Telephone— The Applicant needs to determine its power requirements in greater detail, negotiate with HELCO on the extent of improvements, and decide whether to use HELCO’s system or investigate alternative energy sources.
   iv. Civil Defense— The Applicant and County must determine the need and location of a civil defense warning sirens.

b. Access easement— Although the Applicant acknowledges the access easement rights of the landlocked 2.119-acre lot surrounded by the Project Site, the specific nature and location of the easement through the Project Site has not been determined. The land burdened by the easement is currently owned by the Roman Catholic Church and leased to the Applicant. This access issue will be resolved with the owner of the 2.119-acre parcel when the Applicant obtains legal title from the Roman Catholic Church. Any changes to the site plan, if necessary, to accommodate the easement will not be significant.

c. Soil stability. The extent of setback from the cliff edge and/or appropriate structural mitigation measures need to be determined on the basis of a soils engineering study. The study would be conducted only upon securing the various land use approvals. The setback and/or structural mitigation measures would be checked at Plan Approval.

d. Affordable housing in-lieu fee. The amount of the fee would need to be resolved during the rezoning process.

Summary-7
CHAPTER 1

INTRODUCTION

1.1 APPLICANT

The applicant is Royal Coast Resorts Corporation and Silverlink Holdings Limited ("Silverlink"), dba Kukulhale Development Company ("Applicant"). Silverlink is the holding ("parent") company of Amanresort, an international resort hotel chain. Amanresort currently owns and operates ten other resorts in Indonesia (e.g., Amandari), Thailand (e.g., Amanpuri), Tahiti (Hotel Bora Bora), Malaysia, France, and elsewhere. Amanresort will operate the resort upon completion of construction. In recent ratings, Amanpuri and Amandari ranked #2 and #3 among foreign resorts.¹

¹ "Where Executives Most Prefer to Stay". Forbes. September 27, 1993; see also "The Top 100", Condo Naste Traveler, October 1993 (Amanpuri #1 foreign resort).
1.2 PURPOSE OF THIS DOCUMENT

The Applicant's petition for a General Plan amendment triggers Chapter 343, Hawaii Revised Statutes relating to Environmental Impact Statements. As the accepting authority for this document, the County of Hawaii Planning Department determined that an Environmental Impact Statement was required to address the impacts of the proposed project.\(^2\)

The purpose of this document is to provide decisionmakers and the general public with information regarding the significant environmental effects of the proposed project. This EIS also identifies feasible means to mitigate such effects or identifies alternatives where appropriate.

This document has been compiled from published and unpublished studies, field investigations, and input from various agencies and the community. Technical studies conducted specifically for this project are included as appendices in this EIS.

The EIS process consists of the following steps:

1. **EIS Preparation Notice.** The purpose of the EIS Preparation Notice is to succinctly describe the project in sufficient detail to enable the public to identify major issues that should be addressed in the Draft EIS. The EIS Preparation Notice was distributed to various agencies, community groups, and individuals who had a potential interest in the project. The public had 30 days from the publication date in the OEQC Bulletin to send comments. This 30-day period, referred to as the Consultation Period, officially ended on September 7, 1993. The list of consulted parties, as well as the comments and responses, are attached in Appendix I.

2. **Draft EIS.** The Draft EIS is a fact-finding document that provides pertinent information on the project, the existing conditions, the issues, and possible solutions (mitigation measures) to resolve issues.

3. **Public Review Period.** The public has 45 days to review the Draft EIS and provide comments. The objective during this period is to resolve disputes and document any agreements reached, to correct any inaccuracies stated in the Draft EIS, and to provide additional information pertinent to the decisionmaking.

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4. **Final EIS.** The Final EIS is a decisionmaking reference that contains a comprehensive record of pertinent information, incorporating any comments or commitments made during the Review Period.
CHAPTER 2

PROJECT DESCRIPTION

2.1 LOCATION AND OWNERSHIP

The Project Site is comprised of six parcels (TMK: 3/4-8-6:3, 13, 43, 44, por. 9 & 11) totaling approximately 113 acres located in Waikokoeo and Kanahoua, Hamakua District, Island and County of Hawaii, within the vicinity of Kukuihaele town ("Project Site") (see Figure 1, "Location Map," on page 2-2). The Project Site is approximately seven miles from Honomu. The Applicant currently owns in fee simple approximately one-third of the Project Site, and has a lease with an option to purchase with the Roman Catholic Church for the remainder of the property (see Figure 2, "Ownership Map," on page 2-3). The Project Site excludes a 2.119-acre lot recently granted final subdivision approval (October 20, 1993, Subdivision No. 6345). The Project Site mākai boundary follows the clifftop edge and excludes the cliff area to the shoreline.

The Waipio Valley lookout is about one-half mile away from the Project Site (see Figure 3, "Project Site Location in Relation to Waipio Valley," on page 2-4).
FIGURE 2. Ownership Map

Note: The Project Site excludes this 2.119-acre lot owned by the Kanza family (Subdivision No. 5345, Lot 1). The Applicant will finalize with the lot owner the specifics regarding access to the lot when the Applicant exercises its option to purchase from the Roman Catholic Church.
2.2 EXISTING CONDITIONS

2.2.1 Project Site

Most of the Project Site consists of abandoned fields of sugar cane (see Figure 4 on page 2-6 and Figure 5 on page 2-7). The structures that do exist include: the Plantation Manager's Estate (see Figure 6 on page 2-8), which will be renovated into an inn (see discussion below in §2.5.1 "Retreat Resort Facilities" on page 2-18); a resi-
2.2.2 Surrounding Areas

...dence currently leased to an elderly resident, which will not be disturbed during the lifetime of the resident (see §2.5.3 “Community Benefits” on page 2-24); and the Community Social Hall (see Figure 7 on page 2-9), which will be redesigned in accordance with community input (see §2.5.3 “Community Benefits” on page 2-24). For an overview of the existing and surrounding conditions, see Figure 8, “Existing Conditions,” on page 2-10 and Figure 9, “Topographic Map,” on page 2-11.

2.2.2 Surrounding Areas

The existing community of Kukuihaele includes about 60 homes and a population of approximately 300. Some of the homes are remnants of the plantation days built in the 1910's to 1930's. These extant plantation homes are clustered around the Last Chance Store in “Camp 105”. A few homes in “Camp 104” also still remain across from the Roman Catholic Church. More recent plantation homes line Highway 240 near the entrance to Kukuihaele (“Kona Camp”) and also along the Old Route 240 traversing through Kukuihaele (“Tiger Camp”). The Kukuihaele Park, a 1.2-acre County park, is located across the Plantation Manager’s Estate. Kukuihaele Landing, a popular shoreline recreation area, is located about one mile east from the Project Site.
FIGURE 4. Site Photograph (looking mauka from hotel site)
2.2.2 Surrounding Areas

FIGURE 5. Site Photograph (looking makai from hotel site)
2.2.2 Surrounding Areas

FIGURE 7. Social Hall
2.2.2 Surrounding Areas

FIGURE 9. Topographic Map

Final EIS Amanresort
2.3 PROJECT BACKGROUND

In an attempt to save Hamakua Sugar Company from bankruptcy, the County Council rezoned a portion of Hamakua Sugar Company's lands which included the Project Site. The proposed use included a 200-unit hotel (proposed rezoning from Agriculture-40a to Commercial Village) and golf course (proposed rezoning from Agriculture-40a to Agriculture-1a) to be located on the Honokaa side of the Project Site, as well as 25 1-acre lots (proposed rezoning from Agriculture-40a to Agriculture 1a) within the Project Site (see Figure 10, "Previous Hamakua Makai Land Use Plan," on page 2-13). A 3rd Circuit Court decision overturned the County's rezoning action on procedural grounds, thereby reverting the zoning to the original designation prior to the Council's decision. Although the Use Permit issued for the golf course in 1991 was not affected by the litigation, when a Use Permit "not otherwise conditioned has not been utilized within a period of two years from the date of final approval, then without any further action such ... use permit ... shall become voided and thereafter may not be used." No action has been taken to utilize the Use Permit since it was issued in 1991. Notwithstanding the court decision, Hamakua Sugar Company failed to obtain the entitlements by a specified deadline and the purchase agreement with the hotel/golf course developers expired.

The attempt to save Hamakua Sugar Company failed. Hamakua Sugar Company filed for bankruptcy to liquidate the Company's assets. The creditors have agreed to allow a last harvest of the existing planted sugar cane. This harvest, which started in April 1993 and will last 14 months, ends in mid-1994 at which time Hamakua Sugar Company operations will officially close.

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1. Ross v. County Council of Hawaii, et. al., 3rd Circuit Court, Civ. No. 92-93 (zoning held invalid because Council did not follow proper notice procedures); see also, Greenpeace Foundation Hawaii, Inc. v. County Council of Hawaii, 3rd Circuit Court, Civ. No. 92-068 (partial summary judgment granted that compliance with Hawaii Revised Statutes Chapter 343 (EIS Law) was required).


2.3 PROJECT BACKGROUND

FIGURE 10. Previous Hamakua Makai Land Use Plan

The above events provide the context for the proposed project: Hamakua Sugar Company has gone bankrupt; the last sugar cane harvest will occur in mid-1994 at which time hundreds of plantation employees will be unemployed; the previous plans for a 200-unit hotel and golf course have been scrapped; and the rezoning designations have reverted to the original Agricultural designations.

Final EIS Amanresort 2-13
2.4 STATEMENT OF OBJECTIVES

The Applicant's objectives in the design and operation of the proposed project include:

- **Maintain a low-key presence.** Amanresorts locate in quiet areas. The entrance to the resort is intentionally inconspicuous. This understated identity lends itself to a sense of seclusion, peacefulness, and discovery as the experience of the resort subtly unfolds. The number of hotel units must remain very few to provide the intimate, personalized ambience in a natural environment characteristic of Amanresorts.

- **Design to blend with exquisite natural surroundings.** Amanresorts locate in exquisite natural surroundings. The simple yet elegant architectural design uses indigenous materials, subtle colors, and minimal site grading to blend with the existing contours and showcase the beauty of the area.

- **Maintain the existing rural ambience.** Amanresorts recognizes that the character of a place is an intangible priceless asset. It is not something that can be willfully created; it is something easily destroyed. The physical components of ruralness are fairly rudimentary: keep roads and other improvements simple and minimal; and keep development very low density. The social component is more elusive. The trust, the friendliness, the sense of community— the resort operators recognize that these virtues must be carefully cultivated with their employees and the community.

- **Promote the local culture.** Amanresorts guests experience a culture not only by the entertainment, food, and arts and crafts, but also by the informal interaction with the residents. For this reason, Amanresorts prefers local residents as employees. The sharing of recreational facilities with the community to encourage interaction with the community further this objective. On the other hand, the resort does not wish to intrude on the community.

The Amanresorts chain has successfully developed and operated ten other world-ranked resorts in Thailand, French Polynesia, Bali, and other areas based on objectives similar to those listed above. The success of the resorts is due in part to Amanresorts' sensitivity to the surrounding environment and culture which serve as model examples of "eco-tourism". The target market is primarily the FIT (free and independent traveler), with minimal facilities to accommodate groups.  

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2-14 Final EIS Amanresort
2.5 PROJECT CHARACTERISTICS

The proposed project includes retreat resort facilities, one-acre lots, community benefit package, and infrastructure (see Table 1, "Land Use Plan," on page 2-16 and Figure 11, "Amanresort Master Plan," on page 2-17).

In response to comments received during the Consultation Period, the Applicant modified the project:

- added several items to the community benefits package;
- replaced the originally planned resort villa lots with agricultural lots;
- changed the access route to the project to access the project from a new road from Highway 240 instead of using the Old Route 240;
- relocated and downsized the original proposal to provide affordable housing behind Tiger Camp and instead will construct limited housing onsite but removed from Tiger Camp and contribute in-lieu fees for offsite affordable housing; the Applicant will deed most of the area behind Tiger Camp to the Tiger Camp residents.

The original proposal required a State Land Use District Boundary Amendment from Agriculture to Urban for the proposed villa lots and the hotel. The current proposal requires a reclassification only for four smaller areas (15.0 acres for the hotel site, approximately 9 acres for the residential-resort lots and employee housing, 0.837 acre for the boundary adjustment to the existing makai residential lots, and 0.25 acre for the boundary adjustment to the existing mauka residential lot). The original proposal also required a General Plan Amendment from Intensive Agriculture, Extensive Agriculture, and Low Density Urban to Resort for nearly the entire Project Site. The current proposal requires an amendment only for the hotel site, Plantation Manager’s Estate, residential-resort lots and employee housing to Resort. The agricultural lots remain in Intensive and Extensive Agriculture and

4. The term “free and independent traveler” is used by the tourist industry to distinguish this type of guest who makes their own travel arrangements from the group tours. Whether a hotel caters to groups or FIT has a bearing on the types of facilities (e.g., size of meeting rooms), types of guests, occupancy patterns, and transportation modes (e.g., buses).
Low Density Urban. The modifications are listed in the Developer’s Letter of Commitment in Appendix H.

**TABLE 1. Land Use Plan**

<table>
<thead>
<tr>
<th>MASTER PLAN</th>
<th>#UNITS</th>
<th>ACREAGE (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retreat Resort (Amahidesway)</td>
<td>36</td>
<td>15</td>
</tr>
<tr>
<td>1-acre agricultural lots</td>
<td>38</td>
<td>52</td>
</tr>
<tr>
<td>1-acre resort-residential lots</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Plantation Inn</td>
<td>4 suites</td>
<td>12</td>
</tr>
<tr>
<td>Employee Housing/Open Space/Misc.</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Social Hall/Community Center</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Boundary adjustments for residents</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85 (excluding employee housing)</strong></td>
<td><strong>113</strong></td>
</tr>
</tbody>
</table>
FIGURE 11. Amanresort Master Plan

1. Aman fastball (36 units) (15 ac.)
   SLUD: A to U
   GP: Intensive & Extensive Ag to Resort
   Zoning: A-40a to Y-18

2. Agricultural Lots (36 1-ac lots)
   SLUD: A (no change)
   GP: Intensive & Extensive Ag (no change)
   Zoning: A-40a to A-18

3. Agricultural Lots (Continued)
   SLUD: A (no change)
   GP: Low Density Urban (no change)
   Zoning: A-40a to A-18

4. Residential-Resort Lots (7 1-ac lots)
   SLUD: A to U
   GP: Low Density Urban to Resort
   Zoning: A-40a to V-43

5. Plantation Lot (4 units)
   SLUD: U (no change)
   GP: Low Density Urban to Resort
   Zoning: R1-18 to V-43

6. Employee Housing (10 units max.)
   SLUD: A to U
   GP: Low Density Urban to Resort
   Zoning: A-40a to V-43

Community Benefits:
- Lands to be deeded to owners
- Lands dedicated for community use
- Lifetime occupancy

Final EIS Amanresort
PROJECT DESCRIPTION

2.5.1 Retreat Resort Facilities

The proposed retreat resort facilities consist of three components: 1) Amanhideaway, a 56-unit luxury resort located near the cliff edge with views of the ocean, coast, and Waipio Valley; 2) Plantation Inn, a 4-suite inn in the renovated and preserved 85-year old Plantation Manager’s Estate; and 3) seven 1-acre residential-resort lots.

Amanhideaway (15 acres)

The Amanhideaway would be a single-story, 36-suite resort hotel set back from the cliff edge (see Figure 12, "Section View of Amanhideaway," on page 2-20). Guests would arrive at the porte cochere and lobby via a main entry road. Service vehicles will take a separate service road to the back of house area. The open-air lobby, situated on a knoll, provides a panoramic view of the ocean and coastline. Adjacent to the lobby is a restaurant, swimming pool, library, meeting rooms (2), and limited retail shops (see Figure 13, "Public Areas Floor Plan," on page 2-21 and Figure 14, "Section and Elevation of Public Areas," on page 2-22).

The detached bungalow guest units would be nestled into the existing contour. The roofs would be made of materials and colors to blend the units into the landscape. Guests would either walk to their units or ride a “buggy” (golf cart). The guest units feature a courtyard design constructed with wood and stone reflecting the locality and culture. A typical unit would be about 2,800 square feet, of which approximately 1,620 square feet (56%) would comprise the courtyard and the balance of 1,270 square feet would be a terrace facing the ocean, a veranda surrounding the courtyard, and enclosed air-conditioned space for the bedroom(s), bathroom, and living area (see Figure 15, "Typical Guest Suite Floor Plan," on page 2-23).

Based on the conceptual plan, the gross floor areas would be as shown in Table 2.

<table>
<thead>
<tr>
<th>TABLE 2. Amanhideaway Schedule of Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Garden Suite</td>
</tr>
<tr>
<td>Bedroom (a/c)</td>
</tr>
<tr>
<td>Bathroom (a/c)</td>
</tr>
<tr>
<td>Pantry (a/c)</td>
</tr>
<tr>
<td>Veranda (covered)</td>
</tr>
</tbody>
</table>

Final EIS Amanresort
### TABLE 2. Amanhidenaway Schedule of Areas (Continued)

<table>
<thead>
<tr>
<th>Terrace (trellis)</th>
<th>140</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Subtotal (unit)</th>
<th>1,270</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total (35 units)</strong></td>
<td><strong>4,670</strong></td>
</tr>
</tbody>
</table>

**Public Areas**

| Lobby | 1,356 |
| Bar | 1,184 |
| - veranda | 743 |
| Restaurant | 2,034 |
| - veranda | 581 |
| - terrace | 1,076 |
| Library & meeting rooms | 1,356 |
| Retail & smoking cabin | 1,356 |
| Buggy pick-up | 872 |
| Restrooms | 388 |
| Covered circulation areas | 3,498 |

<table>
<thead>
<tr>
<th><strong>Total</strong></th>
<th><strong>14,444</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Swimming pool</td>
<td>7,535</td>
</tr>
<tr>
<td>- pool deck/outdoor areas</td>
<td>3,229</td>
</tr>
<tr>
<td>Back of House</td>
<td>1,356</td>
</tr>
<tr>
<td>Administration</td>
<td>2,131</td>
</tr>
<tr>
<td>Kitchen</td>
<td>9,494</td>
</tr>
<tr>
<td>Other</td>
<td>73,145</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>73,145</strong></td>
</tr>
</tbody>
</table>

---

*Final EIS Amanresort*
FIGURE 13. Public Areas Floor Plan
FIGURE 14. Section and Elevation of Public Areas
2.5.1 Retreat Resort Facilities

FIGURE 15. Typical Guest Suite Floor Plan
Plantation Inn

The Plantation Manager’s Estate would be preserved and restored as the Plantation Inn. The Plantation Inn will have 4 guest suites and dining facilities. The beautiful 85-year old landscaped grounds will also be preserved and maintained. On weekends, a buffet brunch open to the public will allow people to visit the estate.

1-Acre Residential-Resort Lots

The seven 1-acre residential-resort lots would be sold in fee simple. For purposes of design control, covenants will require the owner to have the house designed by the same architect who designed the Amanhideaway with final design approval by the resort hotel owners. The lot owners will have the option to affiliate with the resort (e.g., room service, maid service, and charge privileges would be available from the hotel). Since these lots will be zoned resort, transient uses would be permitted thereby allowing the units to serve as standby overflow for the Amanhideaway and Plantation Inn. One of the residential-resort lots will be encumbered by a lifetime license (see §2.5.3 “Community Benefits” below).

2.5.2 1-Acre Agricultural Lots

The 1-acre agricultural lots will be similar to the 1-acre residential-resort lots, with one major difference— the lots will be subject to the restrictions of the zoning code, especially those restrictions on transient uses since these lots will be zoned agriculture (A-1a).

2.5.3 Community Benefits

To compensate for some of the impacts on the community, the Applicant has committed to the following actions (see Appendix H for the executed Developer’s Letter of Commitments):

- **Property Tax Trust Fund.** In order to offset increases in property taxes that may be caused by the resort, the Applicant will establish a trust fund to subsidize increased property tax payments incurred by existing owner-occupant residents within Kukuhihele.

  - Who qualifies: To qualify for the subsidy, the property owner (1) must have residentially zoned property, (2) must dedicate the property under the existing County ordinance (Ordinance No. 91-122) that freezes the property tax for ten years (adjusted only by the Consumer Price Index), and (3) continue to retain ownership of the property (except for transfers to immediate family members by inheritance).
- **Funding:** The trust fund would be initially funded with $25,000 and increased with 2% of the gross sales price of each of the 38 one-acre residential-agricultural lots and 7 residential-resort lots when they are sold. The funds will stay in an interest-bearing account during the ten-year period in which the existing ordinance is protecting the taxed amount. An estimated $300,000 to $500,000 would be available at the end of the first ten-year period.

- **Distribution:** When the homes that still qualify re-dedicate the property for the next ten years, the County will reassess the property. This is when there may be a potential impact in terms of increased taxes to the homeowner. The trust fund will cover the difference between the taxes charged after reassessment and the previous assessed tax (adjusted by the Consumer Price Index).

If the County Council passes a bill which would freeze homeowners' property taxes until the home is sold, this trust fund would be unnecessary. In that event, the funds would be made available for other community benefits.

- **Boundary Adjustment for Local Homeowners.** Many of the local homeowners (e.g., Tiger Camp) have been using portions of the former Hanakaa Sugar Company lands over the past 30-50 years. The Applicant will deed these areas to them. In many cases, the additional land represents areas nearly as large in size as the resident's existing lot. The Applicant has also agreed to deed additional land area to the owners of other residential lots adjoining the Project Site. The boundary adjustments will require State Land Use boundary amendments in two areas from Agriculture to Urban and rezoning from the existing A-40a to RS-15 and RS-7.5 to permit consolidation and resubdivision. The Applicant will apply for the boundary amendments and rezoning as part of the project.

- **Community Recreational Facilities.** The Applicant proposes to improve and maintain the Kukuihaele Park. In addition, the Applicant proposes to reserve, for community use, the parcel of approximately 8.5 acres on which the Kukuihaele Social Hall is situated (TMK 4-8-6-03) and the strip of land of approximately 3.5 acres mauka of the expanded Tiger Camp lots (4-8-6: por. 44). The Applicant proposes to work with an Advisory Committee of community representatives, or another type of forum determined by the Kukuihaele community, to ensure that the community has input into the design, operation, and maintenance of the facilities. The Applicant will commit a fund of $175,000 for the initial capital improvements (such as the renovation or rebuilding of the Social Hall, and the construction of playground and/or other facilities).

- **Affordable Housing In-Lieu Fee and Employee Housing.** Instead of constructing affordable housing units behind Tiger Camp as initially planned, the Applicant will contribute in-lieu fees determined at approximately $200,000 based on the
County’s housing policy. The County would use the fees to construct affordable housing at an offsite location. Additionally, in response to concerns from the State housing agency (Housing Financing and Development Corporation), the Applicant proposes to construct limited employee housing (maximum 10 units) in the area between Highway 240 and the Plantation Manager’s House.

- **Waipio Valley Controls.** The Applicant will abide by the recommendations of the various government and local organizations involved with remedying the problems in Waipio Valley caused by the growing number of visitors to the Valley.

- **Additional Cemetery Lands.** In response to concerns expressed by members of the community of inadequate space at the cemeteries, the Applicant proposes to convey a strip of land 50' wide on two sides of each of the cemeteries to the Roman Catholic Church and to the County for purposes of expanding the respective cemeteries.

- **Lifetime Occupancy to Kukuihaele Resident.** An elderly resident resides in one of the structures owned by the Applicant. The Applicant will grant this resident a lifetime license to live out his life on the property.

- **Public Access.** Public access will be provided along the access road on the western or Waipio Valley boundary of the property leading to the County chlorination station. Public access is also being reopened on the government road extending along the eastern or Honokaa boundary of the property. This road continues on to Hamakua Sugar Company land extending to the Kukuihaele Landing.

### 2.5.4 Infrastructure

A Preliminary Engineering Report (PER) provided the basis for the proposed infrastructure improvements (see Appendix A).

**Roads.** The Applicant will construct a new road from Highway 240 to access the project. The proposed access is the existing dirt/gravel road passing through the Applicant’s property on the Honokaa side of the Plantation Manager’s Estate. The Applicant will Upgrade this road in accordance with County requirements. This new access will minimize the traffic impact to the community. Visitors to the project would cross the Old Route 240 at only one intersection. Previously, the Applicant had planned to use the Old Route 240 which would have impacted the Tiger Camp residents. An alternative access route is to upgrade the existing dirt road between Tiger Camp and the Social Hall. The Applicant is willing to use either the proposed or alternative access route depending on comments from the community, State Department of Transportation, and the County Department of Public
2.6 PROJECT SCHEDULE AND CONSTRUCTION COST

Works. Internal roadways may be narrow private roads in keeping with the low-scale, quiet nature of the resort.

Water. The existing County system has capacity to serve the project. However, the system needs to be upgraded to meet the federal Safe Drinking Water Act standards. An alternative is for the Applicant and County to jointly develop a deep well source.

Wastewater. The 36-unit resort hotel will be serviced by a private treatment plant. The effluent will be disposed by a subsurface leaching field planted over with acceptable landscaping. The Plantation Manager's Estate is currently served by one or more cesspools, which may need to be upgraded to septic tanks to accommodate dining facilities. The 1-acre lots will use individual wastewater systems.

Drainage. The drainage system will be designed to contain onsite-generated runoff so that downstream properties are not impacted. Proposed drainage improvements will consist of drywells connected to grated inlets by reinforced concrete pipe (RCP) culverts. These drywells would be located within the road rights of way to pick up the runoff along the roadways. Storm runoff caused by the proposed hotel would be handled onsite by drywells located within the development.

Electrical/Telephone. The existing electrical system does not have adequate capacity to accommodate the proposed project. One alternative is for the project to reconstruct the existing distribution lines from the existing Honokaa Substation to the Project Site. The line reconstruction is required to increase the current carrying capacity of the distribution lines. Transmission lines within the project may be overhead.

2.6 PROJECT SCHEDULE AND CONSTRUCTION COST

The total construction cost is estimated to be approximately $15 million. The target date to start construction of the hotel is the latter part of 1994, with anticipated completion 12 months later at the end of 1995. Job training will start one year before the planned opening date towards the end of 1994.
Each section in this chapter contains the following information:

- **Setting**—provides background information on the existing conditions;
- **Impacts**—analyzes the potential impacts of the project;
- **Mitigation Measures**—identifies measures to prevent or minimize the impacts.

The mitigation measures are categorized depending on when implementation should occur:

**Design Phase.** These mitigation measures should be implemented by the Applicant during the design phase of the project. To ensure compliance, the measure could be required as a permit condition (e.g., rezoning) and checked by the Planning Department upon Plan Approval.

**Construction Phase.** These mitigation measures should be implemented during the construction phase by the contractor. To ensure compliance, the measure could be incorporated in the building or grading permits, which would be inspected for compliance by the county during construction, and/or incorporated into the owner-contractor construction contract, which would be inspected by the owner's representative as a condition for payment.
ENVIROMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Operational Phase. These mitigation measures should be implemented during the operational phase by the resort operator. To ensure compliance, the measures could be required as a permit condition (e.g., rezoning), and possibly recorded in the Bureau of Conveyances to run with the land and give subsequent purchasers notice of this condition.

3.1 PHYSICAL CHARACTERISTICS

3.1.1 Climate

Setting
The Project Site is located on the northeast side of the island exposed to the prevailing northeasterly tradewinds. The wind blows from the northeasterly or easterly direction more than 50% of the time. The Project Site is at an elevation ranging from about 500' above mean sea level (MSL) at the makai clifftop boundary to about 850' (MSL) at the highest point along the mauka boundary. The area receives moderate rainfall with an annual median of 59' (see Figure 16, "Rainfall Map and Windrose," on page 3-3).¹ This area of the Hamakua Coast is situated in a relatively "dry" pocket compared to the average annual rainfall in excess of 100 inches north of Waipio Valley and south of Honokaa. The wetter months are November through April, with the drier summer months of May through October receiving a monthly average of less than 5'.

Impacts
None--the project will not alter the microclimate of the region.

Mitigation Measures
None required.

¹ State of Hawaii, Department of Land and Natural Resources. An Inventory of Basic Water Resources Data: Island of Hawaii, Report R34, 1970 (average annual rainfall and windrose); State of Hawaii, Department of Land and Natural Resources. Median Rainfall: State of Hawaii, Circular C34, June 1982 (annual and monthly median rainfall).

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FIGURE 16. Rainfall Map and Windrose
3.1.2 Soils and Topography

Setting

The predominant soil within the Project Site is classified as Paaauhau silty clay loam with slopes of 6 to 12% and 12 to 20% (PaC, PaD), with steeper slopes confined to the gullies (PaE) (see Figure 17, "Soil Survey Map," on page 3-5). A small portion in the mauka area of the Project Site is classified as Kukalau silty clay loam, 12 to 20% slopes (KuD). Both soil series consist of well-drained silty clay loams that formed in volcanic ash. In a representative profile of the Paaauhau soil, the surface layer is very dark grayish-brown silty clay loam about 10 inches thick, strongly acid. The subsoil is dark-brown silty clay loam about 34 inches thick, medium to slightly acid. The substratum is weathering, basic igneous rock. The depth to bedrock ranges from 36 inches to 60 inches. The Kukalau profile is similar except the surface layer is more acidic. In their natural state, both soils are always moist. When dried, the surface layer has moderate shrinkage but low swelling potential (unlike montmorillonite soils which have high shrinkage and swelling capacity). If allowed to dry, both soils dehydrate into fine sand-size aggregates. These soils possess thixotropic properties—that is, the soil behaves as a solid if undisturbed and liquefies if agitated. In the more level areas (6 to 12%), permeability is moderately rapid, runoff is slow, and the erosion hazard is slight. In the steeper areas (12 to 20%), permeability is moderately rapid, runoff is medium, and erosion hazard is moderate. These soils belong to the family of geologically young soils (Inceptisols) that formed from volcanic ash in moderately high rainfall areas (Dystrobiocapths), having high concentrations of amorphous aluminum and iron oxides, low base saturation, and high organic matter content.

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3.1.2 Soils and Topography

FIGURE 17. Soil Survey Map
Agricultural Suitability. The Land Study Bureau ranks all soils within the Project Site as Class C (fair) for overall agricultural suitability (see Figure 18 on page 3-7). The State Department of Agriculture ranks this soil as prime agricultural land under the Agricultural Lands of Importance to the State of Hawaii (ALISH) system (see Figure 19 on page 3-8). However, since the soils do not strictly meet all of the Department of Agriculture's criteria for "Prime Agricultural Land," it must be presumed that these soils were classified on the basis of their use for sugarcane cultivation at the time of the mapping. The Soil Conservation Service rated the capability of these soils in Class III or IV.6

Structural Suitability. The Soil Survey provides preliminary information on the soil characteristics for structural purposes; the Applicant will retain a soil engineer to conduct appropriate site-specific studies during the design phase of the project. According to the Soil Survey, the Pauhau and Kukalau soils have high compressibility, low density if compacted, low bearing capacity, and high organic matter content. Therefore, these soils have limitations for road fill and foundations for low buildings. A soil engineer would recommend proper measures to mitigate these conditions (e.g., replace the soils to a specified depth with imported fill material).

5. State of Hawaii, Department of Agriculture, Agricultural Lands of Importance to the State of Hawaii (Revised), brochure, November 1977. The brochure lists as one of the criteria for prime agricultural land the following: "Must not be thixotropic and have isometric temperature regime."

6. U.S. Department of Agriculture, Soil Conservation Service. Soil Survey of Island of Hawaii, State of Hawaii; 1973. Class I= soils have few limitations that restrict their use; II= soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices; III= soils have severe limitations that reduce the choice of plants, require special conservation practices, or both; IV= soils have very severe limitations that reduce the choice of plants, require very careful management, or both; V= soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife; V1= soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife; V11= soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife; V111= soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, or water supply, or to aesthetic purposes.
FIGURE 10. Agricultural Lands of Importance to the State of Hawaii (ALISH) Map

LEGEND

Source: State of Hawaii, Department of Agriculture, ALISH Map, Kukuihaele Quad.
3.1.2 Soils and Topography

Impacts

Soil Erosion and Sedimentation. Agricultural practices have historically exposed the soil to erosion, resulting in "red" coastal waters after storms along the Hamakua Coast. Plantation roads in particular, which comprise an average of 9 to 15% of the field area, have considerably higher erodibilities than corresponding agricultural sites. During construction of the proposed project, grubbing and grading activities will expose the soil to erosion. Construction sites that have been filled, graded, and supported no vegetation have considerably higher erodibilities than bare agricultural sites. However, contractors may use several means to control erosion as discussed below under mitigation measures. Provided erosion control measures prevent construction site runoff into the watercourses traversing the site, there should be no sedimentation impact on the streams and coastal receiving waters. The extent of erosion control measures required depends on the rainfall intensity of the area, the erodibility of the soil, and the proximity and vulnerability of the receiving waters. Soil properties which influence soil erodibility include particle-size distribution, percentage of organic matter, soil structure, and permeability. The Kualoa soils were found to have a low erodibility factor due probably to its irreversible dehydration into more stable sand-sized particles which occurs when the soil is exposed during grading or tilling operations. The rainfall intensity is moderately high (see Figure 20, "Rainfall Intensity Map (10 Year Storm)," on page 3-10), thus requiring basic measures that limit the exposed area, mulching, or planting with vegetative cover.


FIGURE 20. Rainfall Intensity Map (10 Year Storm)

COUNTY OF HAWAII
Intensity of 1-hr Rainfall (Inches)
Tm=10 yr

Source: Department of Public Works, County of Hawaii, Drainage Standards

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3.1.2 Soils and Topography

**Fugitive dust.** The predominant easterly winds blow in a direction parallel to Kukuihaele town. Therefore, fugitive dust from construction activity would not normally blow towards any residences or businesses. Northeasterly winds, however, may blow dust towards some residences and businesses. Mitigation measures discussed below would be necessary.

**Removal of agricultural land from production.** The proposed project would remove from production about 65 acres formerly used for sugarcane cultivation. However, according to the Land Study Bureau's ratings, the soils within the Project Site are not prime agricultural lands (prime lands are rated Class A or B; the soils within the Project Site are rated Class C). Hamakua Sugar Company utilized approximately 35,000 acres. In the effort to save Hamakua Sugar Company, the plantation identified 9,500 acres as surplus marginal land that it was willing to sell without affecting the viability of its operations. The removal of 65 acres of marginal lands, therefore, should not have a significant adverse impact (see §5.3 “DIVERSIFIED AGRICULTURE” on page 5-5 for further discussion on the limited prospects for alternative use of the Project Site for diversified agriculture).

**Foundations.** Soil engineering studies would need to recommend proper foundations to mitigate potential earthquake-induced settlement due to the thixootropic soil properties. The study should also investigate the need, if any, for special conditions to ensure the stability of structures in proximity to the cliff edge. According to preliminary consultation with a soils engineer, the concerns due to the soil and proximity to the cliff are mitigable by either setting the structures back from the cliff edge at a distance to be determined by geotechnical investigations (e.g., borings), or to allow building closer to the cliff edge using structural slabs that are anchored with piers to solid rock and structurally tied from front to back. The proper geotechnical studies are costly and justified only if the project is approved. Projects in similar conditions close to a cliff edge have been allowed to proceed with the proper structural mitigation measures (e.g., Princeville on Kauai). Once the project is approved, the geotechnical study should be done almost immediately to provide input into further design and cost estimating for the project.

11. Hamakua Steering Committee, Hamakua Regional Plan: From Kalaekoa to Waipio. Endorsed by the County Council, County of Hawaii, by Resolution No. 244-90, November 1990, p. 1.

Pesticide Residues in Soil. Hamakua Sugar Company used crop dusters to apply pesticides to the sugarcane fields. Diuron and Atrazine were among the pesticides used. In a Phase I environmental assessment for hazardous waste conducted for Hamakua Sugar Company lands, the soil sample concentrations for these two pesticides were considerably below the allowable EPA concentrations. For Atrazine, the allowable concentration is 400 mg/kg; the soil sample concentrations ranged from 0.19 to 17 mg/kg. For Diuron, the allowable concentration is 160 mg/kg; the highest soil sample concentration was 10 mg/kg. Arsenic, a common natural element in soils near volcanoes and formerly used in herbicides, was found in certain samples outside the Project Site above the normal range of 0.1 to 40 mg/kg. The arsenic concentrations for soil samples taken from the Kukuihaele area ranged from 12.0 to 40.2 mg/kg, within the normal range for arsenic in soils. Based on these results, there should be no public health hazard for non-agricultural uses of the former sugarcane lands within the Project Site.

Mitigation Measures

Design Phase:

- Geotechnical (soil engineering) studies for the hotel to determine the proper mitigation measures, if necessary, for foundations and minimum distance from the cliffs. These studies are usually done in the normal course of design and submitted with the building permit. Until the study is completed, the proposed mitigation measure remains unresolved. The Planning Department should verify the selected mitigation measure through Plan Approval.

- Minimal grading by designing with the existing contours. The County Council could require this design consideration as a permit condition and monitor compliance under Plan Approval.

Construction Phase:

- Erosion and Dust Control Plan. The County's erosion and sedimentation control ordinance requires the submission of an erosion control plan if grading more than 15,000 square feet, which would apply to this project. The State Department

of Health imposes additional erosion control measures under the NPDES Permit for grading activities over five acres, which would apply to this project. In terms of dust control, the County's erosion and sedimentation control ordinance authorizes the chief engineer to require additional dust control measures (e.g., sprinkling water, applying mulch or hydro mulch) if dust problems jeopardize health, property, or public welfare; if these measures are still not effective, the chief engineer may stop operations. The Applicant would submit the grading plans to both the County and Department of Health for concurrent review and approval. During construction, the State and County would send inspectors to the jobsite to monitor compliance. In addition, since the approved grading plans would be part of the Owner-Contractor construction contract, the Applicant would monitor the contractor's compliance with the approved grading plans as a condition for payment. Mitigation measures incorporated into erosion control plans could include:

- **Manage soil cover:**
  - conduct grubbing and grading activities during the low rainfall months as much as possible;
  - minimize the amount of exposed area by grading in stages;
  - replant or cover bare areas as soon as grading or construction is completed using high seeding rates, soil amendments, fertilizers, and temporary irrigation to ensure rapid stand establishment;
  - install permanent vegetation and drainage structures as soon as possible;
- **Manage runoff:**


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—use diversion ditches or dikes to intercept runoff above disturbed slopes and convey it to a safe outlet;
—use sediment basins, sediment traps, or other means to remove sediment from runoff waters before it leaves the site;
—contain runoff in appropriate level areas with containment dikes and allow to infiltrate;
—maintain sediment basins, diversions, dikes, and any other erosion control structure to sustain their runoff capacity and remain effective;
—reduce lengths of disturbed slopes with terraces or interceptor ditches;
—locate potential pollutant sources (e.g., stockpiles, staging areas) away from streams and gulches.

3.1.3 Hydrology

3.1.3.1 Groundwater

According to the Aquifer Classification System adopted by the State, the Project Site is in the Honokaa Aquifer System in the East Mauna Kea Aquifer Sector. This Sector has abundant groundwater resources which have been successfully exploited, though only to a very limited degree. The most voluminous source is the basal lens. The lens is on the order of 100 feet thick near the coast, and thickens to several hundred feet further inland. Sustainable yields of this fresh water lens far exceed the quantity pumped. Due to the depth of the wells in the order of 1000' deep, groundwater development is costly. The most probable area for potable groundwater is between 800-1000' elevation by means of wells with capacities of 1.0 to 1.5 mgd.

The current sources for domestic water in the area is a perched aquifer feeding a spring to supply the County system at Kukuihaele, a deep well in Haina to serve the County system at Honokaa, and the Honokaa Ditch to serve Paauhau (see §3.3.2 "Water" on page -79 for further discussion of water systems and their rela-

2.1.3 Hydrology

This section discusses the relationship to the groundwater and surface water resources. The Project Site is not in the Critical Wastewater Disposal Area; thus, cesspools could be an option for the one-acre lots (see Figure 21, "Critical Wastewater Disposal Areas," on page 3-16). The entire Project Site is above the Underground Injection Control (UIC) line. Any injection wells for stormwater would be regulated by the Department of Health's UIC permit; wastewater injection wells would be prohibited.
FIGURE 21. Critical Wastewater Disposal Areas

ISLAND OF HAWAII

CRITICAL WASTEWATER DISPOSAL AREAS

The Kamala Regional Sewage Area

SITE

The 1,000 feet from shoreline or 100 feet shoreline, whichever is greater from shoreline

Source: Department of Health

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3.1.3.2 Surface Water

There are two perennial streams located outside the project boundaries which were designated as candidate streams for protection in the Hawaii Stream Assessment study prepared for the Commission on Water Resource Management: Waipio/Waipio Stream and Lalaka Stream (see Figure 22, "Surface Water Map," on page 3-18). Both streams are more than 1000 feet from the Project Site. The intermittent Waikoeo Stream transects the mauka portion of the Project Site; the intermittent Waiulii Stream is on the Waipio side outside the Project Site. An unnamed gully conveys storm runoff through the Project Site (refer to Figure 9, "Topographic Map," on page 2-11). No proposed development will occur within the intermittent stream course nor the unnamed gully.

Two ditch and tunnel systems provided a source of irrigation water for the sugarcane operations. The Lalaka Ditch and tunnel system diverts an average flow of 1 mgd from Lalaka Stream by an intake at an elevation of 2000'. The water is conveyed to Lalaka Reservoir (elevation of about 1500'). Lalaka Reservoir was used to irrigate sugarcane, but its use was suspended in 1989 due to reduced sugarcane operations. Overflow from the reservoir spills into Waiulii Gulch, a normally dry stream bed. The Lower Hamakua Ditch starts in the interior Waipio Valley at Kawaihui Stream, diverts water from four main tributaries of Waipio Valley, and connects with an irrigation distribution system at Kukulua at 1000' elevation. The ditch system extends about 21.9 miles ending at Paauilo. Historically, a portion of the water from the ditch was taken for domestic use, but currently this use has been virtually eliminated (about 0.5 to 1 mgd used by Paauilo Village for domestic purposes). Sugarcane irrigation accounted for about two-thirds of the flow, while sugar mill use accounted for most of the balance. The Applicant does not propose to use water from Lalaka Reservoir or Hamakua Ditch.

FIGURE 22. Surface Water Map
3.1.3 Hydrology

3.1.3.3 Coastal Waters

Substrate. The nearshore waters in the vicinity of the Project Site and Waipio Valley is unsheltered, open coastline dominated by the effects of wave action. During the winter months, large waves impact the north shores of the Hawaiian Islands, especially the Waipio Valley region of the Hamakua Coast which faces more directly north than the more southern parts of the Hamakua Coast. Throughout the year, tradewind-generated waves impact the windward coasts. Thus, rather than lush coral growth, the nearshore area extending from the shoreline to approximately the 60-80' depth is primarily sand and basaltic boulders. The surfaces of all rock surfaces are covered with a ubiquitous layer of fine sediment, apparently of terrigenous origin, bound in a short algal turf. Such sediment layers, however, were much thinner in the Waipio area compared to areas to the south in the vicinity of the mill discharges. Where living coral did grow, the coral colonies were consistently more abundant on the tops of boulders, compared to the sides which were subject to more sediment scouring. Channels and pockets filled with coarse black sand occurred between the boulders.

In a study conducted for EPA, coral surveys showed less coral cover in the Waipio area compared to both the Pepeekee and Haina Mill areas. On three transects ranging from one mile north and one-half mile south of Waipio Stream, total coral cover averaged 12% of bottom cover. In areas to the southeast, coral cover beyond the influence of sugar mills averaged 29% (vicinity of Haina Mill) and 18% (vicinity of Pepeekee Mill). This reduction did not appear to be a result of the stream discharge influence, since it was observed that water clarity was greater, and sediment deposits were lower near Waipio compared to other areas of the Hamakua Coast further south. A likely cause of the reduced coral cover at Waipio is an increased degree of stress associated with breaking waves, a predominant factor in defining coral community structure in Hawaii.


Environmental Setting, Impacts, and Mitigation Measures

Biotas. Despite the low overall coral coverage, large boulders and rocky ledges provide shelter for many species and support a rich community of reef fish. Typical for Hawaiian reef fish assemblages, the dominant herbivores were surgeonfish (Family Acanthuridae including kolo, manini, pualu, palani) and rudderfish (tenue, Kyphosus spp.). Parrotfish (ulu, Scarus spp.), jacks (papiu, Caranx melampygus), goatfish, butterflyfish, and wrasses were seen. Notable among the wrasses were the relatively rare Coris species (gilu, C. balios and C. flavomaculata). The boulder-rich areas harbored fair numbers of nocturnal "red fish," especially mengachi (ulu, Myripristis spp.). The presence of large numbers of fish overall, their tendency not to avoid divers, the large size of many of the fish, and fair numbers of jacks and "red fish" all suggest that this area harbors a healthy reef fish community that has not been substantially affected by fishing pressure.

Green sea turtles (Chelonia mydas), an endangered species, were observed in the area. The Hamakua Coast is not considered an important habitat for humpback whales (Megaptera novaeangliae) during their residence in Hawaiian waters.

Water Quality. The Department of Health classified the nearshore waters along the Hamakua Coast as Class A (see Figure 23, "Water Quality Classification Map," on page 3-22), defined as follows:

- It is the objective of class A waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted only if it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving


3.1.3 Hydrology

waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class.25

The EPA survey showed no exceedences of Department of Health water quality standards for Class A marine waters at sampling sites in the vicinity of Waipio. The low results for nitrate and suspended solids indicate that there is little input of materials from land. Herbicide analyses from samples collected in the Waipio-Waimanu area were below detection limits.

3.1.3.4 Wetlands

According to U.S. Fish & Wildlife Service criteria, a wetland must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes, (2) the substrate is mainly undrained hydric soil, and (3) the substrate is saturated with water or covered by shallow water at some time.
3.1.3 Hydrology

during the growing season of each year. The U.S. Fish & Wildlife Service did not identify any wetlands within the Project Site; most of the wetlands in the vicinity are concentrated in Waipio Valley (see Figure 24, "Wetlands Map," on page 3-24).

Impacts

Impact of Groundwater Development on Sustainable Yield and on the County Water System. The Applicant proposes potential drinking water source development with deepwell(s). The description and impact of this proposal is discussed in the section on Water Facilities (see §3.3.2 "Water" on page -79).

Impact of Wastewater Disposal and Storm Water Injection Wells on Groundwater and Coastal Water Quality. The proposed methods of wastewater disposal include individual septic systems or septic systems for the one-acre lots and a package treatment plant for the hotel. The treated effluent from the treatment plant would be disposed by subsurface leaching fields. Since the treatment plant and leaching fields would be located at the lowest area of the Project Site, it would be downdrift from any proposed drinking water well and would also be a sufficient distance (greater than 1000') from the County's spring source. The proposed drainage system will consist of drywells at appropriate intervals within the road rights of way. The stormwater would recharge the groundwater supply. Any dissolved pollutants in the wastewater effluent or stormwater recharge that has not been absorbed by plant roots or adsorbed to soil particles, and infiltrates to the groundwater with subsequent seepage to the coastal waters, would not significantly impact the coastal water quality due to the vigorous mixing capacity of the nearshore waters. The resilience of the nearshore ecosystem has been demonstrated by the insignificant impacts caused by sugarcane operations despite the heavy applications of fertilizer (about 213 tons of nitrogen and 74 tons of phosphorous per year on 800 acres), pesticides, and sedimentation. 27


FIGURE 24. Wetlands Map

Source: U.S. Fish and Wildlife Service, National Wetlands Inventory, Kukuihaele Quad.

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Impact of Construction Activities on Coastal Water Quality and Marine Endangered Species. The implementation of the mitigation measures discussed above for soil erosion control would mitigate sedimentation impacts on coastal water quality from construction activities (refer to §3.1.2 "Soils and Topography" on page 3-4).

Mitigation Measures

Design Phase:

- Wastewater System Approval. Compliance with the Department of Health’s rules for the design and operation of individual wastewater systems and treatment plants should protect the groundwater quality from subsurface wastewater disposal. The Department of Health reviews and approves the wastewater system design as part of the building permit process.

- UIC Permit. Depending on the design, drywells could fall under the definition of “injection well.” If the drywell falls within this definition, compliance with the Department of Health’s Underground Injection Control (UIC) Permit requirements should ensure that the location and design of the stormwater injection wells would not degrade the groundwater quality. The Applicant would likely apply for this permit during the building permit process, if applicable.

3.1.4 Flora and Fauna

A previous botanical study encompassing the Project Site divided the original study area into five botanical zones, although only two occur within the Project Site:

Sugar Cane Fields and Gulch Vegetation. The Coastal Vegetation Zone identified in that study lies seaward of the Project Site; the Eucalyptus and Ohia Forest zones lie inland at a higher elevation. A synopsis of each botanical zone present within the Project Site is given below.

- Sugar Cane Fields—The major portion of the Project Site is abandoned sugar-cane fields. Observed introduced species include yellow-flowered wild radish (Raphanus raphanistrum), white clover (Trifolium repens L.), Indian paintbrush

ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

(Castilleja arvensis), marsh purslane (Ludwigia palustris [L.] Ell.) and others. Native species in this area include popolo (Solanum americanum) and koalī'awa (Ipomoea indica [Burn.] Merr.).

- **Gulch Vegetation**—Vegetation in the undisturbed gullies of the Project Site is dominated by introduced ironwood, Java plum, guava, and Christmas-berry shrubs. Scattered patches of banana are also present.

The study indicated that none of the native species located during the survey are officially listed as threatened or endangered plants nor are any proposed candidates. Most of the native species are ubiquitous in the native forests of Hamakua and Kohala.

A bird and mammal field and literature survey of the Project Site identified one species endemic to the island of Hawaii (‘Io, Hawaiian Hawk), two indigenous seabirds (White-tailed Tropicbird, Great Frigatebird), and one indigenous migratory bird (Pacific Golden Plover). The Hawaiian Hawk was first listed as an endangered species in 1967. This species has probably adapted better than any other endemic avian species to the alien-dominated lowland areas of the island. Hawaiian Hawks occupy a wide variety of habitats; they are to be found in almost all habitats lacking trees. It is generally thought among the scientific community that the Hawaiian Hawk population is healthy and maintaining itself, unlike many other endemic species. Therefore, this species is currently under review by the U.S. Fish and Wildlife Service for down-listing from endangered to threatened status. Traditionally, the Hamakua area has had one of the denser populations of Hawaiian Hawks on the island.

The White-tailed Tropicbirds were seen flying along the shoreline on the north boundary of the site. This species nests along the Hamakua Coast in the cliff faces. The Great Frigatebird was seen soaring over the open fields to the east of the site. This pelagic species is not known to nest on the island of Hawaii; it nests on many offshore islets, Oahu, Kauai, and the Leeward Hawaiian Islands. They are not

---

uncommon visitors to this island, most often seen immediately prior to or following high winds or low pressure systems. Neither seabird is considered endangered or threatened.

Migratory waterbirds and shorebirds make up a large part of the winter avian population of Hawaii. These annual visitors are found throughout the island from August through May. It can be expected that during the migration season, several of these species utilize the proposed site. Only one indigenous migratory bird species was detected during the survey. The Pacific Golden Plover (Kolea) is the most common of the migratory shorebirds that visit Hawaii each year. Many return to the same territory every year. This species is not considered endangered or threatened.

The survey made a special effort to find Hawaiian hoary bats and Hawaiian Owls; neither were found. The survey also identified many other introduced bird species. A previous study observed endangered native waterbirds beyond the Project Site at Lalakea Reservoir (coot) and Lalakea Stream (Koloa).30

A total of four species of feral mammals were observed (dogs, cats, mongoose, rats/mice). None of these mammal species are native to Hawaii; they all were introduced to Hawaii by man. All of them are deleterious to the avian species found on the site—dogs disturb and kill ground-nesting birds; cats, rats, and mongoose prey on eggs and the young.

**Impact**

None. The cliffs will not be affected by the proposed project and will be left in their natural state. The project will not significantly impact the Hawaiian Hawk population. There are more favorable habitats along the Hamakua Coast (e.g., Waipio Valley), especially since the vicinity of the Project Site has been developed with Kukuihaele town and disturbed by agricultural activity. With the conversion of abandoned sugarcane fields to grazed areas and water features, it is likely that the project may attract more Pacific Golden Plover to the site as well as other species.

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Mitigation Measures

Design & Construction Phases:

None required. However, in response to a comment received during the Consultation Period, the Applicant should consider the following action:

- **Inventory of Exceptional Plant Specimens.** The Applicant should survey the site with members of the community to identify any exceptional plant specimens that should be preserved. If any specimens are identified, the site plan should identify the location of these specimens and describe how the landscaping would incorporate this feature. Any identified specimens should be clearly marked in the field and protected during construction.

3.1.5 Natural Hazards

3.1.5.1 Flooding

Setting

According to the Flood Insurance Rate Map (FIRM), the entire Project Site is in Zone X (outside the 500 year flood plain) (see Figure 25 on page 3-29). However, Kukuihalea residents have reported occasional flooding problems in the area behind Tiger Camp and the area between the Plantation Manager's Estate and the County cemetery.

Impact

**Impact on Streams and Gullies.** The proposed drainage system will direct runoff by swales along the roads to drywells. The drywells, designed for a 10-year storm, will minimize runoff into the streams and gullies. In the event of exceptional storms, any overflow from the drywells will drain into a settling basin where the sediment would be removed before flowing into the stream. The drywells should offset the increase in impervious surfaces so that the resulting runoff to the streams should not be significantly greater than the existing conditions.
Impact on Downstream Properties. The hotel site is downstream of Kukuihaele town and would not affect any existing residents. The proposed drainage improvements for the mauka one-acre lots may have a beneficial impact on the existing residents by alleviating some of the current flooding problems.

FIGURE 25. Flood Insurance Rate Map

Environmental Setting, Impacts, and Mitigation Measures

Impact on Existing Drainage Improvements. There are no drainage improvements within Kukuihaele; runoff is conveyed by the existing gullies and gulches.

Mitigation

Design Phase:
- Compliance with County Drainage Standards. The Applicant will prepare a flood study during the design phase of the project. The County will review and approve the drainage plans as part of the subdivision, grading, or building permit process.

3.1.5.2 Volcanic

Setting
The Project Site is in lava flow hazard zone 8 (on a scale of 1 to 9 with the greatest hazard in zone 1) (see Figure 26 on page 3-31).

Impact
None.

Mitigation
None required.

FIGURE 26. Volcanic Hazards Map

KOHALA 9

MAUNA KEA 7

Increasing severity of hazard

0 10 MILES
0 10 KILOMETERS
3.1.5.3 Earthquake

Setting
Strong earthquakes endanger people and property by shaking structures and by causing ground cracks, ground settling, and landslides. Locally, such damage can be intensified where soft, water-saturated soils amplify earthquake ground motions; on steep slopes, such soils may result in mudflows or landslides. The island of Hawaii experiences thousands of earthquakes each year—most are so small that they can only be detected by instruments, but some are strong enough to be felt, and a few cause minor to moderate damage. Most of the island's earthquakes are directly related to volcanic activity (magma moving beneath the earth's surface), concentrated beneath Kilauea and Mauna Loa, particularly beneath the south flanks of both volcanoes and in the Koolik region between them. Although originating in the volcanically active area, these earthquakes can have damaging effects that are widespread. A few earthquakes are less directly related to volcanism and originate in zones of structural weakness at the base of the volcanoes or deep within the earth beneath the island, such as the earthquake of magnitude 6.2 centered 25 miles deep beneath Honomu in 1973. Such earthquakes unrelated to volcanic activity have no known recurrence interval and are difficult to predict. The Building Code designates the entire island of Hawaii in Earthquake Zone 3 and contains certain structural requirements to address the relative seismic hazards.

Impacts

Impacts to Public Safety and Property Damage. Since the proposed buildings are all one-story in height, there are no special concerns associated with high-rise buildings. The buildings will be designed in accordance with the local building code, which should ensure that the foundations and buildings are earthquake-proof. Hawaii County adopted the most recent Uniform Building Code (UBC) effective November 8, 1993. The recent UBC includes several new requirements to address hazards from earthquakes and strong winds. The Applicant's soil engineer will determine whether the thixotropic properties of the soil within the Project Site require any special treatment in relation to earthquake concerns.

32. The discussion in this section is from Heliker, 1991. Ibid.
Mitigation

Design and Construction Phases:

- **Compliance with Building Code.** The County reviews and approves the construction drawings for compliance with the current building code. The County also inspects the completed structures and issues a certificate of occupancy to certify compliance with the building code.

### 3.1.6 Archaeological/Historical Resources

*Archaeological/Historical Sites.* This section summarizes the findings of an archaeological inventory survey of the Project Site conducted by Paul H. Rosendahl, Ph.D., Inc. (PHRI) (see Appendix C). The survey— which consisted of an aerial survey, 100% variable-intensity ground survey, and limited subsurface testing— identified four (4) sites within the Project Site and three (3) sites adjacent to the Project Site (see Figure 27 on page 3-34).

Of the four sites within the Project Site, one (15014, habitation terrace) is significant solely for information content with further data collection recommended. Two sites (14986, habitation/agricultural terrace; 15006, historic Plantation Manager's Estate) are significant for information content, for cultural value, and as excellent site type examples. For both sites, PHRI recommended further data collection followed by preservation with some interpretation. The fourth site (14987, habitation/agricultural complex) is provisionally significant for information content and as an excellent site type example; a final assessment depends on further data collection. Sites 14986 and 14987 are significant site type examples on a regional, rather than islandwide basis. If, in the future, better examples are found in the Hamakua region, then the present assessments should be reevaluated. The Plantation Manager's Estate is on the State Register of Historic Places. Table 3, "Summary of Archaeological Significance Assessment and Recommended General Treatments," on page 3-35 summarizes the findings and recommendations.
### TABLE 3. Summary of Archaeological Significance Assessment and Recommended General Treatments

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>FUNCTION</th>
<th>AGE</th>
<th>VEGETATION</th>
<th>SIGNIFICANCE CATEGORY</th>
<th>RECOMMENDED TREATMENT</th>
</tr>
</thead>
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<tr>
<td></td>
<td></td>
<td></td>
<td>A X B C</td>
<td>FD C</td>
<td>NFW</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within Project Site</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14986</td>
<td>Habitation/</td>
<td>LP/EH</td>
<td>GV</td>
<td>+ - + + + + + + + + +</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Agricultural</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14987</td>
<td>Habitation/</td>
<td>LP/EH</td>
<td>CV</td>
<td>+ - * - + - - - - - -</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Agricultural</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>15006</td>
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<td>LH/H</td>
<td>--</td>
<td>+ - + + + + + + + + +</td>
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<tr>
<td>15014</td>
<td>Habitation</td>
<td>LP/EH</td>
<td>GV</td>
<td>+ - + + + + + + + + +</td>
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<tr>
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<td>Burial</td>
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</tr>
<tr>
<td>15012</td>
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<td>LH/H</td>
<td>CV</td>
<td>+ - + + + + + + + + +</td>
<td></td>
</tr>
</tbody>
</table>

*Age*

- LP=Late Prehistoric
- EH=Early Historic
- LH=Late Historic
- H=Historic

*Vegetation*

- CV=Coastal Vegetation
- GV=Guich Vegetation

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Significance Categories
A=Important for information content, further data collection necessary
X=Important for information content, no further data collection necessary
B=Interpretive value
C=Culturally significant

Recommended Treatment
NFN=No further work of any kind necessary
FD=Further data collection necessary
P=Preservation with some level of interpretation
PA=Preservation as is

Historical Background. The Project Site lies within two traditional ahupua'a (land divisions) in the district of Hamakua: Kanahonua and Waalo'oke'o'o. The Mahele of 1848 made land available to native tenants, and at least eight LCAs were awarded to Hawaiian claimants in or adjoining the Project Site. Use of the land by native tenants at the time appears to have been traditional wet- and dryland agricultural practices, and also included crops and livestock of western importation.

In 1850, it became possible for foreigners to purchase Hawaiian land. Much of the Project Site, once a part of the land award of High Chiefess Kekuanao'a (LCA 11216 'Apeka 50), had been acquired by c. 1868 by the Roman Catholic Church of Hawaii. By c. 1878, other portions of land had been acquired by the Pacific Sugar Mill and sugar operations began modifying the natural and cultural landscape of the region. Foreign laborers brought about increased growth of the plantation community.

Because the town of Kukuihaele is built around the government road and takes up much of the land of Kanahonua, most of the evidence of early land use would have been destroyed by construction of modern buildings, as well as by the extensive sugarcane cultivation activities. As this is a small, relatively poorly endowed ahupua'a, population density was probably never very high.

Pacific Sugar Mill had the distinction of introducing the first mongoose into Hawaii. In 1883, the plantation imported them from India and Africa for rat control on the plantation. While most plantations had a small herd of cattle, Pacific Sugar Mill was unusual because it also had over 600 head of sheep. Free mutton was provided for employees along with free housing, fuel, and medical care. As on most plantations, the early work force consisted of Chinese and native Hawaiians. Later,
Japanese, Portuguese, Spaniards, Puerto Ricans, Koreans, and Filipinos came to work on the plantation both as day laborers and contract workers.

By 1908, Pacific Sugar Mill had a nine-roller mill and produced an average crop of three acres. The cane was delivered by flumes to a railroad which stretched across the plantation from east to west. The railroad was about four miles long and extended from the mill at Kukuhihele Landing to the plantation's Honokaa boundary. Pacific Sugar Mill also had a wire rope landing to transport sugar bags to steamers for shipment.

The water for flumes was obtained by diverting the Hi'ilawe Stream which had its source in the Kohala Mountains. Pacific Sugar Mill also had the water rights to Laka'e Stream and to Kukuhihele Valley Stream. The was transported partly through a flume and partly by a ditch to a reservoir at the head of the plantation. Four more reservoirs with an estimated capacity of 50 MO were also constructed. This supply of water not only enabled Pacific Sugar Mill to transport all of its cane to the mill but was sufficient to enable Honokaa Sugar Company to flume 50% of its crop.

Most of the residents of Kukuhihele were either former residents of Waipio Valley or plantation laborers who had come from many different places. The first camp out of Kapulena heading towards Waipio was known as Kona Camp as most of the people in this camp had moved from Kona. The second camp was known as Tiger Camp since many of the Spanish and Portuguese laborers living there 'fought like tigers' all the time. What is now known as the Last Chance Store was the Old Plantation Store; next to that there was a theater. On the makai side of the existing park was where the Kukuhihele Elementary School used to be, and mauka of that was a Congregational Church. Further along toward the village there used to be many stores, saloons, restaurants and a tailor shop. There also used to be a Japanese vegetable garden, Chinese drug store, pol shops, paddocks, stables, blacksmith shops, and even a hotel. The hotel indicates that visitors frequented this area in the early 1900's. By 1913, Pacific Sugar Mill closed and was succeeded by Honokaa Sugar Company. When Honokaa Sugar Company took over Pacific Sugar Mill, most of the Kukuhihele businesses moved to Honokaa since the cane was milled in Honokaa and the Honokaa Landing was used to ship out most of the sugar.

Around 1900, the Hilo Breakwater was being built and large boulders were quarried from the cliffs between Waipio Valley and Kukuhihele. Below Kukuhihele at Waialii Stream, there was a peninsula called Waialii. A small breakwater was built there, but the 1946 tidal wave destroyed this breakwater.
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Impact

Impact on Archaeological Sites. The project will not adversely impact any of the sites within or adjacent to the Project Site. Sites 14986, 14987 and 15014 are located in gulches and would not be disturbed by the project; provided the mitigation measures below are implemented. The proposed project will not disturb the cemeteries nor the trail at the bottom of the cliff.

Impact on Plantation Manager’s Estate. Before any construction or alteration by a private landowner on a registered historic property, the landowner must notify the State Historic Preservation Division.33 Provided the Applicant designs and rehabilitates the structure pursuant to the Division’s standards,34 the impact should be beneficial for it will allow the public to enjoy and learn about this historical period. “Rehabilitation” is defined as “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.”35

Mitigation Measures

Design Phase:

Prepare and implement an Archaeological-Historical Mitigation and Interim Preservation Plan. There are two parts to this plan:

1. Mitigation plan for the rehabilitation of the Plantation Manager’s Estate for review and approval by the State Historic Preservation Division.


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2. Interim Preservation Plan for Sites 14986, 14987, and 15014. Such a plan may involve surrounding each site with a barricade (fence or natural vegetation) to deter vandalism. Stabilization may also be required if the sites are threatened by erosion. The sites should be accurately located and plotted by surveyors.

Construction Phase:
- Should any sites be uncovered during construction, work should stop and the State Historic Preservation Division and County Planning Department notified. Work in the affected area would resume only upon approval by the State and County agencies.

Operational Phase:
None required. The Applicant will allow access to the Plantation Manager’s Estate for the public to enjoy this feature of Kukuihaele’s plantation history.

3.1.7 Scenic Resources

Setting
The General Plan highlights the natural beauty of Waipio Valley. The Project Site offers breathtaking views of the makai portion of Waipio Valley and the Hamakua coastline.

Impacts
To assess the visual impacts of the project, a survey crew erected and located poles marking the makai edge of the Project Site and the high points of the hotel and makai one-acre lots (see Figure 28, “Visual Impact Analysis Location Map,” on page 3-41). The poles were visibly marked at the height approximating a one-story building (15’) and the top of the pole (minimum 24’). Photographs were taken from points along the Old Route 240, the new Highway 240, the Waipio Valley Scenic Lookout, and from points along the Waipio Valley beach to determine the extent, if any, the poles could be seen. The photographic record is included in Appendix D.

36 General Plan, 1989, p. 34.
The poles could be seen only from Highway 240 and the Old Route 240 fronting Kukuiahele Park (see Figure 29, "View Impact from Highways," on page 3-42). The poles could not be seen at all from the Old Route 240 near Tiger Camp, from the Waipio Valley Lookout, nor from Waipio Valley beach.

A previous study done for Hamakua Sugar Company in relation to the previously proposed Hamakua Makai plan (refer to Figure 10, "Previous Hamakua Makai Land Use Plan," on page 2-13) confirmed that a one-story building less than 15' and located about 500' from the cliff edge would not be seen from the far end (Waianu Valley side) of Waipio Valley beach (see Figure 30, "Visual Impact from Waipio Valley," on page 3-43). For the one-story buildings located closer to the cliff edge, the cliff vegetation would screen the structures. Structures built to the height limit of 45' under resort zoning would be visible from Waipio Valley projecting above the cliff vegetation.

**Mitigation**

**Design Phase:**

- *Earthtone colors.* The hotel's roof and building should be an earthtone color to blend with the surroundings.

- *One-story limit.* Due to the visual sensitivity of the hotel's location near the cliff edge, the height limit should be limited to one-story even if the allowable maximum height under resort zoning is 45'. If decisionmakers impose this restriction as a permit condition, the condition should also be required to be recorded to give subsequent purchasers notice of this restriction.

- *Preserve or replace existing cliff vegetation that provide a visual screen from Waipio Valley.* The Planning Department should review the landscaping plan at Plan Approval to ensure that the existing or proposed vegetation at the cliff edge provides an adequate visual screen.

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37. View Plane from West End Waipio Valley Floor to Makai Hotel Site, by Blane Its Registered Licensed Surveyor No. 5091, prepared for Hamakua Sugar Company, undated.

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FIGURE 28. Visual Impact Analysis Location Map

POLE LOCATIONS (HEIGHT)

1. Boundary edge - Honokaa side (29')
2. Cliff edge - resort (30')
3. High point - resort (29')
4. Cliff edge - 1-acre lot (25')
5. Boundary edge - Waipio side (30')
6. High point - 1-acre lot (24')

A. View from Old Route 240
B. View from Hwy 240
C. View from Hwy 240
D. View of mauka 1-acre lots
E. View from Old Route 240
FIGURE 29. View Impact from Highways

Hwy 240 above Tiger Camp.

Old Route 240 fronting Kukuihale Park.
3.1.8 Air Quality

Setting

The State Department of Health (DOH) maintains a network of air monitoring stations around the state to gather data on regulated pollutants, such as total suspended particulates (TSP), particulate matter less than 10 microns (PM-10), sulfur dioxide (SO2), carbon monoxide (CO), ozone (O3), and lead (Pb). DOH maintained an air monitoring station in Honokaa during 1979-1982. Since 1985, DOH discontinued routine air monitoring on the island.

The last available data indicate that federal standards for all criteria pollutants were being met, with some below the detectable limit of measurement. The worst air pollution episodes experienced in Hawaii County are due to volcanic eruptions. However, the Project Site is normally upwind of the volcanic vents under prevailing northeasterly tradewinds; when southerly winds blow, the air quality at the Project Site may be slightly affected. A sampling in 1991 along Highway 19 (Hawaii Belt Road) in the vicinity of Honokaa indicated that CO concentrations were well below state and federal one-hour standards.38

Impacts

Since the project would attract mobile sources of air pollution (i.e., motor vehicles), it is considered a potential "indirect source" of air pollution as defined in the Federal Clean Air Act. Therefore, the focus of analysis is on the air quality associated with increased traffic.

The previous study done for the Kukuihaele Land Use Plan, which involved a much larger project, modeled the projected impacts of future traffic with and without the project. The study found that state and federal one-hour and eight-hour standards for CO would be met.39


39. Ibid.
3.1.9 Noise

Agricultural burning emits particulates, carbon monoxide, and trace amounts of other organics. Concentrations of particulates can reach high levels within about one mile of the fires. The discontinuance of this practice would have a beneficial impact on air quality.

Construction activity will cause particulate dust emissions.

Mitigation

Construction Phase:

• Dust control. Discussed in §3.1.2 “Soils and Topography” on page 3-4.

3.1.9 Noise

Setting

A previous study for the Kukuihaele Land Use Plan measured the existing background ambient noise levels around Kukuihaele. The existing noise levels are low and typical of rural areas. Background noise levels are controlled by traffic on Highway 240, local traffic on the Old Route 240, tour and transiting aircraft, birds, wind, foliage, or surf.

There are several standards to determine acceptable noise levels. According to national standards used by the Federal Housing Administration (FHA) and Veterans Administration (VA), the acceptable level is 65 Ldn. In Hawaii, an exterior noise level of 65 Ldn does not eliminate all risks of noise impacts because of our open, naturally ventilated structures which afford relatively low exterior-to-interior sound attenuation. A lower level of 55 Ldn is considered as the “unconditionally accept-

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41. The noise descriptor currently used by federal agencies to assess environmental noise is the Day-Night Average Sound Level (Ldn). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter (decibels dB).
able" level of exterior noise. The State Department of Health noise regulations, which apply only to Oahu but are used as a standard of reference on the neighbor islands, are intended to minimize noise impacts from stationary and motor vehicle noise sources.

Due to very low traffic volumes, the average background ambient noise levels along Highway 240 and the Old Route 240 range from 45 to 55 dB—within the "unconditionally acceptable" category. In the sugarcane fields in the vicinity of the proposed hotel, the existing background noise levels range from 25 to 60 dB.

Impacts
Since the previously proposed Kukuihule Land Use Plan was significantly larger than the proposed project, the impact analysis for that project would represent a worst case scenario for the proposed project. The previous study found a major impact to be along the high-speed sections of Highway 240. Setback distances from the highway centerline had to be greater than 50' to meet the 65 Ldn standard. The Kona Camp residences have setbacks in excess of 100'.

Mitigation
- **Setbacks from Highway 240.** Any occupied structures on the proposed one-acre lots along Highway 240 should be setback a minimum of 50' (or lesser distance based on findings of a noise study specific to the proposed project) from the centerline of the highway, or use other noise attenuating measures such as berms, landscaping, walls, or air-conditioning.
3.2 SOCIOECONOMIC CHARACTERISTICS

The following analysis of the socioeconomic impacts of the proposed project is based on a study by GeoMetrician Associates and Y.K. Hahn and Associates attached as Appendix E.

3.2.1 Population

Setting

Resident Population Size. The population of Hawaii County has increased in the period since 1960 as the economic mainstay shifted from plantation agriculture to tourism. Most of this increase has been concentrated on the west side of the island, especially in North Kona and South Kohala, where hotels, condominiums and resort-retirement homes have mushroomed.

The Hamakua coast has not shared equally in the population growth of the last several decades. Gradual trimming of the plantation labor force brought about by increasing mechanization and reduced acreage has restricted growth. Kukuihaele itself has seen a steady and dramatic decline in its population over the last fifty years (see Table 4, "Population Trends," below).

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Hawaii County</td>
<td>68,350</td>
<td>61,332</td>
<td>63,46</td>
<td>92,05</td>
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<td>Hamakua</td>
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<td>5,221</td>
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<td>Kukuihaele</td>
<td>590</td>
<td>424</td>
<td>310</td>
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<td>316</td>
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</table>

Sources: U.S. Bureau of the Census: "1990 Census of Population. General Population Characteristics." 1990 CP-1-13; Hawaii County Data Book; Note: The boundaries of Kukuihaele were slightly changed for the 1990 census.

Resident Population Characteristics. The Big Island as compared with O'ahu is rural, relatively low-income, and stable, and like all of Hawaii is known for its multi-ethnic composition. Kukuihaele displays these traits strongly (see Table 5, "Selected Socioeconomic Characteristics of Study Area," on page -48). A full 81% of the population in Kukuihaele is non-Caucasian (this contrasts greatly, however,
with nearby Waipio, which is over 50% Caucasian). The major component clearly reflects the plantation labor force. Another component is the original Hawaiian population, many of whom moved to Kukuihaele after life in Waipio became more difficult.

**TABLE 5. Selected Socioeconomic Characteristics of Study Area**

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>Hawaii Island</th>
<th>Honokaa/Kukuihaele Division</th>
<th>Kukuihaele Census Designated Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>120,317</td>
<td>3681</td>
<td>316</td>
</tr>
<tr>
<td>Percent White</td>
<td>39.9</td>
<td>34.9</td>
<td>17.0</td>
</tr>
<tr>
<td>Percent Asian/Pacific Islander</td>
<td>57.1</td>
<td>62.7</td>
<td>81.0</td>
</tr>
<tr>
<td>Percent Under 18 Years</td>
<td>28.7</td>
<td>28.5</td>
<td>30.7</td>
</tr>
<tr>
<td>Percent Over 65 Years</td>
<td>12.6</td>
<td>16.0</td>
<td>20.2</td>
</tr>
<tr>
<td>Percent Over 16 Years with Work Disability</td>
<td>5.1</td>
<td>3.6</td>
<td>8.8</td>
</tr>
<tr>
<td>Percent Over 16 Years in Labor Force</td>
<td>64.2</td>
<td>63.0</td>
<td>69.8</td>
</tr>
<tr>
<td>Median Family Income</td>
<td>$13,169</td>
<td>$11,586</td>
<td>58,463</td>
</tr>
<tr>
<td>Percent Whose Home Was Built After 1980</td>
<td>35.1</td>
<td>25.5</td>
<td>not available</td>
</tr>
<tr>
<td>Percent Whose Home Was Built Before 1939</td>
<td>10.8</td>
<td>17.0</td>
<td>81.0</td>
</tr>
</tbody>
</table>


Several characteristics mark Kukuihaele as a somewhat disadvantaged community. Its percentages of elderly and adults with work disabilities are considerably higher than the norm. The median family income is also low -- less than 65% of the County average.

Nevertheless, it would be inaccurate to characterize the community as elderly and/or unemployed. The census figures for 1990 reveal a high proportion of the adult population in the workforce -- almost ten percent higher than the island average.
Also, large families help account for the fact that there are actually more children under 18 for the population than the island as a whole.

A breakdown of Kukuihale population by ethnicity is not available yet from the U.S. Census Bureau, but the proportions are somewhat similar to those of Hamakua in general (see Table 6, "Ethnic Composition of Resident Population," below). Again, this ethnic breakdown strongly reflects the plantation heritage of the community.

**TABLE 6. Ethnic Composition of Resident Population**

<table>
<thead>
<tr>
<th></th>
<th>Jnese</th>
<th>Hawn</th>
<th>Filipino</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii Island</td>
<td>20.8</td>
<td>19.2</td>
<td>12.9</td>
<td>39.7</td>
<td>7.4</td>
</tr>
<tr>
<td>Honokaa CDP</td>
<td>20.5</td>
<td>13.4</td>
<td>27.9</td>
<td>33.6</td>
<td>4.6</td>
</tr>
</tbody>
</table>


Kukuihale's population is distinguished by its greater than usual proportion of Hawaii natives. This contrasts with many plantation towns, where there are many first-generation immigrant laborers and their families (see Table 7, "Length of Residence," below). Also notable is the fact that its inhabitants do not relocate as often as is normal for the island. Indeed, several middle-aged and elderly residents were interviewed who reside in the same house in which they were born.

**TABLE 7. Length of Residence**

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>Hawaii Island</th>
<th>Honokaa/Kukuihale Division</th>
<th>Kukuihale Census Designated Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Foreign Born</td>
<td>8.5</td>
<td>14.0</td>
<td>8.6</td>
</tr>
<tr>
<td>Percent of U.S. Natives Born in State of Hawaii</td>
<td>71.9</td>
<td>90.3</td>
<td>96.9</td>
</tr>
<tr>
<td>Percent Who Lived in Same House in 1985</td>
<td>53.1</td>
<td>63.4</td>
<td>69.6</td>
</tr>
</tbody>
</table>

Visitor Population. Currently, the primary reason visitors go to Kukuilwaale is that it is the gateway to Waipio Valley. A previous study reported that over 60,000 visitors per year currently enter Waipio Valley on shuttle tours. This figure was derived from a 1988 survey, and is said to be considerably lower today according to some Waipio Valley shuttle operators. The actual number of shuttle companies that may enter the valley is controlled by a PUC moratorium on Waipio license tours. An unknown but much smaller number of tourists rent four-wheel drives and tour the valley on their own, and some also walk or hitchhike into the valley. Many local people from around the island also visit the valley, particularly on the weekend.

Impacts

Increased Population. The project will have an impact on population in three ways: temporarily during construction; directly from visitors and in-migration of employees; and indirectly.

Temporary Impact During Construction. The construction of the resort and individual houses in the one-acre lots is expected to occupy a relatively short time span. Because of this fact and the existence of a sufficiently large construction labor force within commuting distance of Kukuilwaale, increases in population during the construction period would probably be negligible if they occurred at all, as demonstrated by the recent construction of the $20 million Honokaa Hospital which would be comparable in scale to the resort hotel construction.

Direct and Indirect Impact. The total increase of resident population will be the sum of three components: new residents in the one-acre lots; employees of the resort who choose to move to Kukuilwaale or other parts of Hamakua as a direct result of job availability at the resort and/or one-acre lots; and those who choose to relocate to Kukuilwaale or other parts of Hamakua as an indirect result of the resort. This last category could include, for example, relatives of new residents, retired people who were drawn to settle in the area because of the ambiance and amenities of the resort, and those whose jobs are indirectly dependent upon income generated by the resort.

If homes were built on all of the 45 one-acre lots, and assuming the County average of 3.15 residents per household (calculation based on data from U.S. Bureau of the Census 1990), approximately 140 new residents could be added to Kukuilwaale. This figure assumes full build-out and 100 percent occupancy of the units, and may be considered an "extreme-case" scenario. In reality, since the Applicant project
3.2.1 Population

that approximately 80 percent of the homes will be second or vacation homes, the occupancy rate may be considerably less, yielding a lower total population.

The resort will offer employment to roughly 100 people. The vast majority of the employees are expected to come from the Kukuihaele-Honokaa area and will live near enough to the resort to commute. Even workers who live as far away as Pa'auilo and Waimea would not experience an excessive commute. Given the low stock of housing in Kukuihaele, it is unlikely that more than 10 employees of the resort would relocate to Kukuihaele. Assuming that some of these workers would either relocate without other family members and/or would be residing with other resort workers, the extreme-case figure of new residents attributable to resort employment would be 20.

The number of new residents drawn to the area for indirect reasons is expected to be negligible, since the resort will offer few general-public attractions and is of sufficiently small scale to exercise only a modest influence on the local business climate. For the purposes of calculating an extreme-case scenario, a figure of 5 new residents attributable to indirect reasons is used.

Summing these three components yields a figure of 170 new residents. This represents a 50% addition to the present population of Kukuihaele for a total of approximately 490. This figure is still below the population of Kukuihaele pre-1950.

De facto population would include the 490 projected residents plus the occupants of the hotel rooms. The buildout scenario for 2004 projects 40 rooms, with an occupancy rate averaging 80 percent and an average guest per room ratio of 2.0. Thus, at any given time there is likely to be less than 64 guests present. Therefore, the total de facto population of Kukuihaele would probably not exceed 554 people.

Mitigation

None. The increase in de facto population is an unavoidable impact; however, the worst case projected increase (total of 554 residents and visitors) would be less than the historical population of Kukuihaele (1950 population of 590). The increase due to the proposed project is also less than the potential population assuming full build-out under existing zoning (total of 580 residents) (see §5.1 “NO PROJECT” on page 5-1).
3.2.2 Rural Lifestyle and Residents' Concerns

Setting
Kukuihele consists of several distinct clusters of population. Most of the pattern is attributable to what has survived of plantation housing, while some houses were built independently.

On the southeastern margin of town, with frontage on Highway 240, is Kona Camp, so named because many of its original residents were recruited by the plantation from the Kona district. Tiger Camp is located to the northwest after the split between the main highway and the Old Road. Next is a cluster of houses near the Last Chance Store. Across the gulch is the Catholic Church, the plantation manager's home, a simple grassy park, and a few homes. This area, which is actually the center of Kukuihele, is very low-density. Past this center area the houses are strung out along both sides of the Old Road. This pattern continues at lower and lower densities until the Old Road again intersects the main highway. Over half a dozen homes, many of them recent and large, are situated near the Walpio Lookout. Several large, new houses also front the new highway.

Kukuihele is basically a mile-long line of houses that only in a few places exceed a hundred yards in width. Foot and bicycle traffic by children and neighbors visiting one another relays almost exclusively on the Old Road. The low-density center of the village is also noteworthy. Many of the residents have gardens and raise animals. To the community, the rural values most mentioned and cherished were peace, little traffic, greenery, low population densities, community identity, acquaintance with neighbors, wide open spaces and agriculture.

Impacts
The impact on "rural lifestyle" has several sub-issues. These sub-issues were identified through previous surveys, previous testimony at public hearings, public meetings, and interviews.

Traffic. Construction will disrupt traffic, produce dust and noise, and create a general sense of change that may appear negative and disturbing. Although the residents of the region are accustomed to heavy machinery, noise, dust and smoke associated with sugar cane cultivation and harvesting, the impacts of construction may still be disturbing. It is at this time that the reality of the project may first come home to some residents, and they may feel anxious. The impact to Kukuihele residents would be minimized during the construction and operational phases of the
3.2.2 Rural Lifestyle and Residents' Concerns

project by using the proposed access road. Only one resident currently lives along this road who would be impacted by the project-generated traffic; this resident will be compensated by a lifetime license (see §3.2.6 “Dislocation” on page 69). The project-generated traffic would cross the Old Route 240 at only one intersection. The Tiger Camp residents and the rest of Kukuihele town would still be impacted by visitor traffic to and from the Waipio Valley Scenic Lookout who choose to travel on the Old Route 240; this traffic impact is unrelated to the proposed project and would occur even without the project.

Perception of Tourism. The data from a survey, a social impact assessment and public testimony reveal that the Hamakua community is ambivalent about the effects of tourism. On the one hand, it is seen as a benefit in that it provides jobs, economic diversity and spin-off benefits. On the other hand, there are serious concerns regarding its effects on community life, cultural resources and natural features. Survey results revealed that a majority of Hamakua residents were opposed to large scale development but a small majority "would accept a "small scale luxury resort", golf courses along the Hamakua Coast, and development (with a buffer) near the Waipio rim."

There is also a socio-geographic differentiation of support for/opposition to tourism. Support for tourism in Hamakua is strongest among business and labor leaders, and also among current and former plantation workers and long-time residents of the region. The strongest opposition is centered (although by no means restricted to) Waipio Valley. This is understandable in that tourism impacts in Waipio are so far the most severe in the region.

The small scale of the proposed resort distinguishes this project from typical resort development in Hawaii. This "retreat resort" concept in itself mitigates several concerns associated with typical resort development.

Complaints about Animal Raising. Many Kukuihele residents raise animals (e.g., dogs, chickens). These residents expressed concern that the new residents and/or hotel guests would complain about the animals' noise or odor. The proposed boundary adjustments to those residents bordering the project will increase the buffer area between the existing residents and the proposed 1-acre lots. Most of the proposed lots will be zoned agriculture which permits animal-raising. The increased buffer areas and the agricultural zoning should minimize the probability of conflicts related to animal raising. For interested residents whose zoning is currently Residential, the Applicant is also willing to include these residents' property as part of the rezoning application to redesignate their property to agricultural.
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

**Loss of agricultural land use.** Some community members seemed to regard agriculture as the key element, and while they despair at the demise of Hamakua Sugar, they are hopeful that diversified agriculture can substitute. For some of these people, the use of a very small proportion of Hamakua's agricultural land for the proposed project is seen as minimal impact, at least if they are assured that resort development in the area is "one-time only." Some residents spoke of the positive aspect of gaining an additional market for local crops. Others seemed to consider any resort, no matter how small or inconspicuous, an unpardonable blight upon the rural and cultural purity of the area. The project minimizes the impacts on agriculture by: (1) encouraging existing residents to continue and expand their backyard farming by giving certain residents additional land (see Figure 11, "Amanresort Master Plan," on page 2-17); (2) maintaining approximately 20 acres in open space that could be "landscaped" with orchards, gardens, taro fields, or other agricultural use; (3) providing agricultural lots that permit agricultural activities, including animal raising; and (4) providing an opportunity for local farmers and the hotel restaurant chefs to discover mutual beneficial relationships. 42

**Compatibility of Guests/Newcomers vs. Locals.** Given the expected high-market orientation of the 1-acre lots, the new residents would almost certainly be high-income individuals and families. The addition of this group would change the income profile of the community to become bi-modal; i.e., one group would be wealthy, and another mostly middle-class; such stratification would be even more apparent if the proposed lots are a gated community. A study done for the Manele Golf Course on Lanai revealed some community attitudes relevant to the Kukuihale project. One concern expressed by residents was that "affluent Koele or Manele resort residents could treat longtime Lanai residents in a superior or disrespectful way. Some community informants linked this concern to memories of earlier plantation days, where Caucasians dominated an ethnically-stratified society." The study went on to note that relationships between locals and affluent residents at

42. For example, a workshop was held recently in Hilo, Waimea, and Kona (September 28, 29, 30, 1993) on "Hawaii Grown: From Farm to Restaurant" to further develop the alliance between farmers and chefs. One of several sponsors of this workshop was the University of Hawaii College of Tropical Agriculture & Human Resources. See also, "Hotel chefs cultivating boutique farms in Ka‘u", *Pacific Business News*, August 9, 1993; "Producing fresh produce on Kaua‘i", *Pacific Business News*, September 27, 1993 (former plantation worker supplying Ko‘olau Lodge fresh vegetables); "A Restaurant Takes Root", *Eating Well*, VIII, n.16, March/April 1993 (Chez Panisse, a successful restaurant in California, tailors the menu to the supply of ingredients from the local network of farmers, fishermen, and ranchers).
older, similar projects had generally mellowed into mutual respect if not complete acceptance. They cited the importance of respectful behavior among new residents as a key to this mutual respect.

The Applicant projects that most of the hotel guests will come from North America (40%), Asia and Australia (30%), Europe (20%), and other areas (10%). The projected 1-acre lot residents would be Asians (33%), Americans (33%), Europeans (17%), and Hawaii residents (17%). This projected ethnic mix would diversify the Kukuihaele population. There is the potential for conflict among current residents and future residents and hotel guests in the realm of values, particularly cultural values. This is especially true because not only will the new residents and guests be "newcomers," unfamiliar with local history and people, they will also be from different socio-economic groups, in some cases, vastly different. On the other hand, not all interaction between newcomers/guests and locals is likely to be negative. Interaction between members of different socio-economic groups can be healthy, enlightening and fruitful to all parties, leading to new understandings and sympathies.

One area of conflict cited by area residents in interviews was the issue of privacy. Local residents may sometimes feel that newcomers curious about their new surroundings may intrude or bother. The privacy requirements of newcomers may also cause problems, particularly if they construct imposing fences or begin to complain about noise, odors or eyesores derived from residents' home businesses, parties, animals or other habits. A second area of conflict may arise as a result of misunderstandings concerning ethnic, cultural or religious practices. Examples include possible opposition to cockfighting and insensitivity regarding Hawaiian cultural practices. Another general area of conflict is over the issue of strictly "rural" values. For example, some new residents may see Kukuihaele as "substandard" and begin to demand infrastructure changes or new services not in keeping with local desires. More personal conflicts involve resentment over judgements by newcomers that locals are "country bumpkins," or perceptions by locals that the newcomers are "rich snobs."

Whether conflicts will actually arise is very speculative and highly dependent on the unique mix of individuals. The limited number of guests will in itself mitigate potential conflicts. The buildout rate of the 1-acre lots over several years will also ease the transition and acceptance of newcomers into the community.

Depending on the interest and initiative of the community, the Applicant has agreed to organize a standing committee comprised of representatives of the hotel and the community to discuss any problems with community relations, promoting Hawai-
ian values in the resort industry, providing workshops on Hawaiians and the local history, and other purposes. The Po'okele Program, established by a nonprofit group on Lanai, may be examined as a model.\textsuperscript{43}

\textit{Property Tax Increase}. Most residents fear that a resort would drive land values higher, resulting in higher property taxes. Because many residents are on fixed incomes, the higher property taxes may force the residents to sell and move. A bill is currently pending before the County Council that would freeze homeowners' property taxes. Should the County Council not pass this bill, the Applicant's proposed trust fund will compensate owner-occupants any increase in taxes. The closest model for the proposed project is Hana Hotel. Hana Hotel is a low-scale, high-quality hotel in a rural setting. Old timers have continued to live in that community, and have not been forced out over the generations as a result of property taxes or inheritance taxes. According to the County Real Property Tax Office, properties within a resort are not considered comparable to properties outside a resort; therefore, the values of the proposed hotel and 1-acre lots will not be used to determine the assessed values of the surrounding non-resort properties, even if these properties are contiguous (e.g., Kaua'ou resort area where homes inside and outside the resort are not evaluated on the same basis).\textsuperscript{44}

\textit{Reduction in Land Area Used for Backyard Gardening}. Several residents, especially in Tiger Camp, use the area behind their homes for gardens and other uses with tacit approval of the former landowner, Hamakua Sugar Company. These residents fear they would lose this privilege under the proposed development. The Applicant has agreed to deed to these residents the area currently used by them.

\textit{Impact on Important Community Landmarks}. The Social Hall, Kukuihale Park, and the cemeteries are important landmarks to the long-time residents. Any changes to the Social Hall and park should recognize the importance of these landmarks in terms of the social functions and cultural identity values to the community. The Roman Catholic Church cemetery is already full and expansion is desirable. The Applicant has agreed to provide funds and work with an advisory committee or other forum comprised of community representatives established for the design.


\textsuperscript{44}Public meeting held by representatives of the County Real Property Tax Office at the Kukuihale Social Hall on December 9, 1993.
3.2.2 Rural Lifestyle and Residents' Concerns

operation, and maintenance of the Social Hall and Kukuihale Park. The Applicant has agreed to donate land to the Roman Catholic Church and the County to expand the respective cemeteries.

Precedent for Future Growth. Although some residents do not oppose this particular project, they fear that approving this project would set a precedent and open the door to rampant resort development along the Hamakua Coast. The State and County have the power to contain and direct growth through various land use controls. The County General Plan provides the means to limit future resorts by establishing five levels of resort development: destination resort community, major resort area, intermediate resort area, minor resort, and retreat resort. The proposed project falls under the retreat resort classification, the most restrictive resort classification. The General Plan policies do not support large-scale resort destination areas anywhere in Hamakua; instead, the General Plan encourages small family-operated hotels and small-scale retreat resort development. To allow the proposed retreat resort to "open the door" to uncontrolled resort development would be contrary to the General Plan (see §4.4"COUNTY GENERAL PLAN" on page 4-23 for further discussion on the General Plan).

Mitigation

None required. The Applicant has mitigated potential impacts by committing to the following measures (see Developer's Letter of Commitment in Appendix H):

* Property Tax Trust Fund. The Applicant will establish a trust fund to compensate existing Kukuihale residents for increases in property taxes. Should the County Council pass the freeze on homeowners' property taxes, the fund will be available for other community benefits. The details on the trust fund require further dialogue with the community since the trust fund, as currently proposed, is targeted for owner-occupants who comprise approximately 64% of Kukuihale according to the 1990 Census. Renters may be affected by property tax increases if a landlord elects to raise the rent due to property tax increases, depending on the landlord's carrying cost and the market rent in the area.

* Advisory Design Committee. The Applicant will provide funds and work with an Advisory Committee or other forum to design, operate, and maintain the Social Hall and Kukuihale Park. A management agreement between the Applicant and an appropriate entity established by the community needs to be negotiated.

* Cemetery Expansion. The Applicant will set aside land to expand the Roman Catholic and County cemeteries.
• **Readjust Property Boundaries.** The Applicant will convey that portion used by certain residents as part of their backyards.

• **Agricultural Lots.** The low-density 1-acre agricultural lots would maintain the rural ambience of Kukuihaele. Agricultural uses and animal raising are permitted uses within this zoning district. The existing animal-raising activities by the Kukuihaele residents would be consistent with the proposed agricultural zoning.

• **Access Route.** The proposed access from Highway 240 would avoid impacts to the existing Kukuihaele residents from project-generated traffic during the construction and operational phases.

• **Community Relations & Cultural Promotion Committee.** Depending on the interest and initiative of the community, the hotel operator has agreed to organize a standing committee comprised of representatives of the hotel and the community to discuss any problems with community relations, promoting Hawaiian values in the resort industry, providing workshops on Hawaiiana and the local history, and other purposes.

### 3.2.3 Waipio Valley

**Setting**

Waipio Valley, although not within the Project Site, requires attention in any discussion of land use changes in Kukuihaele. The valley is a valuable cultural, natural and scenic resource which many feel to be threatened by overuse and conflicting land uses. Its proximity and history connect it closely to Kukuihaele.

Waipio is memorialized in many legends. In one, the god Lono descends to earth on a rainbow to find a wife in a breadfruit grove besides Hīlāwai Falls. Waipio is also associated with Umi, the famous king of Hawaii, who had many of his greatest adventures in Waipio and Hamakua. He is also said to have laid out the taro patches of Waipio.

Waipio has always been the finest location on the island of Hawaii for taro cultivation. Its rich agriculture supported possibly as many as 10,000 inhabitants during prehistory. Early descriptions of Waipio by Western travelers are invariably rhapsodies upon its beauty. For all these reasons, the memory of Waipio's past is cherished in Hawaiian history.

Since Western contact in 1778, the population and area under cultivation has steadily declined, although taro farming has persisted. The rice-growing era at the
end of the 19th century introduced new ethnic groups, especially Chinese, to the
valley. Since that time Waipio has been home to members of diverse ethnic groups.
The devastating tsunami of 1946 in the Hawaiian Islands was a disaster in Waipio
and impelled many of the few remaining residents to move out of the valley.

Most who farm taro today do so part-time and reside outside the valley. Most taro
land for taro was on month-to-month leases (which reportedly have recently been
lengthened) from Bishop Museum, which owns approximately 90% of the valley.
However, most of the actual inhabitants of Waipio are now transplanted Mainlanders
who enjoy the rural isolation of Waipio and do not rely on taro farming as their
major source of income or sustenance. A previous study reported that in 1991 there
were sixty inhabitants of the valley.

Traffic into Waipio Valley is restricted to four-wheel drive vehicles and must use
the steep and dangerous Waipio Valley Access Road, the scene of several major car
accidents. Residents, visitors from other parts of the island, some individual tourists
and tour operators use this road, Waipio offers scenic views, historic sites and a
beautiful beach and river with opportunities for swimming and surfing.

Waipio is currently a center of controversy. Problems of overuse by visitors are
compounded by existing problems of conflicting land uses, unsatisfactory land ten-
ure for farmers, inadequate infrastructure (particularly the Access Road) and stream
flooding.

The State Legislature established the Task Force to Preserve Waipio Valley by Res-
olution in 1990. It consists of representatives of State and County government,
large landowners, and community and farming associations. Its purpose is to dis-
cuss and develop long-term solutions to the conflicts of the valley.

The Task Force has published several reports (1991, 1993) that outline its findings
and recommendations. According to the 1991 report:

"The influx of visitors negatively impacts the natural and cultural resources of the
Valley. The lack of adequate restroom and camping facilities, potable water, and
waste disposal services on the Valley floor has led to the deterioration of the stream
beds, the roads and trails, and the beach front area."

Because of this, the task force has concluded that "There is a need for enhanced
regulatory controls on the commercial and public uses of the trails."
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Impacts

Increased Visitor Use of Waipio Valley. Currently, about 60,000 visitors per year enter Waipio Valley using the shuttle tours (or about 10,000 trips per year assuming an average of 6 visitors per shuttle tour). This number already stresses the residents and resources in the Valley. Any increase would only exacerbate the problem. The PUC controls the number of shuttle companies licensed to conduct Waipio tours. The uncontrolled component includes the rental cars and local residents. The proposed hotel would add an estimated 1 van trip per day based on the hotel operator’s experience at their other resorts located in similar conditions where the only beach required 4-wheel transportation from the hotel to the beach—less than 5% of the existing shuttle tour trips ((1 trip/day x 365 days/year) + 10,000 trips/year).

Mitigation

None required. The Applicant has committed to abide by the recommendations of the various agencies and organizations involved with the control of Waipio Valley.

3.2.4 Employment and Income

Setting

Economic Trends. Hawaii’s economy grew rapidly during the 1970’s and 1980’s at an annual average rate of 10.8% and 8.6%, respectively, measured by the Gross State Product in current dollars. Hawaii County’s economy grew at a faster rate than Oahu largely due to the bustling resort development in the North Kona and South Kohala districts.

The sugar industry was the pillar of Hamakua region since the late 1800’s. The 45,000 acres in sugarcane cultivation along the Hamakua Coast amounted to 79% of the total sugar production acreage in Hawaii County and 27% of sugar acreage statewide. Besides sugar, the district also supports ranching and small truck farming activities (ginger, taro, tropical flowers and ornamentals). Unlike other districts in the County, there has been minimal shift in the Hamakua district from sugar production to tourism or other industries, largely a result of climate and historical land use patterns. A 1986 Department of Labor and Industrial Relations survey reported that 46% of all employment in Hamakua derives from agricultural related occupations (agriculture, forestry, fishery). Most of the balance of employment in the district, estimated at 35%, commutes to resort related employment in South Kohala.
A combination of events—the Gulf War of 1991, recession on the mainland, and changing economic conditions in Japan—have contributed to an economic slowdown since 1991. Visitor arrivals, the primary barometer of the health of the tourism industry, declined in 1991 and in the first six months of 1992. Statewide, visitor arrivals were down by 2.8% when compared to the same period in 1991; in Hawaii County, visitor arrivals were down by 7.5%. Statewide civilian unemployment rates have also risen from an average of 2.8% to 4.8% for the six months of 1992. For Hawaii County, unemployment increased from 4.0% to 7.1%.

In addition to the drastically declining tourist trade, Hawaii County and Hamakua in particular is undergoing further economic ills with the closing of two major sugar operations. Hamakua Sugar Company and Mauna Kea Agribusiness have suffered financial setbacks resulting from low yields and fluctuating sugar prices. The expected closing of both plantations by the end of 1994 will cause 1,100 immediate unemployment.

The longer term outlook for the nation and the state does not appear bright. Compared to the '70s and '80s, the '90s is expected to be a decade of "slow growth" reflecting the slow recovery of the global economy with which the U.S. and Hawaii economies are largely impacted. Economic adjustments are necessary in the Hamakua district. Although there is a wide range of possible diversified agricultural products that can be grown in the region, the list is very short for those that can be produced at profit within a relatively short term. Experimentation and innovation is necessary. Until other crops can be developed and tested for market feasibility, more immediate solutions need to be implemented.

**Labor Force Characteristics.** The Honokaa-Paunilo-Kukuihaele area has been the primary source for labor for the Hamakua Sugar Plantation. As of March of 1993, union members, their families and retirees of the plantation made up 52 percent of the total population. This area is also where the resort is expected to obtain some 90 percent of their employees. The closing of the plantation, which will be complete after early 1995, has begun to release hundreds of workers from their jobs. By that time, approximately 447 field operations, 519 factory/garage, 17 medical and 39 feedlot/slaughthouse jobs are projected to be terminated.

Table 8 on page-62 summarizes the characteristics of the plantation workers as analyzed by a union survey in early 1993.
### TABLE 5. Plantation Labor Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Careers</td>
<td>Two-thirds have worked for company for 10 years or more. Almost 27 percent have worked between 11 and 20 years for the company. Another 24 percent have between 21 and 30 years with the company.</td>
</tr>
<tr>
<td>Ethnic</td>
<td>American citizens are 92 percent. The largest ethnic group is Filipino, with 36 percent. Japanese and Chinese make up 30 percent, Part-Hawaiians are 18 percent, and Portuguese, other Caucasian and Puerto Rican are also represented.</td>
</tr>
<tr>
<td>Retirees</td>
<td>There are 863 pensioners and their spouses enrolled in the retiree medical plan - 178 of whom are less than 65 years of age.</td>
</tr>
<tr>
<td>Families</td>
<td>There are 661 workers and 1381 dependents. Hamakua's workforce are mostly stable families. Over 71 percent are married, with another 7 percent divorced or widowed. Only 22 percent are single. Over 60 percent have dependent children.</td>
</tr>
<tr>
<td>Homeowners</td>
<td>Almost 37 percent own their homes, with another 47 percent renting company housing and 17 percent renting outside housing.</td>
</tr>
<tr>
<td>Education</td>
<td>Over 83 percent are high school graduates. Of these, about 12 percent went to trade school or higher education. The remaining 17 percent have completed various levels of grade school.</td>
</tr>
<tr>
<td>Age</td>
<td>Over 43 percent are 45 years and older. Some 30 percent are between 35 and 44 years old. Only 26 percent are under age 35. Only 5 percent indicated they were ready to retire.</td>
</tr>
<tr>
<td>Veterans</td>
<td>Almost 22 percent are veterans.</td>
</tr>
<tr>
<td>Community</td>
<td>Only 14 percent indicated that they would move from the Big Island to find another job. Only 29 percent indicated they would move to another area of the Big Island to find work.</td>
</tr>
</tbody>
</table>


Plantation workers themselves are not the only Hamakua residents who will be entering the labor market in the next few years. Hundreds of previously unemployed or part-time working family members of plantation members are seeking jobs in order to supplement family income. Another source of potential workers are the graduates of Honokaa High School. A total of 1456 students are enrolled in Honokaa School (K-12) at the beginning of the 1993-1994 school year (Source: Hawaii Department of Education). In 1993, 134 students graduated with high school degrees. Under present conditions, many students who do not enroll immediately in college are compelled to leave the area because of a lack of jobs. In the
future, with the closing of Hamakua Sugar Company, this proportion will be significantly higher.

Impacts

Increased Employment Opportunities. The project would generate three types of employment opportunities during the construction and operational phases (see Table 9, "Projected Direct, Indirect, and Induced Employment During Construction and Operational Phases," on page -64);

- Direct employment: jobs that are created by the project to construct the project as well as permanent resort staff.
  Construction Phase: Based on comparable resort construction in the State, the one-year construction phase beginning in the latter part of 1994 would generate jobs for 81 persons with an estimated construction payroll of $3.83 million. The build-out of Aman one-acre lots could add an additional 75 jobs.
  Operational Phase: Once the hotel opens, Amanresort will provide about 100 full-time equivalent jobs. It is estimated that 32% of these jobs would be classified as management/salary class.

- Total Direct Jobs: The total direct jobs generated by the hotel during the construction and operational phases would be about 182 jobs. The one-acre lots would add another 75 jobs during construction, for a total of 257 direct jobs.

- Indirect employment: jobs that are created as the project begins to purchase goods and services from local businesses.

- Induced employment: jobs created as the project-related employees begin to spend their money.

  Construction Phase: The State's input-output economic model calculates that 2.18 additional full-time jobs are generated for every full-time job in the building sector and 1.77 additional jobs for every full-time job created in the infrastructure sector of the construction industry. Based on this assumption, the project will generate an additional 157 indirect and induced jobs. Aman one-acre lots could add 164 more indirect and induced jobs, for a total of 321 indirect and induced jobs during construction.

  Operational Phase: The State's input-output economic model calculates that 0.9 additional full-time jobs are generated for every full-time job in resort operations. Based on this assumption, the project will generate an additional 90 indirect and induced jobs.
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Total Indirect and Induced Jobs: The total indirect and induced jobs generated by the hotel during the construction and operational phases would be about 247 jobs. The one-acre lots would add another 164 jobs during construction, for a total of 411 indirect and induced jobs.

- Total employment: sum of direct, indirect, and induced jobs.

Construction Phase: The hotel would generate about 238 direct, indirect, and induced jobs. The one-acre lots would add another 239 jobs, for a total of 477 jobs.

Operational Phase: The hotel would generate about 191 direct, indirect, and induced jobs. It is conservatively assumed the one-acre lots would not generate any jobs during the operational phase.

Total: The total direct, indirect, and induced jobs generated during the construction and operational phases is about 429 jobs for the hotel and 239 for the one-acre lots, for a total of 668 jobs.

**TABLE 9. Projected Direct, Indirect, and Induced Employment During Construction and Operational Phases**

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>CONSTRUCTION PHASE</th>
<th>OPERATIONAL PHASE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Amanhide-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>away Hotel</td>
<td>81</td>
<td>157</td>
<td>238</td>
</tr>
<tr>
<td>1-Acre Lots</td>
<td>75</td>
<td>164</td>
<td>239</td>
</tr>
<tr>
<td>TOTAL</td>
<td>156</td>
<td>321</td>
<td>477</td>
</tr>
</tbody>
</table>

Income for those directly employed by the hotel would be higher than the plantation wages, especially when tips and bonuses are included. Business establishments in Honokaa or Waimea may realize benefits from visitor and employee spending.

*Labor Fit.* The breakdown of Hamakua Sugar employees as of January 1993 is given in Table 10, "Existing Employee Classifications at Hamakua Sugar Company," on page 65.
### 3.2.4 Employment and Income

#### TABLE 10. Existing Employee Classifications at Hamakua Sugar Company

<table>
<thead>
<tr>
<th>Factory/Garage</th>
<th>Field Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinist</td>
<td>Equipment Operators</td>
</tr>
<tr>
<td>Electrician</td>
<td>Heavy Equipment</td>
</tr>
<tr>
<td>Welder</td>
<td>Field Workers</td>
</tr>
<tr>
<td>Mechanic</td>
<td>Pest Control</td>
</tr>
<tr>
<td>Utility Workers</td>
<td>Lead Personnel/APT</td>
</tr>
<tr>
<td>Equipment Operators</td>
<td>Administrative/Clerical</td>
</tr>
<tr>
<td>Repair/Maintenance</td>
<td></td>
</tr>
<tr>
<td>Administrative/Clerical</td>
<td></td>
</tr>
<tr>
<td>Lead Personnel/APT</td>
<td></td>
</tr>
<tr>
<td>Plumber</td>
<td></td>
</tr>
<tr>
<td>Carpenter</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feedlots/Slaughterhouse</th>
<th>Medical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment Operators</td>
<td>Admin/Prof/Technical</td>
</tr>
<tr>
<td>Livestock Handlers</td>
<td>Nurses</td>
</tr>
<tr>
<td>Factory Workers</td>
<td>Clerical</td>
</tr>
<tr>
<td>Drivers</td>
<td></td>
</tr>
<tr>
<td>Mechanic</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Hawaii Island Economic Development Board.*

The job requirements as projected by the Applicant are listed in Table 11, "Planned Employment at Amanresort," on page 3-66. The area of greatest fit between the soon-to-be-unemployed Hamakua Sugar Company workforce and the needs of the Amanresort is found in the maintenance area. These fourteen jobs could potentially be filled many times over by the Hamakua workforce. There will probably be competition among ex-plantation workers for these jobs, since hotel jobs usually pay as high or higher than plantation work (projected wages at the Amanresort have not been determined and/or disclosed by the Applicant).

The other sectors of resort employment, although not related as directly to plantation work as the maintenance sector, offer promising opportunities for Hamakua Sugar workers. Employees who were involved in office work may find that their...
skills are desired and readily transferable. Certain supervisors and managers may also make a smooth transition. Housekeeping and food and beverage work, however, might require considerable re-training and adaptability on the part of ex-plantation workers.

**TABLE 11. Planned Employment at Amanresort**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Number of Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOMS</td>
<td>12</td>
</tr>
<tr>
<td>Housekeeping and Room Attendants</td>
<td>8</td>
</tr>
<tr>
<td>Other Attendees</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
</tr>
<tr>
<td>FOOD AND BEVERAGE</td>
<td>27</td>
</tr>
<tr>
<td>Kitchen</td>
<td>12</td>
</tr>
<tr>
<td>Restaurant/Bar</td>
<td>15</td>
</tr>
<tr>
<td>MINOR OPERATIONS/GENERAL ADMIN/MARKETING</td>
<td>27</td>
</tr>
<tr>
<td>Shops/Services</td>
<td>7</td>
</tr>
<tr>
<td>Financial/Accounting</td>
<td>10</td>
</tr>
<tr>
<td>Clerical</td>
<td>2</td>
</tr>
<tr>
<td>Security</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td>FACILITY MAINTENANCE</td>
<td>14</td>
</tr>
<tr>
<td>Plumber, Electrician, Engineer</td>
<td>3</td>
</tr>
<tr>
<td>Carpenter, Painter, Mechanic</td>
<td>4</td>
</tr>
<tr>
<td>Nursery and Grounds</td>
<td>2</td>
</tr>
<tr>
<td>Truck Drivers</td>
<td>2</td>
</tr>
<tr>
<td>Laundry</td>
<td>3</td>
</tr>
<tr>
<td>MANAGEMENT AND SUPERVISORY</td>
<td>21</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>101</strong></td>
</tr>
</tbody>
</table>

**Potential Job Satisfaction.** A social impact assessment conducted for Lanai Company sampled the opinions of Lanai's current plantation workers as well as former plantation workers who had made the transition to resort work. Some of their findings shed light on the impacts that may occur at Amanresort.
Some hotel workers mentioned that they were uncomfortable with the formal atmosphere, uniforms, and hours. This opinion was not shared by the majority, apparently. For potential employees currently working in pineapple, the single most preferred type of future job was landscaping. Few reported wanting jobs with significant amounts of public contact (particularly food and beverage jobs). Instead, "back of the house" resort jobs (e.g., housekeeping) were preferable. The Lanai study reasoned that some of this reluctance arose from deficiencies and discomfort with oral and written communication skills, particularly among Filipino immigrants.

In the case of Amanresort, which will be the first of its kind in Hawaii (not to mention Hamakua), one may only speculate about potential job satisfaction. Worker satisfaction is reported to be high and job turnover low at other Amanresorts throughout the world. Most of these resorts, however, are located in Third World countries and their experiences may not transfer to Hawaii. It is important to note, however, that job satisfaction of whatever degree is possible only when one has a job. As few employment opportunities are unfolding in Hamakua, a job at the Amanresort is likely to be prized.

Mitigation

Operational Phase:

- **Job Training.** The State Department of Labor and Industrial Relations Employment Services Division (DLIR) is the lead agency in coordinating job training for the affected sugar workers. DLIR has organized an Employment Assistance Committee comprised of representatives of the union and community to identify needs and coordinate services. The Committee not only addresses job training, but related matters that affect job training such as transportation to and from the training centers, child care, housing, and stress management. Other State agencies (e.g., Department of Economic Development and Tourism) work through DLIR and the Committee in providing assistance. DLIR has also organized an Employment and Training Task Force comprised of about ten agencies (e.g., Department of Education, community colleges, etc.) who provide the training services. DLIR trains the workers in a variety of jobs that have potential employment opportunities in the Hamakua or South Kohala region including hotel services, health services, diversified agriculture, and golf course maintenance. If the proposed project proceeds, DLIR would coordinate with the hotel operator (Amanresort) in establishing a custom-designed training program to
meet the needs and timetable specific to the project. Amanresort would provide supplementary training as necessary to meet the standards and expectations of Amanresort.

- Hiring Preferences. For job applicants equally qualified, the hotel operator and the community/union could decide on a priority order for hiring based on factors such as whether the job applicant is a resident of Kukuihaele, former plantation worker, related to resident in Kukuihaele-Honokaa, or other criteria.

3.2.5 Housing

Setting
The County has imposed an inclusionary employee housing requirement through the rezoning process since 1974 based on the premise that new developments should be held accountable for the impacts they generate. To be fair and consistent, the County adopted an affordable housing policy that sets forth definitive standards. The current assessment is 42% of the number of resort units (i.e., 42 affordable units for every 100 resort units) and 10% of the number of residential units. The requirement may be satisfied by providing the affordable units onsite, providing the units offsite, contributing developable land, payment of in-lieu fees, or contributing infrastructure/services comparable in value to in-lieu fees. The 1993 in-lieu fee, based on the amount of subsidy required to provide housing units affordable to target groups, is $12,500/unit.

Impacts
To satisfy the affordable housing requirements, the Applicant would need to provide a maximum of 21 affordable units (42% of 40 resort units and 10% of 45 residential units). The Applicant originally proposed to provide affordable housing in the approximately six acres behind Tiger Camp which would have significantly reduced the amount of backyard area currently used by the Tiger Camp residents.

45. Description of DLIR's job training program is from personal communication with the Hilo office of DLIR's Employment Service Division (Mr. Blane Hanagami) on 9/23/93.

46. Hawaii County Housing Agency Resolution No. 65, Resolution to Approve an Interim Affordable Housing Policy for the County, effective May 2, 1990.
3.2.6 Dislocation

(refer to §3.2.2 "Rural Lifestyle and Residents' Concerns" on page 52). Instead of satisfying the affordable housing requirement by providing affordable units onsite, the Applicant has elected to contribute in-lieu fees. The maximum in-lieu fee, based on $12,500/unit for 21 units, would be $265,000 payable prior to issuance of the building permit. These estimated fees would be subject to negotiation with the County housing agency based on the current rates and relative impact of the proposed project. In response to comments from the State Housing and Finance Development Corporation, the Applicant will also provide a limited number of employee housing onsite in the area between Highway 240 and the Plantation Manager’s House.

Mitigation

None required. The Applicant has agreed to pay the in-lieu fee and a limited number of onsite employee housing.

3.2.6 Dislocation

Setting

An elderly resident currently rents a home within the Project Site near the Plantation Manager's Estate. This is the only occupied structure within the Project Site (other than the Plantation Manager's Estate which is currently occupied by the Applicant).

Impacts

According to the proposed site plan, the rented house sits on one of the residential-resort lots. However, the Applicant will grant the resident a lifetime license to live in the house.

Mitigation

None required. The resident will not be displaced.

3.2.7 Fiscal Impacts

Fiscal impact analysis is a projection of the direct public (State and County) costs and revenues associated with the proposed project. The revenue analysis distinguishes the cost and revenues accruing during the construction vs. the operational
phase, and whether the source is the visitor vs. resident. For residents, the analysis uses an average revenue/cost approach to estimate fiscal impacts. For visitors, the analysis uses a modified average revenue/cost approach with visitor expenditure data from the Hawaii Visitors Bureau and visitor-sensitive components of the State and County operating budgets. Per capita revenue estimates contain all sources of revenue, including taxes, user fees, and other sources. Per capita expenditure estimates contain all expenditures including operations, maintenance, debt service, and cash capital expenditures.

Revenues

State. The State will realize a one-time construction-related revenue of $914,000 from general excise tax on direct cost of construction, excise tax on building materials, conveyance tax, and income tax as a result of the hotel construction. As the one-acre lots are being developed, this will generate similar tax revenues amounting to an additional $936,600. The annual revenues generated by the hotel during the operational phase is estimated to be $989,000 from excise taxes and income taxes.

County. The expected county revenue is primarily from property taxes on the hotel and one-acre lots. All real property except unimproved residential lots are taxed at $10/$1,000 assessed value of the land and $8.50/$1,000 assessed value of the improvements. Unimproved residential lots are taxed at $8.50/$1,000 value. The projected annual revenue is $268,349 from property taxes on the hotel, one-acre lots, and other facilities (e.g., recreation center), as well as other tax sources (e.g., liquid fuel tax, motor vehicle weight tax, utility franchise tax, other fees).

Expenditures

State. Based on average annual expenditures of $3,954 per resident and $860 per visitor, the projected annual expenditure attributable to the proposed project is $386,484.

County. Based on average annual expenditures of $811 per resident and $511 per visitor, the projected annual expenditure attributable to the proposed project is $97,240.
3.2.7 Fiscal Impacts

Net Benefit (Cost)

State. The estimated annual revenues relating to the project are $988,800, while annual expenditures are $386,484, resulting in a net annual revenue of $602,316— a revenue/expenditure ratio of 2.6. In addition, the State realizes a one-time infusion of $914,000 during construction.

County. The estimated annual revenues relating to the project are $268,349, while annual expenditures are $97,340, resulting in a net annual revenue of $171,009— a revenue/expenditure ratio of 2.76.
3.3 PUBLIC FACILITIES AND SERVICES

3.3.1 Roads

A traffic engineer analyzed the existing conditions and impacts of the project on the roads in the vicinity of the Project Site (see Appendix F).

Setting

The Honokaa-Waipio highway (State Highway 240) is a two-lane highway, with twelve-foot lanes and wide (greater than six-foot wide) shoulders, and is generally posted for a speed limit of 45 mph. An old portion of the highway ("Old Route 240") parallels the existing highway for about 1.2 miles, providing local service to Kukuihaele village.

Old Route 240 is a County two-lane roadway, approximately 18 feet wide with minimal shoulders. Old Route 240 connects to the newer Highway 240 at stop-controlled intersections at both ends.

Traffic conditions on Highway 240 and Old Route 240 are at Level of Service A ("good"). On Highway 240 between Kukuihaele and Honokaa, a 24-hour count taken in June 1992 showed a two-way volume of 1,652 vehicles per day (vpd). The highest hourly volume occurred between 9:30 and 10:30 AM, with a two-way volume of 138 vehicles per hour (vph).

Traffic heading from the Project Site to Hilo would use Highway 240 through Honokaa to its junction with the Hawaii Belt Road (Highway 19). Highway 19 has a posted speed limit of 55 mph. Traffic heading from the Project Site to Waimea would use Lehua Street to access Highway 19.

Traffic volumes on Highway 19 and Highway 240 have been increasing and are expected to increase. Based on the State's Long-Range Plan for the island of Hawaii, daily traffic volumes are projected to increase for Highway 19 and Highway 240 at an average compounded rate of 4.6% and 2.7% per year. Peak hour volumes are expected to increase in proportion to daily volumes.
ECONOMICAL SETTIN, IMPACTS, AND MITIGATION MEASURES

Impacts

Project Traffic. The traffic generated by the proposed hotel, one-acre lots, inn, and recreation center was estimated based on the number of units, number of employees, or floor area. The estimated total daily traffic volume is 1,570 vpd. The afternoon peak hour volume is 61 vph entering the project and 71 vph exiting the project.

Impact on Highway 19 and 240. Figure 31 on page 74 shows the projected peak hour volumes at the intersection of Highway 240 and Highway 19 with and without the project for the year 1996 (estimated opening date of the project) using the compounded annual growth rates. The existing condition of this intersection is a Level of Service A for left turns from Highway 19 onto Highway 240; the Level of Service for left turns from Highway 240 onto Highway 19 is D. The projected Level of Service for 1996 at this intersection would not change from the existing conditions with or without the project (see Table 12, "Highway Intersections Level of Service," below).

<table>
<thead>
<tr>
<th>TABLE 12. Highway Intersections Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESERVE CAPACITY</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Existing (1993) PM Peak Hour</td>
</tr>
<tr>
<td>Left turn into Highway 240</td>
</tr>
<tr>
<td>Shared lane out of Highway 240 (stopped)</td>
</tr>
<tr>
<td>Future (1996) PM Peak Hour (without project)</td>
</tr>
<tr>
<td>Left turn into Highway 240</td>
</tr>
<tr>
<td>Shared lane out of Highway 240 (stopped)</td>
</tr>
<tr>
<td>Future (1996) PM Peak Hour (with project)</td>
</tr>
<tr>
<td>Left turn into Highway 240</td>
</tr>
<tr>
<td>Shared lane out of Highway 240 (stopped)</td>
</tr>
</tbody>
</table>

Impact of Proposed Access. A new access road will be constructed to provide access to the resort. An existing dirt/gravel road passing near and on the Honokea side of the Plantation Manager's Estate would be upgraded to County standards. This new roadway would also serve seven one-acre lots and would minimize traffic impact to the existing community. This roadway would intersect Highway 240 in a T-intersection. The traffic assignment shown in Figure 32 on page 75 represents the estimates of peak hour traffic at this intersection; these estimates include a por-
tion of the existing traffic using Old Route 240 since this connection is expected to provide an alternate path to/from the highway. The projected conditions at this intersection will remain at Level of Service A (see Table 13, "Highway Intersection Level of Service: Proposed Access Road," on page 76).

FIGURE 31. Traffic Assignment 1996 With and Without the Project: Highway 240 at Highway 19

Highway 240 at Highway 19
PM Peak Hour

Highway 19 (Hawaii Belt Road)  Highway 19 (Hawaii Belt Road)
without project  with project

Traffic Impact Analysis Report
AMANRESORT AT
KUKUIHALE, HAWAII

1996 Traffic Assignments
Prepared by: ADACo Inc., October 1991
Figure 32, "Traffic Assignment 1996: Proposed Access at Highway 240," on page -77 shows the traffic estimates for the intersection of the new access road with Old Route 240. Stop controls at this intersection could be placed on either roadway or on all approaches for Level of Service A conditions. The alternative access route between the Social Hall and Tiger Camp would result in greater impacts (see Figure 34, "Traffic Assignment 1996: Alternative Access at Old Route 240," on page -78).
### TABLE 12. Highway Intersection Level of Service: Proposed Access Road

<table>
<thead>
<tr>
<th></th>
<th>Reserve Capacity</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Future (1996) mid-PM Peak Hour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left turn into project access road</td>
<td>950</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of project access road (stopped)</td>
<td>553</td>
<td>A</td>
</tr>
<tr>
<td><strong>Future (1996) PM Peak Hour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left turn into project access road</td>
<td>959</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of project access road (stopped)</td>
<td>530</td>
<td>A</td>
</tr>
</tbody>
</table>
FIGURE 32. Traffic Assignment 1996: Proposed Access Road at Old Route 240
Mitigation

- *Intersection with Highway 240.* The projected traffic volumes at this intersection would not warrant a left turn lane. A T-intersection, constructed by the Applicant, should provide adequate acceleration/deceleration for the projected traffic volumes.

- *Other intersection improvements.* Each connection to an existing roadway should be designed to accommodate the largest vehicle (including delivery and emergency vehicles) expected to enter or exit the resort roadways. Stop signs
should be installed to control traffic exiting from the project. For the intersection of the proposed access road with Old Route 240, stop controls could be placed on the access road, on the Old Route 240, or create an all-way stop. In each case, all controlled movements would operate at Level of Service A. Other appropriate signing should be placed if desirable sight distances are not available along the Old Route 240.

3.3.2 Water

Setting

Existing County Water System. The Hawaii County Department of Water Supply (DWS) has three systems in the Hamakua district. The Ahualoa-Honokaa system uses a combination of surface and groundwater sources. The surface water supply comes from the Waimea Water Treatment Plant via the Waimea-Paauku-Nienie system which crosses into Hamakua from South Kohala. Groundwater is supplied from the Huna Well near Honokaa. The Pauuilo system receives its supply from an extension of the Ahualoa-Honokaa system. In the vicinity of the Project Site, the Kukuihaele System relies on a spring source.

The Kukuihaele Spring is fed from a perched groundwater source. The Project Site lies on the interface of lava flows from the Kohala and Mauna Kea volcanoes (see Figure 35, “Hydrogeological Section,” on page -84). Locally, the Mauna Kea lavas (Hamakua Volcanics) overlie the weathered soil surface of the Kohala lavas (Pololu Volcanics). The Kukuihaele Spring is perched on this soil. Such perched sources are sensitive to variations in rainfall. The spring, at an elevation of 540’, reportedly has a capacity of 100 gpm. The supply of water is lifted by two 100 gpm booster pumps to a 100,000 gallon reservoir at elevation 940’.48

The Kukuihaele System services Kukuihaele and Kapulea through an 8” main transmission line along Highway 240 (Old Route 240 within Kukuihaele). In 1991,


48. Waimea Water Services, Kukuihaele Water Supply Alternatives, September 15, 1993 (see Appendix C).
this system had 158 meters and water sales of 38,000 gpd.\textsuperscript{49} Because the spring is considered a surface water source, this system may be affected by the federal Safe Drinking Water Act regulations which will require expensive treatment.\textsuperscript{50} In short, the system will need to be upgraded due to its susceptibility to dry weather conditions and the need for treatment to comply with the federal Safe Drinking Water regulations.

**Water Demand.** According to DWS, the current (1993) estimated demand for the Kukuihaele System is:

<table>
<thead>
<tr>
<th>Average Day</th>
<th>Max. Day\textsuperscript{51}</th>
</tr>
</thead>
<tbody>
<tr>
<td>42,000 gpd (30 gpm)</td>
<td>63,000 gpd (44 gpm)</td>
</tr>
</tbody>
</table>

Given a source capacity of 100 gpm, which converts to 144,100 gpd, the uncommitted capacity of the system is:

<table>
<thead>
<tr>
<th>Average Day</th>
<th>Max. Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>54,000 gpd (37 gpm)</td>
<td>81,000 gpd (56 gpm)</td>
</tr>
</tbody>
</table>

According to DWS, the uncommitted capacity is subject to low dry weather flows and portions of this capacity will be needed for ohana dwelling requests and 2-lot subdivisions in the future.

The estimated demand for the project is:

<table>
<thead>
<tr>
<th>Average Day</th>
<th>Max. Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>35,000 gpd (27 gpm)</td>
<td>52,000 gpd (40 gpm)</td>
</tr>
</tbody>
</table>


\textsuperscript{51} Max. day = ave. day x 1.5 and is used to determine pump capacity requirements.
3.3.2 Water

The estimated demand (max. day), based on DWS's standards, is summarized in Table 14, "Estimated Water Demand for Amanresort (Max. Day)," below.

**Table 14. Estimated Water Demand for Amanresort (Max. Day)**

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>UNITS</th>
<th>GPD/UNIT</th>
<th>TOTAL (GPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potable Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-Acre Lots</td>
<td>45</td>
<td>600</td>
<td>27,000</td>
</tr>
<tr>
<td>Hotel units</td>
<td>36</td>
<td>600</td>
<td>21,600</td>
</tr>
<tr>
<td>Plantation Manager's Estate</td>
<td>1</td>
<td>2,400</td>
<td>2,400</td>
</tr>
<tr>
<td>Sewage treatment building</td>
<td>1</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Subtotal (Potable Water Demand)</strong></td>
<td></td>
<td></td>
<td><strong>32,000</strong></td>
</tr>
<tr>
<td>Irrigation Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscaping acreage</td>
<td>20</td>
<td>3,000</td>
<td>60,000 (seasonal)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>122,000</strong></td>
</tr>
</tbody>
</table>

**Proposed Water System Alternatives.** Waimea Water Services identified three alternatives for the potable water system (see Appendix G):

1. **Use the Existing Kukuihaele Water System.** The existing uncommitted capacity is 81,000 gpd (max. day). The potable water requirements of the project is 52,000 gpd (max. day). The existing system has adequate capacity to serve the project with a balance of 29,000 gpd that would remain to serve future undetermined needs or serve as a contingency for low flows. Fire flow requirements for the hotel could be met with irrigation water stored onsite as water features.

2. **Develop a Private Water System.** A well capable of producing from 100 to 200 gpm is geologically feasible. This well could be drilled at the mauka portion of the Project Site in the vicinity of the Plantation Manager's Estate at approximately elevation 800' to tap the basal groundwater ranging in quality from 50 to 100 mg/l chlorides. A 100,000 gallon storage reservoir would be constructed next to the well. This private system would serve the proposed hotel and mauka one-acre lots. The Plantation Inn and mauka one-acre lots would be served by the County system. This alternative would be prohibitively expensive.

3. **Joint Development with DWS.** The Applicant and DWS could jointly develop a well. The well could be located within the Project Site (elevation approximately 800') or at the DWS storage tank site (elevation approximately 940'). If the well has a capacity of 100 gpm, the project's potable water requirements would be 40% (40 gpm) of that capacity. The County will need to upgrade the existing
system, regardless whether the proposed project proceeds, in order to meet the federal Safe Drinking Water standards; therefore, both the County and the Applicant could mutually benefit by a joint development.

The alternatives for irrigation water include: a fresh or brackish water well drilled within the Project Site at approximately elevation 700'; conveying water from the Lower Hamakua Ditch system; using the Kukuihaele Spring source if that source is replaced with deepwells; and/or reusing treated wastewater effluent.

Impacts

Impact of Groundwater Development on Sustainable Yield. The Honokaa Aquifer System has a sustainable yield of about 31 mgd (see discussion on groundwater in §3.1.3.1 “Groundwater” on page 3-14). Based on the actual yields of the newly drilled State well at Honokaa, this sustainable yield estimate is reasonable. Any new well drilled for the project would withdraw about 0.1 to 0.2 mgd. Existing groundwater withdrawals from this aquifer total 0.7 mgd (max. day). The aggregate total of 1 mgd, including the project's well, would not approach the sustainable yield limit of 31 mgd.

Impact of Groundwater Development on the Kukuihaele Spring and Base Flows of Perennial Streams. The nearest perennial stream to the Project Site is Lalakea Stream. The perched groundwater source sustains the base flow of this stream. The perched groundwater is also the source for the Kukuihaele Spring. Any wells drilled for the project would tap the basal groundwater source; the perched source would not be impacted (see Figure 35, “Hydrogeological Section,” on page -84).

Impact of Well Location on Individual Wastewater Systems. The Department of Health wastewater rules prohibit any subsurface wastewater disposal within a 1000' radius of a drinking water well. The closest existing well is greater than 7 miles away at Haina near Honokaa. If a drinking water is drilled within the Project Site


53. Mink & Yuen, p.36.
in the vicinity of the Plantation Manager's Estate, most of the proposed one-acre lots make up the Old Route 240 would be within the 1000' radius. Wastewater disposal alternatives for the affected one-acre lots would need to be reexamined.

Mitigation

Design Phase:

- **Well Drilling Permit and Safe Drinking Water Approval.** A new well for drinking purposes requires the Department of Land and Natural Resources' Well Drilling and Pump Installation permits and the Department of Health's Safe Drinking Water approval. These approvals regulate groundwater withdrawal to ensure that the new well does not interfere with existing groundwater wells or springs, does not exceed the sustainable yield of the aquifer, and meets water quality standards.56

- **Water Conservation.** A permit condition could require the Applicant to consider water conservation measures in the design of the hotel, such as water-saving toilets and shower heads, as well as landscaping adaptable to the climate that would minimize seasonal irrigation.


55. Department of Land and Natural Resources, Well Inventory Map (see Appendix G).

3.3.3 Wastewater

Setting
There is no County sewerage system in the region. The County plans to construct a sewage treatment plant and interceptor line in Honokaa within the next five years. Because of the cost for a collection system to convey sewage the seven miles from Kukuihaele to Honokaa, the County's plans do not include Kukuihaele within the service area of the proposed treatment plant.
Kukuihaele residents currently use and will continue to use cesspools. Generally, cesspools operate relatively trouble-free in the area based on complaint records maintained by the State Department of Health.\textsuperscript{57} The Department of Health Rules permit cesspools in certain areas that would not jeopardize groundwater quality (refer to Figure 21, "Critical Wastewater Disposal Areas," on page 3-16), provided the development meets the minimum lot size shown on the map and consists of less than 50 units.\textsuperscript{58} The minimum lot size for cesspools within the Project Site is 1 acre.

Impacts

\textit{Impact on County Wastewater Systems.} Since there is no existing or planned County wastewater system in Kukuihaele, the project will provide private or individual systems and will therefore have no impact on County systems.

\textit{Impact of Subsurface Wastewater Effluent on Drinking Water Wells.} Individual wastewater systems would be located a minimum of 1000' from any drinking water well to prevent potential contamination (see previous discussion in §"Impact of Well Location on Individual Wastewater Systems." on page -82).

\textit{Odor Impacts from Private Treatment Plant.} The proposed hotel and one-acre lots would smell any malfunction of the treatment plant before the Kukuihaele residents. It would be imperative for the hotel operator for its own best interest to prevent odor problems. The Department of Health wastewater rules require licensed operators and monitoring to prevent such problems.

Mitigation

- \textit{Wastewater System Approval.} Compliance with the Department of Health's rules for the design and operation of the wastewater treatment plant and individual septic systems should protect the groundwater quality.

\textsuperscript{57}Hamakua Steering Committee, \textit{Hamakua Regional Plan: From Koiakea to Waipio}. Endorsed by the County Council, County of Hawaii, by Resolution No. 244-90, November 1990, p. 19.

\textsuperscript{58}\textit{Hawaii Administrative Rules} §11-62-31.1.

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- **Plan Approval for Private Treatment Plant Site.** A permit condition should authorize the Planning Department to verify at Plan Approval that the treatment plant is not sited in an area that would cause greater odor risks to the Kukuihaele residents than the hotel or one-acre lots.

### 3.3.4 Drainage

**Setting**
There is no existing County drainage system in Kukuihaele. Storm runoff currently sheet flows to natural drainageways.

**Impacts**
The new access road and internal roadways with shoulders and swales to direct the runoff to drywells will improve the drainage system. If a drinking water well is drilled within the Project Site, the Department of Health (DOH) rules prohibit any drywells that fall under the definition of an injection well to be located within 1/4 mile of the well.

**Mitigation**

**Design Phase:**
- **Compliance with DOH UIC Permit requirements.** Discussed previously under the mitigation measures relating to groundwater (see §3.1.3 "Hydrology" on page 3-14).
- **Review of Drainage Plans by the Corps of Engineers.** The Corps of Engineers have jurisdiction to any alterations of most streams. To ensure that the drainage plans do not impact any resources within the Corps' jurisdiction, the Applicant's engineer should submit a set to the Corps for their review.
3.3.5 Power and Communications

Setting
An existing 69 KV transmission line runs along Highway 19. HELCO's Honokaa substation connects to this main transmission line. From the Honokaa substation, existing overhead lines extend along Highway 240 to Kukuihaele, a distance of approximately 7 miles. At Kukuihaele, the lines follow the Old Route 240. The existing system is currently at near capacity. The GTE Hawaiian Telephone system is also at near capacity.

Impacts
The projected load for the project is 3.5 MW. Electrical service to the project would require either a new substation at or near the Project Site, or reconstructing the distribution lines from Honokaa to increase the current capacity. The new substation alternative is the less desirable alternative for two reasons: it would cost substantially more than upgrading the distribution lines from Honokaa; and it would provide excess capacity that could induce secondary growth impacts.

An alternative to HELCO's system is a renewable energy source such as photovoltaic systems. The Applicant is in the process of evaluating the alternatives.

Mitigation
None required. Provided that the Applicant does not select the new substation alternative, the only impact will be on the project budget.

3.3.6 Solid Waste

Setting
The solid waste system for the County of Hawaii consists of landfills located in Hilo and Paauhau, supported by transfer stations strategically located at various communities throughout the island. The Honokaa Transfer Station is the closest County solid waste disposal facility to the Project Site. The County appropriated money in its 1990 budget to construct a transfer station in Kukuihaele.59

The Honokaa Transfer Station has a single loading chute. The chute empties into a compaction trailer with a volume capacity of 70 cubic yards (approximately 18 net
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

tons at full capacity). The trailers are hauled on a scheduled basis and are not necessarily full when hauled (approximately 10–12 tons).  

Impact

The project will generate about 830 pounds of solid waste per day based on the County's standard of 4.9 pounds per capita per day for 85 units assuming 100% double occupancy. Assuming that Honokaa's trailer is hauled daily, the solid waste generated by the project would represent 2% of the total capacity (18 tons) of the transfer station, or up to 4% of the actual hauling volume (10 tons).

Mitigation

Construction Phase:

- Use of recycled materials and locally-produced compost. The Applicant should include a provision in the bidding documents and/or construction contract for the contractor to consider use of recycled materials such as crushed glass as an aggregate substitute in road paving, and the use of locally-produced greenwaste compost as a soil amendment in landscaping.

Operational Phase:

- Integrated Waste Management Program. The hotel operator should develop and implement a solid waste reduction program that should include recycling and diversion of greenwaste for composting. As a service to the Kukuihaele community, the hotel could allow the Kukuihaele residents to dispose and recycle waste at the hotel’s facility since the nearest County transfer station is seven

59. Hamakua Steering Committee, Hamakua Regional Plan: From Kainake to Waipio. Endorsed by the County Council, County of Hawaii, by Resolution No. 244-90, November 1990, p. 18.

miles away in Honokaa. The hotel’s private contractor would haul the non-recyclable waste to the Honokaa transfer station and the recyclables to an appropriate facility.

3.3.7 Police and Fire Protection

Setting

Police. The Honokaa police station serves the entire Hamakua district. The police force consists of 17 personnel with officers on duty 24 hours a day. Based on modest population growth in the district, it is estimated that 3 to 6 additional police officers would be needed by 2000.61

Fire. The Honokaa fire station, located next to the police station, serves the entire Hamakua district. The 18-man crew provides 24-hour fire protection and emergency medical services. The existing fire station is too small since it was originally designed for a crew of 8.62 The fire department has plans to relocate the station to a more centralized site.63

Impacts

In reviewing the project, the fire and police departments indicated that the project will not have significant impacts on their operations.64


63. Ibid.

64. See letters in Appendix 8.
Mitigation
None required.

3.3.8 Health Care Services

Setting
The State-operated Honokaa Hospital serves the Hamakua district with emergency care, ambulatory surgery, acute and long-term care. The existing 30-bed facility has a staff of 50. Occupancy averages about 65%.

The North Hawaii Community Hospital in Waimea recently received funds to start construction. This facility, scheduled to open in 1994 with 50 beds, will focus on acute care. When this hospital opens, the Honokaa Hospital will refer all acute care cases to this Waimea hospital and expand its long-term care facilities.

Impacts
The new additions to Honokaa Hospital and the new hospital in Waimea should adequately serve any increased health care demands generated by the proposed project.

Mitigation
None required.

3.3.9 Education Facilities

Setting
The public school serving Kukuihaele is Honokaa High & Elementary School (K-12). Enrollment is currently about 1,300, drawing students from the Hamakua district and North and South Kohala. To remedy the shortage of classrooms and accommodate the projected 18% growth in enrollment to 1,400 students in 1994, the Department of Education plans to add a new two-story building with four to six classrooms.65
Impacts
Due to the relatively few number of units, the project will have minimal impacts on the public schools in the area.66

Mitigation
None required.

3.3.10 Recreation Facilities and Public Shoreline Access

Setting
The outdated County of Hawaii Recreation Plan identified five recreation resources in the vicinity of Kukuihaele.67

- Kukuihaele Park (County);
- Kukuihaele Community Center (County-leased);
- Kukuihaele Church (potential historic value);
- Kukuihaele Landing (establish a reserve);
- Waipio Valley Scenic Lookout (County).

Na Ala Hole, the Statewide Trail and Access System established in 1988, maintains an inventory “of all trails and accesses in the State, whether wholly or partly on public or private lands and whether or not under the jurisdiction of the department.”68 The State Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW) administers the program. DOFAW’s inventory maps


showed the trail along the shoreline at the base of the cliff outside the Project Site, as well as a jeep road through the Project Site along the cliff edge. The trail was identified as a historic resource and discussed in §3.1.5"Archaeological/Historical Resources" on page 3-33. The County's inventory of public shoreline access confirmed that this was the only trail in the vicinity of the project.

A 1909 map identifies the road on the Honokaa side of the Project Site as a Government Road (see Figure 36 on page -93) extending from the mauka side of the Project Site past the Plantation Manager's House continuing through the makai side of the Project Site. Although the plantation blocked the makai side of this road years ago and is therefore not presently used to access Kukuihaele Landing, the Applicant will allow public access on the portion of this road within the Project Site. The only other Government Road in the vicinity of the Project Site (other than Old Route 240) is the mauka-makai road passing next to the County cemetery. According to the 1909 map, this Government Road terminates at the intersection with Old Route 240. A dirt road extends makai from this intersection leading to the County's chlorination station. The County Department of Water Supply has an easement to use this dirt road. Although the dirt road was never a Government Road, the applicant will allow public access to the chlorination station. However, there is no access to the shoreline from the chlorination station. The jeep trail shown on the USGS map that follows the cliff edge does not provide access to the shoreline—there are no trails from the top of the cliff to the shoreline within the Project Site due to the steep terrain. For this reason, the Applicant does not intend to provide lateral public access along this jeep trail. This restriction is not contrary to the CZM policies since the project is providing access to the shoreline through the only known historical mauka-makai shoreline public access through the Project Site (i.e., the Government Road on the Honokaa side of the Project Site) and will not impair or interfere with lateral access along the only known lateral shoreline access provided by the historical trail at the base of the cliff. The jeep trail at the top of the cliff is a distance of approximately 300' (at the closest point) to 900' (at the


69. See letter from Na Ala Hele (Appendix I).

farthest point) inland from the surveyed shoreline fronting the Project Site; it is not a lateral shoreline access.

FIGURE 38. 1909 Map Showing Government Roads
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Impacts
The proposed project will have beneficial impacts on public recreational resources. The Applicant will provide funds to improve and maintain Kukuihale Park and the Community Center for the residents.

The project will have no impact on the Kukuihale Church. The project will not be visible from the Waipio Valley Lookout (see §3.1.7 “Scenic Resources” on page 3-39). The project will not interfere with access to the shoreline trail at the base of the cliff. The existing access to Kukuihale Landing is via a road from Highway 240 at the Waipio end of Kona Camp. Since this road is outside the Project Site, the project will not impede access along this road. The Applicant will allow public access on the Government Road within the Project Site that provides an alternate route to Kukuihale Landing.

Mitigation
None required. The Applicant has agreed (which decisionmakers can enforce as permit conditions at their discretion) to establish an Advisory Committee comprised of community representatives to design, operate, and maintain the Social Hall and Kukuihale Park, as well as allow public access along the old Government Roads crossing the Honokaa side of the Project Site and the road passing the County cemetery including the portion continuing to the County chlorination station.

3.3.11 Civil Defense

Setting
Kukuihale is not covered by any siren warning device for threats from storm waves, flooding, and destructive winds. The siren must be solar powered, have a minimum output of 115 dB, and be compatible with the existing civil defense siren warning system. The siren requires a 100-foot radius buffer zone in which there are no residential buildings.71

Impacts
The increased population and development will intensify the need for warning systems, public shelters, and evacuation routes.


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Design Phase:

- **Siren.** The County will determine the need for a civil defense siren and funding arrangements, if required. If the County requires a siren to be provided by the Applicant, the Applicant's consultants will coordinate the location and design of the siren with the County and State.

- **Evacuation Route.** The Applicant's consultants should design the access route to the project to accommodate emergency vehicles and to serve as an evacuation route.

- **Public Shelter.** The Kuloloiae Advisory Committee or other appropriate entity involved with the design of the Social and Recreation Center should consider the use of this facility as a public shelter.
CHAPTER 4

RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

This chapter identifies and evaluates State and County land use plans, policies, and controls applicable to the proposed project. The policies include those that support the project as well as those that require reconciliation. Generally, the policies support the retreat resort concept—i.e., a small scale resort that is compatible with the physical and social environment. The only policies requiring reconciliation are agriculturally-related.

4.1 STATE PLAN

The purpose of the Hawaii State Plan, enacted into law and codified in Hawaii Revised Statutes Chapter 226, is to “serve as a guide for the future long-range development of the State; identify the goals, objectives, policies, and priorities for the State; provide a basis for determining priorities and allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; improve coordination of federal, state, and county plans, policies, programs, projects, and regulatory activities; and to establish a system for plan formulation and program coordination to provide for an integration of all major state, and county activities.” The Hawaii State Plan consists of goals, objectives, policies, and priority guidelines. County general plans must further define these goals, objectives, policies, and priority guidelines.² The Land Use Commission must con-
RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Consider the extent to which any proposed reclassification conforms to the applicable goals, objectives, policies, and priority guidelines of the Hawaii State Plan. Since the proposed project involves a general plan amendment (see §4.4 "COUNTY GENERAL PLAN" on page 4-23) and state land use district boundary amendment (see §4.2 "STATE LAND USE DISTRICTS" on page 4-9), the project must conform with the State Plan. The State Plan defines "conform" as "the weighing of the overall theme, goals, objectives and policies of this chapter and a determination that an action, decision, rule or state program is consistent with the overall theme, and fulfills one or more of the goals, objectives, or policies of this chapter."  

The goals, objectives, policies, and priority directions pertinent to the proposed project are discussed below.

Goals:

(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations.

(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.

(3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.

Discussion:

Large resorts usually meet one of the above goals, namely the economic goal, at the expense of the physical environment and social well-being goals. A small retreat resort, however, has the greater potential to satisfy all three goals if properly developed. Based on proven examples, Amanresort is a unique hotel operator that seems particularly focused to meet all of the above goals (e.g., Amandari in Bali). Amanresort hotels are characterized by highly trained local employees who take pride in their work, exquisite natural settings that enhance the mental and physical well-being of its guests and neighbors, and integration with the community with a sense of responsibility and caring. This retreat resort would rejuvenate Hamakua’s sagging economy by providing 100 permanent jobs for former plantation workers as well as job opportunities for future generations, and will also stimulate additional multiplier economic opportunities for businesses that indirectly benefit from the resort.

Objectives and policies for the economy--In general.6

Objectives:
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries.

Policies:
(2) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.
(7) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small-scale producers, manufacturers, and distributors.
(9) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities.
(10) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.

RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

(13) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy.

(14) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.

(15) Foster a business climate in Hawaii— including attitudes, tax and regulatory policies, and financial and technical assistance programs— that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.

Economic priority guidelines— general: 7

(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.

(A) Encourage investments which:

(i) Reflect long term commitments to the State;

(ii) Rely on economic linkages within the local economy;

(iii) Diversify the economy;

(iv) Reinvest in the local economy;

(v) Are sensitive to community needs and priorities; and

(vi) Demonstrate a commitment to provide management opportunities to Hawaii residents;

(10) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions:

(D) Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents.

(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.

Discussion:

Most resorts prefer sandy beaches and low rainfall, attributes not present on the Hamakua coast. In a region where agriculture has predominated, the proposed retreat resort would add an element of needed diversification. The proposed resort

would provide employment choice for an area that will experience employment problems with the closing of Hamakua Sugar Company. The resort will provide a market for diversified agricultural products. Because of the substantial investments involved in resort development, even for a small-scale resort, the commitments must be long-term. Amanresort prefers and is committed to hiring local residents. Amanresort will work with the State to retrain the displaced plantation workers and give preference in hiring them (see §3.2.4 "Employment and Income" on page -60). Resorts have substantial multiplier effects that will stimulate the regional economy. Therefore, the proposed project fulfills the general economic objectives and policies of the State Plan in terms of its diversification of the regional economy, employment opportunities, multiplier effects, commitment to retrain and hire local residents, and marketing opportunity for agricultural products.

Objectives and policies for the economy-- agriculture.  

Objectives:

(1) Continued viability in Hawaii's sugar and pineapple industries.

(2) Continued growth and development of diversified agriculture throughout the State.

Policies:

(3) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's producers and consumer markets locally, on the continental United States, and internationally.

(4) Enhance agricultural growth by providing public incentives and encouraging private initiatives.

(5) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.

(6) Expand Hawaii's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.

(7) Promote and assist in the establishment of sound financial programs for diversified agriculture.

(8) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.

Economic priority guidelines—diversified agriculture:\(^9\)

(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.

Population growth and land resources priority guidelines:\(^{10}\)

(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.

Discussion:
The priority guidelines urge the protection of "important" agricultural lands. There are three classification systems that rate agricultural suitability: the State Department of Agriculture's Agricultural Lands of Importance to the State of Hawaii (ALISH), the U.S. Soil Conservation Service's Land Capability ratings, and the Land Study Bureau's overall productivity rating. According to the Soil Conservation Service and Land Study Bureau classifications, the Project Site has marginal agricultural soils. The ALISH classification rates the soils as prime agricultural land; however, this classification is suspect since the soils do not meet the Department's criteria for prime agricultural land (see §3.1.2 "Soils and Topography" on page 3-4). The Land Use Commission uses the Land Study Bureau's system to determine prime agricultural land.\(^{11}\) Therefore, depending on how "important" agricultural lands is defined, the proposed project may not be inconsistent with the above objectives and policies.

Displaced plantation workers would have an opportunity to be retrained into resort-related employment. The proposed project could also complement diversified agriculture by creating a market for agricultural products and innovatively "landscaping" with agricultural uses. Existing backyard gardening would be further encouraged by the Applicant's commitment to deed certain areas to the residents. The agricultural zoning of most of the 1-acre lots would permit agricultural activity.

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Objective and policies for the economy - visitor Industry.\textsuperscript{12}

Objective: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.

Policies:

(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.

(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.

(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.

(6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.

(7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.

(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values.

Economic priority guidelines - visitor Industry.\textsuperscript{13}

(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.

(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaii's significant natural, scenic, historic, and cultural resources.

(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.

\textsuperscript{12} Hawaii Revised Statutes §226-8 (Supp. 1992).

\textsuperscript{13} Hawaii Revised Statutes §226-103(b) (Supp. 1992).
Discussion:

The policy to encourage a favorable investment climate is timely. The resort investment climate worldwide, and particularly Hawaii, is at an all-time low. Institutional lenders are wary during these recessionary conditions. The Applicant's willingness to immediately develop and operate a resort is somewhat of an anomaly that may not be replicated in the near term future to timely absorb former employees of the failed sugar industry. The proposed project includes several amenities for the community in an attempt to sensitively respond to community needs: improvements to Kukuihale Park, improvements to the Social Hall, readjustment of boundaries for certain residents to give them areas they used but never owned, and others (see §2.5.3 "Community Benefits" on page 2-24). The one-story resort will be designed with earth-tone colors and indigenous materials to blend with the surroundings. The resort will work with the State in developing job training programs (see §3.2.4 "Employment and Income" on page -60). The Applicant has attempted to fulfill the objectives and policies above relating to the visitor industry by designing with sensitivity to the community and environment, and providing various community benefits.

Objective and policies for the physical environment-- scenic, natural beauty, and historic resources: 14

Objective: Planning for the State's physical environment shall be directed toward achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.

Policies:
(1) Promote the preservation and restoration of significant natural and historic resources.

(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.

(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean vistas, scenic landscapes, and other natural features.

(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.

(5) Encourage the design of developments and activities that complement the natural beauty of the islands.

Discussion:
The proposed project will not impact upon significant archaeological features and will restore the historically significant Plantation Manager's Estate (see §3.1.6 "Archaeological/Historical Resources" on page 3-33). The proposed project will not impact the vistas from the scenic Waipio Valley (see §3.1.7 "Scenic Resources" on page 3-39). The design of the resort will complement the natural beauty of the Hamakua coast. Therefore, the proposed project fulfills the objectives and policies for scenic, natural beauty, and historic resources by minimizing impacts on historic and scenic resources, restoring a significant historic resource, and designing the project to complement the natural beauty of the area.

4.2 STATE LAND USE DISTRICTS

The agricultural lots are and will continue to be in the Agriculture district. The Plantation Inn is already in the Urban district. There are four separate boundary amendments that will require reclassification from Agriculture to Urban (see Figure 37, "State Land Use Districts—Existing and Proposed," on page 4-10):

- Amanhideaway hotel (15 acres);
- residential-resort lots and employee housing (8.757 acres);
- boundary adjustment for mauka lot on the Waipio side of the Plantation Manager's House to be consolidated and resubdivided into the abutting residential lot (0.25 acre);
- boundary adjustment for makai residential lots to be consolidated and resubdivided into the abutting individual lots (0.837 acre).

There are no areas within the project boundaries where the Office of State Planning has proposed redesignation under the 5-Year Boundary Review.15 The area in the

Conservation district along the shoreline will not be affected by the proposed project.

FIGURE 37. State Land Use Districts—Existing and Proposed
The State Land Use Commission is the decisionmaker for petitions involving land areas greater than 15 acres; the county is the decisionmaker for land areas less than 15 acres (except in conservation districts where the Land Use Commission is the decisionmaker). In Hawaii County, the County Council is the decisionmaker with a recommendation provided by the Planning Commission. The county may consolidate proceedings to amend state land use district boundaries with county proceedings to amend the general plan and zoning. The Applicant intends to petition simultaneously for land use district boundary amendment, general plan amendment, and rezoning.

In reviewing the petition, the County Council must consider:

...the purpose of the existing and proposed districts as set forth in HRS 205-2 and the purpose of this chapter. No amendment shall be approved unless it conforms to the General Plan.

Discussion:

The extent the proposed reclassification conforms with the General Plan is discussed below in §4.4 “COUNTY GENERAL PLAN” on page 4-23. The following discussion analyzes the extent to which the proposed reclassification conforms to the existing (Agriculture) and proposed (Urban) district standards.

Standards for determining “U” urban district boundaries.


RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

(1) It shall include lands characterized by "city-like" concentrations of people, structures, streets, urban level of services and other related land uses;

Discussion:
The proposed resort use will contain low-density "city-like" concentrations of people and structures with the single-story hotel, single-family units on the 1-acre lots, and the associated paved streets and utilities.

(2) It shall take into consideration the following specific factors:

(A) Proximity to centers of trading and employment except where the development would generate new centers of trading and employment;

Discussion:
The proposed project would be in proximity to existing centers of employment, (Kukuiulaele, Honokaa, and also Waimea which is in reasonable proximity) and would also create a new center of employment by creating over 100 permanent jobs.

(B) Substantiation of economic feasibility by the petitioner;

Discussion:
Provided construction costs stay within the $15 million budget, the project's pro-forma would evidence the economic feasibility of the project. Likewise, the prior experience of Amanresort of successfully developing and operating other retreat resorts worldwide evidences the financial and technical capability of the Applicant for the proposed concept of a retreat resort. Economic feasibility from the standpoint of public fiscal impacts is demonstrated by the direct, indirect and induced employment opportunities to be created as a result of the resort development. With respect to direct employment, approximately 80 construction jobs and thereafter approximately 100 full-time permanent jobs will be created as a result of the resort project. Also, an additional 247 indirect and induced jobs will be generated during the construction and operational phases of the hotel. In addition, the net annual State excise and income tax revenues from the resort, after accounting for estimated government visitor expenditures, is estimated to be $602,000. The net annual County revenues, primarily from property taxes, after deducting for County expenditures per visitor, are estimated to be $171,000.

(C) Proximity to basic services such as sewers, transportation systems, water, sanitation, schools, parks, and police and fire protection; and
Discussion:
The basic services that serve Kukuihaele would serve the project. Moreover, certain basic services, such as water and parks, may be improved as a result of the improvements installed by the Applicant.

(D) Sufficient reserve areas for urban growth in appropriate locations based on a ten year projection;

Discussion:
The Project Site area would adequately serve the 10-year needs of the resort operator since there are no plans to expand. Increasing the number of units would destroy the personalized ambience characteristic of Amanresort.

(3) It shall include lands with satisfactory topography and drainage and reasonably free from the danger of floods, tsunami, unstable soil conditions, and other adverse environmental effects;

Discussion:
The Project Site's topography, soil conditions, and drainage are satisfactory (see §3.1.2“Soils and Topography”, on page 3–4), and reasonably free from danger of floods and tsunami (see §3.1.5“Natural Hazards” on page 3–28). The property ranges in elevation from about 500 feet at the makai clifftop boundary, to about 850 feet above mean sea level at the highest point along the mauka boundary; thus, the property would be free from the threat of tsunami inundation. Except for the gulies, there are no steep slopes on the property. The two soil types on the property, Pauhau silty clay loam (PaC and PaD) and Kukiauaa silty clay loam (KuD) provide moderately rapid permeability, with runoff slow to medium and the erosion hazard slight to moderate. Although there may be some question as to the stability of the soil immediately adjacent to the cliff edge, the buildings can either be setback or supported by foundations to avoid instability. The property is outside of the 500 year floodplain under the Flobt Insurance Rate Map. The property is also in lava flow hazard zone 8, or a zone with minimal likelihood of lava inundation.

(4) In determining urban growth for the next ten years, or in amending the boundary, land contiguous with existing urban areas shall be given more consideration than non-contiguous land, and particularly when indicated for future urban use on state or county general plans;
Discussion:
The boundary amendment proposed for the 8.757-acre mauka area adjacent to the Plantation Manager’s House is bounded on two sides by Urban districts—the reclassification would result in a unified Urban area. Likewise, the minor boundary amendments proposed for the residential expansion areas are contiguous to Urban residential lots. These areas are designated for Low Density Urban use on the County LUPAG Map, and a General Plan amendment petition has been filed to redesignate the resort area for Resort use on the LUPAG Map. Although the 15-acre malai area is not contiguous with an existing urban area, the County General Plan favors the creation of retreat resorts in the Hamakua area. A retreat resort, by definition, would be removed from an urban area.

(5) It shall include lands in appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the state and county general plans.

Discussion:
The General Plan currently designates the portion of the Project Site mauka of the Old Route 240 as Low Density Urban. Thus, the boundary amendments proposed for the residential expansion areas are consistent with the General Plan. The General Plan also supports the establishment of a retreat resort in Hamakua and contemplated a floating zone for retreat resort to determine the location of the retreat resort. Consistent with this floating zone concept, the Applicants have filed a general plan amendment petition to designate the resort areas for Resort use on the LUPAG Map.

(6) It may include lands which do not conform to the standards in paragraphs (1) to (5):

(A) When surrounded by or adjacent to existing urban development; and

(B) Only when those lands represent a minor portion of this district;

Discussion:
The hotel area does not strictly conform to the standards (1) to (5) above since the hotel area is not contiguous to the existing Urban areas of Kukuihule. However, the hotel area is adjacent (less than a mile) to the Urban area and would represent a relatively minor portion (roughly one-fifth) of the Urban district of Kukuihule.
4.2 STATE LAND USE DISTRICTS

(7) It shall not include lands, the urbanization of which will contribute toward scattered spot urban development, necessitating unreasonable investment in public infrastructure or support services;

Discussion:
The boundary amendments will not contribute toward spot urban development which requires an unreasonable investment in public infrastructure or support services. Each of the areas to be urbanized is either adjacent to an existing urban area, or within a reasonable proximity to the urban area. Also, the Applicant proposes to be responsible for the construction of all needed infrastructure. Therefore, there will not be an unreasonable investment in public infrastructure or support services required because of the proposed amendments.

(8) It may include lands with a general slope of twenty percent or more which do not provide open space amenities or scenic values if the commission finds that those lands are desirable and suitable for urban purposes and that official design and construction controls are adequate to protect the public health, welfare and safety, and the public's interests in the aesthetic quality of the landscape.

Discussion:
The average slope of the Project Site is 10% (see §3.1.2 "Soils and Topography" on page 3-4). Most of the steeper areas greater than 20% slope are confined to the gulches, where no permanent structures are proposed.

Standards for determining "A" agricultural district boundaries:

(1) It shall include lands with a high capacity for agricultural production except as otherwise provided in this chapter;

Discussion:
The soils within the Project Site do not have a high capacity for agriculture according to the productivity ratings by the Land Study Bureau (Class C) and Soil Conservation Service (Class III or IV) (see §3.1.2 "Soils and Topography" on page 3-4).

(2) It may include lands with significant potential for grazing or for other agricultural uses except as otherwise provided in this chapter;


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Discussion:

The land may be used for grazing; however, that use would not be the highest and best use of the site given the potential for alternative non-agricultural uses.

(3) It may include lands surrounded by or contiguous to agricultural lands and which are not suited to agricultural and ancillary activities by reason of topography, soils, and other related characteristics.

Discussion:

This standard is not applicable— it applies to proposed reclassifications to agriculture when the lands are not suited for agriculture.

(4) Lands in intensive agricultural use for two years prior to date of filing of a petition or lands with a high capacity for intensive agricultural use shall not be taken out of this district unless the commission finds either that the action:

(A) Will not substantially impair actual or potential agricultural production in the vicinity of the lands or in the county or state; or

(B) Is reasonably necessary for urban growth.

Discussion:

About 65 acres of the Project Site was used intensively for sugarcane cultivation, but abandoned nearly two years ago. This acreage comprised less than 1% of Hamakua Sugar Company which had over 35,000 acres in sugarcane. The withdrawal of these marginal agricultural lands would not impair potential agricultural uses in the vicinity or in the county. Hamakua Sugar Company had proposed to sell 9,500 acres of land it considered “surplus.” Therefore, it could be extrapolated that up to 9,500 acres could be withdrawn from agriculture along the Hamakua Coast without affecting the continued viability of agriculture. Moreover, with the impending closure of Hamakua Sugar Company, the need for jobs and diversification of the economy provides reasonable justification for urban reclassification.

4.3 COASTAL ZONE MANAGEMENT AND SPECIAL MANAGEMENT AREA

The "coastal zone management area," at one time defined as the Special Management Areas (SMA) delineated by the counties, now includes all land areas in the State.23 Although the project lies entirely outside the SMA (refer to Figure 40 on page 4-33), and therefore does not require a SMA Permit, the objectives and policies discussed below are binding upon all actions within the coastal zone management area.24

The objectives and policies are as follows:25

Recreational resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies:

(A)[not applicable]

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

(ii) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

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23. Hawaii Revised Statutes §205A-1 (Supp. 1992), as amended by Act 91/93. Act 350/89 expanded the definition to include all land areas in the State, excluding the forest reserves. Act 91/93 added the forest reserves.


(iv) (not applicable)
(v) (not applicable)
(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;
(vii) (not applicable)
(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of section 46-6.

Discussion:
The major coastal recreational resources in the vicinity include Waipio Valley and Kukuihaele Landing. Both resources are outside the project boundaries and will not be directly altered by the project. The project will improve public access to the coastal area. The public was not permitted in the area when it was used for sugarcane cultivation. The project will provide public access along the access road on the western or Waipio Valley boundary of the property leading to the County chlorination station. Public access is also being reopened on the government road extending along the eastern or Honokaa boundary of the property. This road continues on to Hamakua Sugar Company land extending to Kukuihaele Landing. With the project, the public will be able to enjoy the vistas from the site since the hotel will open to the public. The project will not affect the main access road to Kukuihaele Landing near Kona Camp since the road is outside the Project Site. The hotel operator will abide by the recommendations of the Waipio Task Force or other agency/organization to mitigate the impacts of visitor use. Nonpoint source pollution will be controlled during the construction period through compliance with the NPDES permit requirements (see See "Soils and Topography" on page 3-6).

Historic resources
Objective: Protect, preserve, and, where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:
(A) Identify and analyze significant archaeological resources;
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and
C. Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion:

An archaeological inventory survey identified four potential archaeological sites within the Project Site. The project will not adversely impact any of these sites (see §3.1.6 "Archaeological/Historical Resources" on page 3-33). The project will restore the Plantation Manager's Estate, a historic site on the State Register of Historic Places, in accordance with the requirements of the State Division of Historic Sites and interpreted for the public and guests to appreciate the plantation history of Kukuiuhea. Interim preservation plans will be implemented for the other three sites within the Project Site.

Scenic and open space resources

Objective: Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments which are not coastal dependent to locate in inland areas.

Discussion:

The project is designed to minimize alteration of the natural landforms. The one-story, earth-toned colored buildings would be compatible with the environment. The project will not be visible from Waipio Valley (see the view analysis in §3.1.7 "Scenic Resources" on page 3-39). The project will enable the public to enjoy spectacular views of the coast that were previously not open to the public. Visitor facilities are coastal-related and depend on special locations on the coast. In comparison, agricultural uses are definitely not coastal-dependent nor coastal-related and may even produce better yields further inland away from the salt spray that may drift up the cliff during times of high waves.
Coastal ecosystems

Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

(A) [not applicable]

(B) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(C) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(D) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

Discussion:

The project is located an average of about 450' inland from the shoreline and over 450' high above the shoreline on a cliff. Therefore, the project will not directly alter any coastal ecosystem. The nearshore ecosystem is an open coastal ecosystem subject to vigorous wave action; it is more tolerant to land runoff due to its mixing capacities compared to a confined bay or estuary. Despite erosion runoff from the cane roads and exposed harvested sugarcane fields, the nearshore coastal ecosystems showed little stress from sedimentation (see §3.1.3.3 "Coastal Waters" on page 3-19). The project will contain onsite storm runoff within the project boundaries. Subsurface disposal of storm runoff and wastewater leachate will not impact the coastal waters.

Economic uses

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and
4.3 COASTAL ZONE MANAGEMENT AND SPECIAL MANAGEMENT AREA

(D) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;
(ii) Adverse environmental effects are minimized; and
(iii) The development is important to the State's economy.

Discussion:
The policies distinguish coastal-dependent uses from coastal-related uses. Visitor industry facilities are coastal-related facilities. The proposed project conforms with the policy for coastal-related facilities—the project has been located, designed, and will be constructed to minimize adverse impacts on the social (see §3.2.2"SOCIO-ECONOMIC CHARACTERISTICS" on page 47), visual (see §3.1.7"Scenic Resources" on page 39), and physical environment (see §3.1.2"PHYSICAL CHARACTERISTICS" on page 3-2), provided some of the proposed mitigation measures are implemented.

Coastal hazards

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Policies:

(A) [not applicable]

(B) Control development in areas subject to storm waves, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program;

(D) Prevent coastal flooding from inland projects; and

(E) [not applicable]

Discussion:
The Project Site is not known to be subject to the threat of any flooding or tsunami inundation (see §3.1.5.1"Flooding" on page 3-28). The drainage system will be designed to prevent flooding of downstream properties.
RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Managing development

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and

(B) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Discussion:

The County allows, and the Applicant will request, concurrent processing of the General Plan Amendment, rezoning, and State Land Use District Boundary Amendment petitions to facilitate timely processing (see § 4.2 "STATE LAND USE DISTRICTS" on page 4-9). The EIS process is intended to facilitate public participation in the early conceptual plan phase of the project.

Public participation

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies:

(A) [not applicable]

(B) [not applicable]

(C) [not applicable]

Discussion:

The policies are directed to the administrators of the Coastal Zone Management program; therefore, these policies are not applicable to the review of this project.

Beach protection

Objective: Protect beaches for public use and recreation.

Policies:
(A) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

(B) [not applicable]

(C) [not applicable]

Discussion:

At its closest point, the project is located approximately 300' from the shoreline, substantially beyond the maximum of 40' for the Inland boundary of the shoreline setback line established for the purposes of protecting against beach erosion.²⁶

4.4 COUNTY GENERAL PLAN

The General Plan Land Use Pattern Allocation Guide (LUPAG) Map designates the portion of the Project Site makai of the Old Route 240 as Intensive and Extensive Agriculture and the portion mauka of the road as Low Density Urban (see Figure 38 on page 4-24). Because the proposed resort uses are not permitted under the present LUPAG designations, the applicant has petitioned for the following General Plan amendments:²⁷

- Hotel site (Extensive Agriculture to Resort, approximately 2 acres; Intensive Agriculture to Resort, approximately 13 acres);
- Plantation Inn, residential-resort lots and employee housing (Low Density Urban to Resort, approximately 27 acres).


²⁷Petition for General Plan Amendment, filed July 23, 1993, on behalf of Kukuihale Development Company; this petition will be amended to reduce the area petitioned for Resort designation from 113 acres (the entire Project Site) to approximately 42 acres (hotel site, Plantation Inn, residential-resort lots and employee housing).
FIGURE 38. County General Plan Land Use Pattern Allocation Guide (LUPAG) Map--Existing and Proposed

LEGEND

- Project Boundary
- EXTENSIVE AGRICULTURE
- INTENSIVE AGRICULTURE
- LOW DENSITY URBAN
- EXTENSIVE AGRICULTURE TO RESORT
- INTENSIVE AGRICULTURE TO RESORT
- LOW DENSITY URBAN TO RESORT

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The petition for a General Plan amendment must analyze the consistency of the proposed amendment with the pertinent elements of the General Plan. The General Plan sets forth goals, policies, standards, and courses of action for thirteen planning elements: Economic Activities, Energy, Environmental Quality, Flood Control and Drainage, Historic Sites, Natural Beauty, Natural Resources and Shoreline, Housing, Public Facilities, Public Utilities, Recreation, Transportation, and Land Use.

The project conforms with the Environmental Quality goals and policies by situating the project only in areas previously used for the cultivation of sugar cane; the environmentally sensitive cliff area and the gullies will be left in their natural state. Mitigation measures will also be implemented during construction in order to minimize the impact of the dust and noise normally associated with construction activities. The project conforms with the Historic Sites goals and policies by the restoration and enhanced public access to the Plantation Manager's House, and the preparation and implementation of Interim Preservation Plans for the other three sites identified in an archaeological inventory survey conducted for the project.

The project conforms with the Natural Beauty goals and policies by the low-scale design of the project that minimizes views of the project from Waipio Valley and also by enhancing public access to enjoy the extraordinary vistas of the Hamakua Coast. The project conforms with the Housing goals and policies by the Applicant's willingness to make a financial contribution to the County for the development of affordable housing, and to construct a limited number of employee housing on the project site. The project conforms with the Public Facilities goals and policies by providing the necessary facilities to serve the project in order to not overburden existing facilities. The project conforms with the Public Utilities goals and policies by providing adequate, efficient, and dependable infrastructure. The project conforms with the Recreation goals and policies by the proposed improvements to Kukuiulahe'e Park and the Social Hall which will increase recreational opportunities for the residents.

The Economic Activities and Land Use goals and policies are discussed in greater detail below.

Economic goals, policies, and standards

28. County of Hawai'i, General Plan, Ordinance No. 89-142 (An Ordinance Adopting the County of Hawaii General Plan and Repealing Ordinance No. 439, as amended), §6.8(2)(a)(5) (relating to interim amendments of the General Plan).
RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Goals:

- Provide residents with opportunities to improve their quality of life.
- Economic development and improvement shall be in balance with the physical and social environments of the Island of Hawaii.
- The County of Hawaii shall strive for diversity and stability in its economic system.
- The County shall provide an economic environment which allows new, expanded, or improved economic opportunities that are compatible with the County's natural and social environment.

Policies:

- The County of Hawaii shall assist the expansion of the agricultural industry, especially diversified agriculture, through the protection of important agricultural lands, capital improvements and other programs, and continued cooperation with appropriate State and Federal agencies.
- The County of Hawaii shall strive for an economic climate which provides its residents an opportunity for choice of occupation.
- The County of Hawaii shall encourage the development of a visitor industry which is consistent with the social, physical, and economic goals of the residents of the County.
- The County of Hawaii shall strive for diversification of its economy by strengthening existing industries and attracting new endeavors.
- The County shall strive for full employment.

Standards:

- The island of Hawaii should be developed into a unique scientific and cultural model. The island should become a model of living where economic gains are in balance with social and physical amenities. Development should be reviewed on the basis of total impact on the residents of the County, not only in terms of immediate short run economic benefits.  

Economic courses of action for Hamakua  

29. General Plan §4.A

"The County shall assist the further development of diversified agriculture in Hamakua and continue to cooperate with other appropriate agencies to provide the necessary services to assist agriculture. For example, the County can protect important agricultural land from urbanization through zoning. Capital improvement programs should be tied into enhancing agricultural areas.

Although there is potential for limited visitor facilities in this area, the County shall allow development which will not detract from the natural beauty of the area.

Discussion:

The General Plan's economic goals and policies emphasize occupational opportunity and choice for the residents, economic diversification, and balanced development in harmony with the social and physical environment. The proposed project fulfills these economic goals and policies in the following manner: the resort provides a range of occupational opportunities from managerial to maintenance and a choice of non-agricultural jobs for those who desire not to work in the agricultural industry; it provides diversification in a region predominantly in agriculture; and the project design strives to harmonize with the physical and social environment. While encouraging agriculture in the Hamakua region, the General Plan explicitly supports limited visitor facilities in Hamakua.

Land use goals, policies, and standards

Goals:

Agriculture

*Identify, protect and maintain important agriculture lands on the island of Hawaii.

Resort

*Maintain an orderly development of the visitor industry.

*Provide for resort development that maximizes conveniences to its users and optimizes the benefits derived by the residents of the County.

*Ensure that resort developments maintain the social, economic, and physical environments of Hawaii and its people.

Policies:

31. General Plan §4.M.
RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Incorporate the concept of a "floating zone" for future industrial and retreat resort areas, to allow flexibility in locating future needed developments which cannot be pinpointed at this time, especially in the more rural and/or remote areas.

The county shall encourage the development and maintenance of communities meeting the needs of its residents in balance with the physical and social environment.

Agriculture

The compatibility of agricultural and non-agricultural uses should be carefully reviewed and where appropriate, buffers required.

Rural-style residential-agricultural developments, such as new small-scale rural communities or extensions of existing rural communities, shall be encouraged in appropriate locations.

Resort

The County shall designate and allocate future resort areas in appropriate proportions and in keeping with the social, economic, and physical environments of the County.

The county shall encourage the visitor industry to provide resort facilities which offer an educational experience of Hawaii as well as recreational activities.

The concept of a "floating zone" shall be used to allow for the future development of retreat resort areas.

Standards:

Resort

Major Resort Area (3,000 rooms)
Intermediate Resort Area (1,500 rooms)
Minor Resort (500 rooms)

Retreat Resort Area: A retreat area is generally an area which provides the user with rest, quiet, and isolation for an environmental experience. It shall have sewer, water, roads, employee housing, and recreational facilities, etc.

Maximum hotel and condominium-hotel units: up to 100 rooms to be determined in conjunction with retreat resort area's zoning.

Resort acreage: 15 acres minimum.

Provide active and passive recreation area commensurate with the scale of development.
4.5 HAMAKUA REGIONAL PLAN

The required employee housing ratio and method of provision shall be determined by an analysis of housing needs of each district or relative area and with the adoption of the resort zoning, provided that the ratio shall not exceed one employee unit for every two hotel units built.

Land Use (Resort) courses of action for Hamakua:

* Encourage the development of small family-operated hotels.
* Consider the small-scale retreat resort development.
* Encourage resort development which enhances the natural beauty of the area.

Discussion:
The Resort designation is consistent with the General Plan’s policies and courses of action supporting a “retreat resort” for the Hamakua district. The General Plan defines a retreat resort as an “area which provides the user with rest, quiet, and isolation for an environmental experience.” The proposed project meets the General Plan’s standards of less than 100 rooms and minimum of 15 acres for a retreat resort. Appropriate open space or landscape buffers should be provided along the project’s boundaries bordering agricultural lands. The proposed agricultural lots will be “rural-style residential-agricultural” developments to the extent permitted under the zoning code. Although the project will remove about 65 acres of abandoned agricultural land from future production, the land is marginal agricultural land, the supply of available land in Hamakua for diversified agriculture substantially exceeds the supply, and the project will provide a market for agricultural products.

4.5 HAMAKUA REGIONAL PLAN

The purpose of the Hamakua Regional Plan—prepared by the Hamakua Steering Committee consisting of representatives of the State, County, Hamakua Sugar Company, creditors, and labor—was to provide a long-range planning guide for the

32 General Plan §5.D(8)(f).
33 General Plan §4.M(6).
lands scheduled to be sold by Hamakua Sugar Company and its creditors. The lands were to be sold in order to raise sufficient capital to maintain the existence of Hamakua Sugar Company. Since the plan's completion, the Hamakua Sugar Company initiated bankruptcy proceedings. Because the basic premise of the plan was the survival of Hamakua Sugar Company, the bankruptcy action casts a veil of uncertainty on the continued viability of the plan's recommendations. Nevertheless, the plan represents an updated vision of the future development for this region.

The plan classified the Hamakua region into three zones. The Project Site is in Zone 3 stretching from Kukuhele to Waipio. The plan recommended a retreat resort in the Waipio Mauka area, as well as an intermediate resort (about 500 units) in the Waipio Makai area. The proposed project implements the less intensive retreat resort concept in the Waipio Makai area in lieu of the intermediate resort.

The plan recommended the establishment of a Waipio Preservation Buffer "to preserve the cultural and scenic integrity of the rim by preventing development and view plane encroachment from private structures." The proposed buffer encompassed approximately 300 acres. The nearest point of the Project Site is approximately one-half mile from the buffer (see Figure 39, "Proposed Waipio Preservation Buffer," on page 4-31).

34. Hamakua Steering Committee, Hamakua Regional Plan: From Kaiakea to Waipio. Endorsed by the County Council, County of Hawaii, by Resolution No. 244-90, November 1990.

35. Ibid., pp. 33-35.

36. Ibid., p. 35.
RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

4.6 NORTHEAST HAWAII COMMUNITY DEVELOPMENT PLAN

The proposal for a low-scale resort is consistent with a recommendation made fourteen years ago in the Northeast Hawaii Community Development Plan:

Hawaii County has a number of successful resort areas, but none are in the Northeast Hawaii Planning Area. The lack of swimming beaches and relatively high rainfall probably account for this. There is, however, no lack of scenic quality so it is possible that some resort development could take place in the area if people so wished and the proper site or sites and developers would be found who would embark on such a venture.37

4.7 COUNTY ZONING

The existing zoning for the Project Site is A-40a, except for the Social Hall lot, the Plantation Manager's House lot, and a corner area on the Honokaa side of Kukuihane Park which are all zoned RS-15 (see Figure 40 on page 4-33). The project will require the following zoning amendments:

- hotel site (15.0 acres) -- A-40a to V-18;
- 1-acre agricultural lots (51.982 acres) -- A-40a to A-1a;
- Plantation Manager's House, 1-acre residential-resort lots, employee housing (26.923 acres) -- A-40a and RS-15 to V-43;
- boundary adjustments for Kukuihane residents (2.656 ac. + 0.837 ac. + 0.25 ac.) -- A-40a to RS-15 and RS-7.5.

The review criteria for zoning amendments are broad:
RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

In considering an amendment initiated by a property owner which proposes to change the district classification of any property, the director shall consider the purposes of the existing and proposed districts and the purposes of this chapter and shall recommend a change in a district boundary only where it would result in a more appropriate land use pattern that will further the public necessity and convenience and the general welfare (emphasis added). 38

The proposed project would further the public necessity and welfare by providing needed jobs in an area with imminent employment problems with the closing of Hamakua Sugar Company.

4.8 OTHER PERMITS AND APPROVALS

Besides the State Land Use District Boundary Amendment, General Plan Amendment, and Zoning, other applicable permits and approvals include Department of Health approval for the treatment plant and individual wastewater systems, possibly the Underground Injection Control permit for drywells, historic site review for the renovation of the Plantation Manager’s Estate and interim preservation plans for the archaeological sites, permit for work within public highways, grading permit, plan approval, subdivision approval, and building permit. Either the applicant or the Department of Water Supply will apply for the well drilling permit and potable source approval should a decision be made to jointly develop a groundwater source to serve the project. Table 15, “List of Necessary Permits and Approvals,” below summarizes the permits that may be applicable to the project.

<table>
<thead>
<tr>
<th>PERMIT OR APPROVAL</th>
<th>AUTHORITY</th>
<th>APPROVING AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE OF HAWAII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underground Injection Control (UIC)</td>
<td>HAR Chap. 11-23</td>
<td>Department of Health</td>
</tr>
<tr>
<td>Well drilling Permit</td>
<td>HAR Chap. 13-168</td>
<td>Department of Land and Natural Resources</td>
</tr>
<tr>
<td>NPDES for construction activity</td>
<td>HAR Chap. 11-55</td>
<td>Department of Health</td>
</tr>
</tbody>
</table>


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### TABLE 16. List of Necessary Permits and Approvals (Continued)

<table>
<thead>
<tr>
<th>Permit Type</th>
<th>Code Reference</th>
<th>Department/Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater systems approval</td>
<td>HAR Chap. 11-62</td>
<td>Department of Health</td>
</tr>
<tr>
<td>Potable water source development approval</td>
<td>HAR Chap. 11-20</td>
<td>Department of Health</td>
</tr>
<tr>
<td>Historic sites mitigation plan approval</td>
<td>HRS §6E-10</td>
<td>Division of Historic Sites</td>
</tr>
<tr>
<td>COUNTY OF HAWAII</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Land Use District Boundary Amendment (&lt;15 ac.)</td>
<td>HCC Chap. 28</td>
<td>County Council</td>
</tr>
<tr>
<td>General Plan Amendment</td>
<td></td>
<td>County Council</td>
</tr>
<tr>
<td>Rezoning</td>
<td>Ord. No. 89-142; PC Rule 5</td>
<td>County Council</td>
</tr>
<tr>
<td>Plan Approval</td>
<td>HCC §25-20; PC Rule 11</td>
<td>Planning Department</td>
</tr>
<tr>
<td>Subdivision Approval</td>
<td>HCC Chap. 25, Article 20</td>
<td>Planning Department</td>
</tr>
<tr>
<td>Grading Permit</td>
<td>HCC Chap. 23</td>
<td>Department of Public Works</td>
</tr>
<tr>
<td>Building Permit</td>
<td>HCC Chap. 10</td>
<td>Department of Public Works</td>
</tr>
<tr>
<td></td>
<td>HCC Chap. 5</td>
<td></td>
</tr>
</tbody>
</table>

*HRS= Hawaii Revised Statutes
HAR= Hawaii Administrative Rules
HCC= Hawaii County Code (1987), as amended
PC= Rules of Practice and Procedure, Planning Commission, County of Hawaii*
CHAPTER 5

ALTERNATIVES

This chapter describes a range of reasonable alternatives to the proposed project. The evaluation of alternatives focuses on the capability of each alternative to reduce significant impacts and to meet the project's basic objectives. An alternative was considered reasonable if it was economically feasible, within the control of the Applicant or decisionmaker to implement, and could be accomplished within an expeditious period of time.

5.1 NO PROJECT

If the project is not approved, the status quo would continue for the immediate future. However, economic forces and development rights under existing zoning designations would inevitably engender changes.

Strong economic forces could cause Kukuihaele to grow. On the other hand, a continuation of the present recessionary trend coupled with the closing of Hamakua Sugar Company could cause a gradual attrition of Kukuihaele as current residents and future generations move in response to jobs, similar to what happened to Kukuihaele when the Pacific Sugar Mill closed in the early 1900s, and to Hawi when Kohala Sugar Company closed.
ALTERNATIVES

A potential economic development espoused to revitalize the area is diversified agriculture. The prospects of this alternative is discussed below in §5.3 "DIVERSIFIED AGRICULTURE" on page 5-5.

If Kukuihaele grows, the existing zoning designations would control the density of the ultimate build-out. The existing zoning within the Project Site currently allows a maximum of about 8115,000 s.f residential and 4 agricultural lots (see Figure 41, "'No Project' Alternative: Full Build-Out Under Existing Zoning," on page 5-3). This maximum would be modified by the topographic conditions and land area for infrastructure improvements. Nevertheless, the estimated numbers provide an order of magnitude vision of the worst case scenario under existing zoning. Since the current General Plan designation for the area between the old and the new Highway 240 is Low-Density Urban, conceivably the areas zoned Ag-40a could be approved for rezoning to RS-15. This rezoning would add about another 95 lots for a grand total of about 180 new lots within the Project Site.

The 85 prospective new lots under the existing zoning is comparable with the proposed 85 units, but the units under the existing zoning would be concentrated at higher density in a smaller area. Assuming a household size of 3.15 persons (see §3.2.1 "Population" on page 47), the projected additional population under existing zoning would be approximately 270 persons. For the proposed project, assuming 100% occupancy at 2.0 persons per unit for the 40 hotel units, and a household size of 3.15 persons for the 45 agricultural and residential-resort lots, the projected additional population is approximately 220. Therefore, the population could be greater under the "no project" alternative compared to the proposed project.

Advantages
The advantages of the "no project" alternative include:

- Continued availability of the existing agricultural lands at A-40a zoning.
- Preservation of the status quo at least for the immediate future. Should Kukuihaele shrink in response to economic forces, the quiet ruralness would be enhanced. Should Kukuihaele grow, the permitted zoning would allow a population greater than the proposed project. However, the population characteristics of these newcomers would probably be more similar to the existing population than the visitors that the proposed project would attract.
- No impact from traffic increase attributable to the proposed project; however, there would still be the increased traffic of the Waipio Valley Scenic Lookup visitors.

5-2 Final EIS Amanresort
5.1 NO PROJECT

FIGURE 41. "No Project" Alternative: Full Build-Out Under Existing Zoning

- Assurance that property taxes would not increase as a result of a neighboring resort; however, property taxes could still increase due to inflation or other reasons.
ALTERNATIVES

- No increased numbers of visitors to Waipio Valley attributable to the project; however, the Valley would still be impacted by visitors unrelated to the proposed project.

Disadvantages
- Lost opportunity to create 100 permanent jobs, and additional indirect multiplier jobs.
- Lost opportunity to improve the Social Hall and Kukuhaele Park.
- Lost opportunity to residents benefiting from boundary adjustments (e.g., Tiger Camp) and the expansion of the Roman Catholic Church and County cemeteries.
- Lost opportunity for a subsidy to fund property tax increases by means of a property tax trust fund.
- Potential destruction of the Plantation Manager's Estate since a private owner of a registered historic property need only notify the Division of Historic Sites; if the State does not commence condemnation proceedings within 90 days of notification, the landowner may proceed with demolition.¹
- Lost opportunity for a potential market for diversified agricultural products.
- Lost opportunity for favorable cost/benefit net revenue flow to State and County from taxes paid by the hotel (property, excise, and transient taxes).
- Increased traffic and population from residential build-out under existing zoning.
- Higher density development with the same number of permitted units under the existing zoning compared with the proposed project, resulting in greater potential population increase than the proposed project.

5.2 ALTERNATIVE SITE LOCATIONS

Since the Applicant does not own other sites on the Hamakua Coast, or for that matter anywhere else in the State, this alternative would be feasible and reasonable only if the County or State could expeditiously negotiate a land exchange. Because

¹. Hawaii Revised Statutes §6E-10(a) (Supp. 1992).
5.3 DIVERSIFIED AGRICULTURE

Western Farm Credit Bank currently owns large acreage in Hamakua and would like to sell; this alternative could become a reasonable alternative if negotiations could be expeditiously concluded (i.e., within 6 months). Based on current conditions, this alternative is rejected for two reasons: 1) the likelihood of finding a site that would be acceptable to the Applicant and the County is highly unlikely and may cause even greater impacts than the proposed location; and 2) even if an acceptable site could be found, the timing to consummate a deal would not be reasonable.

5.3 DIVERSIFIED AGRICULTURE

If the proposed project is not approved, the Applicant will not exercise its option to purchase the Roman Catholic Church’s lands. The prospects of another private venture approaching the Roman Catholic Church for diversified agriculture depends on the availability of competing opportunities, the market potential, and the actual demand in terms of farmers interested in starting a diversified agricultural business.

Competing Opportunities. Under separate actions, the State Department of Agriculture (DOA) and the State Department of Land and Natural Resources (DLNR) have proposed to lease a total of 7,075 acres, more or less, to farmers interested in diversified agriculture in the Hamakua area. The DOA’s proposal, called the Hamakua Agricultural Park, consists of about 509 acres near Paualilo and envisions ventures for grass-fed “organic” beef, tropical fruits and spices, nursery stock plants, and experimental industrial crops. DLNR’s proposal consists of 88 parcels (6,566.802 acres) along the Hamakua Coast between Kaaawa and Waipio Valley and envisions tree planting, nurseries, and agricultural crops. Both proposals have arisen from the bankruptcy of Hamakua Sugar Company—DOA’s land from a bankruptcy settlement agreement to repay outstanding loans, and DLNR’s land as


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former leased land to Hamakua Sugar Company. The availability of these low-cost lands would undermine the marketability of the lands within the Project Site.

**Market Potential.** According to DOA's assessment, the amount of acreage required to meet the estimated market potential of diversified agricultural products does not come anywhere near the 43,500 acres along the Hamakua Coast becoming available from the closing of Hamakua Sugar Company and Hilo Coast Processing Company operations (see Table 16, "Market Potential for Diversified Agriculture, Hawaii County," on page 5-7). The existing acreage in diversified agriculture in 1991 for the entire island was 27,000 acres. The estimated additional acreage to meet market potential is 12,000 acres. Assuming the entire additional acreage is in Hamakua, the surplus acreage would be 31,500 acres (43,500 - 12,000 acres).

**Demand Based on Expressed Interest to Start a Diversified Agricultural Business.** Based on the number of persons who have expressed interest in diversified agricultural ventures, it is not likely that someone would pay the higher lease rent or purchase price to farm the Roman Catholic Church's lands within the Project Site compared to the affordable rents offered by the State in the immediate future. Of the approximately 900 sugar workers in Hawaii County, about one-third (300) expressed interest to continue employment in some form of agriculture in the Hamakua area; only about 20 would like to start their own agricultural business. An additional 10 to 50 non-plantation workers have expressed interest in forming an agricultural cooperative based in Honokaa to farm up to 200 acres in a variety of crops. This cooperative approached DOA to lease land in the Hamakua Agricultural Park. Given the existing A-40a zoning, the Roman Catholic Church's lots within the Project Site would have to be rezoned and subdivided if prospective farmers desire lots less than 40 acres.

In short, diversified agriculture does not seem to be a viable alternative for the Project Site in light of competing available land, the limited market demand, and the limited extent of interest expressed by the sugar workers to start diversified agricultural businesses.

---

4. DOA, ibid.
### TABLE 16. Market Potential for Diversified Agriculture, Hawaii County

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>EXISTING ACREAGE (Hawaii County 1991)</th>
<th>ESTIMATED MARKET POTENTIAL</th>
<th>ESTIMATED ADDITIONAL ACREAGE TO MEET MARKET POTENTIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowers/Foliage</td>
<td>1,361</td>
<td>3,009</td>
<td>1,648</td>
</tr>
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<td>Guava</td>
<td>515</td>
<td>838</td>
<td>343</td>
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<tr>
<td>Papaya</td>
<td>1,915</td>
<td>2,618</td>
<td>703</td>
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<tr>
<td>Banana</td>
<td>420</td>
<td>894</td>
<td>474</td>
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<tr>
<td>Macadamia Nuts</td>
<td>20,500</td>
<td>29,006</td>
<td>8,506</td>
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<tr>
<td>Tropical Specialty Fruits</td>
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<td>no data</td>
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<tr>
<td>Cacao</td>
<td>no data</td>
<td>no data</td>
<td>0</td>
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<tr>
<td>Dryland Taro</td>
<td>170</td>
<td>530</td>
<td>360</td>
</tr>
<tr>
<td>Ginger</td>
<td>250</td>
<td>379</td>
<td>129</td>
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<td></td>
<td>27,332</td>
<td>37,294</td>
<td>12,163</td>
</tr>
</tbody>
</table>

*Source: Department of Agriculture, State of Hawaii, Draft Environmental Assessment for Hanakawa Agricultural Park, Phase II, August 1993.*
CHAPTER 6

IMPACT ANALYSIS

6.1 RELATIONSHIP BETWEEN SHORT-TERM USES AND MAINTENANCE OF LONG-TERM PRODUCTIVITY

The tradeoff between the proposed resort use and the maintenance of long-term agricultural productivity was examined in the previous Chapter on Alternatives. The agricultural land within the Project Site (approximately 65 acres) was formerly used for sugarcane; it has been abandoned and remains fallow to this day. The prospects of diversified agricultural use of the Project Site seems improbable in light of the extensive low-rent State land soon to be offered for lease within the Hamakua district (see §5.3 "DIVERSIFIED AGRICULTURE" on page 5-5). The soils within the Project Site are rated as marginally suited for agriculture (Land Study Bureau Class C); better quality agricultural land exists in other areas along the Hamakua Coast. The proposed resort use may in fact enhance the long term agricultural productivity of the remaining agricultural lands by providing a market for diversified agricultural products. The economic benefits generated by the resort (e.g., jobs, market for agricultural products) offset the marginal agricultural productivity of the portion of the Project Site formerly used for agriculture (i.e., 58% of Project Site formerly used for agriculture).
6.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed project will irreversibly commit marginal agricultural resources to resort use. Other sensitive resources within the vicinity of the Project Site will not be impacted. There are no endangered species and no wetlands. There will be no degradation of stream, groundwater, or coastal water quality. A registered historic site will be preserved and rehabilitated; other archaeological sites located within the gulches will not be impacted. The viewplains from Waipio Valley will be preserved; the one-story structures will not be visible from Waipio Valley or the Scenic Lookout.

6.3 UNAVOIDABLE ADVERSE IMPACTS

The only potential unavoidable adverse impact is the change in Kukuihaele's rural character. However, this change could happen even without the project since the existing zoning designations could result in a greater population impact than the proposed project (see §5.1 "NO PROJECT" on page 5-1). There would be significant unavoidable adverse impacts that could occur without the project, such as the demolition of the Social Hall and the Plantation Manager's House. The proposed project would minimize adverse impacts by preserving the Plantation Manager's Estate and Social Hall, reducing density to 1-acre agricultural lots, and confining the resort to the 15-acre portion for the hotel with a significant buffer between the resort and the town.
The Developer’s Letter of Commitment (see Appendix H) resolved many issues. There are a few issues remaining:

- **Offsite infrastructure**
  - **Road**—The Applicant, community, County, and State Department of Transportation need to agree on the access road and extent of improvements.
  - **Water**—The Applicant and Department of Water Supply need to agree on a feasible water supply option.
  - **Electrical/Telephone**—The Applicant needs to determine its power requirements in greater detail, negotiate with HELCO on the extent of improvements, and decide whether to use HELCO’s system or investigate alternative energy sources.
  - **Civil Defense**—The Applicant and County must determine the need and location of a civil defense warning siren.

The above infrastructure issues will need to be resolved prior to decisionmaking on the various permits.

- **Access easement.** Although the Applicant acknowledges the access easement rights of the landlocked 2.119-acre lot surrounded by the Project Site, the specific nature and location of the easement through the Project Site has not been determined. The land burdened by the easement is currently owned by the
Roman Catholic Church and leased to the Applicant. The Applicant will resolve this access issue with the owner of the 2.119-acre lot when the Applicant obtains legal title from the Roman Catholic Church. Any changes to the site plan, if necessary, to accommodate the easement will not be significant.

- **Soil stability.** The extent of setback from the cliff edge and/or appropriate structural mitigation measures need to be determined on the basis of a soils engineering study. The study would be conducted only upon securing the various land use approvals. The setback and/or structural mitigation measures would be checked at Plan Approval.

- **Affordable housing in-lieu fee.** The amount of the fee would need to be resolved during the rezoning process.
CHAPTER 8
EIS PREPARERS AND PERSONS CONSULTED

8.1 Preparers of the EIS Document

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roy R. Tokemoto, M.A., J.D.</td>
<td>Land Use Planner &amp; Attorney; overall coordination and production.</td>
</tr>
<tr>
<td>Geometrician Associates (Ron Terry, Ph.D.)</td>
<td>Socioeconomic analysis</td>
</tr>
<tr>
<td>Y.K. Hahn &amp; Associates (Youngki Hahn, Ph.D.)</td>
<td>Fiscal impact analysis</td>
</tr>
<tr>
<td>Waimea Water Services (Stephen Bowles, John Stubbert)</td>
<td>Hydrogeologic analysis; water system alternatives</td>
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<tr>
<td>Julian Ng., Inc. (Julian Ng, P.E.)</td>
<td>Traffic impact analysis report</td>
</tr>
<tr>
<td>Rana Productions (Reginald David)</td>
<td>Avifauna analysis</td>
</tr>
<tr>
<td>Paul H. Rosenthal, Inc. (Leta Franklin, M.A., Kepa Maly, James Head, B.A.)</td>
<td>Archaeological inventory survey</td>
</tr>
</tbody>
</table>

Final EIS Anaehiromer
8.2 Consulted Parties

The consulted parties are listed in Appendix I.
REFERENCES

Reports


12. Hamakua Steering Committee, *Hamakua Regional Plan: From Kainakea to Waipio.* Endorsed by the County Council, County of Hawaii, by Resolution No. 244-90, November 1990.


Laws, Ordinances, Resolutions, Administrative Rules

42. Hawaii Administrative Rules, Chapter 11-55, Department of Health, Water Pollution Control.


46. *Hawaii County Code*, Chapter 10 (Erosion and Sedimentation Control).


APPENDIX A
PRELIMINARY ENGINEERING REPORT
PRELIMINARY ENGINEERING REPORT

FOR

AMANRESORT
Kuku'ialoe, Hamakua District, Hawaii

Prepared for:
Kuku'ialoe Development Company

Prepared by:
Imata & Associates, Inc.
171 Kapiolani Street
Hilo, HI 96720

September 25, 1993
INTRODUCTION

1.1 Purpose of the Report

The purpose of this Preliminary Engineering Report is to evaluate the sitework and infrastructure required to support the proposed project and is based on State and County standards and guidelines. A construction cost estimate provided for the elements of work included in this report is given in current 1993 dollars.

1.2 Project Description

The approximately 113-acre project site is comprised of six parcels as shown on Tax Map Key: 3rd Division 4-6-3, 15, 43, 44, sect. 9.8.11 located in Kualoa, Honolulu, island and county of Hawaii (see Fig. 1). Three components comprise the project: 1) Amaunikilaua, a 36-unit luxury resort located on the cliff edge with a view of the ocean coast and Waipio Valley; 2) Plantation Inn, a 4-suite Inn in the existing 85-year old Plantation Manager's Estate; and 3) 4-acres 45 for simple residential-agricultural (36) and residential-estates (7) lots in clusters at various locations (see Fig. 2).

1.3 Description of Project Site

The existing ground slopes at an average of 10% in the northerly direction with elevations ranging from 850 feet to 450 feet mean sea level.

Existing soil types are predominantly of the Paosan series (PA - on slopes of 6 to 12%, PAO - on slopes of 12 to 20%, and PALL - on a small portion of steeper cliff slopes) and silty clay loam (see Fig. 3). A small portion of the site is of the Kualoa series (KU). Both series consist of well-developed silty clay loams formed in volcanic ash. In a representative profile, the surface layer of Paosan soil is very dark brown silty clay loam about 10 inches thick and is slightly acidic. The subsurface is medium brown silty clay loam about 34 inches thick and is medium to slightly acid. The subsoil is medium brown silty clay loam about 8 inches thick and is medium to slightly acid. The surficial layer of Kualoa soil is medium acid.

In their natural state, both soils are always moist. When dry, the surface layers have moderate shrinkage and low swelling potential. If allowed to dry, both soils shrink to fine sand-size aggregates. The more level areas (6 to 12%), permeability is moderately rapid, runoff is shallow, and the erosion hazard is moderate. In the steeper areas (12 to 20%), permeability is moderately rapid, runoff is moderate, and the erosion hazard is moderate. These soils are poorly suited for rudiments, and they have low bearing capacity for low buildings. The degree of settlement for site work fills is slight to severe, depending on the slope.

2 ROADWAY SYSTEM

2.1 Existing Conditions

Access to the site from the Hawaii Belt Road (State Highway 19) is along the Honoakoo-Kualoa Road (County Highway 240), through Honoakoo Road toward the Waipio Valley lookout. The existing pavement width of Highway 240 is 20', with 2 to 4 shoulders.

2.2 Proposed Improvements

2.2.1 Ontap Improvements

A private internal roadway system will be developed to provide circulation within the project limits, with provisions made to accommodate pedestrian traffic, if required.

2.2.2 Offsite Improvements

The project will access from a new road connecting to Highway 240 and passing near the Plantation Inn. Based on the relatively low volume projected for Highway 240 and the proposed project, intersection improvements could include a "T" intersection with short deceleration and acceleration lanes designed in accordance with the posted speed limit of that section of Highway 240.

2.3 Estimated Road Improvement Costs

The estimated cost for construction of 12,200 linear feet of private, non- dedicable internal roadways is approximately $2,750,000 ($225/ft assuming 20' pavement width with 4" aggregate base course and 12" subbase). Intersection improvements to the Highway 240 end into the intersection with the Old Route 240 is estimated to be $450,000.

3 WASTEWATER SYSTEM

3.1 Existing Conditions

There is no county wastewater system in the region. Wastewater disposal is predominantly by cesspools.

3.2 Proposed Improvements

Under current Department of Health wastewater regulations, cesspools are permitted for developments of less than 50 units. Therefore, cesspools may be permitted for the 43 1-acre lots. If required by the Department of Health, individual wastewater systems will be provided.

The 4-acre Plantation Inn is currently served by a cesspool(s). Depending on final plans for this facility, the cesspool(s) may need to be upgraded to septic system to accommodate the proposed improvements.

For the 36-unit Amaunikilaua hotel, disposal would be through an individual wastewater system, depending on the availability and suitability of soils for a leaching field. An alternative would be a private wastewater treatment plant designed and operated in accordance with the rules of the Department of Health. Rechlorination of wastewater for irrigation purposes may also be considered. The estimated wastewater flow at 400 gpd/h is about 21,000 gal.

3.3 Estimated Wastewater System Costs

The estimated cost for an individual septic system consisting of a septic tank and leaching field for each unit is about $7,000. For Amaunikilaua hotel, the estimated cost for an individual wastewater system is $242,000.
system is $75,000, and the estimated cost for a package treatment plant is $100,000.

4 DRAINAGE SYSTEM

4.1 Existing Conditions

There is no existing drainage system in the area. Stormwater runoff is conveyed by overland sheet flow toward Waikooko Gulch and other unnamed gullies that traverse the area.

As shown on the current Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency, the project site is located in Zone X, areas outside the 500 year flood plains. The County Department of Public Works, however, has reported drainage problems at Waikooko Gulch bridge which was washed out by a major storm in 1992.

4.2 Proposed Improvements

The increase in runoff generated by this development will be directed by swales for collection in grated inlets and conveyance by reinforced concrete pipes (RCP) for disposal in drywells placed throughout the site. Existing offsite runoff will be intercepted by a swale ditch at the upper limits of the project and conveyed around the development to return to its natural course at the lower limits of the project. Velocity dissipators will be constructed as required.

In accordance with recent Department of Health requirements, a National Pollutant Discharge Elimination System (NPDES) permit will be required for construction of this project. Best management practices will be employed to control erosion and sedimentation during construction to prevent discharge of silt and sediment into downstream waterways.

4.3 Estimated Drainage Improvement Costs

Drainage improvements are estimated $700,000.

5 ELECTRICAL/TELEPHONE

5.1 Existing Conditions

The existing electrical distribution system originates at HELCO's Waikoko Substation and extends approximately 7 miles along existing public thoroughfares to the proposed project site. However, the existing system does not have sufficient capacity to support the proposed project. In addition, the GTE Hawaiian Telephone system also does not have sufficient capacity to service the proposed project.

5.2 Proposed Improvements

5.2.1 Onsite Improvements

Use of an overhead or underground onsite electrical distribution system will be determined during the design development stage of the project. An overhead system will cost approximately $15 to $20 per linear foot. An underground system will cost approximately $300 to $400 per linear foot.

5.3 Estimated Electrical/Telephone Costs

The onsite cost for construction of a new substation with 69 kV line is estimated to be $1.15 million. The cost for construction of a new distribution line from Honoakua Substation is estimated at $500,000. Proprietary estimates indicate the total cost for the project's developer will be approximately $6.5 million.

6 SOLID WASTE

The solid waste system for the County of Hawaii consists of landfills located in Hilo and Pahoa, supported by transfer stations strategically located at various communities throughout the island. The Honoakua Transfer Station is the closest County solid waste disposal facility to the Project Site. The County appropriated money from its 1990 budget to construct a transfer station in Kailua-Kona.

The Honoakua Transfer Station has a single hauling chain. The chain operates into a compactor trailer with a volume capacity of 70 cubic yards (approximately 18 tons) at full capacity. The trailers are hauled on a scheduled basis and are not necessarily full when hauled (approximately 10-12 tons).

The project will generate about 830 pounds of solid waste per day based on the County's standard of 24 pounds per capita per day for 85 units assuming 100% double occupancy. Assuming that Honoakua's trailer is hauled daily, the solid waste generated by the project would represent 2% of the total capacity (80 tons) of the transfer station, or up to 1% of the actual hauling volume (80 tons).

7 SUMMARY OF SITEWORK COSTS

<table>
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APPENDIX B

ORNITHOLOGICAL AND MAMMALIAN SURVEY
OF THE PROPOSED AMANRESORT
REPORT:

ORNITHOLOGICAL AND MAMMALIAN SURVEY OF THE
PROPOSED AMANRESORT DEVELOPMENT SITE AT
KUKUIHALE, HAMAKUA DISTRICT, ISLAND OF
HAWAII.

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Prepared by:
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SUMMARY OF A BIRD AND MAMMAL SURVEY OF KUKUIHALE, HAWAII

A bird and mammal survey of this property was conducted September 18 & September 23, 1993. The purpose of this survey was to: Document what bird and mammal species occur on the property, or might be expected to occur given the type of habitat available; provide some baseline data on the relative abundance of the species found; and determine the presence of any native species, particularly any that are threatened or endangered.

Mammals were found either by sight or by looking for their tracks and other signs. No trapping study was done.

A total of sixteen bird species were found. Of these eleven are not native to Hawaii, having been introduced by man; one the Hawaiian Hawk is endemic (native and unique) to the Island of Hawaii and two are indigenous seabirds native to the State of Hawaii, but also found elsewhere. Although Hawaiian Hawk were detected flying over the site, there is nothing unique about the site, and it cannot be considered critical to the survival of the Hawaiian Hawk. The birds and mammals found during this survey are the ones that one would expect to find in habitat of this nature in the Hamakua District of the Island of Hawaii.

A total of four species of land mammals were found during the course of the survey. All of these mammal species are not native to Hawaii and were introduced by man. An effort was made to find Hawaiian hoary bats and Hawaiian Owls, neither were found.

Development of this property should not greatly alter the bird populations of this area. Migrant usage will in all probability increase.

Recommendations

1. The most biologically interesting part of this property is the northern cliff face and the beacon beach and strand vegetation below them. Neither areas are rated for development in the plans that I have seen.

Recommendations:

A. The combination of native plant communities found on the cliff sides and the strand vegetation below them represent fragile native ecosystems. The cliff areas also afford indigenous seabirds such as the White-tailed Tropicbird with nest sites. The rich shoreline provides foraging areas for endangered Green Turtles. These areas should be preserved as they represent important natural biological resources; furthermore, they have potential as an educational resource.

B. Due in part to the presence of endangered Green Turtles along the coastline immediately below the site it is imperative that an effort be made to control soil erosion during the course of construction. Realistically this threat may be less real than perceived. Sugar has been harvested from these same lands for most of this century, and it is hard to conclude that the development proposed will create more of a biological disturbance than has been perpetuated on an ongoing basis for the past ninety years.

INTRODUCTION

This report summarizes the findings of a two day ornithological and mammalian survey conducted on September 18, and September 23, 1993, on the Kukuihaele Development Company property located in Kukuihaele in the Hamakua District, on the Island of Hawaii, U.S.A. (see Fig. 1). The purpose of the survey was to: (1) document what bird and mammal species occur on the site, or are likely to occur given the type of habitat available; (2) provide some baseline data on the relative abundance of the species found; (3) determine the presence of any native species, particularly any that are listed as threatened or endangered by either the federal or state government; and finally (4) address the importance of the habitat to the endangered Hawaiian Hawk or ‘oio (Dioctodura solitaria).

GENERAL SITE DESCRIPTION

The project site encompasses approximately 113 acres in Kukuihaele, Hamakua District, Island and County of Hawaii. The center of the project site is approximately 20° 7' 29"N; 155° 34' 36"E (Fig. 1). The property runs north from highway 240 at an elevation of 600 feet down to the top of ocean cliffs at 500 foot elevation. The bulk of the site is made up of abandoned / fallow sugar cane fields interspersed with small ravines which are primarily vegetated with introduced trees and shrubs. The predominant plants in the fields are sugar cane (Saccharum officinarum) and various grasses such as California grass (Brachiaria mutica) and weeds generally associated with agricultural lands. The ravines and field borders are dominated by introduced trees such as Ironwood (Casuarina equisetifolia) and Kania pine (Pinus echinata) and shrubs such as Chilean berry (Solanum leucanthum) and grove varieties (Ficus sp.). The only real change to the vegetation since Cheng's 1991 survey is that most of the sugar cane fields are now either falling over or are in fact abandoned. For a detailed discussion of the vegetation found on the site, see (Chap 1991).

Weather during the survey was predominately cloudy with intermittent light rain showers.
PREVIOUS SURVEYS

The first systematic surveys of the avifauna of Hawai'i were not undertaken until 1976. Starting in that year and continuing until 1983 the U. S. Fish and Wildlife Service (USFWS) conducted a state-wide survey of the avifauna of Hawai'i (Scott et al. 1986). During the course of the Hawai'i Forest Bird Survey (HFBS) a total of 27 transects were surveyed in the Hamakua and Kohala regions of the Island of Hawai'i (Fig. 2). Due to the fact that the bulk of the lands in the Kohala area had been under intensive sugar cane cultivation for more than 75 years with the attendant loss of native vegetation, no transect was placed even close to the subject property (Fig. 2). Brumen surveyed this site in the course of a larger less intensive survey in 1991 (Brumen 1991).

STUDY METHODS

Eight-minute unlimited distance circular plot counts (Reynolds et al. 1980) were made at each of 17 stations located throughout the site. Field observations were made with the aid of Leica 10 X 40 binoculars and by listening for vocalizations. Counts were concentrated during the early morning hours (generally between 0700 hrs and 1100 hrs), the peak bird activity time. Two separate circular counts were made in an attempt to locate Hawaiian Hoary Bats (Lasiurus cinereus adustus). These counts are the basis for the relative abundance estimates in this report (see Table 1 & 2). Time not spent counting was used to “prospect” for species not recorded during the counts. Forests were made into all pockets of vegetation within the site in an attempt to locate any missed species. In addition James Jacob and Jack Jeffrey, both avian biologists with the U. S. Fish and Wildlife Service (USFWS), were contacted for additional information on the avifauna and mammalian species of the surrounding area. Also contacted was Grant Means of the University of Hawai'i - Hilo campus for information on the history of the sugar cane industry in this region. Observations of feral mammals were limited to visual and auditory detection, as well as observation of nests, tracks and road kills. No trapping study was conducted to obtain data on their relative abundance.


RESULTS

A total of 18 bird species representing 18 separate families were detected during the course of this survey. All of these species were counted on station counts (see Table 1 & 2). No other avian species were detected on the site. Of the 18 species detected, 11 are introduced (alien), 1 is a domestic species, 2 are indigenous (native) seabirds, one is an indigenous (native) migratory species and one is endemic to the Island of Hawai'i (native and unique to the area). The one endemic species detected is currently listed as an endangered species by the USFWS (USFWS 1988).

SPECIES ACCOUNTS

In the following species accounts I briefly discuss the natural history and origin of each species. The federally listed species are addressed first, then the indigenous ones, and finally the remainder are addressed in taxonomic order.

FEDERALLY LISTED SPECIES

Hawaiian Hawk: Buteo solitarius

The Hawaiian Hawk is the only extant falconiform in Hawai'i, it is currently endemic to the Island of Hawai'i, sub-fossil remains indicate that it was also formerly found on Molokai (Olson & James 1982). The Hawaiian Hawk was first listed as endangered in 1987 (USFWS 1999). This species has probably adapted better than any other endemic avian species to the alien dominated lowland areas of the island. Hawaiian Hawks occupy a wide variety of habitats, they are to be found in almost all habitats not lacking trees (Fig. 2). They are all but absent from treeless or close to treeless grasslands and lava fields. During the course of the HFBS no population estimate was made, due in part to the fact that as with most raptors Hawaiian Hawks do not meet the basic assumptions that are used in computing forest bird community densities
(Scott et al. 1988). In 1984 Gilliss estimated a population of some where between 1400-
2500 birds (Gilliss 1984). At the recent Hawaiian Forest Bird Conservation Assessment and
Management Plan Workshop the same figures were used in discussing the status of this species
(Ellis-Joseph et al. 1993). It is generally thought that the population is healthy and
maintaining itself, unlike many other endemic species. This species is currently under review
by the USFWS for down listing from endangered to threatened status (USFWS 1993). A total of
2 detections of this federally listed endangered species were recorded. Traditionally the
Hanalei area has had one of the denser populations of Hawaiian Hawks on the island (Durger
1981, Gilliss pers. comm.).

INDIGENOUS SEABIRDS

Two species of indigenous (native) nesting seabirds were detected. Two White-tailed
Tropicbirds (Phaethon lepturus douroese) were seen flying along the shoreline on the north
boundary of the site. This species nests along the Hanalei coast in the cliff faces. A lone Great
Frigatebird ( Fregata minor palmerstoni ) was seen nesting over the open fields to the east of
the site. This pelagic species is not known to nest on the island of Hawaii. Although it nests on
many offshore islands, Oahu, Kauai and the leeward islands. They are not uncommon visitors to
this island, most often seen immediately prior to or following high winds or low pressure
systems.

INDIGENOUS MIGRATORY SPECIES

Migratory waterbirds and shorebirds make up a large part of the winter avian population of
Hawaii. These annual visitors are found throughout the island from August through May.
Currently 81 separate migratory and extralimital waterbird and shorebird species have been
documented from the islands (Pyle 1993). It can be expected that during migration season,
several of these species utilize the proposed site. Only one indigenous (native) migratory bird
species was detected during this survey. It is to be expected that several other species utilize
the site at times. The most likely species being Ruddy Turnstone (Arenaria interpres ) and
Wandering Tattler (Heterocerus incanus )

Pacific Golden Plover: Pluvialis fulva

Kokea

The most common of the migratory shorebirds that visit Hawaii each year, Pacific Golden Plover
usually start arriving from their arctic breeding grounds in August. They spend the winter here
and on other islands in the Pacific. Many defend wintering grounds and are site tenitive, this
meaning that they return to the same territory every year. They leave to head back to their
arctic breeding grounds in late April and early May. Some individuals oversummer in Hawaii. A
total of 7 detections of this species were recorded.

INTRODUCED BIRDS

During the last hundred years more than a 160 species of alien birds have been introduced to
the Hawaiian Islands (Long 1981, HAS 1983). Many of these species were game birds
introduced by, private landowners, the Territorial Division of Fish and Game, and following
statehood, by the State of Hawaii’s Division of Land and Natural Resources. These birds were
introduced in the hope that they would become established and provide a recreational hunting
resource. Less than a quarter of these introductions have been successful. On the Island of
Hawaii more than 60 species of game birds have been introduced. Currently 14 of these alien
introductions have survived and are considered to be established on the island (Pyle 1992,
David in press).

Little is known of the effect that these species have on Hawaii’s native bird populations. They
are, by and large, aggressive birds that are native to areas that have many predators. Many of
these alien birds probably also compete Hawaii’s native species, for food, cover and nesting
resources. They have been implicated in the spread of alien plant species, which all to often
have proven to have a disastrous effect on our ecosystems. Some are thought to be reservoirs for
diseases, some of which probably cannot do negatively impact Hawaii’s endemic avifauna.
Systematic scientific studies of these problems have commenced, but are all nascent.

The bulk of the avian species detected on the site were all introduced to Hawaii by man, and
have managed to sustain viable wild populations. A total of 10 species of introduced (Alien) bird
species were detected on the site.

Ring-necked Pheasant: Phasianus colchicus

The Ring-necked Pheasant is native to Asia Minor from the Black Sea to Manchuria and Japan,
south to China and north to the Hindu Kush (Delacour 1965). At least five races of this widely
introduced species have been released in the Hawaiian Islands starting with the Mongolian race
P. c. mongolicus in 1865. The Chinese Pheasant P. c. torquatus in 1875 and the Green
Pheasant P. c. versicolor sometime before 1900 (Caun 1933, Walker 1967). Both P. c.
cochlirius and P. c. lineobrasius and P. c. versicolor were introduced to Puu Waawaa's Ranch
between 1957 and 1966 (Lewis 1971). Although in some areas on the Island of Hawaii one can
still find relatively pure P. c. versicolor and P. c. cochlírius the majority of Ring-necked
Pheasants found here are crosses of one combination or another.

Ring-necked Pheasants are commonly found on cultivated land, pastureland and also in some of
the uncultivated grasslands around the state. They feed on a combination of seeds, grasses,
berries and insects. In Hawaii they breed from March through June. They are polygamous and
lay clutches of between six and eleven eggs, somewhat fewer than the norm elsewhere (Teres

A total of 2 individuals of this species were detected during the course of this survey.

Rock Dove: Columba livia

The Rock Dove was native to the coastlines of England, southern Europe the Mediterranean and
north Africa east to the Indian sub-continent (Sibley and Monroe Jr. 1990). Widely
domesticated and even more widely introduced this species has interbred extensively with
domestic stock that it is difficult, if not impossible, to reconstruct its original range (Teres
1988). Rock Doves were one of the first alien introductions to the islands they probably
escaped from captivity in 1786 (Walker 1967). Its current population is much reduced from
the immense flocks reported from the Island of Hawaii in 1831 (Munro 1969).

Rock Doves breed year round and may do so as many as five times a year. They feed on seeds,
grasses, worms, insects and berries. They usually lay two eggs in a loosely constructed nest
made of small twigs that are usually placed on ledges and in cavities as well as in buildings and
under bridges. On Hawaii they breed in many of the valleys of the North Kona Coast and
probably also in abandoned buildings etc.

Only two birds were detected during this survey, they were both walking down the road in the
town of Kukiohaena.

Spotted Dove: Streptopelia chinensis

This species is native to a large part of southeast Asia and the Malay Archipelago (Sibley and
Monroe Jr. 1990). The race Streptopelia chinensis chinensis was introduced to the Hawaiian
Islands prior to 1900 (Caun 1923). Spotted Doves were well established on Hawaii by 1940
(Munro 1960). For some unknown reason the owners of Puu Waawaa's released 8 birds on the
ranch in 1981 (Lewis 1971). This species is found in residential as well as in most other
habitats throughout the main Hawaiian Islands.

Spotted Doves eat seeds, grain, plant material and scraps. In Hawaii they breed from February to
October. They usually lay two eggs in a messy platform nest made of small sticks which is usually
placed from 8 to 40 feet in vegetation or on buildings (Teres 1989).

A total of 8 birds were recorded on station counts, during the course of this survey.

Zebra Dove: Geopelia striata

This species is native to southeast Asia and the Malay Peninsula was first introduced to
Hawaii in 1922 (Munro 1960). There is real confusion as to which races were released when
and where in the islands. By 1950 The Schwartz's considered the species to be well established
throughout the Hawaiian Islands (Schwartz & Swartz 1950).

In Hawaii this species is found in almost all habitats. They feed on seeds, grain, insects and eggs.
They nest year round often as many as five times a year. They usually lay two eggs in a small
flimsy nest made of little sticks that are precariously placed in vegetation, and sometimes on
and in buildings (Teres 1989).

A total of 9 were detected during station counts.

Melodious Laughing-Dove: Gambel canorus

Melodious Laughing-Dove, better known in Hawaii as Hweawei are native to southern Asia from
China to northern Laos and Vietnam, they are also found in Taiwan (Sibley and Monroe Jr.
10
1950). It is thought that this species escaped from captivity during the 1926 Chinatown fire on Oahu. (Gaum 1933). Following its unintentional release on the Island of Oahu, this species was imported for release on Kauai, Maui and Hawaii. (Burger 1972). Melodious Laughing-thrush are now established on all the main islands with the exception of Lanai (Hawaii Audubon Society 1975). Its distribution is very patchy.

Melodious Laughing-thrush are omnivorous feeders, eating everything from insects to vegetable matter. In Hawaii they breed from May to July, laying between three and five eggs in a large bowl shaped nest often placed close to the ground in dense bushes such as Christmas berry (Long 1931, David pers. obs.).

A total of four birds were heard during this survey.

**Common Myna** Acridotheres tristis

The Common Myna is native to southern and southeast Asia (Sibley & Monroe Jr. 1990). It was introduced to the Hawaiian Islands in 1865 by Dr. Hildebrandt, with the hope that they would prey on army worms and other insect pests (Gaum 1933, Munro 1950). This very aggressive species rapidly became established and has become ubiquitous. It tends to be a communal species and is found in extremely large numbers in cities and towns. Due to its aggressive nature and it is prone to most communities - up to 5000 birds in one area, many local rising human have been less than enchanted with this species.

Common Mynas are omnivorous feeders eating everything from nectar to cats. In Hawaii they breed from February to August often raising as many as three broods per season. They lay between two and five eggs in a messy nest made of twigs, trash, plant bits and often times paper or plastic (All & Ripley 1969-1974, David pers. obs.).

A total of 172 were detected on station counts including one flock of 80 plus birds seen foraging on the freshly mown Kuilauola Co. Park.

**Japanese White-eye** Zosterops japonicas

The Japanese White-eye is native to east Asia from southern China to Korea and Japan and in winter, Thailand, Borneo and Laos (Sibley & Monroe Jr. 1990). Exactly when this species was first introduced to Hawaii is uncertain. In 1929 the Territorial Board of Agriculture released birds from Japan on Oahu (Gaum 1933, Munro 1950), there were several more releases by both the Board of Agriculture and by the Hui O Mānoa. They were released on the Island in 1957 (Hawaii Audubon Society 1978). This species has been considered to be established on all main islands since at least the mid 1920's (Burger 1972, Hawaii Audubon Society 1978).

Locally called Majo this ubiquitous species is probably the most common bird in the state. It feed on a mixed diet of arthropods, nectar and berries. It has been recorded nesting from February through November; nest is a small dome shaped affair, well finished out of a blend of grasses, often lined with feathers and spider webs. In Hawaii, Japanese White-eyes lay three to four eggs, slightly more than in its native range.

A total of 13 were detected on station counts.

**Northern Cardinal** Cardinalis cardinalis

Northern Cardinals are native to the eastern part of the U.S.A. They range west to Colorado and southwest to southern Arizona. South to northern Guatemala and Belize (ACU 1963). It has also been successfully introduced to southern California. Northern Cardinals were first introduced to the Hawaiian Islands in 1899. Birds were released on all main islands. Several separate introductions of this species of several races were made in 1923 and 1931. They were considered to be established on all main islands by the 1960's (Gaum 1953, Burger 1972, Hawaii Audubon Society 1978). They have to be found in almost all habitats in the Islands.

This species eats a mixed diet of seeds, berries, plant material and insects. In Hawaii Northern Cardinals breed in all months of the year. They construct a loosely built shallow nest made of small twigs, grasses and other plant material, it is lined with fine grasses. Clutches consist of two to six eggs (Temes 1930).

Six were recorded during this survey.
House Finches: _Carpodacus mexicanus_

House Finches are native to western U.S.A. from west of Kansas, north to British Columbia and south to central Mexico (ACU 1963, Sibley & Monroe Jr. 1990). This species has been successfully introduced to the eastern U.S.A. House Finches have been in the Hawaiian Islands since the 1870's; they were popular cage birds and probably escaped soon after they first arrived in Hawaii. The race _Carpodacus mexicanus frontalis_ from California has been established on all main islands since the early 1920's (Craith 1933, Berger 1972, Hawaii Audubon Society 1976).

This species is considered an agricultural pest in its native range (Terres 1980). In Hawaii, this species feeds on fruit, berries and insects. Papaya farms consider this species a pest as they apparently do some damage to this commercially grown fruit crop. They nest year round, making a grass and twigs nest usually placed in a tree cavity, roof, tree crown. Clutch size ranges from two to six eggs (Long 1981).

Twelve individuals were recorded on station counts.

House Sparrows: _Passer domesticus_

House Sparrows are native to most of Eurasia, from the British Isles, east to the Pacific ocean and north to Siberia, south through the Indian sub-continent and N. Africa (Sibley & Monroe Jr. 1990). House Sparrows have been introduced all over the world. This commensal species is now almost cosmopolitan in range. Little is known of this species introduction to the Hawaiian Islands. Craith reported that nine birds had been released on Oahu in 1871 (Craith 1933). It is not known if there were further introductions. They were numerous around Honolulu in 1902 (McGregor 1903). By the late 1800's House Sparrows of the nominate race _Passer domesticus domesticus_ were common on all main islands (Peters 1962, Hawaii Audubon Society 1976). This species is common throughout the State but tends to be mesoan and does not occur in large numbers far from man's settlements and developments.

House Sparrows breed year round in Hawaii, often raising as many as three broods a year. They build very messy nests of twigs, grasses and litter often just stuffed into a crevice or opening.

When nesting in trees they build a domed nest with a side entrance. Clutch size ranges from four to six eggs. House Sparrow food on a wide variety of foodstuffs from seed, grain and other plant materials to insects, worms and ants (Terres 1980, Long 1981).

A total of 10 were detected on station counts.

Nutmeg Mannikins: _Lonchura punctulata_

Nutmeg Mannikins are native to Southern and Southeast Asia from India east to Java and the Philippines (Sibley & Monroe 1990). The race _Lonchura punctulata impressa_ was introduced to Hawaii by Dr. Wiedenbrand around 1865 (Craith 1933, Berger 1977).

Little is known about this species' life history in Hawaii. In Malaysia this species breed from February through August, Berger reports that he found nests in all months except August (Berger 1977). They build a large covered nest which has a side tunnel entrance. They lay between three and four eggs per clutch. They continue to use the nest as a dormitory following fledging. They feed on seeds, rice and insects.

A total of 22 were detected on station counts. Many were seen in the grasslands approaching the study site.

**BATS AND OWLS**

Three separate counts (see Fig 3), were taken during crepuscular hours in an attempt to locate Hawaiian honey bats (Lasiurus cinereus seminobus), Short-eared Owl or Pueo (_Asio flammeus sandwicensis_) and Barn Owl (Tyto alba). Only one of these, the Hawaiian honey bat is listed as an endangered species (USFWS 1978). No bats were detected during the course of this survey. However it is highly probable that this species utilizes the site upon occasion. Other observers have seen this species in the Hamakua area (J. Garfisch pers. com., David pers. com.).

Neither species of owl resident in Hawaii was detected on station. It is to be expected that both species of owls forage at least occasionally on the site.
MAMMALS

A total of 4 species of mammals were detected during this survey (see Table 3). Feral dogs (Canis familiaris) were seen on both days of the survey. One feral cat (Felis catus) was seen within the site, as was lots of cat signs. Three small Indian mongooses (Herpestes auropunctatus) were seen within the site. No rodents were seen during the survey; it is likely that roof rats (Rattus rattus), Norway rats (Rattus norvegicus) and house mice (Mus musculus), utilize the site. Without conducting a trapping program it is difficult to assess the population densities of these often hard to see mammals.

WILDLIFE RESOURCES

Avian species

The paucity of avian species, especially native ones is not surprising. These lands have been under intensive sugar cane cultivation for at least the past 50 years. The clearing of all native vegetation and the importation of numerous alien plant species, coupled with the attendant pesticide and fertilizer usage have irreversibly altered the flora and fauna of the region. The lack of native vegetation coupled with the decimation of native insects has probably rendered the area hostile to native species.

Endangered Avian Species

The only endangered avian species detected was the Hawaiian Hawk or 'io (Buteo solitarius). This species is listed as an endangered species by both the federal government (USFWS 1979) and by the state of Hawaii. This species is endemic to the island of Hawaii. As stated in the species account, this species has traditionally had its highest population densities along the Hamakua coast. There is nothing unique about the site, and the lands are not critical for the survival of this species. Should any nests of this species be detected in future, the nest, nest tree and birds should be protected at all costs. The disturbance, killing, removing of the nest tree or nest would constitute a take under the Endangered Species Act.

Non-game Mammals Species:

All mammals detected during the course of this survey were alien species. All of them are deleterious to the avian species found on the site. Dogs disturb and kill ground nesting birds, cats and mongoose are known to prey on eggs and young of many avian species, as do rats.

Game Mammals:

No game mammals were detected during the course of this survey. With the harvesting of the last of the sugar cane in the area, it would stand to reason that feral pigs (Sus scrofa) will probably move into the area. It is hard to imagine that with lack of cover that the site could support a viable hunting resource.
CONCLUSIONS

A short two-day survey cannot provide a total picture of the wildlife utilizing any given area. Certain species will not be observed for one reason or another. Seasonal variations in populations coupled with seasonal usage and availability of resources will cause different usage patterns throughout a year or, in fact, over a number of years. A one-time survey can usually only provide baseline information. Coupling that baseline information with data gathered from similar habitats and from previous studies in the same general area can greatly enhance the value of the gathered baseline data; resulting in a much more complete assessment of the natural resources and their utilization at the given site.

The species list of both birds and mammals gathered during this survey is typical of what one would expect from habitat of this type located at that elevation on the Hamakua Coast of the Island of Hawaii. One avian species currently listed as being endangered species by the federal government was detected.

Development of this site will have little effect on the avian populations presently found on the site. Since the area has been under intensive sugar cane cultivation for the best part of this century, coupled with the fact that there is a small town at the edge of the development site, it is unlikely that the proposed development will change the avian makeup of the area in any meaningful way. If some of abandoned sugar cane fields are converted into grassed areas it is likely that these areas will attract more Pacific Golden Plover (Pluvialis fulva) to the site. The development of any standing water will also increase the avian diversity of the site.

RECOMMENDATIONS

1. The most biologically interesting part of this property is the northern cliff face and the boulder beach and strand vegetation below them. Neither areas are suitable for development in the plans that I have seen.

Recommendation:

A) The combination of native plant communities located on the cliff sides and the strand vegetation below them represent fragile native ecosystems. The cliff faces also afford indigenous seabirds such as the White-tailed Tropicbird with nest sites. The rich shoreline provides foraging areas for endangered Green Turtles. These areas should be preserved as they represent important native biological resources; furthermore, they have potential as an educational resource.

B) Due in part to the presence of endangered Green Turtles along the coastline immediately below the site it is imperative that an effort be made to control soil run-off during the course of construction. Realistically this threat may be less real than perceived. Sugar has been harvested from these same land for most of this century, and it is hard to conceive that the development proposed will create more of a biological disturbance than has been perpetrated on an ongoing basis for the past ninety years.
LITERATURE CITED:


KEY TO TABLE 1

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E = Endemic species</td>
<td>Reasons for adding animals to the list</td>
</tr>
<tr>
<td>IS = Indigenous species</td>
<td>Reasons for adding animals to the list</td>
</tr>
<tr>
<td>A = Alien Introductions species</td>
<td>Reasons for adding animals to the list</td>
</tr>
<tr>
<td>D = Domestic species / no self sustaining population</td>
<td>Reasons for adding animals to the list</td>
</tr>
</tbody>
</table>

Relative abundance = the number of lines recorded during the survey

A = Abundant (>50) individuals recorded
C = Common (>10) individuals recorded
U = Uncommon (>5) individuals recorded
R = Rare (<5) individuals recorded

TABLE 1

<table>
<thead>
<tr>
<th>COMMON NAME</th>
<th>SCIENTIFIC NAME</th>
<th>STATUS</th>
<th>RE-ABUNDANCE</th>
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</thead>
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<tr>
<td>TROPICIBIRDS - Phaethontidae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White-tailed Tropicbird</td>
<td>Phaethon lepturus dorsatus</td>
<td>IS</td>
<td>R - 2</td>
</tr>
<tr>
<td>FROGIBIRDS - Pogoniidae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great Frigatebird</td>
<td>Fregata minor palmerston</td>
<td>IS</td>
<td>R - 1</td>
</tr>
<tr>
<td>HAWKS &amp; EAGLES - Accipitridae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hawaiian Hawk</td>
<td>Buteo jamaicensis</td>
<td>E</td>
<td>R - 2</td>
</tr>
<tr>
<td>GROUSE &amp; PTERARDAN - Pheasantida</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Junglefowl</td>
<td>Geophagus geophagus</td>
<td>D</td>
<td>U - 11</td>
</tr>
<tr>
<td>Ringed Plover</td>
<td>Phasianus colchicus</td>
<td>A</td>
<td>R - 2</td>
</tr>
<tr>
<td>SANDPIPERS &amp; ALLIES - Scolopacida</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific Golden Plover</td>
<td>Pluvialis fulva</td>
<td>IM</td>
<td>U - 7</td>
</tr>
</tbody>
</table>
FIGURE 1

ANANDESORT PROPOSED PROJECT SITE
KOROHINELE, HAWAII DISTRICT
HAWAII

PIGEONS & DOVES - Columbidae

Rock Dove
Columba livia
A
R - 2

Sri Lanka Dove
Streptopelia chinensis
A
U - 8

Zebra Dove
Geopelia striata
A
U - 9

OLD WORLD FLYCATCHERS & ALLIES - Muscicapidae

Melodious Laughing thrush
Garrulus canorus
A
R - 4

STARLINGS & ALLIES - Sturnidae

Common Myna
Acridotheres tristis
A
A - 172

SILVEREYES - Zosteropidae

Japanese White-eye
Zosterops japonicus
A
U - 13

WIREBIRDS & SPARRROWS - Emberizidae

Northern Cardinal
Cardinalis cardinalis
A
U - 6

CANARIES, SISKINS & ALLIES - Fringillidae

House Finch
Carpodacus erythrinus
A
U - 12

OLD WORLD WEAVERS - Ploceidae

House Sparrow
Passer domesticus
A
U - 10

WAXBILLS AND ALLIES - Estrildidae

Nutmeg Mannikin
Lonchura punctulata
A
C - 22
FIGURE 4
DISTRIBUTION OF HAWAIIAN HAWKS BUTEO SOLITARUS ON HAWAI'I

APPENDIX C
ARCHAEOLOGICAL INVENTORY SURVEY: KUKUIHAELE PROJECT
Archaeological Inventory Survey
Kukuihaele Project
(Amanresort At Kukuihaele)

Lands of Kanahonua and Waiko‘eko‘e
Hamakua District, Island of Hawai‘i

Archaeological Inventory Survey
Kukuihaele Project
(Amanresort At Kukuihaele)

Lands of Kanahonua and Waiko‘eko‘e
Hamakua District, Island of Hawai‘i

BY
Lea Franklin, M.A. * Projects Supervisor

AND
Kepa Kaula * Cultural Resource Specialist

WITH
James A. Hadl, R.A. * Projects Supervisor

PREPARED FOR
Kukuihaele Development Company
of Roy R. Nakano
Attorney and Urban Planner
171 Hanalei Street
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OCTOBER 1993

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Paul H. Rosendahl, Ph.D., Inc.
Archaeological • Historical • Cultural Resource Management Studies & Services
SUMMARY

At the request of Mr. Roy R. Takekawa, Attorney and Urban Planner, on behalf of his client, Kukuluwai Development Company, Paul H. Bousal, Ph.D., Inc. (FHRI) provided archaeological consultant services in connection with the Kukuluwai Project (Ancestral to Kukuluwai) in the Land of Hawai‘i, to the Hamakua District, Island of Hawai‘i, TMK-2-6-4. In 1991, FHRI conducted an archaeological inventory survey of the approximately 5.776 acre Hamakua Sugar Company Wai‘oli Lands Project area (FHRI Project 91-1584), which constitutes the present Kukuluwai Project area. Preliminary consultations with DLNR-HISHD staff have confirmed that the FHRI report prepared in March 1991, reviewed in consultation with the proposed Kukuluwai Project.

The field work for the original project was conducted March 4-9, 1991, and consisted of a variable-cover aerial survey, an intrusive pedestrian survey, and limited subaqueous testing. Additional field work to assess the current conditions of sites and gather additional site data was completed on April 19, 1993. During the initial field survey, 40 sites consisting of 96 component features were identified in the current project area. The features include the following functional types: agriculture, habitation, habitation, habitation, habitation, habitation, habitation, habitation, habitation, habitation. These sites consisting of eight component features were located immediately adjacent to the project area. All these sites are historic in late historic site. Two of these sites are surrounded by three sites by the current proposed development; the third, a trail, runs along the cliff below the current project boundary. The former sites are all associated to the project area; trail, historic, and structural remains. Function interpretations of the features are: transportation, economy, and habitation or increased.

At least one site, 1981 (South Side), is no significant for information content, and is recommended for further data collection. Of the remaining sites, two (Site 1496, habitation/agricultural feature; Site 1971, habitation/agricultural complex) are assessed as significant for information content, as excellent examples of site type, and for cultural significance. Further data collection followed by preservation with interpretive development is recommended for these sites. Site 1985 (habitation/agricultural complex) is assessed as significant for information content and for cultural significance, and it is provisionally assessed as an excellent example of a site type. Final assessments and treatment recommendations depend on the results of the further data collection. It should be noted that, for two of these sites (1496, 1971), this assessment is not made because the sites are exceptional examples containing the intact, but rather, because they are exceptional examples in their respective region. If, in the future, better examples of such agricultural sites are identified in the Hamakua District (other than those of Wai‘oli Valley), then perhaps the generic assessments can be changed. Mitigation plans for rehabilitation of Site 1971, the Hamakua Sugar Company Manager's Residence, should be developed within the State Historic Preservation Division.

Of the three sites adjacent to the project area, two (Site 1971, habitation/agricultural complex) are assessed as significant for information content and for cultural value. Site 1985 (habitation) is assessed as significant for information content, as an excellent example of a site type and for cultural significance. These sites, that are outside the project area have been considered in the current study to determine the potential for their extending into the project area. The data appear to support the assertion that these are discrete resources lying within their current TMK boundaries. No further work is required for these sites.
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INTRODUCTION

BACKGROUND

At the request of Mr. Roy R. Takeno, Attorney and Urban Planner, on behalf of his client, Kukuiholo Development Company, Paul H. Rosenblatt, Ph.D., Inc. (FHRI) provided archaeological consulting services in connection with the Kukuiholo Project located at Kukuiholo in the lands of Kahua (N.S. 4-8-0-5, 11, 12, 13, 14). The overall objective of this work was to provide inventory level survey information appropriate to and sufficient for satisfaction of all current Hawaiian preservation regulatory review requirements of the Department of Land and Natural Resources State Historical Preservation Division (DLNR-SHPD) and the Hawaii County Planning Department.

In 1993, FHRI conducted an archaeological inventory survey of the approximately 3,370-acre Kahua Sugar Company Wai'aoi Lands project area, within which the present Kukuiholo Project area is located (Head, Franklin, and Goodfellow 1993). Because of the bankruptcy of Kahua Sugar Company, the review of the Wai'aoi project final report was not fulfilled. Preliminary consultations with DLNR-SHPD staff have confirmed that in connection with the proposed Kukuiholo Project, they are willing to complete their review of the FHRI report 109-4-01 (1993), prepared earlier for the Kahua Sugar Company Wai'aoi Lands project. This report has recently been revised as Head, Franklin, and Goodfellow (1993).

Field work for the Kahua Sugar Company Wai'aoi Lands survey was conducted during the period of March 6-30, 1991 by a crew of six, under the supervision of Supervisory Archaeologist James Head, B.A., and Alan T. Walker, B.A., Principal Archaeologist. Dr. Paul H. Rosenblatt provided overall guidance for the project. Crew members included Field Archaeologist Michelle Deacon, Randy Fish, Eric Johnson, Jeff Prentis, and Leo Smith. The field survey required approximately 790 man-hours of labor to complete. Fieldwork for the current report required four man-hours for additional site recording. The report was prepared by Projects Supervisor Leo Franklin, M.A., with Projects Supervisor James Head, B.A., and Cultural Resource Specialist Erica Stniza. Dr. Paul H. Rosenblatt provided overall guidance for the project. The current report covers the six parcels totaling approximately 113 acres comprising the Kukuiholo Project.

SCOPE OF WORK

The basic purpose of an inventory survey is to identify all sites and features of potential archaeological significance present within a specific project area. An inventory survey is the initial level of archaeological investigation. It is conducted to determine the presence or absence of archaeological resources within a specified project area and indicates both the general nature and variety of archaeological remains present, and the general distribution and density of the remains. Finally, it permits a general, subjective assessment of the archaeological resources, and helps in the formulation of realistic recommendations and estimates for any further work that might be necessary or appropriate. Such work could include further data collection - additional data collection involving detailed recording of sites and features, and selected limited excavations. It may also include subsequent mitigation-data recovery research excavations, construction monitoring, interpretive planning and development, and preservation of sites and features with significant scientific research, interpretive, and cultural values.

The basic objectives of the inventory survey were four-fold: (a) to identify archaeological features and remains present within the project area; (b) to evaluate the potential cultural significance of all identified archaeological remains; (c) to determine the possible impacts of proposed development upon the identified remains; and (d) to define the overall scope of any subsequent further data collection and/or other mitigation work that might be necessary or appropriate.

The following specific tasks were determined to constitute an adequate scope of work for the proposed inventory survey at the Kukuiholo project area:

1. Review archaeological and historical literature relevant to the project area;
2. Provide consulting services related to DLNR-SHPD review and approval of the Kahua Sugar Company Wai'aoi Lands project inventory survey report previously prepared and submitted by FHRI (Report 109-4-01 (1993));
3. Prepare a Summary Archaeological Inventory Survey Report, based on prior FHRI work, suitable for incorporation into Kukuiholo Project planning documents; and
4. Provide related consulting services as requested and/or appropriate.

These tasks were chosen based on a review of readily available Hawaiian literature, on firsthand knowledge of, and experience with, the specific project area, and on basic familiarity with the general project area. They were also chosen based on a general familiarity with the current requirements of pertinent review authorities, and on information provided by Mr. Takeno and Mrs. Sandra Schaturn, Attorney-at-Law, and on discussions with Dr. Ross Cordy, DLNR-SHPD chief archaeologist and with Mr. Kamakalei Shan, DLNR-SHPD staff archaeologist for Hawaii County.

The inventory survey was carried out in accordance with the current standards for inventory-level survey required by DLNR-SHPD. The significance of all archaeological remains identified within the project area was assessed in terms of the National Register criteria contained in the Code of Federal Regulations (50 CFR Part 60), and the DLNR-SHPD criteria for evaluation of traditional cultural values prepared by the National Advisory Council on Historic Preservation (NACHP 1993). DLNR-SHPD and the Hawaii County Planning Department (HCPD) both use these criteria to evaluate eligibility for both the Hawaii State and National Register of Historic Places.

To assist the client with decisions regarding the subsequent treatment of resources, the general significance of all archaeological remains identified during the survey was also evaluated in terms of FHRI cultural resource management value scales, which relate to potential scientific research value, interpretive value, and cultural value. The value scales are explained in more detail later in the report.
of the ironwood are thick clumps of Christmas-berry (Ehrenbergia spectabilis) and low hedges (Iresine hederacea =Euphorbia hederacea) (Euphorbiaceae) de Witt. Also present are California grass (Pachyrrhizus minor = Euphorbiaceae) and the western portion of the island, arrow fern trees (Pteridium aquilinum), Christmas-berry, and California grass. The smaller, less steep cliffs support lowwood and beach phragmites (Spartina foliosa Vahl), along with some native species.

2. Sugar Cane Fields—As stated above, most of the project area is in sugar cane, which is not being replanted at the races nor planted in the areas, so development is minimal and is confined. A few small groves of yellow-flowered wild rhizomes (Rhapontium repens), white clover (Trifolium repens L.), Indian paintbrush (Castilleja indivisa), and marsh marigold (Cyperus palustris [L.] L.) are some. Native species in this area include purple California wildflower (Echinocereus tennesseensis) and several species of birds (Passeriformes S.)

3. Guache Vegetation—Vegetation on the undisturbed gullies of the project area is dominated by any species such as ironwood, hogs, and Pacific Pipturus. There are also scattered patches of Paranlossus pascui L. (L.)

Chur (1991:14) indicates that most of the native species located during the survey are actually listed as threatened or endangered plants and are proposed for listing. Most of the species are obligates in the native forests of Hamakua and Kohala.

PREVIOUS ARCHAEOLOGICAL WORK

The northern Hamakua coast has not been extensively surveyed. The most substantial archaeological work to date, the compilation and description of temple sites (Mauil), was completed in the first third of this century. This work was begun by Thomas G. Thur, who catalogued ancient Hawaiian remains and published several historical materials related to the construction and use of these sites throughout the Hawaiian Islands. Between 1937 and 1938, Thur published tractable descriptions of Aron sites in his journal, Hawaiian Archeological and Ancestral.

John E. C. Thompson, in his 1939 Survey of Hawaiian Islands for the B.P.E. Bishop Museum, added several of the survey work by his comprehensive mapping, mapping, and descriptive recording of Aron sites. Thompson's work on the Chur site is valuable in the interpretation of the Hawaiian archaeological sites. However, the work is not easily comparable to a archaeological context within this period. In historical perspective, Thompson's work is extremely valuable, because he has made the physical characteristics in the face of valuable insights. Chur (1925) credits Chur as being the first Hawaiian archeologist.

During 1938 to 1939, Alfred E. Hudson, carried out field work on the eastern point of the island's land for the B.P.E. Bishop Museum (Hudson 1939). Hudson focused his survey on the structural remains in the district of Hamakua, North, South, and East Tula, and the western coast of Ewa. Hudson recorded not only Aron sites, but also other types of sites, such as agricultural features and structures. Hudson used both his survey and the Chur descriptions of Aron and the local races, and attempted to relocate as many of these sites as possible. He also surveyed the area of Hamakua, covering the bottoms of the valleys and gullies along the coast. Hudson suggested that the relatively sparse number of archaeological sites found in this survey region was a result of the destruction of remains during sugar cane cultivation.

Thur's informants knew of only one Aron within the Aron's current project area, and of three sites in adjacent Aron's. One was a site named Kawaihae, in the Waikiki area. He was not able to identify the site (Thur 1944:13), but he was Hudson's (1939:185) informant about the site in that area. The two sites in the lands of Kohala (the Aron's directly west of the current project area) were called Kalihiwai and Puukohola (Thur 1944:13). These sites were located on the sites, but still retained remnants of the structures. Later, Hudson (1939:185) was unable to determine the location of these sites. Last, Thur mentions a site named Kauaii, a site located near Kauai, between Kohala and Kukuiho, although he was not able to locate the site. (Thur was unwillingly referring to Kaua'i, the Hawaiian's approach to the east side of Waikiki's Aron's.)

The archaeological surveys since Hudson's time are summarized in Table 1. The Lou and Ida K. (1974) and Coughlin (1974) surveys focus on the Waikiki valley, and will not be discussed further in this report. Bennett's 1977 survey also emphasized Waikiki's data, however, Bennett also evaluated historical properties in the Kohalada/Alahe'e area for their interpretive potential, including the Hamakua Sugar Company Manager's House.

In 1974, Wright compiled a historic site inventory for the Hamakua Sugar Company Manager's House, and the site was accepted into the Hawaii Register of Historic Places. As of September 1973, it remains on the State Register of Historic Places. This site lies within the current project area, although it has a new DNP number (12500).

Two archaeological survey maps have been completed in or near the current project area. Willey, Kealoha, and Kauai (1971) compiled a 1:360 site inventory survey in the upscale area of the Aron's of Waikiki and Waikiki's 1:125 to 1:250 scale map of the current project area. This survey involved 100% survey units, surface survey of unoccupied street areas, surf-survey of pasture land, and limited roadside testing of the identified sites. The survey identified 6 sites (4 isolated, 1 transportation, and 1 information site—a possible temporary structure, none of which required further work).

Only one study has been conducted within the project area, and that is the archaeological inventory survey from which this current work is derived (Falk, Franklin, and Goodyear 1973). This previous inventory survey examined 5,719 acres (1,360 ha) of the Hamakua Sugar Company property at the Lu'au site (Alahe'e, Kohala, Kukuiho, Waikiki, Kaua'i, and Kula-

SUMMARY OF THE HISTORICAL DOCUMENTARY RESEARCH

The following summary of the historical documentation for this project, which was carried out by the BHI's cultural resource specialists Rupa Mally. The complete text of this report is presented in Appendix D.
Table 1
SUMMARY OF PREVIOUS ARCHAEOLOGICAL WORK

<table>
<thead>
<tr>
<th>Year</th>
<th>Researcher</th>
<th>Level of Study</th>
<th>Location</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>Nelson</td>
<td>Field/Excavation</td>
<td>Kukanui</td>
<td>Attempted to locate Heke's roadway through Kukanui.</td>
</tr>
<tr>
<td>1973</td>
<td>Lacy and Beck</td>
<td>Field/Excavation</td>
<td>Wai‘anae, North and South Kuku, North and South side, Prince Kuhio Highway</td>
<td>Inferred sites due to Wai‘anae roadway.</td>
</tr>
<tr>
<td>1974</td>
<td>Wingate</td>
<td>Road/Excavation</td>
<td>Kukanui Town</td>
<td>Hukilau Park at Hukilau Point.</td>
</tr>
<tr>
<td>1975</td>
<td>Barnes</td>
<td>Field/Excavation</td>
<td>Hukilau Conn. Trench, Wai‘anae roadway</td>
<td>Excavated from Wai‘anae Roadway, also (possibly) inferred sites due to Hukilau Point.</td>
</tr>
<tr>
<td>1983</td>
<td>O'Casey</td>
<td>Road/Excavation</td>
<td>Hukilau Town Trench, Wai‘anae roadway</td>
<td>Excavated during roadway construction.</td>
</tr>
<tr>
<td>1985</td>
<td>Cidley</td>
<td>Archaeological</td>
<td>Hamana (Hana) area, Kukanui, Kukanui, Prince Kuhio Highway</td>
<td>Inferred sites due to Kukanui roadway.</td>
</tr>
</tbody>
</table>

*Year of Publication*
The project area includes land within two traditional ahupua'a in the District of Hanalei: Kauhoulina and Wai'ale'ale. Only a few legendary references are available for the immediate project area of Wai'ale'ale, but there are numerous legendary and historic references available for the larger Hanalei and Waipio communities.

This portion of Hanalei was an important agricultural region in which both wet- and dryland crops were cultivated in forested fields. Haney and Haney note:

The wet-land section of the Hanalei coast extended from Hanalei's town to Kauhoulina, where there is a terminus of small terraces with high containing walls, as noted by Waipouli Stream. Several of the upper terraces have been converted into small reservoirs, while the lower ones were used for raising wet rice. (1972:233)

Haleiwa village habitations were identified in this area; however, there was not a paniolo.

As noted by Haney and Haney (1972:284), "The old Hawaiians...had no conception of living or working as a corporate social entity. The terrain and the subsistence economy naturally created the dispersed community of scattered homesteads." Wai'ale'ale, however, would have been different from the agricultural productivity area which was known as "Kauhoulina...Haney and Haney (1972:285) write: "Here there were continuous fields in a valley bottom, as in Wai'ale'ale valley near Waipouli, the Kauhoulina (now constituting a "home") were scattered about the middle of the valley, each family right beside the road, in narrow valleys."

Because Waipouli was an important royal and religious center for the island of Kauai in ancient times, and it can be assumed that portions of the resource from Kauhoulina and Wai'ale'ale were sent to the Waipouli community. Indigenous sources specifically address the fact that Kauhoulina was a major contributor to the higher cliffs which were traded to the Waipouli people. Wai'ale'ale also provided an important access to area and fishing resources for people living along the coast, who had limited access to the ocean, because Waipouli is the only point where birds were harvested in this portion of the Hanalei valley; as well, sea birds were hunted for food (as well as for sale) and for certain fish. The forest birds provided feathers for royal use. Some of the forest birds were eaten as well.

Early foreign visitors describe this region as rich and well populated, and in areas where missions became established, native communities began to take on characteristics of western villages, including church relocation. The events and conditions that occurred in the native community of Hanalei and Kauhoulina are events that are common to the Kauhoulina District, and to the Hanalei area. They also document the decline of the native population. By the early 1900s, the number of Hawaiians had decreased significantly, and the methods and land management practices began to diminish over traditional ways.

The Malaekahana Division of land, 1948 made land available to native tenants, and at least eight LCAs were awarded to Hawaiian claimants within or adjoining the project area. Use of the land by native tenants at the time appeared to be traditional wet- and dryland agriculture, alongside areas for food production, and for creating the land. Native tenants documented the boundaries of fields, wet- and dryland agricultural parcels, house sites, and natural features etc., and provided descriptions of land use in the project area.

Because the Malaekahana had only limited access to the Hawaiian population and land in the district, great amounts of land were left unused. In 1980, the land was awarded to the state for use as a conservation area or for educational purposes. On September 10, 1983, Act 94 (Amends 52) officially set aside one acre of land for the school of Kauhoulina, which is to be used for educational purposes (government road) from the school (church) of Kauhoulina. The church has also been surveyed and granted at that time.

Much of the project area was once part of the land which was part of the land owned by King Kamehameha (LCA 1216-yea 1846). By 1880, portions of it had been acquired by the Roman Catholic Church of Hawaii. In 1879, portions of land had been acquired by the Pacific Sugar Mills (PSM), whose operations changed the natural and cultural landscape of the region. The evolution of plantation economies and further development of sugar plantations continued to change the appearance of the area.

Sugar cane was grown, the Hawaiian population declined, and additional labor was required. The arrival of foreign laborers brought about increased growth of the plantation community and sugar resources, but by 1912, PSM was closed. Following the closure of PSM, the area lost its importance as the Kukuiholo portion of the Hookipa Sugar Plantation.

As a result of historical events, and since 1912, the climate, land use, and population of the area have changed. Today, the land is used for agriculture, and the area is used for recreational purposes.

SUMMARY OF POSTULATED SETTLEMENT PATTERNS

The project area encompasses the greater part of the ahupua'a of Kauhoulina, which extends 2,790 ft. (845 m) inland from the coast. Only the inland section of the coast is included. Wai'ale'ale's ahupua'a, a small portion, is covered by the present project, a triangular section of land that is west of Waipouli Gulch at 1,050 ft. (315 m) inland from the coast.

The ahupua'a of Waipouli's extends inland 6.4 miles (10 km) from the boundary of the District of Hanalei and the north end of the town of Hanalei. The town of Hanalei contains 3,830 ft. (1169 m) at 394 B.C. at Hanalei Estates, and the town of Hanalei is 6.4 miles (10 km) from the coast. The town of Hanalei is 6.4 miles (10 km) from the coast.

The town of Hanalei is 6.4 miles (10 km) from the coast. The town of Hanalei is at 394 B.C. at Hanalei Estates, and the town of Hanalei is 6.4 miles (10 km) from the coast. The town of Hanalei is 6.4 miles (10 km) from the coast. The town of Hanalei is 6.4 miles (10 km) from the coast.

In contrast to Waipouli's, Kauhoulina ahupua'a is the power land. Along the coast, Kauhoulina is 6.4 miles (10 km) from the coast, with a total length of 1,050 ft. (315 m) from the coast. The town of Hanalei is at 394 B.C. at Hanalei Estates, and the town of Hanalei is 6.4 miles (10 km) from the coast.
Cordy’s 1985 study of the Hawai’i DLNR examined historic sites and land use patterns on the windward slopes of Mauna Kea. Cordy reviewed archival documents searching for patterns of historic land use, and his findings present a useful model for the settlement patterns in the current study. The findings of Cordy’s research were broken down into four physiographic zones—S-Sea-shore, The Seaward Upland Slopes, ‘O‘i‘a’s Koa Forest Zone, and The Gulches. The current project area includes land in two zones: the Seaward Upland Slopes zone and The Gulches; although all four zones will be discussed here as they all occur within the upaupa’u considered in this study.

Although the Sea-shore zone is small in area relative to the entire upaupa’u, marine productivity was extremely important to native Hawaiians, providing the primary protein base for their diet (Tigue 1977). The routes involved in marine procurement are higher on the windward coast of the Island of Hawai‘i than they are to the leeward portions of the island, however, because the prevailing winds and larger swells off the windward coast limit access, and probably also affect the amount (biomass) of available marine resources (Newman 1970:15). Accessible beaches and coves suitable for shellfish collecting, causing landing sites, and other fishing would have been highly valued.

The typical upaupa’u begins at the sea shore, but in the lands within the project area, the high cliffs would have hampered marine exploitation from within the residents’ own lands. The inhabitants of upaupa’u without coastal access may have harvested with the owners of coastal lands for the use of the land, and there would have been a tik to fish the waters off of their own lands as upaupa’u fishing rights extended to offshore waters (Boundary Commission Books, Hawaii, n.d.; H Cordy 1985:52). Coastal access from the upaupa’u in the current project area was available both through a trail down into Waipio and as Kailua-Sells landing, which the upaupa’u of Ke’ea, near the present day Kikaha.

Due to the steep cliffs and narrowness of the marine bench, archaeological evidence of land use in this zone would be limited in marine resource procurement activities, trails, and the construction of upaupa’u’s shores at the edge of the sea (Cordy 1985). Procurement activities would have included the hunting of sea birds for food and feathers, and the line-fishing: spearing; trapping; and hand-harvesting of fish; shellfish; and crustaceans.

Land use within this region, however, would have focused on Cordy’s Seaward Upland Slopes zone. The relative density of LCAs occurring in this zone within the area of Hanalei streams to the discontinuity of this land. Native Hawaiian modifications to the land within this zone would have included agricultural terraces and taudas, houses, trails, and religious structures. House clusters appear to have been scattered throughout, but Cordy points out that the houses were probably located near the main trail through the upaupa’u. This area of the Hanalei District was an important agricultural region; both wetland and dryland crops were cultivated in formal fields. Dryland land was cultivated in fields (flat, open lands) in the discontinuous patches of wooded forests and wood, n teeth, grass, and other materials (Farrand 1915; Hoadly and Hoadly 1927).

As stated earlier, none of the early ethnographical and historical surveys recorded Aina in the upaupa’u of Kauhene; and only one Aina was known in Waipio’s, although it could not be located. Since only surveys focused on recording Aina sites, it is unlikely that any large religious structures remain within the project area. Physical remains within this zone in the current project area will probably be limited to habitation, agriculture, transportation (trails), and boundary (well) features.

Cordy’s “The Gulches” zone would have been largely used for agriculture. As shown in testimonial for LCAs 19352 and 1972 (Kauhene, Franklin, and Goodchild 1999; Appendix B), taro, bananas, and sweet potatoes were grown in the area of Waipio ‘a Kukui ‘ia in Kalahaku upaupa’u during the mid 1800s. Although no early references were found that indicated if forming features were present in the other large gulches of Hanalei, we may postulate that similar usage to Waipio may have been planted in Waipio’s Kukui ‘ia and the smaller, tributary drainages. Taro was probably grown in irrigated flatbottoms of the gulches. Coconuts such as it, bananas, sweet potatoes, mountain apples, breadfruit, sugar cane, manioc and would may have been planted along the borders of the ‘a‘i and on raised drier portions of the gulches.

Permanent houses may have been present on drier portions of the gulch bottom, as well as on slopes and along trails. However, this zone was probably very heavily used due to the narrowness of the gulches. We would expect to find an extremely low density of agricultural and habitation features in this zone.

The ends to portions of Waipio’s ‘a Kukui ‘ia lie within Cordy’s ‘O‘i‘a’s Koa Forest Zone. Land use in the area during prehistoric to early historic time would have consisted of resource gathering trips lasting a day or longer (Cordy 1985:65). These trips would have focused on the collection of timber, bark, birds, and other forest products not available in the coastal slopes or in the gulches. Hawaiians respected ‘a Kukui ‘ia’s boundaries, and did not approach upon another land when collecting forest resources. Collectors would have camped overnight in temporary shelters, which in addition to trails, would be the only archaeological evidence of land use within this zone. It is likely that permanent habitation sites would have occurred in this area.

Cordy (1985:63-65) mentions trails that ran from the housing areas inland to the forest. These trails were often used to access upland resources, but apparently were also used for longer journeys. Historical research for the Waipio’s Area Development (Walker et al. 1995) uncovered 1866 survey maps showing both ‘a‘i-koka trails and traditional site maps that crossed ‘a‘i-koka within Waipio’s (Figure 8). Two trails labeled ‘Ainali’ula (St. long path to Waipio) crossed Waipio’s and into South Kauhene. The latter trail passes through the middle of Waipio’s, the improved trail above the border of Waipio’s, on Waipio’s ridge. The latter road is probably what came to be called “Kauhene Lane” (see Figure 8). Both trails may have continued on South Kauhene for 5 to 6 miles (nine kilometers) to Waipio, or the latter trail may have connected with another trail in Waipio at some point. The “Kauhene Lane” branches near the coast with one branch continuing inland into the present town of Kukui‘ia (the upaupa’u of Kauhene and Kukui‘ia), and the other, ‘Ainali’ula, heads into the ali‘i lane.

Because it was the main thoroughfare, many portions of the traditional ali‘i lane were incorporated into what is now the Kauhene Irrigation road. The government road follows much of the same land that was Manukauha, the roadway named for Kauhene’s Law of the Silted Paddle. This law gave people traveling along the highways and byways the right to travel freely without fear of being troubled or stopped. The Kauhene Report is shown on the inset map of Figure 4 and the Kukui‘ia’s crossing from the ‘a‘i-koka of Kauhene’s Ke’ea into Waipio’s. Resources from the lands of Kauhene and Waipio’s, as well as forest products, undoubtably contributed to the

Data collected in the current project is applicable to future settlement pattern studies in this area, especially those focusing Waipio Valley and its relationships with other lands. From ancient times, Waipio was an important royal and religious center for the Island of Hawai‘i. Because of the project area’s proximity to Waipio Valley, it is probable that the lands were controlled, or at least influenced, by the leadership controlled in Waipio. Resources from the lands of Kauhene and Waipio’s, as well as forest products, undoubtably contributed to the
support of the Waipi'o community. The valley also provided important access to ocean and fishing resources for people living along the slopes, whose access to the ocean was restricted by the steep cliffs in the region.

**FIELD METHODS AND PROCEDURES**

Inventory surveys are conducted as a series of tasks. The first task is the identification of potential site locations from historical and topographic maps. The second task, where appropriate, is an aerial survey of the project area, with several goals in mind: determining patterns in project vegetation; assessing ground access to various parts of the survey area; coordinating the mapped locations of topographic features (e.g., gulches, low flows) and potential historic sites (i.e., cemeteries, structures) with the observed positions from the air; and identifying new archaeological resources. The third task is a pedestrian survey of the project area. During the ground survey, archeologists visit the locations of the sites and potential sites identified in the first two phases of survey to assess the site's potential for further study.

Details of the current inventory survey are as follows:

On March 4, 1991, PHS Supervisory Archaeologist James Hallo, B.A., and Alan T. Walker, B.A., accompanied at various times by Field Archaeologists Michelle DeLellis and Kent Smolik, conducted an aerial survey of the project area using a helicopter piloted by Mr. Kahaunaeel Kealoha of Northwest Helicopters, Inc. The archeologists began the helicopter survey by tracing the perimeter of the project area. Then the major and minor drainages within the area were traced, usually by means of north-south transects. Aerial surveys cover between 15 and 30 sq. miles of ground level. Overall visibility was poor, with the ground surface obscured by heavy vegetation. Sugar cane fields were examined from the air to determine if any large historic sites or oral data concerning unidentified natural vegetation existed within the fields.

The ground survey consisted of a 100% variable-intensity survey. Figure 3 indicates those areas identified as possible sites that appear to be controlled fos. If there is a potential to contain prehistoric or early historic sites, Waipio Valley's Gulch was one of these areas. The entire Waipio Valley's Gulch was surveyed using pedestrian transects ranging from two to ten meters apart, depending on the terrain. The transects were spaced to maximize coverage of the varying terrains. The survey areas were evaluated using the aerial photograph, with the survey conducted using a standard pedestrian survey with intervals between survey members of 10 to 15 m. Those areas within the project area already protected in sugarcane were not surveyed on the ground because the destructive, deep-growing nature of sugarcane cultivation would have destroyed any sites in those areas. The only exceptions are small areas of apparently uncontrolled vegetation lying within the canals. These areas were covered using pedestrian survey transects at 10 to 15 m intervals. In addition to the survey of scattered areas, the locations of potential features, such as trails and structures shown on early maps, were also surveyed on the ground.

All identified sites were described on standard PHS site survey record forms and were photographed using 35 mm black-and-white film (PHS Rule No. 1066, 1973, 1874, 4128, and 4938). Detailed recording of sites included written descriptions, measurements, and plan maps. Some units (plotted areas) were placed at two sites (1408 and 1608), and the profiles were examined for cultural levels.
Each site, or the primary feature within the site complex, was marked with pink and blue flagging tape. In addition, a wooden stake with an aluminum tag bearing the temporary site number, the date, the initials of the recorder; the letter “PHIP,” and the PHIP project number (91-1005) was left at each location. All sites range one were newly identified historic resources, and each was assigned a one- or two-digit PHIP temporary field number prefixed with “1019-.” The first site number was “1019-1.” All sites were subsequently assigned permanent State Inventory of Historic Places (SHIP) site numbers. The temporary PHIP and permanent State Inventory numbers for the sites within the current boundary are presented in Table 3. Site 15006 was initially recorded in 1974, as SHIP Site 7178. After further consultation with Ms. Kaunui Duenas—DLNR-SSPD and Archaeologist for Hawai‘i County, it was decided that the plantation manager’s house would now be the 15006 number, cross-referenced with the earlier SHIP number.

Three of the sites recorded during the initial survey (15006, 15008, and 15009) were revisited by HSP Supervisor Archaeologist Leta Franklin, M.A., on August 21, 1993 for additional site recording and a field inspection of their condition. Of those sites, only 15006 site within the current project boundary. The remaining two sites, both cemeteries, were inspected to determine if field boundaries extended into the current project area. This work was supplemented by archival research.
FINDINGS

SURFACE FINDINGS

PAS identified four sites (48 component features) in the current project area and three sites (14 component features) immediately adjacent to the project area. To aid in determining archeological site location, all cultural features located during the survey were examined to determine their approximate ages. The sites were placed in one of three categories—(A) Prehistoric, which includes all periods up to the end of the Late Prehistoric—AD 1620 (Francis, 1981); (B) Late Prehistoric/Early Historic, which includes the Post-Prehistoric Period—AD 1620-1750 (Chapman, 1981); and (C) Late Historic/Historical (1750-1945). The ages of the sites during the current project range from Late Prehistoric/Early Historic to Late Historic/Historical. Time period designations are based on a number of factors, including site type, presence or absence of primary remains, condition of the site, and historical accounts of the region, and proximity to LCA properties. Information on site ages is summarized in Table 2, along with information on site vegetation, elevation, functional interpretation, and presence within the LCA. Table 3 contains the site in terms of component features, formal and functional type, PAS Cultural Resource Management (CRM) value codes, assessment, and contextual field work tasks.

Appendix A provides detailed descriptions of each site and component feature occurring within and adjacent to the project area. The sites within the project area consist of two component (multiple feature sites) and two single-feature sites. The sites immediately next to the project area consist of one site complex and two single-feature sites. These seven sites comprise the following formal feature types: upland, historic settlement, modified outcrop, and terrace (Tracys, 1977). The functional feature types are: agriculture, habitation, agricultural habitation, possible habitation, possible temporary habitation, and storage (Tracys, 1977). The most common formal feature type in the project area is terrace (13 examples) followed by historic habitation (four examples).

The seven site complex sites lie below 850 ft AMSL (255 m) (Figures 5-7). The sites are located within a variety of vegetation zones, as defined by Chapin (1971). Two sites (14996 and 15006) are located in the glacial Vegetation Zone; two sites (14997 and 15007) lie within the Coastal Vegetation Zone; two sites (15008 and 15009) lie within an area of glacial vegetation that has been modified; and one site (15008) lies within modified grassland vegetation.

Site 14996 is a good example of a Late Prehistoric/Early Historic/PAS site type/land use category. The site consists of 11 features (five features, a roadway, and a modified outlet) along the side of a wide, gently sloping drainage. A few to the east, west, and south are planted in sugar cane; on-site vegetation includes Sphagnum, grasses, ferns, shrubs, trees, and grasses. The site is in good condition, and the vegetation is intact. The site plan is illustrated in Figure 5, and photographs of the features are provided in Figures C-5 to C-7.

The feature at this site is a gently sloping drainage. The feature, which is located at the top of the hill, is a few meters above the surface. The site is in good condition, and the vegetation is intact. The site plan is illustrated in Figure 5, and photographs of the features are provided in Figures C-5 to C-7.
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</tbody>
</table>

*Summary of Identified Sites and Features:
- HUP Site No.: Hawaii Urban Park Site Number.
- Wakanaha: Hawaiian Place Name.
- Functional Type: Infrastructure, Building, Agriculture.
- Functional Interpretation: N = New, C = Consolidated, E = Existing.
- Field Work: Type and Sampling Methods.

Cultural Resource Management and Field Work Assessment:
- Fresh Water: N = New, C = Consolidated, E = Existing.
- Sea: N = New, C = Consolidated, E = Existing.

Recommended Field Work Tools:
- EX = Existing sampling
- N = New sampling
- C = Consolidated sampling

*Notes:
- * Number of component features within samples.
- + Site adjacent to, but not within, current project area.
permanent habitation component to the site; however, none of the terraces could definitively be assigned a habitation function during the survey.

Site 1496 lies within LCA 7131 and south (outside) of LCA 7874. According to Native Traditions, the area of LCA 7131 is noted that he had killed the bear with a stone wall. None of the features observed in the field during the current survey appeared to be a boundary wall. The 1909 map (Figure 2) shows a meander-trail leading from the coast to Kukutcha village. This trail closely follows the east (Middle) side of LCA 7131. Yet, the Pacific Sugar Mill field maps (1909-1912) (Figure 8-7) indicate the trail running along the west (Near) side of the LCA. No evidence of the meander-trail was found during the current survey of this area. The remains of this trail may have been destroyed by waves or erosion, or it may have been overgrown vegetation after it fell into disuse.

Site 1497 is a complex of three terraces (one habitation and two agricultural) in a wooded area between the upper and lower cliff faces of the coast. This site is located just north of Site 1496, and also lies within LCA 7131. The overall site dimensions are roughly 30 m (N-S) by 10 m (E-W). The site is in good condition, and has not been altered. The site's probable age is prehistoric to early historic. The site plan is presented in Figure 3.

Site 1504 is a late prehistoric to early historic, paved habitation terrace measuring 3.0 m by 5.6 m (Figure 7 and C-D). Migrating as and around this site includes macadamia trees, banana, taro, avocado, and ahu. The site is in poor to fair condition, and is unaltered. It is immediately downhill of three modern sheds and animal pens fabricated of wood and corrugated steel. The terrace is constructed with boulders and boulders (0.05 to 0.50 m in diameter) and left over concrete and asphalt. These are trimmed as and around the terrace, because of tree root disturbance. This feature is located 100 m south of the entrance road, in Kukutcha, within Waiakea 's Pasture along the west bank of Waipioho'a Stream. Site 1504 lies west of LCA 1877 and within Huenoa Sugar Company (Figure 8-5). Two camp structures are mapped in the area of this site, although this feature predates the camp.

Table 5. Frequencies of Formal Feature Types

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<thead>
<tr>
<th>Formal Type</th>
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<tr>
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<td>17</td>
<td>60</td>
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<tr>
<td>Heiau complex</td>
<td>1</td>
<td>100</td>
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<tr>
<td>Common wall</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Heiau residence</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Noria pump</td>
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<td>50</td>
</tr>
<tr>
<td>Total</td>
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<td>100%</td>
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</table>

Table 6. Frequencies of Functional Feature Types

<table>
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<tr>
<th>Functional Type</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Habitation</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Agricultural wall</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Road</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Common wall</td>
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<td>5</td>
</tr>
<tr>
<td>Possible habitation</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Possible agricultural</td>
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<td>5</td>
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<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100%</td>
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</table>

* Included in the three sites adjacent to the project area
One historic site was identified during the inventory: Site 15006 (Wright 1974, Hanaarea 1977), the Honolulu Sugar Company Manager's Residence. This site was listed on the Hawaii Register of Historic Places in March 1994, and is still listed on the state register under the ZRP number assigned at that time (12178). The site is located on slightly sloping land between Kukuihaele town and the island's Waipio Road (Highway 200), encompassing 0.5 acres. Lot 8859 lies within the site (see Appendix B). The estate property encompasses TMF parcel 4-5-06-11, and measures c. 244 m (800 ft) in S-S by 312 m (1020 ft) E-W. This historic site is a large, well-maintained house composed of the following architectural features: main house, kitchen, garage, 3-car garage, small porte-cochere, gardens, paved driveway and parking area, tennis courts, and swimming pool. A 1974 architectural sketch map of the estate is preserved in Figures 8 and 9. This site is in fair to good condition, although the integrity has been altered in several ways, including modification of the gardens; the addition of a tennis court and pool; the addition of modern fencing, driveway, and walkway; the addition of service rooms to main house; and enclosing the lawn.

An asphalt-covered driveway leads up from the county road to the estate parking area. The main house (Figure 8-A) lies downhill of the parking area. The main house is a two-story clapboard (lap siding) structure with nine sides and a combination of hip and gable roof sections. An enclosed lanai runs along the north (southern) side of the house, overlooking a swimming pool. A tennis court adjoins a small patio on the west side of the main house. The house is painted a light gray and is roofed with white corrugated iron and topped with two red brick chimneys.

There is a second, small house (the "Kapaa Cottage") and a carport on the south (northern) side of the parking area. This second house appears to be built more recently than the main house, although the carport may be contemporary with the main house. Landscaping on the grounds is lush and well-tended, consisting of terraced lawns and exotic and Polynesian vegetation, such as banyan, ginger, hibiscus, Cook Island palm, coconut palm, ferns, and palm trees.

Designed by architect Edgar A. Perlman and built in 1936, the main house is typical of the "Hawaiian Style" design. The Hawaii Register of Historic Places Historic Sites Information and Review Form (Wright 1974) states: "This house is one of the examples of the Hawaiian style of architecture that became popular through the support of wealthy clients. It is one of a few in the area, and is thought by many local inhabitants to be the best plantation manager's house on the island." Current plans call for the Honolulu Sugar Company manager's residence to be renovated and converted into an inn, as part of the Kukuihaele Amenities Project.

Three historic sites are adjacent to the project area: two cemeteries and a trail. These sites were included in the earlier project (Hale, Franklin, and Goode 1993). Updated site descriptions were prepared as part of the current report. Additional field inspection of the two...
centuries and supplementary archival research was undertaken to determine if the site
boundaries may have extended into the current project area or if related features may have some
bearing on the current study.

Site 10008 is the Saint Theresa Catholic Cemetery and the scattered remains of an earlier
Catholic Church or house that once stood on this site. The cemetery is an area of
moderately gullied vegetation that slopes down to the coast (north). While the site's
dwelling lies to the east, with
sugar cane fields situated to the west and south. The maile-māloa road that passes by the
cemetery is the "Road to Mill and Landing" shown on the map of Pacific Sugar Mill Camps
4 and 5 (Figure 8.1). This site falls outside of the current project area, and is surrounded on
three sides by the project area.

There is no vegetation within the cemetery except for a few of plants planted in the graves.
The cemetery perimeter is marked by a strip of mostly blank and paperless, fine condition
is fair, and the integrity of the cemetery is confirmed. The cemetery property measures c. 60
in (196 sq m) square; the area in which the graves are located (Feature A) measures c. 50 in (N-5)
by 40 in (W-10), consisting of c. 30 graves and a small wooden fence structure (also a historic
feature). There is a discrete scatter of flintic structural debris (Feature B) in the southwest
corner of the cemetery property that measures. Site (N-5) by 15 in (E-10). An overview photo
of the cemetery is presented in Figure 8.9.

Surrounds on the grave markers (e.g., Basos, de Jesus, de Melo, Domingo, Eddie,
Enriquez, Lujan, Lucas, Isaac, Padillo, Peralta, Peralta, Ramirez, Rodriguez, Santos, and Witko,
and the site's proximity to Saint Theresa Catholic Church, indicate that the cemetery was
largely for Portuguese, Spanish, and Filipino Catholic burial. Headstones date from AO
1851-1991. Many graves are unmarked and in various states of disrepair, but the cemetery
is still in use.

The small, wooden frame structure in the southeast corner of this property serves as an
open-air shelter. This feature measures 14 ft. (4.4 m) by 16 ft. 4 in. (4.9 m), with a corrugated
sheet roof, slapping from 9 ft. 5 in. to 7 ft. 8 in. The framework rests on a concrete and
cinder block foundation, and is fabricated of wooden planking, painted gray. The structure
is open to the east with large doors on the north and south sides. Construction appears to date to
the 1950s or later. This structure probably functions as a shelter for people visiting the cemetery,
or possibly, for funerals. Due to its age, this feature is not of archaeological or historical
significance.

Early maps of the area indicate a church on this site in 1809 (Figure 8.1), and a Catholic
church and a house on this site (alongside "Field 2") in 1851 (Figure 8.3). The southwest area
of the cemetery lacks graves, and is covered with a scatter of historic and modern debris,
consisting of both portable items and structural remains. This densest area of the debris
contains the remains of previous occupations and modern debris, consisting of various sizes,
and structural debris (e.g., hundreds of cut lengths of various sizes, wood and metal
beams, and small wooden items). The last
category of remains probably represents the remains of a wooden structure that burned down,
either accidentally or intentionally. The burned pottery sherd are rare to the remains of the structure.

Figure 9. Site 10088, Hawaii's Sugar Company Manager's Residence (from Historical Sites
Information and Review Form, Wright 1974)
Since 1909 is a historic Hawaiian cemetery lying on a gently sloping ridge between the Waipahu Golf Course and the Waipahu elementary school. This cemetery was still in use. While it is adjacent to but not within the project area, it is bounded by the project area in three sides. Site conditions are flat, and integrity is unaltered. The cemetery covers an area, measured c. 99 m (101 ft) x 230 m (248 ft). The area c. 99 m (101 ft) x 230 m (248 ft) occurs on an area of 60 m x (200 ft) by 25 m (82 ft) within the cemetery limits. The cemetery is covered with green grass, and is surrounded by a field of grasses and purple flowers. Figure 2.7 presents a view of the cemetery from the original 1943 survey.

Sixty-three marked graves occupy the cemetery, with observed dates ranging from AD 1870-1951. Graves are oriented end-to-end with the markers at the west end. The markers are mostly wooden boards or small metal markers with an uninstructed place and clear plastic (49 of these are missing). Grave types were: simple grave, exhumed or fresh, upright stone headstone (mostly on older graves), coffins or concrete slabs or very shallow, single mound earth, and graves marked with glazed ceramic tile (Jin' yu) plaques. Surfaces of graves are typical of Hawaiian cemeteries, and include waka and oni of flowers (e.g., rubus, ligustrum, helichrysum). Some broken burial objects are present on the ground.  

Nations on the grave markers indicate age by Hawaiian, other names are of Chinese, Japanese, Portuguese, and English origin. Although the cemetery was established in 1943 (see Appendix J), 13 observed dates on the headstones date this site, ranging back as early as 1879. These 13 graves are located in the southeastern (northeast) corner of the cemetery in an area c. 30 m (100 ft) x 30 m (100 ft) southwest of the site. A photo of these older graves is presented in Figure C.1. The graves are located in a small area of three graves that are aligned with one grave (each plot c. 3 by 8 ft). The regular spacing of the graves, the fact that they are the 13 oldest burials in the cemetery, and that this area was 1879, it is likely that these graves may have been moved from another location. This cemetery was established on lands deeded to the County of Hawaii by the Roman Catholic Church, so it is unlikely that a family plot existed on these lands at the time the property changed hands.

Site 14986 is a late prehistoric early historic habitation/agriculture complex in this feature. The complex is at approximately 400 ft (149 m) ASL, and lies within a flat, north-trending surficial drainage. Feature D is an agriculture or habitation terrace in the southwestern portion of the site. Large basalt boulders mark the northeastern portion of the site. The terrace extends north from Feature B and contains pali debris of earth and rubble contained in a right-angle wall of stacked basalt boulders and cobble. The area may be covered by possible soil movement from above.

A. 50 by 50 cm test unit was excavated in this feature. The site was excavated by natural stratigraphy layers.

Layer Description

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<th>Type</th>
<th>Description</th>
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<td>I</td>
<td>0-15 cm: black (FVB 2.5M, 2.25M); soil layer: dark reddish brown (FVB 5R 3/2); moderate, fine, subangular blocky structure; not very friable, sticky, plastic</td>
</tr>
<tr>
<td>II</td>
<td>15-40 cm: dark reddish brown (FVB 5R 3/2, 2.25M); silty clay loam; dark reddish brown (FVB 5R 2/2); moderate, very fine, to medium, subangular blocky structure; very hard, fine, sticky, plastic</td>
</tr>
</tbody>
</table>
CONCLUSION

EVALUATION OF SURVEY METHODOLOGY

The aerial survey covered the entire project area with sweep flights at an average height of c. 15-20 m. The survey worked well for determining which modified areas contained vegetation (e.g., gardens); however, in unmodified areas, dense vegetation often obscured the surface, and these areas was covered using pedestrian surveys. The ground survey utilized closely spaced transects in the densest areas of vegetation, and this added in the location of ground features. Areas planted in sugar cane were not surveyed on the ground, but the destructive, deep-plowing nature of sugar cane cultivation had certainly destroyed all sites in these areas. In general, the survey methodology was successful. The combination of pre-field research to delineate potential site locations, the aerial survey, and the pedestrian ground survey provided adequate coverage of the project area.

DISCUSSION

This study is among the first to be done in the lands of Kaahumanu and Waikiki. Because of this, it is not known whether the features identified in the project area are common to the general area, or whether they are unique. The features are, however, common to other areas of the Island of Kauai.

The survey included unaltered portions of the project area slated for development as well as examination of the historic resources within the project area. The unaltered areas encompassed only a small portion of the project area, and are limited to coastal areas along roads, above the sea cliffs, and within those gulches that arc too steep for plowing sugar cane. Most of the project area has been deepened and isolated, and so as a result, these sites that remain are only limited, non-representative samples of the site since present.

Excluding the historic sites, three (12.96.75%) of the identified feature types in the project area (n = 21) are terraces (agricultural and/or habitation). Seven of the features (45.76%) were agricultural features (32%) in Hawaiian; three of the features (20%) have a probable agricultural component. As most of the sites in the project area relate to agriculture, it may be that the area was utilized during prehistoric times much as it is today—primarily for agriculture.

Cody (1985) proposed dividing the distinction four topographic areas: (1) Sea-shore; (2) The Seaward Upland Slope; (3) 'O'ahu-Ka'i Forest Zone; and (4) The Gulches. The present survey examined portion of two of these zones: The Seaward Upland Slopes and the Gulches. Using Cody’s area models, the findings in the project area as they relate to the abanu of Waikiki are and Kauai are summarized as follows:

Sea-Gulches Zone: Land within this zone was not included in the current project. However, a wall (Site 19013) that built to the Seaward Upland Slope east of the project area was recorded. This site is an area that was used for native Hawaiian resource procurement.
Seaward Upland Slopes - A fair number of sites were noted by Sikes (1919), Troost (1919), and Hines (1932), but most are probably no longer present, probably because of damage by cultivation. During the present inventory, two late prehistorically historic sites (14902 and 14903), both habitation/agricultural complexes, were found in this zone within the Kanahou ahupua'a. Land Commission Awards indicate houses, enclosed fields, and a boundary wall were located in this area. No modern water wells leading to the upland forest zones were found in the current project area, although they are indicated on historic maps. These wells have either been destroyed by sugar cane cultivation, or paved over when the modern roads were constructed. These data fit our expectations for the settlement pattern and site types within this zone.

*Chi's Area Forest Zone - None of the current project areas lie within this zone, although trails would have run past the lower elevation areas across the upland forest zone, as discussed in the previous paragraph.

The Gulches - During this inventory, one native Hawaiian site, a habitation area, was found in this zone. No sites were found, although canals were noted, banana, taro, and akoko were growing near the habitation terrace. This finding was not surprising, although it is significant that no formal agricultural features were found within this zone. Historic and modern sugar cane cultivation activities have included the deep burning of many of the shallow gulch areas. Since the shallow gulches are the most likely gulch areas to contain cultural features such as agricultural terraces, the features may have been destroyed by sugar cane cultivation.

Post Contact and Recent Period

The land that had once supported a variety of crops, including taro, akoko, and handbread, became exclusively pasture and sugar land, and the village became the center of activity, because the milling and handling were located there. Foreign labor was brought in, creating an increasingly mixed population that included Pueo Ho'okano, Ruanian, Filipinos, women, Portuguese, Japanese, and Chinese. As the population grew and agricultural diversity decreased, the subsistence economy collapsed. Residues became more dependent on manufactured goods, and cash economy developed. The construction of Kahaluu Road may have had a significant impact on the settlement patterns for this area. Waipio had been the center of population in the area, but once sugar industry developed, Kahaluu grew. Still, in Kahaluu, many natives from the valley move up to work on the sugar plantations, including Kahaluu, the center of economic activity, as well. Pastoral lands were once used for the cultivation of sugarcane and other crops such as bananas, sweet potatoes, peanuts, beans, taro, and akoko. Although Pacific Sugar Mill itself was closed in 1983, the surrounding land was still plowed and irrigated, and the land is now used for agricultural purposes. Many former residents now live in the area, working in other fields or living in the city. The area is now a semi-rural community, with some agriculture and some residential development.
Concerning Question 4, as mentioned earlier, there have been only a few archaeological studies in the region. Based on available information, there is little indication that the observed patterns of marine resource exploitation would be consistent along the shoreline, especially since there are no great changes in topography or climate in the area.

Question 5 concerns the role of marine resource exploitation in the project area. As Taggert (1973:174-175) observed:

The ascent was the primary source of protein for the Hawaiian. They obtained fish, shellfish, seal, eel, crocodile, and, to some extent, marine mammals. The most diverse and valuable of the Hawaiian was the ocean resource exploitation and included fishberries, crabs, turtles, and octopus. Fish, as well as meat-eating animals such as the whales, seals, and sea otters, were not directly harvested for use in the Hawaiian Islands. The prevailing winds and large swells on the Honolulu Coast make marine resources more difficult to obtain. Resources are available from the project area, however.

Cordy's model (1985) may be tested by further archaeological investigations in the Hawaiian District. In the South Upland Slope the unialgal patches—gourmet, isolated plants, flowers, and the completed slopes—have a great potential for providing additional data on land use; these portions should be carefully examined.

GENERAL SIGNIFICANCE ASSESSMENTS AND RECOMMENDED GENERAL TREATMENTS

To aid in the review, general significance assessments and recommended general treatments for all identified sites are summarized in Table 7. Significance categories used in the evaluation process are based on the National Register guidelines for evaluating cultural resources in the Code of Federal Regulations (CFR) Part 60. The Hawaii State Historic Preservation Division uses these criteria for evaluating cultural resources. Sites determined to be potentially significant for information content (Category A, Table 7) fall under Criterion A, which defines significant resources as those which "have yielded, or are likely to yield, information important in prehistory or history" (CFR Sec. 60.6). Sites potentially significant as representative examples of site types (Category B) are evaluated under Criterion B, which defines significant resources as those which "embodies the distinctive characteristics of a type, period, or method of construction...or that represent a significant and distinctive entity whose components may lack individual distinction" (CFR Sec. 60.6).

Sites with potential cultural significance (Category C) are evaluated under guidelines prepared by the Advisory Council on Historic Preservation (ACHP) entitled "Guidelines for Consideration of Traditional Cultural Values in Historic Preservation Reviews" (ACHP 1985). The guidelines define cultural values as "...the contributions made by an historic property to an evolving society or cultural system. A traditional cultural value is a cultural value that is historical or prehistoric in time and place..." (ACHP 1985:3). The guidelines further specify that "...a property need not have been in consistent use since antiquity by a cultural system in order to have traditional cultural value" (ACHP 1985:3).

Table 7. Summary of General Significance Assessments and Recommended General Treatments

<table>
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<th>Significance Category</th>
<th>Recommended Treatment</th>
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</tbody>
</table>

Recommended General Treatment:

FSC—further data collection necessary (field recording, surface collection, and backhoe excavation, and_preliminary data reconnaissance assessment).

F—further 50% field recording, surface collection, and backhoe excavation required, no backhoe data reconnaissance necessary.

C—consideration of mitigation development recommended (including appropriate related data recovery methods).

R—Reconsider assessment as it may be in need of further work field record data collection and backhoe digging, or possibly manual further data collection necessary.

*Sites outside the project area

To further facilitate client management decisions regarding the subsequent treatment of resources, the general significance of the archaeological site identified during the current survey was also evaluated in terms of potential scientific research, interpretive, and cultural values (FHWA CRM (Cultural Resource Management) value model). Potential value refers to the potential of archaeological resources to inform and enhance our understanding of cultural history, cultural impact on the environment, and cultural resources at the local, regional, and international levels of organization. Interpretive value refers to the potential of archaeological resources for public education and recreation. Cultural value refers to the potential of archaeological resources to preserve and promote natural, cultural, and ethnic identity and values. CRM assessments for individual sites are presented in Table 4.

Of the four sites identified within the project boundary, one (15014, habitation terrace) is assessed as significant for information content. This site is recommended for further data.
collection only. Of the remaining sites, two (Site 14986, habitation/agricultural terrace, and Site 11006, historic residence) are considered significant for information content, as excellent examples of site types, and for cultural significance. Further data collection followed by preservation with interpretive development is recommended for these sites. Site 14987 (habitation/agricultural complex) is considered as significant for information content and for cultural significance, and is provisionally assessed as an excellent example of a site type. Final assessments and treatment recommendations will depend on the results of the further data collection. It should be noted that, for two of these sites (14986 and 14987), the assessment of significance as site type examples is not made because the sites are exceptional examples considering what has been identified island-wide, but rather, because they are exceptional examples in their particular region. If, in the future, better examples of such agricultural sites are identified in the Hanalei District (other than those at Waipo'o Valley), then perhaps the present assessment can be changed. Mitigation plans for the rehabilitation of Site 11006, the Hanalei Sugar Company Manager's Residence, should be developed with the State Historic Preservation Division.

Three of the sites designated for further data recovery (14986, 14987, and 15016) are designated for "Immediate Protection Pending Further Data Recovery" as an alternative to the treatments recommended above. In this case, the sites, with adequate buffer zones, would be surrounded by orange fencing (i.e., using brush or natural vegetation) to deter public access. Stabilization of the sites may also be required if they are endangered by erosion. Details of this interim preservation plan option will be included in the Cultural Resources Mitigation Plan.

Of the three sites adjacent to the project area, one (Site 15008) is not significant for either cultural or historical values. Site 15012 (mauipi) is assessed as significant for its cultural significance, as an excellent example of a site type, and for cultural significance. These sites outside the project area have been considered in the current study to determine the potential for their extending into the project area. The data appear to suggest the assumption that there are discrete resources lying within their current TMK boundaries. No further work is required for these three sites.

Prior to further work in the project area, as an important initial step, it is recommended that all sites be accurately located and plotted by professional surveyors, with the aid of an archaeologist, on an appropriately scaled, topographic map of the project area. This located plotting will greatly aid development planning by allowing further archaeological work divisionalizations (further data collection, data recovery and preservation) to be more accurately considered on a site-by-site basis.

The assessments and recommendations presented here have been based on the findings of an inventory survey of the project area. There is always the possibility, however remote, that potentially significant, unidentified surface and subsurface cultural remains could be encountered in the course of further archaeological investigations or subsequent development activities. In such situations, archaeological consultation should be sought immediately.

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Stevens, D.T., and G.A. Kells

Stites, J.G.

Thorem, T.G.

Tuttle, H.D.

APPENDIX A: SITE DESCRIPTIONS

SITE NO.: State 14986  PHRM: 1903-1
SITE TYPE: Complex (11 features)
TOPOGRAPHY: Intermittent drainage flowing north. Wide drainage area with gently sloping sides. Areas further to the east and west planted in sugar cane.
VEGETATION: Black, bayou, cactus, grass, cayenne, salt grass.
CONDITION: Good
INTEGRITY: 1: Undamaged
PROBABLE AGE: Late Historic
FUNCTIONAL INTERPRETATION: Multifunctionalgriculture
DESCRIPTION: The complex consists of four terraces (Feature A), a courtyard (Feature B), and an associated structure (Feature C). The overall area of the site is 75.0 m (N-S) by 40.0 m (E-W).
REFERENCE: Head, Franklin, and Goodfellow (1953). (The current site description updates and supersedes the site description presented in Head, Franklin, and Goodfellow 1953)

FEATURE A: Terrace
FUNCTION: Agriculture
DIMENSIONS: 8.25 m by 4.00 m by 1.50 m
DESCRIPTION: Feature A is at the south end of a broad drainage. This is a narrow terrace with a retaining wall. It is roughly square in plan. The terrace is built into the slope on the west and south sides. The slope from the west is sloping into the feature. The wall is stacked two to three courses high. The terrace is located at the far southeast corner of the site (1903-1). It is immediately up slope west of Feature B. There is a wall to the east and south of the terrace. The east part of the wall is mostly bedrock outcrops with stacking in front and between the outcrops.

FEATURE B: Terrace
FUNCTION: Agriculture
DIMENSIONS: 10.00 m by 4.00 m by 1.50 m
DESCRIPTION: This is a roughly rectangular terrace with a stacked retaining wall. The terrace is immediately above and south of Feature D, which is a large mound, and to the north and west are stacked in six courses high and consist of large boulders and cobble. Feature D borders Feature A on its northeast border. The Feature B eastern wall has a possible courtyard at its south end. There is a large banyan coming out of Feature B, along its east wall.

FEATURE C: Terrace
FUNCTION: Agriculture
DIMENSIONS: 16.00 m by 4.00 m by 1.50 m
DESCRIPTION: This long and narrow rectangular terrace is bordered on the west by Feature B and D. The terrace consists of boulders and cobble stacked four six courses high. The northern half of the terraces seems to be more of a grid alignment. No possible terraces were present however, there is present a small banyan back of a large banyan on the south and cobble.

*PRE — Prehistoric; LHEH — Late Prehistoric/Early Historic; LHI — Late Historic/Indian
FEATURE 1: Cupboard
FUNCTION: Storage
DIMENSIONS: 0.45 m by 0.40 m by 0.30 m
DESCRIPTION: This small cupboard is framed by four flat bands forming a square. It is made of wood and has a door with a handle.

FEATURE 2: Modified outcrop
FUNCTION: Agricultural
DIMENSIONS: 15.00 m by 1.75 m by 0.60 m
DESCRIPTION: This outcrop extends northward from Feature 1. It consists of medium to large rocks crudely stacked between large boulders and the natural outcrop. It is located along the western slope of the drumlin.

SITE NO: State 14897
PHASE: 1019-2
SITE TYPE: Complex (5 Features)
TOPOGRAPHY: Wooded area on north-south slope between uplands and sheer cliff face of the drumlin.
VEGETATION: Bayside trees, typical coastal vegetation
CONDITION: Good
INTEGRITY: Unaltered
PROBABLE AGE: LATE
FUNCTIONAL INTERPRETATION: Habitation/agriculture
DESCRIPTION: The complex consists of three terraces (Feature A, B, and C). The overall dimensions are c. 150.0 m by 25.00 m.
REFERENCE: Head, Franklin, and Goodfellow (1993)

FEATURE A: Terrace
FUNCTION: Habitation
DIMENSIONS: 150.00 m by 25.00 m
DESCRIPTION: The terrace walls are stacked and faced on north and east sides. This terrace is constructed with small boulders and rocks, and is elevated above the surrounding area. The terrace extends to a depth of c. 0.50 m.
REFERENCE: Head, Franklin, and Goodfellow (1993)

FEATURE B: Terrace
FUNCTION: Agriculture
DIMENSIONS: 4.00 m by 3.00 m by 0.70 m
DESCRIPTION: The terrace has stacked and faced retaining walls and a large platform. Feature A (Feature B) is rectangular, larger east-west than north-south. It has built cobbled retaining walls stacked three to four courses high. Feature B is located 2.5 km south of a cliff edge on sloping terrain.
REFERENCE: Head, Franklin, and Goodfellow (1993)

FEATURE C: Terrace
FUNCTION: Agricultural
DIMENSIONS: 7.00 m by 1.35 m by 0.75 m
DESCRIPTION: This small terrace forms a triangle showing the north side of Feature B. It consists of piled stones, stacked two to three courses. The interior is filled with scattered cobbles. Feature C is located c. 3.0 m south of the cliff edge. Some walls and a bayside tree growing in the feature base were noted.

SITE NO: State 15008
PHASE: 1035-26
SITE TYPE: Historic residence
TOPOGRAPHY: Slightly sloping area between Axelrod and Way's-Hanegra's Road
VEGETATION: Terraced lawn and exotic and Polynesian plants, such as hibiscus, ginger, melicope, Cockscomb, purple puff, jacaranda, tree fern, paper bark, and plumeria.
CONDITION: Fair
INTEGRITY: Altered
PROBABLE AGE: LATE
FUNCTIONAL INTERPRETATION: Habitation
DIMENSIONS: 250 m by 412 m (dimensions of TMC parcel, 8.5 acres)
DESCRIPTION: A large, well-developed estate consisting of: the main house; a smaller, probably more recent, second house; a 3-car garage; a driveway; a tennis court; and a swimming pool. The asphalt-covered driveway leads up from the county road to the main parking area. The main house has a two-story clapboard structure with attic. An enclosed brick ramp runs along the north (southside) of the house, looking down to a swimming pool. A tennis court adjoins a small patio on the west side of the main house. The house is painted a light gray, and is covered with a white, polystyrene roof topped with two red brick chimneys. The main house was built c. 1950, and was designed by A.P. Newcom.

A second, small house and a caretaker's house on the south (eastside) side of the parking area. This second house appears to be built more securely than the main house, although the caretaker may be contemporaneous with the estate.

PHASE: 1035-28
SITE TYPE: Historic cemetery/structural remains
TOPOGRAPHY: Slight south slope
VEGETATION: None within cemetery boundaries, except for 5 large trees growing in a few graves.
CONDITION: Fair
INTEGRITY: Unaltered
PROBABLE AGE: LATE
FUNCTIONAL INTERPRETATION: Burial-ceremonial/Inhabitation
DESCRIPTION: This historic complex consists of two features (A & B). Feature B (remains of an earlier structure) lies within the northwest corner of Feature A (a historic cemetery). The overall plan dimensions are 65.0 m by 65.0 m.
REFERENCE: Head, Franklin, and Goodfellow (1993)
FEATURE A: Historic cemetery
FUNCTION: Burial
DIMENSIONS: 35.00 m by 0.60 m
DESCRIPTION: There are c. 50 graves and a recent wooden frame building. Summa
present and the forest proximity to San Thero Church indicate Portuguese,
Filipino, or Spanish burial. HEADSTONE dated from A.D. 1875 to 1901.

FEATURE B: Structural remains
FUNCTION: Ceremonial House
DIMENSIONS: 20.00 m by 15.00 m
DESCRIPTION: Remains of an older structure on the site consisting of hundreds of east walls
(various sized), wood acres and spring water, window pane glass, glass bottles and jar
shards, and glazed earthenware and potsherd pottery sherds (some burned). Some of the glass
and pottery artifacts are probably grave offerings from the cemetery component; others may
have been associated with the structure. Early maps (Figure B-1 to B-8) indicate a house and
Catholic church (pre-dating the current Saint Theresa Church) on this corner of the property.

SITE NO.: State: 10014
SITE TYPE: Historic cemetery
TOPOGRAPHY: Slight slope to the east.
VEGETATION: Red oak, pines, and sapwood.
CONDITION: Fair
INTEGRITY: Unaltered
PROBABLE AGE: L1430
FUNCTIONAL INTERPRETATION: Burial
DIMENSIONS: 60.00 m by 24.00 m
DESCRIPTION: There are c. 65 graves in the cemetery. The majority of the headstones are marble,
one grave has two seaworn beach cobbles. Red oak, pines, and sapwood, and other species
are planted within the grave area. Groves on the headstone indicate usage mostly by
Hawaiians. Other species are of Chinese, Japanese, Portuguese, and English origin. The
cemetery is located just outside of the project area. Observed data on the headstone maps
from A.D. 1875 to 1901.
REFERENCE: Head, Franklin, and Goodfellow (1913). The current site description update and
supersedes the site description presented in Head, Franklin, and Goodfellow (1933).

SITE NO.: State: 10012
SITE TYPE: Trail
TOPOGRAPHY: Follows along the face of cliffs above the Pacific Ocean.
VEGETATION: Native and exotic.
CONDITION: Poor-fair
INTEGRITY: Altered
PROBABLE AGE: L1430
FUNCTIONAL INTERPRETATION: Transportation
DIMENSIONS: 100.00 m by 2.00 m
DESCRIPTION: The construction of this trail appears to have resulted from rock removal as well
as building retaining walls. The trail appears to drop down a cliff before descending further into
the mouth of Walpio Valley.
REFERENCE: Head, Franklin, and Goodfellow (1933).
APPENDIX B: 
Historical Documentary Research
By Kapé Maly

BACKGROUND

This report includes selected references from an earlier historical documentary research paper for this region (Kalihiwai 1971), which included the current Waikohoe's-Kanuha area. The current report also provides additional historical documentation, including text from Hawaiian language newspapers and government land records. The primary focus of this research is the nature of Hawaiian settlement within the project area and vicinity, and the report includes discussion of the environment at the time of the settlement, use of land, and economic resources, evolution of the Hawaiian community, and Western influence of land use practices. In 1956, Hanawa (1955-56) new (1956-57) revised archival and historical information for portions of the Hamakua District, from which he prepared a land use map. His work, along with Kalihi's survey of the sugar plantation history, including oral histories, may be consulted for additional information.

The project area occupies a portion of the Alexander's district of Hana, on the windward coast of the island of Hawai‘i. Situated on the northwest (windward) slopes of Mauna Kea, this area is well watered by rainfall at elevations between sea level and 4,000 feet. Additionally, the maue (pluie) region (e. 2,000 and 5,000 feet) is noted for its heavy mist drip. The availability of water through rainfall, streams, and mist drip made this region one of the richest on the island. Even the project area above a mesa appears to descend the nature of this wet and mist covered region, similar in growth to the Hamakua District in Philo et al. (1970), or Alexander (1950), interpretations are possible. If written as "Kanea-Maua" (with support), the name is perhaps descriptive of a land that stretches out horizontally supporting various plant species, a site where one can see the sea from a mesa or mesa.

HAWAIIAN SETTLEMENT

Current theory places Polynesian settlement voyages between Hawai‘i and the continental boundaries of the Hawaiian and people (Kahului) in two major periods, AD 300 to 600 and AD 1100 to 1250(Evans 1971:15-16:18). In Natives Hawaiians OI Islander’s (1972, Handy

Note: A glossary of Polynesian terms has been included at the end of this report. These terms refer to various practices, deities, places, the celestial, and some are used to transport the narrative of this research. The Hawaiianisches Historisches Wörterbuch (Cajus), 1927-1971, may be included for additional information. A dictionary, A Dictionary of Hawaiian English, published in 1971, provides an overview of the language and its historical development.

and Handy speculate that when the first Polynesians reached the Hawaiian Islands, they found a flora that was much like that of their ancestral homeland (Handy and Handy 1972:12). Other authors think the takupoa and people of the islands was not entirely different. The broad, watered flatlands of Kona’s, Okau‘u, and Mauna Kea, and the broad, cultivated mountain slopes of Kona and Kea’s on Hawai‘i, permitted the development of a systematic and elaborate farming culture. These topographical features were not present on the main island, and their presence associated with agriculture developed to a higher level in Hawai‘i than in other Polynesian islands (HDB 16).

It is believed that for generations following initial settlement, the Hawaiian population clustered along the better watered windward shores of the islands, where fresh water was available, agricultural production could become established, and fishing was good. These conditions characterized Hana, particularly within the Waikohoe and nearby area. Small bays generally had a cluster of houses where fishermen and their families lived (HDB 287). Only after the last areas became populated and perhaps crowded (e. AD 800 to 1000), did the Hawaiians begin settling more remote and less desirable areas.

When the Hawaiian settlers came to Hawai‘i from Kahului, they brought with them many materials things which were necessary for their survival. Among these "essential introductions" were the basic plants (sweet potato, manioc, yam, gourds, breadfruit, coconut, la‘ie, sugar cane, and waka, etc.). In a distinctive early settlement, Mary Kawena Pukui expresses the thought that her ancestors also brought with them numerous non-material things which were important to ancient life.

It is impossible to enumerate the number of gods and goddesses of old Hawai‘i. Some of the gods were inherited from exceedingly ancient times, from our ancestors who came from eastern islands and they are said to have been "brought" along with them, just as truly or more the mental things in the same manner because they [the gods and goddesses] were in their minds and souls (Kamakau HDB 49).

In the Hamakua project area, possible water was readily available, being provided by rain and streams such as Waikohoe’s and Waia’ula (Water flowing along a steep area). This water was used for development and irrigation of its (farms and fields) and other crops, and to sustain human life. The river also provided various fish and (fresh water "snapper" or bass), shell fish, such as the pali (white rainbow trout), (fresh water clams), and several species of fish and water fowl such as the (duck). All of these were delicious and often had medicinal and ritual uses, as well. Additionally, the ocean provided marine foods, which provided much of the protein in the Hawaiian diet.

While describing the ancient setting of Hamakua, Handy and Handy (1971) note that the project area and surrounding lands were important wetland growing locations on the island of Hawai‘i.

The wet zone section of the Hamakua coast extended from Honokaa’s to Waikohoe, where there is a succession of small streams with high retaining walls, washed by Waikohoe Stream. Several of the upper trees have been converted into small reservoirs, while the lower ones are still used for retaining wet trees (1938).
HAWAIIAN LAND MANAGEMENT PRACTICES

As ancient Hawaiian land-use and resource management practices evolved, the maka'ainana, or ordinary people, labored to develop and maintain their lands. These lands were often assigned to families and extended for miles in various directions. The largest was the akua'a (house Milo), the estate of royalty and nobility. The land was divided into smaller units that were managed by individuals or groups. Each unit was maintained by a kaupulehu (chief), who was responsible for its stewardship and development.

KA 'AINA: THE LAND AND LEGENDARY SETTING

Hawaiian legends document land use, cultural practices, and physical features of the land, while they offer values and insights into the relationship between humans and the environment. The legend of Ka'iulani (The Heiress of Hawaii) is a story of a young Hawaiian princess who lived in the 19th century. Ka'iulani is said to have been the last heir to the throne of Hawaii, and her story is an important part of Hawaiian history. The legend of Ka'iulani is associated with many important events in Hawaiian history, including the acquisition of Kauai Island by the United States in 1898.

On each island, the land was divided into smaller units known as ka'upulehus. These units were managed by individuals or groups, and each unit was assigned to a chief or kaupulehu (chief). The chief was responsible for the stewardship and development of the land, and he was answerable to the ali'i (high chief). The land was managed through a system of communal ownership, and the land was used for agriculture, hunting, fishing, and other activities.

The legends of Hawaiian history and culture are an important part of Hawaiian identity. The legends are a reflection of the values and beliefs of the Hawaiian people, and they help to preserve the history and culture of the island. The legends are passed down from generation to generation, and they are an important part of Hawaiian identity and culture.
While the commandos were being given, Ku-Mkhi hit the rafter of the Alaba d'Vi (royal compound) of Loo'on, which was called Hihakusa. When one of the ghosts looked inside, he saw Ku-Mkhi open the ridge pole and prepared to mix it with the bones of some fish (sibla) on the ridge pole. Ku-Mkhi then left from Hihakusa up to the ridge height, and landed on a 'ku'we's (cane basket) branch. Ku-Mkhi's movement then covered the region with his body from Ku'we-ka'su to ika-ka'si (the mark which separates the forest), blocking everything from sight. The angry cries of the ghost boxers were heard from uplands to shore, in the haunted looked for Ku-Mkhi, trying to trap him in their nets like birds (as was practiced in this region). The technique was: "open Ku'we-ka'su's mouth (front or back) and call them."

Having been deceived in their attempts to ensnare Ku-Mkhi in their supernatural net, the men ran away, the ghosts wandered "anam to" along the cliffs and forests of Ka'mana (Kohola tribe of Wi'pa's) and Mihal (Hilahusa tribe of Wi'pa's), and went hungry (mihal). Under the cover of this movements, "mi" body form, Ku-Mkhi kept from the forest scaven to Pu'a-omane', in the forest of Mihal.

Because the ghosts wandered hungry about, two places names commemorate their wandering and their hunger: Ka'Mana (The wandering), and in Mihal, Pili'o-kuma (The ghosts [ghouls] are hungry) which is also called Pili'o-ki-ka-mana (Hungry for the bird) (22/01/14).

In Land Commission Act 1241 to Kewe (see LCA testimony, below), Pili'o-kuma is identified as the name of the Waialua's canoe, which has its origin in the upper region of Mihal. In reference to the practice of "fishing" for birds, there are traditions tales and sharin from this region of Hilahusa that describe the bird cycling oils and the practices associated with saving net and the front to contact birds. One share which employs the poetic symbolism of "fishing" for birds was published in the Hawaiian newspaper Kohola Today on 26 March 1906:

"Lei-Maka'ala, Kuhu'ana Kukui A nest is set in the Pu'ula's nest Hole'pua'aka'i'ama'Ile or Kuhu'ana Surrounding the birds like the mini Makena. Ka'mana is where, a place where birds are caught..."

At the time of the Pu'a-omane, pol ed same place is the name of the Pu'a-omane Pu'alaka's nest, the hole'pua'aka'i'ama'Ile (the chief who controlled the district resources) and Pili-o-kuma's, the Alaha ku'we's (the chief who drew on the continuousness of the nest), who dwelt at Wi'pa's (22/01/15 - 16). Most of the points and peripheries of Hilahusa were named for the "ghost", lesser chiefs and ghosts who supported the sacred Pili chiefs (10/01/15).

While wandering along the ala'ika Ku-Mkhi competed at Ka'we in Hilahusa, and won the right to compete at the great ku've'sa (constant Clay) of Pili'o-kuma, in Wi'pa's. During the accounts, several references were made to the "ghosts" and the difficulty of traveling through portions of Hilahusa. Just like what has been described elsewhere, it is likely that though it had been easy, there were many more challenges to be met while traveling through Hilahusa. Because they consisted of the ancient traits passing through the project area, documenting the occurrence of事件-ghosts' and regional traits, descriptions of them are important:

Ku-Mkhi is Hihahusa. He ate 'Alali ka'we ka'we'sa i ka kula a Hihahusa's pole Hihahusa - The owner (very potent of Hihahusa) and his pole Hihahusa, where a rope is set down for the pole of Hihahusa which is in the buffer (guardian) of Hihahusa [before entering Kukua] (10/01/15).

Hihahusa ka ala'ika, ku ala'ika kula pali nihihala a ke kula - Hihahusa of the steep trails, where one carefully untied the rope until reaching the steep cliffs where the kula's (rock wall) perch (12/01/16).

Hihahusa i ka'a maka'o na ha'ihe'o i ka ko'ohua - Hihahusa with its far reaching canoe (polo) stretching from east to west.

The narratives below briefly describe the trial contests held at Ka'we, and the movement of the people from this region of Hilahusa to the royal court at Wi'pa's:

Polihalepo, a priest of the house of Alika and Alika's oldest canoe (an interpreter of owners of the earth and heaven), led Ku-Mkhi and sent Ka'we ka'we'sa (The cult chief figure) to the canoe site of Ka'we. Ku-Mkhi, who was the Hihahusa's game official and wife's main instructor of the sacred chief Pili'o-kuma's and Pili-o-kuma's. Trial contests were being held at Ka'we to determine who would qualify to compete on the canoe of Pili'o-kuma before the Pili chiefs. At these trial contests, Ku-Mkhi met with Ka'we, Hihatena, Kahu, and Kepau'u; all of whom were famous 'lauhala' of Hihahusa. (10/01/15)

Having defeated his opponents, Ku-Mkhi won the opportunity to compete at Pili'o-kuma. Ku-Mkhi, who was called for all who were gathered at Ka'we from the forenoon to the late (all day), the battle begins, the warriors and the maid Aina-a were desired to Wi'pa's for the next day's contest. This Wi'pa's was filled with people, all anxious to see the events (10/01/15).

The legend here follows the narrative of the earliest Wi'pa's and the events at the Kauai nonetheless a Pili'o-kuma. Certain sites of Pili'o-kuma's portion of the names of Hilahusa's famous competitors are held fast, identifying portions which make up modern place names.

After speaking with the Pili chiefs about Ku-Mkhi, Ku-Mkhi's 'a'ike went with the names of the owners who were to compete on the canoe of Pili'o-kuma, they were: Hilo-ka'a, Kuhua'ka'a (p71), Kau'e'a-kai'ana, Hilo-ka'a, Kau'e'a-kau'e'a, Kaau'e'a-kau'e'a, Kaau'e'a-kau'e'a, as the usual Wi'pa's, Naahe'e, Pili'o-kuma's, Pu'o'o, Pu'o'o, Pu'o'o, Pu'o'o. The Pili chiefs then called on the Wi'pa's champions telling them that they must defeat Ku-Mkhi.

As the chiefs and their champions spoke, Ku-Mkhi overheard their discussion and chanted:
He is manu ka kila o Waip'O
Ke will see i ka itua
Ke pēt see ka 'oio kila lā
Ke hā'ahā'aha a o Waip'O
E ho'okomo ana i ke ka a ka a
He lā o kila kā'ālālā see
Ku'ālālā ka mana a 'ōpi'i
'Opi'i ka a hā'ahā a 'iihā pa
He pēt akanu, He pēt maka
Pīlai a pau a ke kaua
He 'ake 'a o ka Miki
Ma ka 'ala ka 'epe a o na pa
Naka Paoha ka nake o ka ha'a'a
Ka 'ula ka ha'a o pau a 'al ni fima i ka 'u'ake

The 'ula, Kopu or 'akua is considered to be a Kuhi or Kuhi'i because of its abilities, such as flying and swimming. One of the main reasons for this is the fact that it can fly and swim at the same time. The 'ula can fly and swim at the same time, and it is considered to be a Kuhi, which is a bird of Kuhi'i. The 'ula is also considered to be a Kuhi'i because of its ability to fly and swim at the same time.

ADDITIONAL PLACE NAMES WITHIN THE PROJECT AREA

Hale-o-Kuake - House (temple) of the god Kuake, possibly an alternative name for Waio'aka'e
Hukumahana - Sacred mountain (Hukumahana; a rare native maple, Pseudopanax gratus), an ancient site; 20 km within Waio'aka'e-Nahokahoe
Ka-malai - Sacred mountain (Ka-malai) considered to be a hidden place in the mountains of Waio'aka'e, near Kaumana (see LCA 1394)
Kapa'aka'a - A public place where people would come to rest and to have a picnic. It is considered to be a sacred place for the people of Waio'aka'e, near Kaumana (see LCA 1394)
Keppe'a - A sacred mountain (Keppe'a) considered to be a sacred place for the people of Waio'aka'e, near Kaumana (see LCA 1394)
Kana'a - A sacred mountain (Kana'a) considered to be a sacred place for the people of Waio'aka'e, near Kaumana (see LCA 1394)
Kamā'akeha - Sacred mountain (Kamā'akeha) considered to be a sacred place for the people of Waio'aka'e, near Kaumana (see LCA 1394)
Waio'aka'e - A sacred mountain (Waio'aka'e) considered to be a sacred place for the people of Waio'aka'e, near Kaumana (see LCA 1394)
Wai-kahululu - A sacred place (Wai-kahululu) considered to be a sacred place for the people of Waio'aka'e, near Kaumana (see LCA 1394)
Wai-kahululu - A sacred place (Wai-kahululu) considered to be a sacred place for the people of Waio'aka'e, near Kaumana (see LCA 1394)
HAWAIIAN AGRICULTURAL PRACTICES

As mentioned earlier in this report, the environment of Hawai‘i was well suited to agriculture, and Walker (1881) and surrounding lands were planted in both wetland and dryland fields. The rich soils (otu, open lands) for which Hawai‘i is known were completely used to defend cultivation. Handy and Handy (1972) comment that these fields were covered with water-grown kahili ferns (Habershamia) and would have been used to rear kalo (taro) seedlings (1972:23). It was on these fields that taro and other crops (harleah) and in Mikahau’s and Wasilu’s houses were used to rear kalo seedlings. Two descriptions of this dryland planting technique are cited below:

Mulched taro was planted on the open fields in the border of the old forest area and is said to have flourished under a patch of grass, it leaves, and it leaves that were left around it in the end soil, small patches in growing today seems to flourish. We are told that taro was planted in kalo forest which would cover a patch of land that was to be planted again; for this planting the kalo trees were not filled. Personally such planting was successful only in relatively open grass. Another method consisted of digging a small hole in the ground, filling it with kalo leaves, and allowing these to decay completely, after which trees that had been started from cuttings planted in plant beds were transplanted to grow in size (Handy and Handy 1972:237).

In Hawai‘i, the field was called palakai or palakum, the kalo was the soil, that a kalo tree was not done and that he and leaves that were removed off that high, which they decompose and become soil. The leaves were then planted which produced fine leaf and then the plot was covered. This was called palakai, and that it was in all places where the kalo grew (Fernandez 1918:360-3). Another method that I believe Fernandez’s first sentence: Palakai, initially kalo of ferns. Decomposed taro (Habershamia) and wood forests were valuable for fertilizing the soil, yet that two planting was done in the drying down.

Because of the importance of agriculture in this region, and the emphasis of regular showers brought by warm, wet clouds, it is not surprising that the Hawaiians governed was particularly important in the rituals and legends of Hawai‘i. Lono was one of the major Hawaiian gods; he was revered by chiefs, commoner, and agriculturists alike. Lono’s attributes included abundant growth, and the following burr clouds, and rain clouds that are a manifestation of the seasonal downpour, or torrential rains. During the Hawaiian winter season, called leho, (literally, to spread or to generate, the time of spreading) all other gods stood behind Lono is important, the gods (surnamed) were cleansed, and the people celebrated Lono’s (the earth’s) fertility in ceremonies and festivals of the Makahiki (pic of television).

One of Lono’s many body forms was that of the demigod Kama-pua’a (fig. child). Handy and Handy (1972) describe how Lono and Kama-pua’a relationship in Hawai‘i at the time of the Makahiki.

Where the taro clouds at the beginning (November-December) and at the culmination (January-February) of the season of rains pelt against fernlands and rocky summits, where thunder rumbles and echoes, there is Kama-pua’a’s hiwahiwa. On Hawai‘i’s high ridges, the rain clouds pile up in rolling masses like giant waves in the uplands. After the thunder, the voice of Lono (Kama-pua’a’s), the clouds let down their rain drops. The very last front rushes to the very brink of the circuit of Kama-pua’a (Handy and Handy 1972:341).

In a further discussion of Kama-pua’a, Handy and Handy provide an account of the Hawaiians portion of the pig-agricultural god’s journey to Kulae to meet with Pele, goddess of the volcano:

Kama-pua’a’s (Lono) comes to Hawai‘i from Kauhā – that is from the north – as the taro and another cycadiscus which bring water rains, on which placers in low areas depend for their sweet-potato planting. Kama-pua’a’s placed aside the fernlands (planted the valleys between them), and then on his plant forms of the forest, the fall of trees (accidentally, a tree fell from the forest cover the Makahiki area), the anaima’s fern (the fern of great fern trees comes to the very rim of Kulae center), and the ha puhuhun (trees are all along the uncle and guided), to grow now “the forests” (Handwallia). (Handy and Handy 1972:619).

In another group of Hawaiian legends, Lono comes to Hawai‘i in human form and became associated with the practices of Kama-pua’a’s ancestors in the Kulae basin. Lono and his companion, Ka maka-o-ai-lo, became known for their healing skills, and for a time Lono cared for people at Waimalu, while Kama-pua’a’s aatua cared for people around Kaumakulu (Beckwith 1976:61-6).
forever changed. Western introduced weapons of the late 1700s, encouraged as retaliation in wars between island tribes, and led to precipitous overall Hawaiian casualties. Further decimation of the Hawaiian population was brought about in the 1900s through 1890 by epidemics of foreign diseases which killed tens of thousands of Hawaiians.

Native Hawaiian settlement and subsistence patterns were radically altered by the growing missionary influence. The foreign introduced sweet potatoes and açai and by 1784 had changed the Hawaiian life style by altering the native vegetation (Hewett 1970). Newly introduced plants and animals, including squash, melons, racoon, sheep, and goats spread throughout all the islands. Hewett reports that over grazing by sheep has affected to some degree all of the vegetation on the island of Hawai'i. The naturalist Archibald Menzies, a member of George Vancouver's expedition in 1790, also noted that sheep had consumed all the native vegetation and described Hawai'i at that time:

The land we pass'd in the forenoon was a steep bank from the water side and from the same consisted for the most part of thick underwood, and rather the country surveyed level with an easy acclivity for about four or five miles, and was laid out into little fields, apparently well cultivated and interspersed with the habitations of the natives. Beyond this the country becomes steeply rugged, forming mountains of great elevation. A little after noon, we pass'd a most beautiful spot of the shores furnished into ridges not unlike the coasts of Europe with their ends facing the sea in dark perpendicular cliffs of preternatural height. There were interspersed with deep gulfs from which a number of beautiful cascades emptied their falling streams into the ocean (Menzies 1822:25-26).

Eighty years later (1872), Isabella Bird, a woman of the world with a keen eye and the ability to document her adventures, visited Hawai'i and described Hawai'i as well. Birdy and Handy (1912) give Bird's narrative and note that by her time, the number of native dwellings had decreased substantially (Bird 1964:37).

There was a magnificent coast-line of grey cliffs many hundred feet in height, usually dappled with green, but often black, covered, and fantastic at their bases. Throughout the country were traces of an old trackway surrounded with a sort of wild vine, sending their broad white shoots from them high up among the forest canopy, and descending for a time the emerald barracade of the cliff, which is never silent through the warmer summer months. Caravans in numbers took one impetuous leap from the cliffs to the sea, or came thundering down cliffs as "golden," which, rolling at their extremities, opened an immense green lawn, each one of which had its grass house or house, half pitch, house, umbrella place, and to the beach Pacifica its peoply oftenInternal itself away over their fan-like leaves. Above the cliffs there were many uplands which sparkled like diamonds on the sea, and ranked not, and glades and dells of dappled green, bright with yam, opened up among the dark dense forests which for some thousands of feet girt Puu Ka'a and Puu Loa, two vast volcanic monoliths, whose yam covered summits glanced from their heads above the clouds, at an altitude of nearly 14,000 feet (Bird 1866:27).

LAND TENURE - TRANSITIONS IN LAND USE

In the period between 1790 and 1840, the land in Hawai'i was increasingly influenced by western ideas, and land management and use changed radically. Within a year of the death of Kamehameha I (1819), American missionaries arrived, and by 1821, a "great deal" of Hawaiian floral culture, values, practices and history, was underway. Land use in Hawai'i began quickly evolving towards Western practices, and in 1848, a Western-style system of land ownership was established. Proceeding this event, called the Kalahula (division of land between the crown, government, lesser chiefs (Kawalulii), and native tenants of the land), all land and certain resources were held in trust by the high chief, and the revenue was used for the consumption of the high chief or "kala" (equivalent to or equivalent of) and their representatives or land agents (Kawalulii), who were generally lesser chiefs at well.

The Māhele defined the land interests of the King (Kaanakolu III), the high-ranking chiefs, and the kahānalea, who were originally those in charge of tracts of land on behalf of the King or a chief (Chilton 1958:106 and Chilton 1961:13). More than 320 of the highest-ranking chiefs and Kawalulii in the kingdom owned Kaaanakolu III in this division. The first Māhele was signed on Jan. 27, 1848 by Kaaanakolu III and Prince Victoria Kamalūanaia, and by her granddaughters Malia Kahiwai and Jane Huapuha Pālai. The last Māhele was signed by the King and E. H. Tabb on March 7, 1856 (Chilton 1958:16).

The Māhele did not convey title to any land. The chiefs and Kawalulii were required to present their claims to The Land Commission to receive awards for lands, or claim them by Kawalulii. They were also required to pay compensation to the government to receive unpaid taxes on their lands. Until an award was issued, title remained with the government. The lands awarded to the lesser chiefs and Kawalulii became known as Kōkōolii lands. Because there were few surveys in Hawai'i at the time of the Māhele, the lands were identified by name only, without the understanding that future boundaries would prevail until the land could be surveyed. This expedited the work of the Land Commission and speeded the transfer.

During this process all land was placed in one of three categories: Crown Lands (for the occupant of the land), Government Lands, and Kawalulii Lands. Those were all "subject to the rights of the entire tenant," (Law Raws Hawai 1848:22). The land use or native tenants were the common Hawaiian people who lived on the land and worked for their livelihood and for the well-being of the chiefs. Questions concerning the nature of the rights of these native tenants began to arise when the King, the government, and Kawalulii began selling parcels of land to foreigners. On December 21, 1859 the Privy Council adopted a proclamation intended to protect the rights of native tenants referred to in the 1848 Law (Chilton 1958:29).

These resolutions (Kingdom of Hawai'i 1850:123-124) authorized the Land Commission to award for single lots to all native tenants who occupied and improved any portion of Crown, Government, or Kawalulii lands. They resolved to be of the order of compensation except for lots located in the districts of Līhau, Lāna'i, and Kauai (Chilton 1958:29). Before receiving their awards from the Land Commission, the native tenants were required to prove that they cultivated the land for a living. They were not permitted to acquire additional lots or land which they cultivated "with the seeming intention of altering their lot." Once a claim was entered, a survey was required before the Land Commission was authorized to issue any award. The lands of the native tenants became known as Kōkōolii lands.
By the time of its dissolution on March 31, 1855, the Land Commission issued only 8,213
balance claims, equaling only 26,658 acres of land to the native tenants (Kamehameha
1992:295). Though the commissioners were required to provide proof of land use and habitation,
their claims rarely included any documentation. This requirement of proof by the commissioners
produced a series of volumes of registry and testimony. Today, these volumes are used to
researchers understand land use practices, crop production, resource harvesting, and tell what
structures were on the land at the time. Because the narrative help provide a view into communities
at the time (mid-1800s), claim registers and testimonies from within the project area
are listed as a few of the immediate surrounding area are included below.

MĀHELE AWARDS INOR ADJACENT TO THE PROJECT AREA

The alai'pua of Kan'alana was awarded to Kohala (high chief) Keke's home (LCA
12166: Foreign Testimony Vol. 1:411), who was a granddaughter of Kan'alana and a
tok of Ka'ahumanu, who had been the Ahíalaka (land owner—land administrator) of
Kan'alana. Keke's home's genealogy represented the Ahíalaka (LCA 1992:23)).
Following the Māhele, Keke's home was awarded land only in the Māhele
(Kamehameha 1992:23). Because of her sister, no
documentation was required for her claim.

The alai'pua of Waifeke's home was awarded to William Lumai'a (Kamehameha
1992:219-220), and the land of Keke's home above, no documentation was required. The son of
high chief Kekaha'ula and Kava'a was the grandnephew of both Kan'alana and Keke's home,
and thus also represented the land of high chief of Keke's home and of Kava'a

Some owners and their claims were awarded by the Māhele parcels within or adjacent to the
project area alapahu'a, and their register and testimony claims are presented below. In past
years, there has been some confusion regarding a few LCA numbers and their locations. On
the copy of a map prepared by Willmott in 1909, reviewed for this report (Figure B-1), it
appears that there are discrepancies in recording on LCA 1856 and 1857.

Identified as being in Kan'alana, LCA 7858 was actually situated in the 'AI of Līhka
(Waifeshe's mask). Furthermore, the LCA was declined by Kahanu Haimam, thus
should be be no way record of its location. Instead, Hukumana and Ekapua joined together in
claiming LCA 7857 in the lands of Ka'ūho's and Kapa'a (Lidstone).

During LCA research for this project, it was noted that the testimony and diagram that
accompanied LCA 7859, awarded to Ka'Ihou, fit the location identified in LCA 7858 on
the Willmott map. Upon obtaining a copy of the project area TMS map it was found that
LCA 7859 was indeed situated on what is now the plantation manager's house site (Site 15000).

Another balance (LCA 7877) appears to be identified on the Willmott map, but the
failure of this award was actually stated in Pa'auilo on the island of Hawai'i. The
documentary evidence for the LCA 7877, arguing that the lands as awarded in Keke's
portion 2 of his award in situated within the project area (near Site 15014). Additionally, in LCA 7877
Keke's home's Land Division Registry claim identified the alapahu'a as being Waifeke's home, but
in the supporting testimony, the alapahu'a was named Hālakahakai; this is perhaps an alternative
claim for the alapahu'a of Waifeke's home. (The Hawaiian testimony providing this information
is included below.)
One additional LCA (No. 411), given to Kona, is registered as being in the land of Kāne'akea. The 1899 Williams map shows the area as being in two parcels; one parcel is in Kalinahua (incorrectly spelled so, or partially within the project area), and the other parcel is in Kalihiwai. Termination below confirms this configuration. Kona (a lesser chief) was also the recipient of lands covered under LCAs 1394 and 1394-8. The text for these awards were reviewed and clarified by L. Itai-lay, at the University of Hawai‘i Press. Some of the translations presented below are those corrected by Itai-lay and the Hawai‘i State Archives (1996b-1998). A review of the translations revealed numerous discrepancies in the spelling of names and in the locations of land parcels, as well as questionable translations. Because of this, the author of this report reviewed the original Hawaiian texts and cross-referenced some sections of the LCA documentation, which are included below. Additional research of the Māhe‘ahoe records will undoubtedly contribute to future research efforts and site descriptions.

Land in Wai‘alea (Figure 3.1):

LCA 1294 to Hanaula Kona (Wai‘alea) Native Register Vol. 3:60-63

(The Native Register claims of Hanaula Kona cover five separate ahupua‘a; these claims were later aggregated into three LCA numbers: 1294, 1294-8, and 1111. The selected narratives below address the Wai‘alea portion of Kona’s claim.)

November 20, 1847

Honōry Judge Commissioner: I hereby present my claim at Wai‘alea; this land was from Kana‘ki. In 1827 Kana‘ki gave it to Alii and I got it from Alii. The year Wai‘alea was turned over, fish was found with Alii and the land became Kana‘ki’s and I went under him, the land and people were under me. At this time, this area was settled and the neighboring place is mine; it is my claim. This is my claim and you will see by the diagram below the nature of the claim. The large diagram outside Wai‘alea and within there my claim is shown. I have three claims in Wai‘alea; the pasture land by the cliff to the shore is mine, and the place of my dwelling house is another, and in the uplands is the other.

Here is the testimony for the shoreward claim: The eastern boundary is the cliff of Ka‘ū‘aua, which runs eastward to Kape‘é on the shoreward side; it then continues north along the shore to Waikōhu in Kāne‘akea; on the west it continues to the cliff of Kau‘ō‘ō, and then continues southward to the cliff of Māhina, these are the boundaries. This is the claim in the northern section of Waikōhu, it’s diagram is on the west.

The second claim is bound on the east by Kāne‘akea, on the west – northern boundary is the ali‘i [a boundary] in Kāne‘akea, on the west is Kama‘ki, on the south is the hill Mā‘ehā‘e‘akua, and then to the east in Kāne‘akea. These are the boundaries of this claim. This claim is between Wai‘alea’s eastern shore, and Kāne‘akea on the east side. This is the land shown in the diagram.

This is the third claim: Kapalua is the east – north boundary; on the south is the shore of Pā‘a‘ikahama, this is the east side. This boundary continues to the lands to the east side of Kāne‘akea, which is the upland boundary; from there it goes to the west – southern boundary at Kāne‘akea, this is the west – southern side; then goes north – west and runs shoreward of Kapalua, this is the west – north boundary; then running north – east it is Kapalua. These are the boundaries of this claim. This is the land of Wai‘alea which is shown in the diagram. Look at this diagram of the claim document. (Drawings not included with the Hawaiian text that were the source of the above translations; see Figure 3.1, Māhe‘ahoe Map 4.6-8.)

LCA 1294 to Hanaula Kona (Wai‘alea); in this, the project area Native Testimony Vol. 4.152

Kana‘ka ‘awa and stated: I have known them in the ‘ili lands within Wai‘alea, his 3 sections:

Section 1. See Figure 3.1. Combined Pacific Sugar Mill Field Maps

Moku: Kana‘ki land
Ko‘olau: Kama‘ki land
Māhe‘ahoe: Kana‘ki land
Nā‘ālehu: ‘a‘a land
Hōnaunau: ‘a‘a land

This is the area for this field, this is the northern part of the Wai‘alea, it is not cultivated and there is no house.

Section 2.

Moku: ‘a‘a land
Ko‘olau: Kana‘ki land
Māhe‘ahoe: Kana‘ki land
Nā‘ālehu: ‘a‘a land
Hōnaunau: ‘a‘a land

This is a dry land [green], I house is for him

Section 3. At Pā‘a‘ikahama

Moku: ‘a‘a land
Ko‘olau: Kama‘ki land
Māhe‘ahoe: Kana‘ki land
Nā‘ālehu: ‘a‘a land
Hōnaunau: ‘a‘a land

This is a dry land [green] without a house. It is not on this plot, having been evicted and thus deserted there was no known owner; removed in 1844. Kana‘ki gave it to Alii and Alii gave it to Kona in 1832 (not 1827). The years mentioned in the original document [Native Register above] are erroneous. Objection has been raised since 1839. Kana‘kaʻawa has been and stated "show how we were as Kapalua before them." Look at Figure 5.10-116.

(Lands for awa‘ula Kona are also continued in Native Testimony Volume 4:160 in two sections: (1) for a parcel in the ahupua‘a of Kona’s LCA 1294-8) on the Hōnaunau side of Wai‘alea and (2) another parcel in the ahupua‘a of ‘Pā‘a‘ikahama (LCA 1294) which is the next ahupua‘a on the Hōnaunau side of Kona’s Kona area which included a lava flow continues ahupua‘a of Kāne‘akea, Kana‘kea, Wai‘alea, Kona’s, and ‘Pā‘a‘ikahama, north to south.)
LCA 7877 to Kaha'ena (Wahke'eha'ew) west of Site 15040. Native Register Vol. 1.B.3

Heavy, yet Land Commissioner: I hereby present my claim for land to you, the Commissioners, for this week. My claim is at Wahke'eha'ew. This is the place where I was born, it has been held since ancient times. My claim is on the west side of Wahke'eha'ew. One mile north of the way to the shore and the other side returns inland where the path is. The diagram explains it.

That is my message to you, the Commissioners to quit land titles.

PETEKO KAMEHAMEHA X

LCA 7877 to Kaha'ena (Wahke'eha'ew - Hulakinga) Native Testimony Vol. 1.B.3

October 1846


Milohe ho'ihi'i'a, a 'iole mai ia: "Ea ia! "Kaha'ena? Hulakinga? "Ia mai 'a, na na 'a! Kaha'ena? Hulakinga?

Milohe sworn and stated: I have seen the 'iole land of Hulakinga in Hulakinga shapua'a, in the land section. Towards the upland in Kana's land; towards Kaha'ena in Kaha'ena land; towards the shore in Kaha'ena land; towards Hulakinga in Kaha'ena land; towards the shore in Hulakinga land; towards the upland in Hulakinga land, and then he was born there. No one has objected to him.

Milohe sworn and stated: My understanding is exactly as Milohe has just related here.

Although the above statements identify one parcel, 21.15 acres were awarded in two parcels to Kaha'ena. The entire portion (7877) is just west of Site 15040, and is identified as near the Japanese School (Figures B-1 and B-2)

Land in Kaua'i (Figure B-1.1)

LCA 4111 - Kana Kaua'i Native Register Vol. 1.274

I have a claim for a house lot at Kaulahe'e. There is also an 'aii (land parcel) at Kaulahe'e which was received from Kapu. At Kaua'i he is another 'aii which was received from Kapu. The kihap adornment plan is in one parcel. My land claim is at Kaulahe'e. The diagram shows the size in fullness. That is my work which I present to you, the Commissioners to Quiet Land Titles.
LAND USE FOLLOWING THE MÄHELE

At the time of the Mähele, Hawaiians lived on and worked the land throughout the various environmental zones of the project area. Estates were established above coastal cliffs, on the flats or level dry lands that were used for dry land cultivation and pasture, and along the watered streams (mānanea), which were used for li`. A review of Mähele records show that native tenants were cultivating several crops on their properties. It can be assumed that the products of the land were used by the tenants for family subsistence, and also as trade items, to pay kapu ali`i and the ali`i `alae (government). This was much as it had been practiced in pre-contact times. Cultivated crops identified in the Mähele records included taro, sweet and manu`a (both used for kapa making), kalo (bananas), sugar cane, bananas, and bamboo; and oranges and coffee, which were introduced crops.

The placement of LCA in the region is related to several factors. They were often located near water sources, for domestic and agricultural use. They were also located near the land estate, for access to property, natural resources, and transportation. For example, access to community, road, and agricultural resources in Wahi`a`a remained important to those in the project area vicinity even after women business interests came to dominate the land economy. Similarly, LCAs were located along the evolving pueo or government pathways. As western influences reshaped the Hawaiian sense of community, Hawaiian settlements of the period reflected missionary concepts regarding acceptable communities; i.e., the `bndal` of living under the watchful eye of church leaders, close to churches, and in `elevated` villages and towns. Churches were placed in populated areas around the islands, within easy access to native
During their stay in Hawaii, Lyon traveled to the various churches within his field, and at one point he found himself on the island of Molokai, where he began "converting a building into a playhouse" (bid. 17). He also taught at the school for children and women. In his February 11, 1815, journal entry, Lyon notes that he introduced the reading of the Hawaiian Newspaper into his classes (bid. 17).

On May 25, 1815, Lyon and his family left their home in Honolulu and returned to the island of Oahu. Before they left, he wrote a letter to the "three women who have given us a season to rest" (bid. 8). Lyon estimated that the population in Oahu was approximately 42,000 in 1815 (bid. 8). In August of 1823, Lyon noted in his journal, "the new morning house is going up and will be completed in two months perhaps. It is surrounded by a stone wall put up by convicts such as we have seen. This is not all it would be if it were surrounded against it" (bid. 81). Another note from Benny Lyon's journal mentions that when he saw Lyon returning from Hawaii in 1820, they walked along the shore with a group of girls, boys, and men, "all in native style, and in great evidence of their love. Many came from great distance. Some were schools of children growing tobacco" (bid. 81). By August of 1823, Lyon noted that he held meetings at Kulaheiki, and used the floor of the schoolhouse (bid. 87).

Between 1839 and 1846, Lyon was put in the field at least three times to visit his country's publications. Describing his post and stay in Honolulu as he wrote:

"On the way to Hawaii, there is in wet weather a marsh to pass through, not much unlike the Tammy's of New England. The marsh road is perhaps four feet long, and then a ledge of grass and then a road of stone and then a marsh. The whole is a delightful scene, but at first the thoughtfulness of the people was painful. But the woods, with the women and children, and with the man, the old men and women, and the children, all such delightful scenes, make a delightful scene. The people build all kinds of houses to exchange for books.

Being too poor to pay for a house, the people preferred to live in tents. October 19, 1834, was a significant date in the history of the Marshall Islands. Lyon noted that "the people are quite sociable and friendly. They often meet at the home of a friend and enjoy pleasant conversation."
The black and white text on the page is not legible due to the quality of the image.
of Hāmākua, Reverend Lyon (cited above) also described travel upon this trail when he was coming and going from his Kanehaoa - Waipio's, Hāmākua parish.

In June 28, 1943 letter to L. A. Makia, Commissioner of Public Lands, C. I. Murray, CulturalExplorer, Murray reviewed the configuration of the County Cemetery, and temporary use of some of the land by the plantation. In the letter, Murray noted that "To date there have been no burials in the cemetery lot. The area set aside will be ample and will in most part be left for many years to come. There are four cemeteries between Honokaa and Kukuihaele used by different churches and institutions at present but these are small and may in time be used up."

Documents recording establishment of the cemetery and Murray’s comments regarding these being "not suitable" and it is fate of 1942 are of interest, and perhaps of importance to project area and community history. A visitor to the County Cemetery today will see headstones dating back to 1879. Among the questions which come to mind are: (a) Where did the graves thus far exceeded 1941 come from? (b) Who are the graved of the native residence and others who lived in this area prior to 1879? and (c) Was the 'Eile' Church site also used for interments, and are their unmarked graves on the church lot, or are adjoining project area parcels?

During the current research, records of the County and State of Hawaii, were reviewed in Hilo. Additionally, Dr. Honn, of 'Imiloa Church, Mr. James Richards, of the Hawaii Conference of the United Church of Christ, the greater organization of the Hāmākua – Kohala churches associated with Reverend Lumen Lyon, and the Catholic Diocese of Hāmāka'a (Carol) (gnocchi) were contacted in an effort to answer some of the questions relating to the County Cemetery. These lines of inquiry were unable to further clarify questions regarding cemetery use.

**SUGAR IN HĀMĀKUA**

Throughout the Hawaiian Islands plantation agriculture, ranching, and farming were undertaken, and in the project area, the Pacific Sugar Mill was established in (1879). Lands within the project area were directly associated with the growth and evolution of the sugar industry in Hāmākua (Figure 2-3). The 'plantation camps' churches, stores, schools, and diversified, and the distribution of the area's ethnic make-up were direct products of the 'plantation life' (Figures 2-3 and B-2). Plantation communities usually developed around smaller Hawaiian church settlements, and many families were established into plantation holdings for various reasons (see locations of LCC 78, 1913, 1917, and LCA 7810).

The following brief history of the Pacific Sugar Mill and Hawaiian Sugar Planters was compiled by Kanai (1991), following his survey project at the Hawaiian Sugar Planters Association (HSPA) Archives.

The Pacific Sugar Mill was located on the northwest coast of the Island of Hawaii between Honokaa and Waipio Valley. Scattered along the coast for four miles and up the mountains from two to three miles. The elevations ranged from 200 to 1,900 feet, giving a variety of growing conditions. Half of the land was arable; the remainder was pasture and forest.

The beginnings of Pacific Sugar Mill are not entirely clear. A Charter of Incorporation dated August 18, 1879 was signed Parker and F.A. Schober.
as the foundation. Other published sources cite Dr. M.M. Smith, Dr. Truesdale, and Mr. C.H. Price on boundary properties of the exemption. Material in the collection does confirm that the plantation was named in 1818, and the first crop harvested in 1880 with F.A. Scherer and Co. as the agents.

Pacific Sugar Mill had its distinction in introducing the first macaroni into Hawaii. In 1893 H.W. Price imported them from Italy and Africa for use on the plantation. Pacific Sugar Mill also experimented with growing cane-type seed (baster exotics) when Mr. I. Macdonald, Commissioner of Agriculture, imposed the rule of 1815. It was assumed that the root would become a good source of raise for use in the sugar industry. This was an early attempt to diversify and utilize land that was unsuitable for cane production.

While most plantations had a small herd of cattle, Pacific Sugar Mill was unusual because it also had over 600 head of beef. Five minutes was provided for employees along with free lodging, fuel, and medical care. As on most plantations, the early work force consisted of Chinese and native Hawaiians. Later on Japanese, Portuguese, Spaniards, Puerto Ricans, Koreans, and Filipinos came to work on the plantation, both as day laborers and contract workers.

By 1905 Pacific Sugar Mill had a nine-inch mill and produced an average crop of over three tons per acre. The cane was delivered by flumes to a railroad which avoided the plantation from east to west. The railroad was about four miles long and connected from the mill to Kukuihaele leading to the plantation's Huleia boundary. Pacific Sugar Mill also had a wire rope hauling system to transport sugar bag to steamers for shipment.

The water for the flumes was obtained by diverting the Wailua River, which had its source in the Wailua Mountains. Pacific Sugar Mill also had the water rights to Lihue Stream and to Kauaihae Valley Stream. The water was transported partly through a flume and partly by a ditch to a reservoir at the head of the plantation. Four reservoirs with an estimated capacity of 50,000,000 gallons were also constructed. This supply of water not only enabled Pacific Sugar Mill to transport all of its cane to the mill, but sufficient to enable Hakalau Sugar Company to ship 30% of its crop to Kauai (Kalani 1941a, 1941b).

In the Hawaiian Defense and Amenity for 1911, Thomas O. Thrum described the opening of the Hawaiian Ditch, a portion of which runs through the area of Kauaihae and Waialua's, a 1,000 feet elevations (Figures 1-3). Portions of the article are present here because they directly influenced the nature of work done in the plantation, and development of the communities.

Construction work on the lower ditch began in May 1909, and was brought to a close by June, 1910, at that opening day, July 1, it was made a memorable event.

The source of the supply is the Waimea Stream, in Hamakua, which has its origin in the Kukuihae mountain, and in the confines of four avenues known as Kanawale, Aikahi, Kilauea, and Waimea, which by a series of tanks

56,932 feet, slopes (779 feet), and open ditches (571,942 feet), it brought out and conveyed to Paalau Plantation, southeast, a distance of twenty-four and thirty-four miles, supplying on route by flumes and open ditches the needs of Kukuihae and Waiawa plantations.

This ditch taps the most distant Kaauhae stream at an elevation of 1,007 feet, then by a series of fifty-five consecutive tunnels nine miles in length, including seven bridges, and 841 feet of fluming connecting the deep ravines, in which course the above four named streams, the water is brought out at Kukuihae, at an elevation of 895 feet, where is located the main measuring well, which contains on its five-foot panel, capable of measuring up to one hundred million gallons, the capacity of the ditch daily... (C.I.C. Thrum 1916a, 1916b).

Further plans of the irrigation company contemplate the construction of upper reservoirs, damming up ravines and gorges, obtaining and generating power for additional water to the upper and lower ditches for the further development of a district which is just now being brought into close relations with Kauai through the extension of its railroad, which is planned to come within fifteen miles of Kukuihae, to give direct transportation for sugar and other products from shipping at Honolulu.

Though the plantation had adequate water and land resources, Pacific Sugar Mill failed. Kalua (1991) narrates the company's demise:

In 1909 a planter's epidemic broke out because of poor conditions in the salines and most of the livestock had to be destroyed. The mill and housing were in a sorry state. In 1913 the mill closed and the cane was sent to Hulahula for grinding. At this time the administrators of both plantations were brought under one manager in order to cut costs. In 1916, Pacific Sugar Mill sold all equipment to Midway Company of Japan. The partial merger with Midway proved to be such a success that a proposal was made to join all the interests of Pacific Sugar Mill with Honolulu Sugar Company in order to avoid adding and unite the economic management of the two plantations. Pacific Sugar Mill was formally dissolved on August 4, 1918 and became the Kukuihae Division of Honolulu Sugar Company.

HEIAU IN THE PROJECT AREA VICINITY

Throughout the Hawaiian Islands, plantations and ranches radically changed the Hawaiian landscape; most traditional axes, cultural sites, land-use patterns, and monumental structures were changed and/or disappearing. In Hamakua, these occurrences are directly responsible for the limited availability of documentary materials and physical remains of Hawaiian sites within the proposed area and historical. The earliest sites date from the late 1800s, and early 1900s. Nevertheless, several researchers have compiled oral histories and site documentation. In a listing of scars, one site near the Island of Hawaii's, the Thrum identified the presence of two Arches in the Waialua area. One was named Kanawale-ua, which can be translated as 'He'e Nui's Nest. Since then other Arches was named Kauai-o, or 'He'e Alo, and it was possibly associated with the god Kauai, of the waters of life and mortality. The location of these sites were not identified (Thrum
COMMUNITY DISPERSAL AND PLANTATION DEVELOPMENT

As the island economy continued to adapt to the western system, subsistence fishing and homestead agriculture rarely produced enough income for Hawaiian families to retain their independence. Paying taxes was difficult, and as the children grew up they left the homesteads to take steady work as policemen and school teachers. By the end of the 19th-century, the community developments (emigration, diversification, and stock raising) associated with the development and expansion of the Hawaiian Sugar Industry brought about job opportunities and a growing need for site access.

Government and plantations road projects provided access to many remote areas, and even travel to Waipio Valley and Waihuna Valley was improved. From 1897, the Hawaiian language newspaper Ka Nui Ohe o Hilo printed a letter from Mr. Oliver K. Pahulani, of Waipio Valley, telling readers about circumstances associated with construction of the Waipio Valley Road, and the great “iti na o na maui” (i.e., highway) which was held in honor of the local labor of the road crews. Excerpts of Pahulani’s article are presented below; in the article he refers to traditional values of the area and offers a glimpse into the nature of the Hawaiian community at the time.

Pahulani’s article in Ka Waihuna o Hilo: "Ane o na 'ai waalele" (Annual of the Society for the Promotion of Hawaiian Culture by Members of the Society) (December 19, 1907), page 2, article 4.

Waihuna Valley: Pahulani’s article in Ka Waihuna o Hilo (December 19, 1907), page 2, article 4.

Events associated with establishment of a "modern" roadways and community dispersal are still recalled by some older residents of the area. According to Mr. Paul Christiansen, a resident of the Kukuihaele Sugar Company, who moved to the area in 1933, the Kukuihaele Bridge was built around 1935. At that time, large towers were erected for the railroad crossing, and the sidewalks were extended to the cliff at Kukuihaele. The main road from Kukuihaele to Waipio Valley was built to give Waipio Valley residents access to the jobsite (Christiansen, Hilo News, 1991:16). He mentions that the Hawaiian residents of Kukuihaele had access from Waipio Valley (ibid.:16).

In his interview with Kukuihaele, Mr. Tuke described various features within the Pomona Community (Figure 5-5, above).

The site map of Kukuihaele, heading towards Waipio Valley, is known as Koa Camp, some of the people in the camp had moved over from Koa. The 2nd camp was known as Kii Camp, and Mr. Tuke gave a humorous explanation.
for this name. It appears that this name was made up by many English and Portuguese laborers and their wives "fought the tigers" all the time. What is now known as the Last Chance Store was the Old Plantation Store; next to that there was a theater. Heading toward Waipoli one came across a road which led to the sugar loading where ships would be loaded and unloaded. However, the Maunalei area would venture off above, then the "dancing," a device that was used to load sugar into a water tank, would transport the sugar to the boat and it would go back and forth until it was loaded. (Kawela 1991: 1-19).

Figures 2 and 3 are maps of various some of the fields and of sugar fields of Pacific Sugar Mill, also depicted in Kukahaule village with its various structures and houses. Among them are churches, community, hospitals, homes, schools, stores, the plantation manager's and supervisors' houses, stables, pasture, and sugar cane fields.

Mr. Teake mentioned that the Plantation Manager's house (112150) was very fine and a community group was using it as a social center. Near the existing hall field, or park on the rear side is where the Kukahaule Elementary School used to be and marks of this was the Congregational Church in cemetery (112150).

He added that the church had long since been damaged but you could still see the foundation. Further along the village there used to be many stores, saloons, restaurants, and a vaudeville show. Mr. Teake lived just past the old Kula sugar mill which is located on the hill after his family lived in the area for years. He said that many old timers know this area as Teake's Hill (Adapted from Kawela 1991: 1-19).

Though the Pacific Sugar Mill closed in 1933 and was formally dissolved on August 24, 1974, the Kukahaule Division of Hawaiian Sugar Company, sugar remained an important industry providing jobs for residents of this area until recently. Agriculture began modernizing operations, fewer jobs were available, and over the last 15 years sugar itself has been in decline. Hawaiian soils have been used between Kapua and Kukahaule, and the closing of Hiakua Sugar in 1993, will likely affect the lives of area residents and the social structure of the Hawaiian community.

IN SUMMARY

The project area includes land within two traditional aha'ina in the district of Hanalei, Kauai and Waipoli Valley. Few legendary references are available for the preproject area, and there are numerous legendary and historical references for the larger Hanalei and Waipoli communities. These accounts provide us with a clearer understanding of life in and around the project area.

This portion of Hanalei was an important agricultural region where both wetland and dryland crops were cultivated in former fields. From these times, Waipoli was an important royal and religious center for the island of Niihau, and it can be assumed that portions of the resources from the project area were used to support the Waipoli community. Indeed, legendary accounts specifically address the fact that ali`i chiefs accessed to the higher authority of chiefs who lived at Waipoli. Waipoli also provided an important access to the ocean for people living along the Kila slopes. The steep cliffs in these areas provided little access to the ocean. This part of Hanalei was also known for its bird hunting.

Early foreign visitors described this area as rich and well populated. In areas where missions became established, native communities took on characteristics of western villages and included churches and schools. The Journals of Reverend Lorrance Arms describe the native community of Hanalei and the establishment of the E'eloa Church and school at Kualoa (West Hanalei Hawaiian Mission). They also discuss the decline of the native population. By the mid-1900s, the Hawaiian population had declined significantly, and western culture and land management practices were replacing traditional ways.

The Malaekahana State Land Office had available to native tenants, and at least eight LCA's were awarded to Hawaiian claimants in, as adjoining the project area. Native tenants on these parcels appear to have continued traditional agricultural practices, augmented by crops and livestock of western origin. Tenancy by native tenants document the locations of 'ula, wetland and dryland agricultural plots, house sites, and natural features, and also provides descriptions of land use in the project area.

During the 1920s, the Malaekahana had only limited access to getting the diminishing Hawaiian population on the land, for the simple fact of land being held in trust. In 1915, it became possible for foreigners to purchase Hawaiian lands, and large parcels went into the sugar cultivation and ranching. On September 29, 1922, Grant 44, on Apana 56A officially set aside one acre of land for the school at Kauhunana, which is across the main road from the Church of the Cross. This church lot was also surveyed and granted at that time as well.

Much of the project area was once a part of the land used for a High Chief Kaumualii (LCA 1216, Apana 56A), and by 1864 portions of his land had been acquired by the Roman Catholic Church of Hawaii. By 1878, other portions of land had been acquired by the Pacific Sugar Mill (PSM) and sugar operations began modifying the natural and cultural landscape of the region. Area communities were further changed as plantation towns evolved and native lands came under the control and cultivation of PSM. As plantation operations increased, the Hawaiian population continued to decline, and additional labor was needed. The arrival of foreign laborers brought about increased growth of the plantation community and town center, but by 1913 PSM was closed. Following the closure of PSM, the project area lands became the Kukahaule portion of the Hiakua Sugar Plantation.

There are many questions concerning the use and locations of cemeteries in the project area vicinity. Discovering the answers to these questions would add to the community's understanding base. It is possible that some relatives of those people buried in the cemetery, pre-dating 1849, might be contacted to record their understanding of burial occurrences in the project area, and possible 1850s use of the 'Eeloa Church for interments.

Recently, the community has continued to change, as younger members leave to seek work outside the plantation. Yet sugar was an important industry until approximately 12 years ago. Since then, industries such as unadvised have been planted between Kapua and Kukahaule, and sugar prices have continued to decline, which led to the 1993 closure of Hiakua Sugar Company. The current proposed project is one alternative for community survival in the post-plantation era.
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APPENDIX C: SELECTED PHOTOGRAPHS

Figure C-1. Overview of Project Area, Looking South (Fig. 1684-26a)

Figure C-2. Site 14994, Feature B, North Wall (Fig. 1677-2a)
APPENDIX D

VISUAL IMPACT ANALYSIS OF AMANRESORT
METHODOLOGY

A survey crew (Inzua & Associates) erected bamboo poles painted white with plastic fluorescent orange flags attached at 15' from ground level and at the top of the pole. The 15' heights simulated the height of a one-story building. The top of the pole height varied:

<table>
<thead>
<tr>
<th>Pole</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25'</td>
</tr>
<tr>
<td>2</td>
<td>30'</td>
</tr>
<tr>
<td>3</td>
<td>35'</td>
</tr>
<tr>
<td>4</td>
<td>25'</td>
</tr>
<tr>
<td>5</td>
<td>25'</td>
</tr>
<tr>
<td>6</td>
<td>24'</td>
</tr>
</tbody>
</table>

The survey crew placed the poles at the outermost edges of the Project Site makai boundary (Poles 1 & 5), at the edges of the hotel and 1-acre lot (Poles 2 & 4), and at the highest points of the hotel and 1-acre lot (Poles 3 & 6). The cluster of Poles #1/2/3 relate to the hotel, and the cluster of Poles #4/5/6 relate to the makai 1-acre lot.

On September 22, 1993, a photographer (Norbert Kokeny) took photos from vantage points within the Project Site (shown in the figure on the following page) to document the visual impact from the highways (Old Route 240 and Highway 340). The photographer used a normal lens (50mm), wide angle (17mm & 24mm), and telephoto (80mm & 180mm). The photographer also documented the views from the Waipio Valley Scenic Lookout and Waipio Valley beach.

FINDINGS

The Poles could be seen only from two vantage points:

- From Highway 240 above Tiger Cliffs. Poles #1 and #3 were visible. Since the 15' flag of Pole #3 was visible, it is probable that the proposed hotel lobby would be visible from this vantage point unless screened by landscaping. Since only the top of Pole #1 was visible, it is unlikely that the one-story guest units would be visible.

- From Old Route 240 framing Kukuihele Park. Pole #3 (proposed hotel lobby) was visible through a gap in the vegetation. Should the park landscaping fill the "gap", the hotel would not be visible from this vantage point.

The project would not be visible from the Waipio Valley Scenic Lookout nor from the Waipio Valley beach.
APPENDIX E
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11
CHAPTER 1 INTRODUCTION

1.1 Project Description

Royal Coast Resorts Corporation and Silverlink Holdings Limited, dba Kukuihale Development Company ("the developers"), propose to construct a resort in and near the town of Kukuihale, Hakuna District, Island of Hawaii. Inasmuch as the project would require an Amendment to the Hawaii County General Plan and significant environmental effects may be expected as a result of the proposed action, an Environmental Impact Statement (EIS) pursuant to Chapter 343, HRS, is required. This report is the primary research document on socioeconomic impacts for incorporation in the EIS.

The proposed project is fully described in the EIS for which this report is an Appendix. The reader is referred to the descriptions, figures and tables in the main body of the EIS for clarification of what is presented in this section. For convenience, a summary of the main components of the project is presented below:

- Construction of a 36-suite resort located within Kukuihale Village, called the Amahideaway;
- Conversion of the existing plantation manager's house into a luxury guest house with 4 suites, called the Plantation Inn; and
- Subdivision and improvement of 36 residential-agricultural lots and 7 residential-resort lots, which will be referred to jointly in this document as the Residential Lots.

For purposes of clarity, the project as a whole is referred to as the Amah Resort in this report. The term "hotel" as used here generally refers jointly to the Amahideaway and the Plantation Inn, unless it is explicitly limited to the Amahideaway component.

The project also involves extensive landscaping and some road construction on land that was formerly cultivated in sugar cane and is now abandoned. The properties to be occupied by the development total approximately 113 acres.

Significant improvements and/or additions to the water system, utilities, existing roads and intersections, and other features of Kukuihale Village will likely be necessary and offered by the developers and/or requested by the County as a condition of rezoning and General Plan Amendments.
Construction of the project is expected to begin in late 1994. If this target date is achieved, then the resort would open at the end of 1995.

1.2 Community Benefit Package

The developers have also proposed a package of community benefits that has been formulated in consultation with the Kukuihale community and the County of Hawaii. The specific benefits have been formally agreed to in a Developer's Letter of Commitment (Appendix H to the EIS) and are discussed in Section 2.5.3 of the EIS.

The principal elements of the package include the following:

- Property Tax Trust Fund: In order to offset increases in property taxes that may be caused by the resort, the Applicant will establish a trust fund to subsidize increased property tax payments incurred by existing owner-occupants residents within Kukuihale.
- Boundary Adjustment for Local Homeowners: The developers have agreed to deed former sugar land adjacent to houses that have been informally used by residents. In some cases, this will virtually double the size of the homeowner's lot.
- Community Recreational Facilities: The developers will improve and maintain the Kukuihale Park, the Social Hall, and upgrade the open field by the Social Hall to include a playground, lawn area, swimming pool, and other facilities. The developers will work with an Advisory Committee structured by the community to ensure community input into design, operation, and maintenance of the facilities. The developer will commit a fund of $175,000 for the initial capital improvements.
- Affordable Housing In-Lieu Fees: Instead of building affordable housing, the developers will contribute in-lieu fees, determined at approximately $200,000 based on the County's housing policy, which will be used to construct off-site affordable housing. This is in response to residents' requests that no affordable housing be constructed in Kukuihale Village.
- Waipio Valley Controls: The developers will abide by the recommendations of the government and local organizations involved with resolving the problems in Waipio Valley associated with growing tourism.
- Additional Cemetery Lands: The developers will deed a strip of land fifty feet wide on two sides of both the Catholic cemetery and the County cemetery for the purpose of expanding these grounds, at the request of the community.
- Lifetime License to Kukuihale Resident: An elderly resident who lives one of the structures owned by the developers will be granted a license to live out his life on the property.

It is important to note the iterative development of the package. The project was conceived in 1993, and discussions with the community were begun immediately. Individual elements of the package were suggested by the developers and/or the community, leading to informal understandings among various parties. No coherent agreements were formalized, and many individuals were unclear about the benefits. The EIS Notice of Preparation issued in July of 1993 included discussion of a range of benefits but offered no clear resolution. During a community meeting in August of 1993 undertaken for the research in this document, the many speakers expressed confusion about the precise nature of the benefit package. For these reasons, the developers, in consultation with community members, prepared the Developer's Letter of Commitment mentioned above.

Because the package had not been fully developed during the social research phase for this document, the remarks and concerns of many individuals may have been somewhat unjustified in light of the agreed-upon benefits. It should be recognized that the concern of these individuals is part of what encouraged a clear, written agreement to be developed.

1.3 Alternatives

The alternatives for this project have been defined in terms of three scenarios:

- Alternative 1: Full project as proposed.
- Alternative 3: "No-project," land is subdivided for agriculture and/or house lots in accordance with existing zoning (a mixture of Rz-15, Rz-1, and Rz-20).
In Alternative 2, it is assumed that although the land remains undeveloped, ongoing social trends continue to transform the demographics and land use of the region. Major economic and social dislocations would occur as Hawaii Sugar jobs are lost and no viable replacement appears. Local people, especially young adults, would continue to leave the area in search of jobs. They would be "replaced" by outsiders, most of whom would have independent and/or non-plantation related sources of income. Also, some of the abandoned sugar cane land surrounding Kualiihele would be utilized to some degree for diversified agriculture or cattle grazing. Much would simply grow a thick cover of weedy grasses and ironwood trees. In sum, no likely alternative is envisioned in which the region does not undergo substantial change.

In Alternative 3, it is recognized that existing zoning within the project site currently permits a maximum of about 75 100,000-square foot residential lots, and about 81 1-acre agricultural lots, for a total of 156 lots. Because of topographic conditions, land requirements for infrastructure, and other controls, however, this maximum would likely not be achieved. The research presented here assumes that under Alternative 3, approximately 100 new homes/lot might be constructed.

The developers have stated that alternative hotel site locations are feasible and are not being considered. Thus, this report does not include a discussion of alternative site locations.

Each discussion of impacts in Chapter 3 (Socio-cultural impacts) considers impacts that would occur with the "project" alternatives and the two "no-project" alternatives. Chapter 5, which is concerned with economic impacts, considers only the full-project scenario.

### 1.4 Regional Introduction

The primary region of concern for this study has been defined as Kualiihele Village. The secondary area of concern includes the rest of the Hamakua District, and especially the area between and including Honolua and Waipio Valley. The limited size of the proposed project means that significant effects on an island-wide basis are not likely. However, issues relating to culture, recreational use of Waipio, and the proper role of tourism development in the economy and sociology of the region are framed from an island-wide perspective.

#### 1.4.1 History of the Region

The Hamakua District was well settled by ancient Hawaiians, who farmed wetland taro in valleys and stream gulches, and dryland taro, sweet potatoes and other crops in the ash-derived soils of the slopes (Handy 1940). Although relatively little archaeological work has been done in East Hawai (Kitch 1985:154), it is certain that the project area was at one time part of an agricultural complex (see Archaeology Report by Paul Rosenblith, Inc., attached as an appendix to this EIS).

A rich oral history exists concerning some features of Hamakua, especially near Waipio Valley. Little is known of the prehistory of Kualiihele itself, although its name does figure in legends related to Waipio Valley, as discussed by Community Resources, Inc., (CRH) (1991:2-1).

Since the late 19th century, sugar cane cultivation has dominated land use and economics in Kualiihele and the entire Hamakua Coast. Plantation cultivation of cane in the area began in 1879 with the chartering of the Pacific Sugar Mill. By 1900, cane was king in the region as plantations stretched from Waipio Valley to Hilo and beyond. The Lower Hamakua Ditch, which was completed in 1910, aided the plantations by providing irrigation water from Kualiihele to Honokaa.

The period between 1900 and World War II was the heyday in Kualiihele. Its population climbed from about 200 in 1900 to 590 by 1950. The 1916 Waipio U.S.G.S. topographical map shows several cane camps that are no longer in existence scattered near Kualiihele. The plantation camps were originally segregated by ethnic group. Several Japanese camps, a Filipino camp, and a "Spanish" camp were included. The town supported a public primary school and a Japanese language school, which is now the Kualiihele Social Hall.

Many businesses flourished in Kualiihele before the war, including three grocery stores, a plantation store, a restaurant and bar, a meat market, a small gas pump, a boardinghouse, and other little shops near the very active cable landing. Not only sugar but also crops from Waipio kept Kualiihele bustling, because the town was a marketing and staging place for rice and taro production (Jitsuo Hinoita, pers. comm. September 1971).

#### 1.4.2 Contemporary Setting

After World War II, mechanization in sugar cultivation changed the way labor was mobilized and made the scattered settlements of Hamakua obsolete. One by one the tiny camps disappeared, and a few major towns took their place. The district as a whole slowly but steadily lost population. Eventually, all of the separate sugar...
companies in Hanaakua merged into the Thos Davies Hanaakua Sugar Company, which was in turn bought by Francis Morgan in 1984. In 1991, CRI reported that 746 workers were employed by the company. As of September 1992, however, Hanaakua Sugar had entered Chapter 11 bankruptcy, and a crew of approximately half of the original work force was laying off a lost harvest. By 1995, it appeared that commercial sugar cane production will be a thing of the past in Hanaakua.

The gradual decline in sugar cane cultivation has led to a reduction in the size and population of Kukuihaele. Nevertheless, the basic layout and landmarks of the town reveal its origins. The slow, easy pace of life is reflected in the traffic on the Old Road, which consists more of children and dogs than automobiles. Physical signs of the plantation era include an old cable landing on the sea cliff, which dates from the 19th century. It was used for decades to transport cargo to steamers anchored just offshore, but it now lies in ruins at the base of the cliff. The Last Chance Store occupies the original quarters of a venerable general store. Most striking is the graceful plantation manager’s residence, now a private home.

2.4.3 Waipio Valley

Although the project is not located in Waipio, the valley requires attention in any discussion of land use changes in Kukuihaele. It is a valuable cultural, natural and scenic resource which many feel is threatened by over-visitiation and conflicting land uses. Its proximity and history connect it closely to Kukuihaele.

Waipio is memorialized in many legends. In one, the god Lono descends to earth on a rainbow to find a wife in a breadfruit grove beside Hiiilawe Falls (Kahalehi, 1976: 71-79). Waipio is also associated with Uai, the famous king of Hawaii, who had many of his greatest adventures in Waipio and Hanaakua. He is also said to have laid out the taro patches of Waipio (Ibid: 391).

Waipio has always been the finest location on the island of Hawaii for taro cultivation. Its rich agriculture supported perhaps as many as 19,000 inhabitants during prehistory. Early descriptions of Waipio by Western travellers are invariably captivated upon its beauty (e.g., Ellis 1831). For all these reasons, the memory of Waipio’s past is cherished in Hawaiian history.

Since Western contact in 1788, the population and area under cultivation has steadily declined, although taro farming has always persisted. The era of rice at the end of the 19th century saw the immigration of Chinese, Japanese and Filipinos, who broadened the ethnic makeup of the valley and forestalled the population decline caused by emigration and epidemics among the native Hawaiians of the valley. The terrible tsunami of 1946 in the Hawaiian Islands was a disaster in Waipio and impelled many of the few remaining residents to relocate out of the valley.

Most taro farmers today live outside the valley and farm only part-time. Bishop Museum, which owns approximately 90 percent of the valley, has long leased taro patches to farmers on a month-to-month basis (CRI 1991:2-3). Reportedly, longer term leases have recently been negotiated. Most of the actual inhabitants of Waipio are now transplanted mainlanders who enjoy the rural isolation of Waipio and do not rely on taro farming as their major source of income or sustenance. CRI (1991:2-4) reported that in 1991 there were sixty inhabitants of the valley.

Waipio Lookout, a scenic vantage and the beginning of the Waipio Access Road, is located about a mile from the center of Kukuihaele, and is considered by most to be part of the Kukuihaele area.

Automobile traffic into Waipio Valley is via a steep, dangerous four-wheel drive road that has been the scene of several major car accidents. Outiders, visitors from other parts of the island, some individual tourists and tour operators all use this road. Waipio offers scenic views, historic sites and a picturesque beach and river for swimming and surfing.

Controversy currently envelopes Waipio. A history of over-visitiation is compounded by existing problems of conflicting land uses, unsatisfactory land tenure for farmers, inadequate infrastructure (particularly the Access Road) and stream flooding.

The Task Force to Preserve Waipio Valley [7] was set up by a resolution of the State Legislature in 1990. It comprises representatives of State and County government, large landowners and communitiy and farming associations. Its purpose is to discuss and develop long-term solutions to the conflicts of the valley.

The Task Force has published several reports (1991, 1993) that outline its findings and recommendations. According to the 1991 report:

"The influx of visitors negatively impacts the natural and cultural resources of the Valley. The lack of adequate restroom and camping facilities, potable water, and waste disposal services on the Valley floor has led to the deterioration of the stream beds, the roads and trails, and the beach front areas" (p. 8).
Because of this, the task force has concluded that "There is a need for enhanced regulatory controls on the commercial and public uses of the trails" (1991:7).

More specific conclusions and recommendations of the Task Force are discussed in the appropriate sections of this document.

1.5 Consultants, Data Sources and Methodology

The social and economic analyses were conducted separately and integrated for this report. Dr. Younki Hahn of Y.K. Hahn and Associates in Hilo, Hawaii, performed the economic impact analysis. Dr. Ron Terry of Geomatics Associates in Kona was responsible for the social impact analysis. Assisting him with community meetings were Dr. Alton Ohaioka of the University of Hawaii at Hilo, Russell Hayao, M.A., of R & R Consulting, and Jannine Fareso, a UH student.

Many aspects of the project had both social and economic impacts. Therefore, such topics as employment and tax impacts received treatment in both discussions.

Data and description concerning the design and operation of the project were supplied by the developers.

Demographic, social and economic information of a quantitative nature was obtained from U.S. Census Data, the Hawaii State Data Book and the Hawaii County Data Book for various years, publications of the Hawaii State Department of Labor and Industrial Relations, and the Hawaii Tax Foundation, Hawaii Visitors Bureau, and economic publications of First Hawaiian Bank.

A number of other published studies including Environmental Assessments, Environmental Impact Statements, surveys and regional plans were consulted for data, ideas and opinions concerning the impact of tourism in rural areas of Hawaii. A rich source of information was a socioeconomic impact report prepared in 1991 by CHRI as part of a proposed major rezoning request in Hakalau. These sources are cited individually in the text.

A community meeting was held at which local residents were encouraged to speak freely about their vision of the community and the effects, both negative and positive, that they felt the project would bring. Transcripts of public meetings are appended to this document as Attachment B.

Additionally, interviews were conducted with key informants who were consulted because of their knowledge of and/or stake in the community. A genuine attempt was made to solicit views of individuals who were for, against, and neutral about the project, in order to gain a balanced view of the community. A list of informants is provided as Attachment A.

The analyses presented in this document may seem in places to extend beyond what might be required according to a strict interpretation of Hawaii EIS law, as contained in Chapter 343, HRS, and Title 11, Chapter 200 of the Hawaii Administrative Rules. It is the policy of this assessment team to disclose and discuss all relevant concerns in a report of this type. We believe that the "full-disclosure" approach is necessary for several reasons. First, it promotes a thorough general understanding of a project and its impact for the public and government officials, who ultimately must decide whether and how to grant requested approvals. Secondly, it provides the basis for evaluating such difficult concepts as secondary effects and cumulative impact.

Further discussion of methodology is contained within individual sections of this report.

1.6 Monitoring and Implementation of Mitigation Measures

Mitigation measures are suggested in various portions of this report, particularly in Chapter 3. These measures have been formulated by the authors, in consultation with the developers, the principal investigator for the EIS and government agencies.

A common belief among readers of an EIS is that suggested mitigation measures are essentially conditions that have been agreed to by developers and government agencies and are therefore enforceable through legal or administrative means. We wish to clarify this misconception. The responsibility to modify, adopt, codify, monitor and enforce these mitigation measures is in the hands of County and State government. Those members of the public who wish to be involved in the mitigation "bargaining" process or want to ensure that certain provisions have adequate means of enforcement should address their concerns to County and State agencies, particularly during the county rezoning and state land use boundary amendment processes.
CHAPTER 2 EXISTING SOCIO-CULTURAL CONDITIONS

2.1 Demographic and Socio-Cultural Characteristics

2.1.1 Population, Settlement and Traffic

2.1.1.1 Population

The following table presents recent and historic population data for Kukuihaele and the Hanakua District.

<table>
<thead>
<tr>
<th>Table 2.1</th>
<th>Population Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii County</td>
<td>68,750</td>
</tr>
<tr>
<td>Hanakua</td>
<td>6,056</td>
</tr>
<tr>
<td>Kukuihaele</td>
<td>590</td>
</tr>
</tbody>
</table>

Sources: U.S. Bureau of the Census: "1950 Census of Population, General Population Characteristics," 1990 CP-1-13; Hawaii County Data Book; Notes: The boundaries of Kukuihaele were slightly changed for the 1990 census.

Population has increased in Hawaii County as the economic mainstay has shifted from plantation agriculture to tourism. In the period since 1960, most of this increase has occurred in North Kona and South Kohala, where hotels, condominiums, and resort-retirement homes have mushroomed. Population on the island grew 45.0 percent between 1970 and 1980 and 36.7 percent between 1980 and 1990. The growth has continued during the 1990s. As of 1993, the estimated resident population stands at 120,317.

The Hanakua coast has not grown in proportion with the rest of Hawaii County. Gradual trimming of the plantation labor force brought about by increasing mechanization and reduced acreage has restricted growth. Kukuihaele itself has seen a steady and dramatic decline in its population over the last fifty years.

2.1.1.2 Settlement/Use Patterns

This section describes the existing geographic settlement pattern. Settlement in Kukuihaele consists of several distinct clusters of population (see Figures in EIS). Most of the pattern is attributable to what has survived of plantation housing, while some houses were built independently.

Fronting Highway 240 on the eastern margin of town is Kona camp, so named because many of its original residents were recruited by the plantation from the Kona district. Tiger Camp is located to the west, just after the split between the main highway and the Old Road. Kukuihaele is a cluster of homes near the Last Chance Store, which is adjacent to Makahoe Stream, where the bridge over the Old Road was destroyed in 1993. Across the gulch is the Catholic church, the plantation manager's home, a single grocery store and a few homes. This area, which is actually the center of Kukuihaele, is very low-density. Most of this central area houses are strung out along both sides of the Old Road. This pattern continues at lower and lower densities until the Old Road again intersects the main highway. Over half a dozen large, mostly newer homes are situated near the Waipio Lookout. Several large, new houses also front the new highway.

In summary, Kukuihaele is basically a mile-long line of homes that is generally less than a hundred yards in width. Foot and bicycle traffic by children and neighbors visiting one another relies almost exclusively on the Old Road. The low-density center of the village is also noteworthy.

2.1.1.3 Village Traffic

Traffic and road issues are addressed fully in the Traffic Impact Analysis Report by Julian Ig, which is attached as an Appendix to this EIS. Quantitative assessments and suggested mitigation measures are not developed or evaluated here. The purpose of reviewing traffic data in this section is simply to better describe the perceived environment of Kukuihaele village.

Currently, roads are uncrowded in and around Kukuihaele and traffic problems are non-existent. Mr. Ig reported that traffic volumes on all roadways except Highway 240 (Hanakua to Waipio Lookout Road) are less than one hundred vehicles per hour. Delays at all driveways and roads are minimal. Pedestrians, bicycles and animals use these roads with little fear or danger.

Although traffic on Highway 240 is higher volume (up to 128 vehicles per hour at peak times, on average), traffic still flows freely with minimal delays. Because of the broken bridge on the Old Road, automobile traffic between the eastern and western sections of Kukuihaele must detour mauna and use the Highway. Trails exist to allow pedestrian traffic to cross the stream near the broken bridge except in times of high stream flow.
2.1.2 Social Characteristics

2.1.2.1 Socioeconomic and Ethnic

Tables 2.2 and 2.3 provide the basis for the discussion of socioeconomic characteristics of the population.

### Table 2.2

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hawaii Island</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Population</td>
<td>120,317</td>
</tr>
<tr>
<td>Percent White</td>
<td>39.9</td>
</tr>
<tr>
<td>Percent Asian/Pacific Islander</td>
<td>57.1</td>
</tr>
<tr>
<td>Percent Under 18 Years</td>
<td>28.7</td>
</tr>
<tr>
<td>Percent Over 65 Years</td>
<td>12.6</td>
</tr>
<tr>
<td>Percent Over 16 Years</td>
<td>5.1</td>
</tr>
<tr>
<td>Median Family Income</td>
<td>$13,169</td>
</tr>
<tr>
<td>Percent Whose Home Was Built</td>
<td>35.1</td>
</tr>
<tr>
<td>Percent Whose Home Has Built</td>
<td>10.8</td>
</tr>
</tbody>
</table>


Residents of the Big Island have generally lower incomes, live in more rural settings, and relocate less frequently than Oahu residents. Like all of the state, the island is known for its multi-ethnic composition. Kukuihaele displays all these traits strongly.

A full 81 percent of the population in Kukuihaele is non-Caucasian (this contrasts greatly, however, with nearby Waipio, which is over 50 percent Caucasian). The major component clearly reflects the plantation labor force. Another component is the original Hawaiian population, many of whom moved to Kukuihaele after life in Waipio became more difficult.

The "plantation community" is a distinct type familiar to residents of most of the Hawaiian islands. Academic sociologists (e.g., Lind 1959) long ago identified these towns' unique community types. They have evolved from their beginnings as separate clusters of ethnically segregated "communities" through a process of consolidation and relocation into what is quite often a very mixed community, a microcosm of Hawaii.

Several characteristics mark Kukuihaele as a somewhat disadvantaged community. Its percentages of elderly and adults with work disabilities are considerably higher than the norm. The median family income is also lower—65 percent of the County average.

Nevertheless, it would be inaccurate to characterize the residents as mostly elderly and/or unemployed. The census figures for 1990 reveal a high proportion of the adult population in the workforce—almost ten percent higher than the island average. Also, large families help account for the fact that there are actually more children under 18 for the population than the island as a whole.

Most people in Kukuihaele are either retired pensioners or working "middle-class," although some are wealthy and some live below the poverty line. From discussions with many residents, it appears that class conflicts are relatively few in this well-integrated village.

A breakdown of Kukuihaele population by ethnicity is not yet available from the U.S. Census Bureau, but the proportions are somewhat similar to those of western Hamakua in general, which are shown in Table 2.3.

<table>
<thead>
<tr>
<th>Japse</th>
<th>Hawn</th>
<th>Filip</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii Island</td>
<td>20.8</td>
<td>19.2</td>
<td>12.9</td>
<td>39.7</td>
</tr>
<tr>
<td>Honokaa CDP</td>
<td>20.5</td>
<td>11.4</td>
<td>27.9</td>
<td>31.6</td>
</tr>
</tbody>
</table>


Again, this ethnic breakdown strongly reflects the plantation heritage of the community.
2.1.2.2 Labor Force Characteristics

The Honokaa-Paauilo-Kahului area has been the primary source of labor for the Hamakua Sugar Plantation. As of March of 1993, union members, their families and retirees of the plantation made up 52 percent of the total population (Source: Voice of the IUD, March 31, 1993, p. 7). This area is also where the resort is expected to obtain some 90 percent of their employees. The closing of the plantation, which will be complete after early 1995, has begun to release hundreds of workers from their jobs. By that time, approximately 447 field operations, 519 factory/garage, 17 medical and 19 feedlot/slaughterhouse jobs are projected to be terminated (Source: Hawaii Island Economic Development Board).

Table 2.6 below summarizes the characteristics of the plantation workers as analyzed by a union survey in early 1993.

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Careers</td>
<td>Two-thirds worked for company for 10 years or more. Almost 27 percent worked between 11 and 20 years for the company. Another 24 percent have between 21 and 30 years with company.</td>
</tr>
<tr>
<td>Ethnic</td>
<td>American citizens are 92 percent. Largest ethnic group is Filippino, with 36 percent. Japanese and Chinese make up 30 percent, Part-Hawaiians are 18 percent, and Portuguese, other Caucasian and Puerto Rican are also represented.</td>
</tr>
<tr>
<td>Retirees</td>
<td>There are 66 pensioners and their spouses enrolled in the retiree medical plan - 178 of whom are less than 65 years of age.</td>
</tr>
<tr>
<td>Families</td>
<td>There are 661 workers and 1341 dependents. Hamakua's workforce is mostly stable families. Over 71 percent are married, with another 7 percent divorced or widowed. Only 22 percent are single. Over 80 percent have dependent children.</td>
</tr>
<tr>
<td>Homeowners</td>
<td>Almost 37 percent own their homes, with another 47 percent renting company housing and 17 percent renting outside housing.</td>
</tr>
<tr>
<td>Education</td>
<td>Over 83 percent are high school graduates. Of those, about 15 percent went to trade school or higher education. The remaining 17 percent have completed various levels of grade school.</td>
</tr>
<tr>
<td>Age</td>
<td>Over 43 percent are 45 years and older. Some 30 percent are between 35 and 44 years old. Only 26 percent are under age 35. Only 5 percent indicated they were ready to retire.</td>
</tr>
<tr>
<td>Veterans</td>
<td>Almost 22 percent are veterans.</td>
</tr>
<tr>
<td>Community Attachment</td>
<td>Only 14 percent indicated that they would move from the Big Island to find another job. Only 29 percent indicated they would move to another area of the Big Island to find work.</td>
</tr>
</tbody>
</table>

Plantation workers are not the only Hamakua residents who will be flooding the labor market in the near few years. Hundreds of their family members, who up till now have worked part-time or not at all, are beginning now to seek jobs in order to supplement family income. Another source of potential workers are the graduates of Honokaa High School. A total of 1465 students were enrolled in Honokaa School (K-12) at the beginning of the 1993-1994 school year (Source: Hawaii Department of Education). In 1992, 114 students graduated with high school degrees. Under
present conditions, many students who do not enroll immediately in college are compelled to leave the area because no jobs are available. Hanalei Sugar Company's closing will lower job opportunities further and induce higher rates of out-migration among high school graduates.

2.1.3 Length of Residence

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hawaii Island</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Foreign Born</td>
<td>8.5</td>
</tr>
<tr>
<td>Percent of U.S. Natives</td>
<td></td>
</tr>
<tr>
<td>Born in State of Hawaii</td>
<td>71.0</td>
</tr>
<tr>
<td>Percent Who Lived in Same House</td>
<td>53.1</td>
</tr>
</tbody>
</table>


Kukuihaele's population is distinguished by its greater than usual proportion of State of Hawaii natives. This contrasts with the typical plantation town, which frequently has many first-generation immigrant laborers and their families. Also notable is the fact that Kukuihaele residents do not relocate as often as is normal for the island. Indeed, the author interviewed several middle-aged and elderly residents who still live in the same house in which they were born.

2.1.4 Recreational Opportunities

Recreational facilities in Kukuihaele are few, as might be expected with its small size. One County park with minimal playground equipment is present. The Kukuihaele Social Hall, operated by the County, provides a site for community activities, parties and meetings. Many Kukuihaele residents avail themselves of the small golf course, a gymnasium, basketball and tennis courts, and other facilities located in nearby Honokaa.

Most residents' main recreation activities take place outside of designated public or commercial facilities. As in other locations in Hanalei, hunting and fishing are very popular, and many families and individuals visit the uplands, cliffs, gulches and valleys for outdoor recreation. Although ocean recreation apart from cliff fishing is dangerous along most of the Hanalei coastline, Waipio Valley offers swimming, hiking, camping and picnicking opportunities. Many residents garden, and some engage in part-time farming, an activity which combines recreation with income and/or food-producing work. Several residents own or lease land in Waipio Valley for this purpose.

2.1.5 Current Visitor Count

Currently, most tourists come to Kukuihaele only because it is the gateway to Waipio Valley. CRI reported that over 60,000 visitors per year currently enter Waipio Valley on shuttle tours (1991:2-4). This figure was derived from a 1988 survey, and is said to be considerably lower today (Gladye Ahas, pers. comm., 1993). The actual number of shuttle companies that may enter the valley is controlled by a Public Utility Commission moratorium on Waipio license tours. An unknown but much smaller number of tourists rent four-wheel drives and tour the valley on their own, and some also walk or hitchhike into the valley. Many local people also visit the valley, particularly on the weekend.

Although reliable use figures are not available, residents of Waipio clearly perceive a problem.

Waipio Valley has proven such a prominent draw that traffic was raised to undesirable levels in Kukuihaele Village by the 1970s. In order to mitigate traffic concerns and provide a safer and faster route to Waipio Valley, the State in 1980 constructed a bypass around Kukuihaele, which is an extension of the main road from Honokaa.

Even after the construction of this road, however, many tourists continue to detour into Kukuihaele to enjoy the picturesque village. Much of the commerce in the Last Chance Store and nearly all of the business at Waipio Arts/Works was derived from this tourist traffic. After the bridge on the Old Road washed out in early 1993, none of this trade was lost, but some tourists still find their way into the village.
2.2 Community Attitudes and Values

2.2.1 Existing Attitude Surveys/Assessments

Several studies of community values and attitudes regarding development have been conducted in Hamakua during the last five years. A review of these studies was useful in establishing a context for community attitudes regarding the current project.

Three sources were reviewed: the 1988 Statewide Tourism Impact Core Survey (1989); a social impact assessment by CRI for an "Environmental Assessment" submitted for the Kuakini Land Use Plan (1991); and testimony before the Hawaii County Planning Commission concerning the rezoning plan mentioned above (1992).

2.2.1.1 Statewide Tourism Impact Core Survey

This survey was undertaken by CRI on behalf of the State Department of Business, Economic Development and Tourism to provide baseline data for planners, visitor industry specialists, and social researchers. It is based on one of the largest phone surveys ever taken in Hawaii (almost 4,000 people). Because of the sample size, the value of the numerical results, plus or minus no more than 5 percent, may be considered accurate with a 95 percent level of confidence. As with any social research, the degree of validity is more difficult to determine.

Geographically, the smallest sample unit was a county subdivision. One such unit was the Hilo-Hamakua area. Table 2.6 presents selected questions and compares statewide versus Hilo-Hamakua responses.

On both statewide and Hilo-Hamakua levels, several aspects of tourism are believed by most people in Hawaii to enrich their lives. The availability of jobs is clearly seen as the principal benefit of tourism. Other aspects of tourism with a positive perception are the new opportunities for shopping, dining, and entertainment, improvements in general area beauty and beach parks, and the preservation of Native Hawaiian culture. Surprisingly, at least in view of certain beliefs about the affects of tourism (see Smith 1972 for discussion), most respondents believe that the overall standard of living and the quality of family life generally improve as a result of tourism.

On the other hand, Hawaii residents generally believe that crime, traffic and higher prices for housing, food, and clothing accompany tourism.

Table 2.6 1988 Statewide Tourism Impact Core Study Responses

<table>
<thead>
<tr>
<th>Has tourism made better or worse for your island?</th>
<th>Better</th>
<th>Worse</th>
<th>No Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>HI/Na</td>
<td>State</td>
<td>HI/Na</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Job Availability</td>
<td>82</td>
<td>85</td>
<td>12</td>
</tr>
<tr>
<td>Shopping, Restaurant, Entertainment for Residents</td>
<td>60</td>
<td>70</td>
<td>18</td>
</tr>
<tr>
<td>Overall Standard of Living</td>
<td>63</td>
<td>69</td>
<td>20</td>
</tr>
<tr>
<td>Quality of Family Life</td>
<td>41</td>
<td>44</td>
<td>20</td>
</tr>
<tr>
<td>Beauty of Your Area</td>
<td>33</td>
<td>47</td>
<td>22</td>
</tr>
<tr>
<td>Preserv. of Native Hawaiian Culture</td>
<td>47</td>
<td>55</td>
<td>36</td>
</tr>
<tr>
<td>Relations Between Long-Time Residents and Newer People</td>
<td>33</td>
<td>45</td>
<td>31</td>
</tr>
<tr>
<td>Quality of Beach Parks</td>
<td>44</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Number of People Living in Your Area</td>
<td>27</td>
<td>43</td>
<td>30</td>
</tr>
<tr>
<td>Preserv. of Ocean and Natural Areas</td>
<td>33</td>
<td>48</td>
<td>45</td>
</tr>
<tr>
<td>Speed or Pace of Life</td>
<td>32</td>
<td>46</td>
<td>42</td>
</tr>
<tr>
<td>Cost of Food and Clothing</td>
<td>20</td>
<td>26</td>
<td>56</td>
</tr>
<tr>
<td>Cost of Housing</td>
<td>8</td>
<td>12</td>
<td>67</td>
</tr>
<tr>
<td>Crime Situation</td>
<td>4</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>Traffic Situation</td>
<td>4</td>
<td>10</td>
<td>83</td>
</tr>
</tbody>
</table>

Notes: Data from CRI 1989. "HI/Na" means HIlo and Na\u2018\u2019a\u00a9 use combined. Margin of error is +/- 7.6 percent with a 95 percent level of confidence.
Hilo-Hanakaa residents tend to view tourism in a somewhat more positive light than the state as a whole. One interpretation of this phenomenon is that Hilo-Hanakaa residents have little experience with tourism and tourists. Another is that tourism in this area has not yet approached a level that has produced noticeably negative effects.

2.2.1.2 Kuukuiaae Land Use Plan, 1991

In 1990, Hanakaa Sugar was facing impending foreclosure of a $95 million loan, threatening not only the sugar company but also the plantation lifestyle of the Hanakaa Coast. In response, Governor John Waihee convened a blue-ribbon steering committee to guide the sale and development of a portion of Hanakaa Sugar’s land in order to repay the loan and preserve the plantation. Various studies of the environmental impact of the plan were conducted under the auspices of the Hanakaa Steering Committee, including a Socioeconomic Study by CHI (1991). Although the plan never came to fruition, the socioeconomic study contains much of value in terms of identifying community attitudes and values.

The project proposed by the Hanakaa Steering Committee was vastly larger than the proposed Ruan project. Over 3,000 acres of land were proposed for the development, which comprised three golf courses and a 50-unit clubhouse/lodge, a 200-room hotel, a 50-unit retreat resort, 172 condominium units, and over 1,000 agricultural lots. Furthermore, the ostensible purpose of the rezoning was to “save” the sugar plantation. Comparisons with the current project, therefore, must be made with caution.

According to the report by CHI (1991), the survey revealed that a majority of Hanakaa residents were opposed to large scale development but a small majority “would accept a ‘small scale luxury resort’, golf courses along the Hanakaa Coast, and development (with a buffer) near the Waipio rim.” It is important to note that their approval was granted with the understanding that such development was vital to save the plantation.

The following attitudes and concerns about development were expressed by Hanakaa residents in interviews, meetings and surveys:

- A desire to continue the plantation lifestyle, as it represents the “roots” of the community.
- Mixed feelings about resort development in Hanakaa: on one hand, it would allow shorter trips and provide employment; on the other, there were concerns about the quality of resort work and the “fit” of people with rural backgrounds.

- Concern about population growth and Hanakaa becoming “urban.”
- Concern about crime and mental health impacts.
- Concern about the “chaos” created by construction.
- Worries about rising property values and taxes.
- Feelings that newcomers might not integrate well with community and/or would take it over.

Some social impacts were seen to be unique to the Kuukuiaae/Waipio area. Some residents resisted the fact that the hub of the impacts would be born in their area.

2.2.1.3 Planning Commission Testimony, 1991

Hanakaa residents, business people and community leaders, including many from Kuukuiaae, Honokaa and Waipio Valley, testified at a public hearing held on October 17, 1991, concerning the Kuukuiaae Land Use Plan (Hawaii County Planning Commission 1991). The testimony adds depth to the social impact analysis performed by CHI (1991).

Widespread support was shown for the rezoning plan, with few expressing complete opposition, despite the significant impacts upon the community that were acknowledged by all. The rationale cited by nearly every testifier was that the great change was necessary to save the Hanakaa Sugar plantation, and that no means was too extreme. Don Catalina, chief of Hilo Coast Processing, noted that the failure of Hanakaa Sugar would not only eliminate company jobs but would lead to the failure of the other plantations, who had port costs with Hanakaa Sugar (p. 118). A retired worker noted that housing and medical care for pensioners would also be threatened (p. 121). These warnings have proven prophetic.

Many speakers, although they voiced approval for the plan, had serious concerns and requests about various issues in Kuukuiaae and Waipio. These included limiting traffic on the Kuukuiaae Old Road; protecting Waipio Valley from tourists, traffic and floods; widening the buffer zone on the Waipio Rim; mitigating the expected rise in homeowner’s taxes; gaining community improvements to parks and roads; and creating a museum and cultural center in the former plantation manager’s residence.

The one person who expressed complete opposition to the plan was concerned about preserving the tourist-free atmosphere of Hanakaa, to which he had just moved a few months before.
2.2.1.4 Conclusions

These data from a survey, a social impact assessment and public testimony reveal that the Hana residents are ambivalent about the effects of tourism. On the one hand, it is seen as a benefit in that it provides jobs, economic diversity and spin-off benefits. On the other hand, there are serious concerns regarding its effects on community life, cultural resources and natural features.

There is also a socio-geographic differentiation of support/opposition to tourism, although only one of the sources discussed above provides much insight. Support for tourism in Hana is strongest among business and labor leaders, and among current and former plantation workers and long-time residents of the region. The strongest opposition is centered (although by no means restricted to) Hana Valley. This is understandable in that adverse tourism impacts in the region are only apparent in Hana. In general, those who voice the most concerns and/or opposition to tourism in Hana include many newcomers to the region. However, many local residents may share some of these feelings but may be reluctant to express them in a public forum.

2.2.2 Public Meetings on Hana

It is incumbent upon social researchers to transcend the analysis of an "outsider", however professional, and present community members' thoughts and feelings about the projects that affect them. Furthermore, the development of mitigation measures should originate to some degree from the community itself. In keeping with this goal, a public meeting to collect input about the proposed project was held on August 26, 1983, at the Kula Community Social Hall. Notification for the meeting consisted of an insertion in the "Database," section of the Hawaii Tribune-Herald, notices posted in Kula, Honokaa, and Hula koa, and door-to-door distribution of the notices within Kula itself. A transcript of the meeting is Attachment B to this report.

Approximately 75 people attended the meeting. The developers were not present, and the GIS coordinator presented a brief description of the project. Residents were encouraged to speak freely about their vision of the community and the positive and negative effects that they felt the project would bring.

Those who either opposed the project or planned to withhold approval pending resolution of significant questions clearly outnumbered supporters. This is particularly true for those who testified.

Many in the audience expressed a deep appreciation of the rural atmosphere and easy pace of life in Kula. They also stressed the area's cultural significance, which was enhanced by the familiarity and intimate connections with Hana Valley. Concerns were expressed regarding the potential impact of tourism on Hana Valley, and the need for jobs in the area, however, and some participants declared that tourism development should be prohibited in Hana Valley altogether. Several speakers said that they worked in the visitors industry themselves and valued their jobs.

Section 3.1 continues the discussion of this public meeting with a detailed outline and discussion of the impacts and desirable mitigation measures from the point of view of those who testified at the meeting.

2.2.3 Interviews with Key Informants

The public meeting did not include the entire affected population. Also, some individuals at the public meeting confided during private conversations that they were uncomfortable testifying in public. In order to gain a wider cross-section of opinion, telephone and personal interviews were conducted with Hana residents as well as Hana Valley community and business leaders who were familiar with Hana Valley and had a "stake" in its future.

At the public meeting, participants were invited during the presentation and later, in individual conversations, to identify to the Social Impact Assessment Team others who were not able or willing to attend the meeting but wished to give input on the project. This invitation was repeated to many individuals, including government officials and the developers, during the course of this research.

Each individual identified was contacted for an interview and interviewed if willing. The list of informants contacted is provided as Attachment A to this report.
CHAPTER 3  SOCIO-CULTURAL IMPACTS AND MITIGATION MEASURES

3.1 Public Meeting and Informant Interviews

The discussion of social impacts and mitigation measures in Sections 3.2 and 3.3 follows a format similar to the preceding treatment of the existing environment. However, particular areas of impacts have been added or separated in order to address these impacts in accordance with the public perceptions revealed during the meetings and interviews. Therefore, the first topic is an outline of the impacts, both positive and negative, as perceived by the community, along with the mitigation measures they proposed.

3.1.1 Summary of Impacts and Mitigation Measures Mentioned by Community

The following table summarizes the main concerns raised by the public in the August 23, 1993 public meeting and in subsequent interviews with the author.

<table>
<thead>
<tr>
<th>Table 3.1: continued</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New residents and/or hotel guests will complain about chickens, dogs, and pigs.</strong></td>
</tr>
<tr>
<td><strong>Resorts are fine; keep them in Kohala and let us live away from the tourists.</strong></td>
</tr>
<tr>
<td><strong>Resort may make village less authentically rural.</strong></td>
</tr>
<tr>
<td><strong>Resort will bring higher density of population.</strong></td>
</tr>
<tr>
<td><strong>Concerns about Social Hall and other town features.</strong></td>
</tr>
<tr>
<td><strong>Obtain a guarantee that pre-existing rural lifestyle can never be outlawed.</strong></td>
</tr>
<tr>
<td><strong>[None suggested]</strong></td>
</tr>
<tr>
<td><strong>Resort should incorporate authentic Hawaiian themes, features and values as much as possible.</strong></td>
</tr>
<tr>
<td><strong>Obtain a guarantee of no more resorts in the area from County and/or State.</strong></td>
</tr>
<tr>
<td><strong>Ensure that local community has full play in any renovations or reconstruction of Social Hall. Donate more land to Catholic Church and County cemetery and improve access road.</strong></td>
</tr>
<tr>
<td><strong>NONE NEEDED: positive impact</strong></td>
</tr>
<tr>
<td><strong>Community benefits would be appreciated.</strong></td>
</tr>
<tr>
<td><strong>Social Hall renovation.</strong></td>
</tr>
<tr>
<td><strong>Donated land behind houses at Tiger Camp.</strong></td>
</tr>
<tr>
<td><strong>New recreation facilities: swimming pool, ballfield.</strong></td>
</tr>
<tr>
<td><strong>Loss of agricultural land</strong></td>
</tr>
<tr>
<td><strong>A guarantee [from whom?] that the remainder of the land zoned for ag. in the region remains in that category.</strong></td>
</tr>
<tr>
<td><strong>None needed: positive impact</strong></td>
</tr>
<tr>
<td><strong>Issues raised with moderate frequency and/or intensity</strong></td>
</tr>
<tr>
<td><strong>Jobs do not match needs of community.</strong></td>
</tr>
<tr>
<td><strong>Since most Kukuihele people are retired or have jobs, community does not need it. This might be acceptable if unemployed plantation workers and high school graduates get jobs.</strong></td>
</tr>
</tbody>
</table>

### Table 3.1: Impacts and Mitigation Measures Identified by the Community and Informants

<table>
<thead>
<tr>
<th>Issue</th>
<th>Sub-Issue</th>
<th>Proposed Mitigation Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Issue</td>
<td>Resort will drive rates up.</td>
<td>County legislation freezing rates for duration of owner’s habitation and/or developers could create a trust fund.</td>
</tr>
<tr>
<td>Issue Mentioned Very Frequently and/or Intensely</td>
<td>Speculation may raise land values</td>
<td>[None suggested]</td>
</tr>
<tr>
<td>Project May Ruin Rural Lifestyle</td>
<td>Traffic will increase, making road usage and/or less slow-paced.</td>
<td>Traffic should be routed differently so that few tourists or new residents drive along Old Road.</td>
</tr>
<tr>
<td></td>
<td>Tourists and new residents won’t share values and lifestyles will conflict.</td>
<td>[None suggested]</td>
</tr>
</tbody>
</table>
Table 3.1, continued

| Outsiders may get most jobs. | Guarantee that those Kukuihae people who want jobs will get first preference. |
| Hotel work is very unsteady and unreliable. | [None suggested: positive impact] |
| RESORT WOULD RESTORE TOWN TO ITS FORMER SIZE AND DIVERSITY | [None needed: positive impact] |
| MAIFIO VALLEY IS THREATENED | [None suggested] |
| Hidden, main draw is Maipio | Guarantee that hotel management will be sensitive to this issue in advice to tourists. |
| More resorts will add to excessive numbers in Maipio. | [None suggested] |
| Once tourists get a chance to stay in Hanaka‘u, there will be a demand for more resorts. | [None suggested] |
| The reasoning will set a precedent for future actions. | A guarantee by County and/or State that no further resorts will be permitted in Kukuihae area, and that few will be permitted on entire Hanaka‘u coast. |
| SOME RESORT ASPECTS MIGHT BE BEAUTIFUL TOWN | [None needed: positive impact] |

Table 3.1, continued

| ISSUES MENTIONED INFREQUENTLY | GUARANTEE OF NO HELICOPTER USE BY GUESTS OR MANAGEMENT AT OR NEAR HOTEL. |
| HELICOPTER NOISE MAY INCREASE | Consult with community on STP location. |
| SEWAGE TREATMENT PLANT FOR HOTEL MAY BE IN UNDESIRABLE LOCATION. | [None suggested] |
| THE VILLAGE IS SPIRITUALLY SACRED: RESORT IS SACRILEGE | Keep scale very small so that few foreigners are about. |
| CRIME MAY INCREASE | |

It should be emphasized that this summary simply echoes various speaker’s statements about impacts and mitigation measures. This presentation is done in the interest of full disclosure of community opinion. No evaluation of the validity or applicability of such statements occurs until later sections.

3.1.2 Discussion of Impacts and Mitigation Measures Proposed by Community

As the table above indicates, the public has many significant concerns about possible negative impacts associated with the resort. At the same time, the resort was seen by most speakers at the public meetings and interviews to have one basic, but very significant benefit: jobs. Nearly all were in agreement that accepting the resort involved a trade-off between the benefit of jobs and the negative impacts, no matter how small, associated with any resort development. The points of disagreement lay in whether and how the negative impacts could be mitigated.

Many residents, especially ex-plantation workers and their families, expressed the common feeling of nostalgia for the plantation days. The prospect of Hanaka‘u Sugar closing clearly distressed most people, who associated sugar with security, permanence and the identity of Hanaka‘u.

The prospect of a resort brought out mixed feelings that were tempered by their particular experience and vision of life in Kukuihae.
Some residents especially valued the rural atmosphere of the village which sugar cane had helped to maintain but did not necessarily cause. It was vital to them to preserve the rural atmosphere in its current state. For example, as one said at the public meeting:

"I'm a resident and landowner of Hokuiahele. My family lived here for three generations. In fact, I lived on the same property with my grandpa and grandma and with my mom and me and my husband. My family and I are not for the development because, first, we would like to remain in sugar cane. My family now consists of ten goats, three dogs, two chickens and everything else that comes in our yard. After a while, you cannot even own a chicken, after a while not even a dog. My husband works for a hotel away from here and he drives to work like 50 miles each way every day. But they don't mind driving cause when they come home you're at home. You're in the country; it's peaceful. Someone said it's better to work 40-50 miles away and come home and you're at peace instead of walking down the hill when you come home - you're still looking at your job."

This was seconded by many lifelong local residents as well as transplanted mainlanders. Some had ties to the sugar cane past of the region, but instead valued its rural atmosphere. For example, a Hokuiahele resident of three years expressed it this way when he testified in 1991 about the Hokuiahele Strategic Plan rezoning request:

"I moved to Hokuiahele three months ago because there was no resort development here. Needless to say, I was not happy when I discovered what was going on."

To these individuals, the demise of sugar cane was perhaps not as great a tragedy as it was for actual plantation workers. Instead, it was a problem that was compensated for by the qualities of the region and the potential for diversified agriculture. As a 20-year resident of the region wrote in a leaflet expressing concern about the project:

"It is a joy and privilege to live here, we feel, and the saying comes to mind, "If it's not broken, don't fix it! (certainly not for "us residents")."

A resident of Waimanalo stated at the public meeting:

"One hundred jobs, you know, two farms can do that. One hundred jobs is nothing. There's a much better way to go."

Not everyone shared this view. Some were deeply concerned about the economic and social future of Hokuiahele, and worried that residents were not taking the situation seriously. In the words of a Hokuiahele resident and store owner:

"Hokuiahele has a problem. And it's going to get worse. We need jobs. Many people find it hard to believe that what happened in Kahului could ever happen here - the boarded-up town of Hokuiahele, people leaving, children growing up with no opportunity of staying close to home."

To this latter group, it appeared that many in Hokuiahele had failed to wake up to reality. As a Pa'auilo resident and local business owner said in an interview, accepting any resort development was a necessary response to reality:

"The cold fact is sugar is out, and this project could provide up to 60 jobs for local people. The thing is, everybody says they don't want a change of life. So one put up a resort, but it did change. The stores are not what it used to be. There is no pol factory anymore. It's not what it used to be twenty years ago."

A long-time resident and community action agency official said:

"It is a very good project. All the negatives could be corrected by a few good answers. We can't lose something like this in Hokuiahele."

Some of the resort's supporters expressed resentment about the attitude that would dismiss new economic ventures for relatively trivial, niggling concerns. In the words of a supporter in a leaflet giving his views about the resort:

"Those who feel that they are sure will not be affected by the [Hokuiahele Sugar Company] shutdown cannot be too selfish about their good fortune."  

The prospect of change, although it created anxiety, was also a sign of hope for many. A local woman who owns property in Waipio and is married to a native of Hokuiahele said in an interview:

"It's a little bit exciting, something new is going to happen. If it would create jobs for the local people, I would say that is great."

It appeared from testimony at the public meeting that quite a number of individuals simply could not accept the idea of a resort, no matter what mitigating conditions were placed upon it. No matter how small it might be in comparison with the conventional idea of a resort hotel. Several speakers said essentially the same thing as this Waipio taro farmer:  

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"I'm totally against this project."

Other interviewees and speakers at the public meeting stated their general opposition but implied that if certain issues were resolved, they would be less opposed, or perhaps in favor.

In the words of a supporter:

"Much of the impact can be controlled, and significant benefits can be received in mitigation."

The most commonly expressed concern was the issue of loss of tax money. A resident said in an interview that she basically supported the project:

"My one concern has been what about land tax. The same thing happened in Pana, when the rich people moved in, the poor people had to sell their land."

A Kohala resident who is now a bank officer and a prominent community leader expressed enthusiasm for the project if it could be guaranteed that property tax concerns would be satisfied. He was hopeful that with government help, this could occur:

"One of the concerns...is the question of property taxes. I think the County Government can take care of it, if we push legislators to enact something that will take care of people living in the area."

Another issue raised was cultural integrity. In the Kapalena resident's words:

"The culture gets trivialized. It gets turned into a show. I don't think you want that to happen here...tourism is an industry...it trivializes culture." Diversified agriculture is an empowering thing, okay. It reinforces culture."

A local policeman, also an officer with a Hawaiian social club, indicated in an interview that the cultural authenticity of the project would be the litmus test for his support:

"(The resort must be) really sensitive to the community; it's never had a hotel here...the idea is relatively new. You have to make it totally Hawaiian. It cannot be foreign. There are too many foreign resorts. Going back to what is Hawaiian. Naming things after the chiefs, connecting it to the area."

The bank officer felt that:

"Given the ball situation and the way they treat local people with respect and provide sensitive info to guests concerning local customs, it could work."

Tourism can itself be a fulfilling expression of culture, if practiced with the right spirit on a proper scale, according to public testimony by a lifelong resident of Kohala:

"I am in favor of the resort because I worked at the resort area for seventeen years, and believe me you no, the people that come to the hotels, they like to see how the local people live. I invited many of them on trips into Waipio, I invited many of the guests that were in the hotel to different places, and it's a different feeling for them altogether."

Residents of Waipio were especially critical of the potential cultural impact of increased tourism on the valley. An officer with a local agricultural organization testified thus:

"We can talk about low-key, blend with nature, maintain ruralness, integrate with community. We feel the effects of not a big scale development like this. We are already having a lot of negative impacts in Waipio. It's very difficult for the farmers to operate continuing what we do as we perceive as being cultural..."

While jobs were seen as a main benefit, some were doubtful whether the employment could realistically aid the region. A Kohala resident asked at the public meeting:

"On the paper it says 100 jobs. How if 100 people are going to be laid off on the plantation, where will the other 100 go and how are we guaranteed that our families will be, or the residents will be employees of the resort?"

Another local resident noted that hotel work can be unstable and not the best base for the local economy:

"We have resorts down in the Kohala Coast and I'm working for one of them...[There will be jobs] but right now the hotels and the resorts are so slow that a lot of people are getting laid off or on call and we don't need that over here."


In his leaflet opposing the resort, a local teacher wrote that in a private survey conducted by a community association:

"...we found that only three people "might be interested" in working at such a resort, with the vast majority saying that...if the jobs were going to go to the people from outside communities, let them put the resort there and not burden us and our children with it for nothing!"

Others were more hopeful about the jobs and the prospect of new money circulating in and reviving the stagnant economy. As the owner of a local trucking and construction firm said:

"The positive side - it's going to take vacant cane land that would be doing nothing - they are going to bring the land to doing something - they are going to have technical jobs - they are going to have training - it will be good for businesses in town, for services."

Regardless of the issue of how well-suited the plantation work force was for Ana Resort employment, the ability to retain jobs for young people was important to some. One resident said in an interview:

"Some people want their kids to go to the Mainland - they think it's better there. I do want my kids to stay around here and get good jobs."

Even supporters, however, acknowledged that the prospect of a resort hotel in Kauai was a little unsettling. Tourism was seen by everyone as "a dual-edged sword," with the ability to destroy what it seeks to market if it is not done with sensitivity. Therefore, the strongest advocates in the community would not have disagreed with the local business owner who summed the situation up this way:

"Maybe it's not the very best answer [to the problems in Kauai] but it's better than doing nothing."

### 3.2 Socio-Cultural Impacts

#### 3.2.1 Population Impacts

Increase in population in itself may sometimes be relatively minor but carry with it significant impacts to lifestyle and public services. The discussion in this section focuses on direct population impacts, while later sections take up the far-reaching indirect impacts of population increase.

Population in Kauai would increase with the construction of the resort. The calculations presented are of course simply approximations.

#### 3.2.1.1 Temporary (Construction)

The construction of the Hotel and Residential Lots is expected to occupy a relatively short time span. Because of this fact and the existence of a sufficiently large construction labor force within commuting distance of Kauai, increases in population during the construction period would probably be negligible if they occurred at all.

#### 3.2.1.2 Operational

The total increase in resident population would be the sum of three components: new residents in the Residential Lots; employees of the resort who choose to move to Kauai as a direct result of job availability at the Hotel and/or Residential Lots; and those who choose to relocate to Kauai as an indirect result of the resort. This last category could include, for example, relatives of Residential Lot inhabitants, retired people who were drawn to settle in the area because of the amnity and amenities of the resort, and those whose jobs are indirectly dependent upon income generated by the resort.

If homes were built on all of the 45 Residential Lots, and County average of 3.16 residents per household obtained (calculation based on data from U.S. Bureau of the Census 1990), approximately 140 new residents could be added to Kauai. This figure assumes full build-out and 100 percent occupancy of the units, and may be considered an "extreme-case" scenario. In reality, since the developers project that approximately 80 percent of the homes would be second or vacation homes, the occupancy rate may be considerably less, yielding a lower total population. Conversely, if the conditions of rezoning do not prohibit "duals" (two homes per lot) development, the population addition due to the Residential Lots could potentially double.

The resort would offer employment to roughly 100 people. The vast majority of the employees are expected to come from the Kauai area and would live near enough the resort to commute. Even workers who live as far away as Pauilo and Waimea would not experience excessive commutes. Given the low stock of housing in Kauai, it is unlikely that more than 10 employees of the resort would relocate to Kauai. Assuming that some of these workers would either relocate without other family members and/or would be residing with other resort workers, the extreme-case figure of new residents attributable to resort employment would be 20.

The number of new residents drawn to the area for indirect reasons is expected to be negligible, since the resort would offer few general-public attractions and is of sufficiently small scale to exercise only a modest influence on the local business climate.
For the purposes of calculating an extreme-case scenario, a figure of 5 new residents attributable to indirect reasons is used.

Summing these three components yields a figure of 170 new residents. This represents a 50 percent addition to the present population of Kukuihaele for a total of approximately 530. This figure is still below the population of Kukuihaele in the year 1950, which was 590.

De facto population would include the 490 projected residents plus the occupants of the hotel rooms. The building scenario for 2004 projects 40 rooms, with an occupancy rate averaging 80 percent and an average guest per room ratio of 2.0. Thus, at any given time there is likely to be less than 84 guests present. Therefore, the total de facto population of Kukuihaele would probably not exceed 554 people.

3.2.1.3 Impacts of Alternative Scenarios

Alternative 2, in which the land would be vacant or at least unused for residential purposes, no additional population would be expected, and the population would remain at approximately 315.

Under Alternative 3, it is assumed that the proposed project does not occur, and that in accordance with existing zoning a landowner would subdivide a minimum of approximately 100 residential and/or agricultural lots. Discounting any indirect effects of this development, a population increase of approximately 315 might occur, given the 3.15 residents-per-household ratio that prevails in Kauai County (see section 3.2.1.2 above). The total population might then double to 630.

Table 3.2 below summarizes the potential population increases.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Full Project as Proposed</td>
<td>550</td>
</tr>
<tr>
<td>2. No Project, Land Remains Vacant of Residences</td>
<td>315</td>
</tr>
<tr>
<td>3. No Project, Residential Development in Accordance with Existing Zoning</td>
<td>630</td>
</tr>
</tbody>
</table>

3.2.1.4 Potential Mitigation Measures

Potential mitigation measures for population increase could take several forms. First, the resources which are threatened by increasing population, such as peace and quiet or access to public facilities and services, could be protected and/or improved. As discussed in Section 3.3.1.1., impacts and mitigation for increased pressure on common resources are covered in subsequent sections. Alternatively, the actual number of inhabitants could be decreased. The following mitigation measures would accomplish the latter:

- Reduce the number of residential lots during the rezoning and subdivision procedures. However, reducing the number of units below some critical level would likely decrease the economic viability of the project.
- Prohibit "ohana" development on residential lots.

3.2.2 Rural Lifestyle Impacts

The rural lifestyle cherished by Kukuihaele residents is as much a concept as a physical reality. Nevertheless, it is valid to discuss impacts to this subjective phenomenon because of its vital importance in the community identity of the town. Therefore, the discussion of impacts to this rural lifestyle is based upon the characteristics of Kukuihaele perceived as valuable by its inhabitants. The reader is referred back to Table 3.1 for a summary of these aspects.

The most frequently mentioned positive rural features of Kukuihaele were peace and quiet, little traffic, greenery, low population densities, community identity, acquaintances with neighbors, wide open spaces and agriculture.

It should also be noted, however, that while most speakers at the public meeting and most informants felt that the rural nature of Kukuihaele was a very positive feature, some felt that the area lacked certain desirable features. Most frequently mentioned was the absence of jobs. Some of the older residents spoke of the good old days when the town was larger and more lively. In some ways they looked forward to the resort because it might once again restore a measure of diversity to the town.

3.2.2.1 Temporary (Construction)

Construction would disrupt traffic, produce dust and noise, and create a general sense of change that may appear negative and disturbing. Although the residents of the region are accustomed to heavy machinery, noise, dust and smoke associated with sugar cane
to complain about noise, odors or eyesores emanating from residents' home businesses, parties, animals or other habits.

A second area of conflict may arise as a result of misunderstandings concerning ethnic, cultural or religious practices. Examples include possible opposition to coofiguring and insensitivity regarding Hawaiian cultural practices.

Another general area of conflict is over the issue of strictly "rural" values. For example, some new residents may see Kukuihaele as "substandard" and begin to demand infrastructure changes or new services not in keeping with local desires. More personal conflicts involve resentment over judgments by newcomers that locals are "country bumpkins," or perceptions by locals that the newcomers are "rich snobs."

However, not all interaction between newcomers/guests and locals is likely to be negative. Interaction between members of different socioeconomic groups can be healthy, enlightening and fruitful to all parties, leading to new understandings and sympathetic.

Farm Animals

Of particular concern to several Kukuihaele residents was the issue of whether their current practices of raising farm animals such as chickens, pigs, cows, hunting dogs, etc., would be endangered by the proposed project. Animals are an integral and accepted part of Kukuihaele rural life, despite any theoretical and unenforced zoning restrictions.

The developers have responded that their particular style of resort flourishes because of its connection with and celebration of rural life. They have cited their own design project in Bali, where pig raising occurs seamlessly adjacent to the hotel, as an example of harmony with traditional village life.

Resorts as Inappropriate and/or Inauthentic

Many residents expressed a strong belief that the very presence of a "resort" on the periphery of Kukuihaele would by definition ruin the village of its rural character. Although few residents were specific about this process, some cited increasing traffic, the presence of strangers, and incongruous buildings.

The developers have responded to this concern by promising that the resort will blend in with the village.
A related concern was that the resort imbue the entire village with an unauthentic character.

Cultural Landmarks and Facilities

Several local landmarks are significant symbols of the local history and rural character of Kukuihaele. The Social Hall, the Plantation Manager's House, the two cemeteries and the old Kukuihaele Landing are prominent.

Despite the fact that plantation work in the early 20th century was often backbreaking and poorly compensated, this time is increasingly seen as the golden era of Hanalei. The 85-year-old Hanalei Lumber Company, the 16-are grounds, and the housing development all reflect a time when sugar was king. Although the homes have never been generally open to the public, including the Kukuihaele community, some residents are hopeful that this private home can be transformed into a museum or cultural center. There is currently no source of funding for such a project, but many residents voiced a hope that the State might purchase, restore and operate the home as a free museum.

As described in the introduction, current project plans call for the house to be integrated with the resort hotel as the Plantation Inn. To achieve this, the house requires some interior alterations to create four separate guest quarters. The funds to maintain the elegant grounds would be generated by the hotel revenues.

The Social Hall, once the Japanese language school, is a valuable and cherished gathering place, even in its antiquated and somewhat dilapidated condition. There appear to be a division among the community about how to best upgrade the Social Hall. Some want it intact and unchanged, even if such a policy means that it would inevitably crumble. Others want it restored and modernized. Still others favor a new Social Hall, on the same or a different location. Because the hall is currently owned by the County, there is considerable worry about what might happen to the structure.

The two cemeteries in Kukuihaele would not be directly affected by any aspect of the proposed project. The current configuration of Residential Lots would present the county cemetery with three adjacent lots and the Catholic cemetery with one. If no landscaping or other physical barrier were present between the cemeteries and the lots, the isolated character of the cemeteries might potentially be affected.

Kukuihaele Landing would not be affected by the proposed project. Because it is located at the bottom of a steep cliff, about 2000 feet laterally from the edge of the resort, it would not be visible from the project. No impact to access to the landing would result from the proposed project.

Land Use Impacts

A change of state land use classification from Agriculture to Urban would approximately double the area of Urban-zoned land in and near Kukuihaele. Over 36,000 acres in Hanalei still retain agricultural zoning, and the scale of urbanization represented by the project thus appears miniscule.

Nevertheless, many residents feel that the rezoning may set a precedent for future requests. Given the rainy climate and cliffed shoreline in Hanalei and the conventional tastes of the resort visitor, such speculation is probably groundless, at least for the foreseeable future. Still, the perception that Hanalei may be on the road to massive urbanization is a common community fear. A program to release some of this enormous stockpile of agricultural land is currently being developed by the state Board of Land and Natural Resources, which plans to lease over 3,500 acres of former sugar cane land for diversified agriculture.

Residents of many sugar cane camps throughout Hanalei have found themselves evicted, and new development in their area would put a stop to their unoffical but traditional use of such lands.

Higher Population Density and Traffic

These issues are covered in Sections 3.2.1 and 3.2.3.

3.2.2.3 Impacts of Alternative Scenarios

Alternative 2, the no-project/vacant land scenario, would avoid impacts to rural lifestyle from the project. Changes in surrounding land use and social structure might affect the lifestyle of Kukuihaele nevertheless. For example, a resident of the Kona Camp mentioned his concern that the proposed project would cause a seemingly inevitable growth of ironwood in the cane fields would interfere with the scenic character of the area.

Alternative 3, the no-project but residential/low lot development scenario, would entail many of the same rural lifestyle impacts because of the simple fact of population growth, some of it composed of newcomers. The current practice of using vacant land adjacent to existing residential lots for gardens might have to cease as a result of the subdivision of such land for lots.
3.2.2.4 Potential Mitigation Measures

The following mitigation measures would reduce impacts to rural lifestyle:

- Increase awareness and sensitivity of guests by orientation to local customs and tips on behavior.
- Resort management could maintain formal and informal lines of communication with community, such as periodic picnics, sporting events and meetings.
- Develop a clear written agreement concerning the status of farm animals in the village.
- Design landscaping to minimize the visibility of the resort hotel and Residential Lots from the village. The existing trees and design of the resort appear to satisfy this measure.
- Dedicate homeowners in Tigre Camp portions of the former Hanakaa Sugar lands that they have been using for many years. This mitigation measure has been formalized in the Developer's Letter of Commitment. In many cases, the addition would increase the size of the homeowner's lots by as much as 100 percent.
- Set up a community committee to decide upon and oversee any modifications or replacement of the Social Hall. This mitigation measure has been formalized in the Developer's Letter of Commitment.
- Dedicate a strip of land around the cemetery to ensure room for expansion and privacy. This mitigation measure has been formalized in the Developer's Letter of Commitment.
- Sponsor periodic events at the Plantation Manager's House such as open grounds and/or house to public, specifically the Kukuihaele community. The developers have offered this measure.
- Work with the community, the county and the state to address fears about uncontrolled resort/urban development in Hanakaa.

3.2.3 Local Traffic Impacts

Traffic impacts are covered in the Traffic Impact Analysis Report by Julian Ng, which is attached as an Appendix to this EIS. Objective measures of traffic flow and remedial recommendations are discussed in his report. The purpose of reviewing traffic impacts in this section is simply to better describe the environment of Kukuihaele village as it would be experienced by residents.

3.2.3.1 Temporary (Construction)

Traffic would increase temporarily during construction as a result of commuting laborers (although some construction workers may come from Kukuihaele) and the transport of building materials. Some of this traffic would involve heavy machinery and would be disruptive in terms of noise, dust, traffic congestion and unsightliness. However, because of the relatively short time-span of construction of the hotel, and the fact that individual Residential lots would be built upon by their owners, significant impacts would not last long.

3.2.3.2 Operational

The report calculated that a daily in-plus-out traffic volume of approximately 1570 vehicles per day would be generated by the proposed project. Peak hours would add as many as 70 vehicles per hour to the traffic flow. Depending on the final selection of an entrance route to the hotel and Residential lots, some small roads might experience a doubling of traffic as visitors and new residents enter and leave the area in the direction of Honokaa and Waipio Valley; traffic volumes on many roads and road sections would be changed very little, especially during non-peak hours.

3.2.3.3 Impacts of Alternative Scenarios

Traffic impacts would be avoided under Alternative 2. Alternative 3 traffic impacts might be just as large as those under the full project.

3.2.3.4 Potential Mitigation Measures

Road and circulation improvements are discussed in the Traffic Report Appendix and in the main body of the EIS and are not addressed here. It is recommended that all traffic improvement projects give issues of community cohesiveness, the pedestrian use of roads, and the convenience of local residents priority consideration. A panel of community members to advise the developers and the county on road improvements is recommended.
3.2.4 Impacts to the Socioeconomic and Ethnic Structure of Community

The class/ethnic structure of the community would change under the proposed project. The current middle-class, mixed ethnic, long-time Hawaii resident profile would be altered by the addition of a distinctly different group.

The juxtaposition of cosmopolitan, wealthy newcomers with rural, middle-class local residents has potential for both conflict and harmony. Despite the plans to integrate the hotel in some extent with the community, the short stay of most hotel guests would probably make their impact on the community structure negligible.

3.2.4.1 Temporary (Construction)

Because construction crews for relatively small projects in Hawaii tend to be local, they are usually representative of the community as a whole. In terms of class and ethnic affiliations, such workers would blend in with the community. Indeed, some local residents may be part of the construction force.

3.2.4.2 Operational

Class Differences

Given the expected high-market orientation of the Residential Lots, the new residents would almost certainly be high-income individuals and families. The influx of this group would create a bi-modal income distribution; i.e., one group would be wealthy, and the other mostly middle-class.

Local residents expressed anxiety about this issue only vaguely during interviews and public meetings. They may have been reluctant to speak about the issue in such settings.

Research by CRI (1991) for the Manolo Golf Course on Lanai revealed some community attitudes relevant to the Nakuluale project. One concern expressed by residents was that...

...affluent Koko or Manolo resort residents could treat long-time Lanai residents in a superior or disrespectful way. Some community informants linked this concern to memories of earlier plantation days, where Caucasians dominated an ethnically-stratified society" (p. 19-509).

CRI went on to note that relationships between locals and affluent new residents at Koko, similar projects had generally followed into mutual respect, if not complete acceptance. They cited the importance of respectful behavior among new residents as a key to this mutual respect.

Ethnic Differences

The study of the impacts of changing the ethnic structure of a community requires a great deal of caution. As Siput and Var's review of tourism impact studies pointed out, reports of impacts of "racial" or "ethnic" tension among ethnic groups has often confused economic on class categories with ethnic ones (1984:7). Also, planning to minimize ethnic conflicts (especially through avoidance of contact) is not necessarily harmonious with the "melting pot" ideology shared by many Americans, particularly Hawaii residents.

Nevertheless, the issue of ethnic identification of communities requires consideration, because Hawaii residents do tend to categorize certain communities as "more Hawaiian" or "more maile", etc. Our perception of these communities is often based, for good or for ill, on their ethnic makeup.

A profile of resort guests and Villa buyers as projected by the developers is presented in Table 3.3.

<table>
<thead>
<tr>
<th>Component</th>
<th>Place of Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>40%</td>
</tr>
<tr>
<td>U.S./Canada</td>
<td>20%</td>
</tr>
<tr>
<td>Europe</td>
<td>30%</td>
</tr>
<tr>
<td>Asia</td>
<td>25%</td>
</tr>
</tbody>
</table>

Notes: "includes Australia. Percent of hotel guests were projected by developers to originate from Latin America, Africa, and the Pacific.

If this projection is approximated in reality, the ethnic mix in Nakuluale would be broaden by the presence of Japanese, Chinese and Australian nationals. Mainland-born Caucasians (and others), who are already prominent in the population, would become proportionally as well as absolutely more numerous.

It is only a myth that ethnic or racial conflicts are absent in Hawaii. Nevertheless, communities with every conceivable mixture rather than the exception in Hawaii. Most relations in Hawaii are marked by harmony rather than conflict. The history of repeated and diverse immigrations, the tendency of many Hawaii residents to relocate, and the rapid growth of new communities throughout the state also has helped develop an extremely adaptable population.
In all likelihood, some conflict between new and existing residents may arise because of ethnic or cultural differences. In some cases this conflict would be compounded by resentment against the class status of the new residents, especially towards rich Japanese or Mainland healers.

3.2.4.3 Impacts of Alternative Scenarios

Even if the land remained vacant, as under Alternative 1, it is likely that social change in Hamakua would continue, although the nature of such change is difficult to speculate on. Mainlanders with independent income would probably continue to grow in proportion in the population, especially as some local people might be expected to migrate from Hamakua in search of jobs. Under Alternative 2, such processes might accelerate, although if a viable small-farm alternative were discovered, the purchasers of residential and/or agricole might be more heavily local than otherwise.

3.2.4.4 Potential Mitigation Measures

Socioeconomic changes of the type anticipated as a result of the Anah Resort project may be viewed as negative, positive or neutral, depending on the individual. Therefore, proposing mitigation measures is inappropriate.

3.2.5 Social Impacts of Property Tax/Property Value Increases

Experience with other resort developments that have occurred in an area of existing rural homes and farms indicates that property values would probably rise as a result of the proposed development. Several impacts can proceed from such a rise. First, in the absence of measures that freeze tax levels or exempt property owners in the affected areas, property taxes would also rise. Although from the standpoint of greater county revenues such increases produce significant benefits, they are usually viewed rather differently by individual homeowners.

Second, the resale value of the property also rises. Resale value increase (as separate from the property tax issue) can have positive or negative effects, depending on the individual and community.

Many elderly residents welcome the growth in the size of their estate, which would allow their children to inherit more wealth. Residents who plan to leave the area may also benefit from a windfall if they sell their home and are fortunate enough to relocate to an area where property values are lower, and they are thus able to "trade up" to a better home.

However, the continuing rise of property values usually brings about higher taxes that may force fixed-income residents to relocate. Also, the socioeconomic character of the community may change because the higher value of its property sales during home turnover may exclude low-income residents, who may have social or cultural ties to the area.

Another negative impact is that higher values coupled with speculation tend to drive up the prices of nearby agricultural land. Existing farmers may find the taxes burdensome, and new farming ventures are discouraged by the land costs and the taxes. Some farmers may be forced to sell to achieve a profit, but the community as a whole may suffer because of the gradual loss of agricultural land.

3.2.5.1 Temporary (Construction)

Negligible effects on property values and taxes may be expected as a result of construction.

3.2.5.2 Operational

Property tax increases are a common complaint throughout the state of Hawaii and indeed, the entire United States. In the case of the proposed project, this seems to be the one aspect of the project with which everyone, supporter and opponent alike, is concerned. It is problematic to predict with any precision the magnitude of the likely increase in property value and taxes -- which is one reason property owners are uncomfortable with change of this type.

3.2.5.3 Impacts of Alternative Scenarios

Under Alternative 2, property values might rise, fall, or stay level, following the general trend of Hamakua County and the Hamakua District. Alternative 3 might involve some increase in property values and taxes, but not to as great an extent as in Alternative 1.
3.2.5.4 Potential Mitigation Measures

Several mitigation measures could reduce or eliminate the negative effects of property tax/property value increases:

- Creation of a fund by the developers to help offset the difference between current property taxes and future property taxes that can be attributed to the resort. This mitigation measure has been formalized in the developer's letter of commitment. The developers have already committed to creating an initial fund to be supplemented by $5,000 from the sale proceeds of each of the 45 lots when they are sold.
- Legislation currently before the County Council would freeze tax levels for all county residents at their current values for all homes occupied by their owners. This would be superior to the current "10-year exemption" in that no penalties would accrue to the seller, but several questions still trouble many local residents and county officials. For example, would the exception be inheritable? Would the measure discourage home sales? Would new homeowners be taxed at unfair levels to support such an exemption?

3.2.6 Social Impacts of Employment

Certain employment impacts are covered in the Economic Impact Analysis presented in Chapter 5. Jobs generated by any economic enterprise fall into three categories: direct, indirect, and induced. Section 5.1.2 discusses these concepts in detail. This section deals only with the social impact created by direct jobs, i.e., the jobs created by the construction and the permanent resort jobs such as kitchen staff, housekeeping, maintenance crew and wait help. Approximately 100 construction jobs, and later, 100 resort operation jobs are called for.

This section addresses the following social aspects of the new employment opportunities: Would jobs go to local residents? Would the other workers come from? To what extent would the jobs created by the resort match the skills and desires of the existing labor market, especially workers displaced from the Hanalei sugar company's closure? If the match is not close, how would workers be trained? Finally, would workers experience satisfaction with the jobs being offered?

3.2.6.1 Temporary (Construction)

Construction work would be contracted to local firms, which employ mostly full-time crews. Hanalei residents who work for these firms would benefit from this employment. A few local residents may also gain temporary or permanent full- or part-time work during the construction phase. No job training for construction work is anticipated.

3.2.6.2 Operational

Origin of Workers

The developers have stated that they would seek to hire from the residents of Hanalei to the greatest extent possible. They expect that over 80 percent of jobs can be filled locally. The remaining workers would mostly be commuters from other parts of the Big Island. A small number of employees may move to the region from other islands, the U.S. mainland or foreign countries.

Labor Fit and Training

The breakdown of Hanalei workers as of January 1993 is given in Table 3.4.
### Table 3.4
Existing Employee Classifications at Hanakau Sugar Company

<table>
<thead>
<tr>
<th>FACTORY/GARAGE</th>
<th>FIELD OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinist</td>
<td>Equipment Operators</td>
</tr>
<tr>
<td>39</td>
<td>147</td>
</tr>
<tr>
<td>Electrician</td>
<td>Heavy Equipment</td>
</tr>
<tr>
<td>15</td>
<td>172</td>
</tr>
<tr>
<td>Welder</td>
<td>Field Workers</td>
</tr>
<tr>
<td>60</td>
<td>86</td>
</tr>
<tr>
<td>Mechanic</td>
<td>Pest Control</td>
</tr>
<tr>
<td>132</td>
<td>25</td>
</tr>
<tr>
<td>Utility Workers</td>
<td>Lead Personnel/Apt</td>
</tr>
<tr>
<td>69</td>
<td>13</td>
</tr>
<tr>
<td>Equipment Operators</td>
<td>Administrative/Clerical</td>
</tr>
<tr>
<td>64</td>
<td>1</td>
</tr>
<tr>
<td>Repair/Maintenance</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Administrative/Clerical</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Lead Personnel/Apt</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Plumber</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Carpenter</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>FOOD/PACK/SLAUGHTERHOUSE</td>
<td>MEDICAL</td>
</tr>
<tr>
<td>Equipment Operators</td>
<td>Admin/Prof/Technical</td>
</tr>
<tr>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Livestock Handlers</td>
<td>Nurses</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Factory Workers</td>
<td>Clerical</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Drivers</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mechanic</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Hawaii Island Economic Development Board.

The job requirements as projected by the developers of the Anan Resort are listed in Table 3.5 below.

### Table 3.5
Planned Employment at Anan Resort

<table>
<thead>
<tr>
<th>Operation</th>
<th>Number of Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROOMS</td>
<td></td>
</tr>
<tr>
<td>Housekeeping and Room Attendants</td>
<td>8</td>
</tr>
<tr>
<td>Other Attendants</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
</tr>
<tr>
<td>FOOD AND BEVERAGE</td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td>12</td>
</tr>
<tr>
<td>Restaurant/Bar</td>
<td>15</td>
</tr>
<tr>
<td>MINOR OPERATIONS/GENERAL ADMIN/MARKETING</td>
<td></td>
</tr>
<tr>
<td>Shops/Services</td>
<td>7</td>
</tr>
<tr>
<td>Financial/Accounting</td>
<td>10</td>
</tr>
<tr>
<td>Clerical</td>
<td>2</td>
</tr>
<tr>
<td>Security</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td>FACILITY MAINTENANCE</td>
<td>14</td>
</tr>
<tr>
<td>Plumber, Electrician, Engineer</td>
<td>3</td>
</tr>
<tr>
<td>Carpenter, Painter, Mechanic</td>
<td>4</td>
</tr>
<tr>
<td>Nursery and Grounds</td>
<td>2</td>
</tr>
<tr>
<td>Truck Drivers</td>
<td>2</td>
</tr>
<tr>
<td>Laundry</td>
<td>3</td>
</tr>
<tr>
<td>MANAGEMENT AND SUPERVISORY</td>
<td>22</td>
</tr>
<tr>
<td>TOTAL</td>
<td>161</td>
</tr>
</tbody>
</table>

The area of greatest fit between the soon-to-be-unemployed Hanakau Sugar Company workforce and the needs of the Anan Resort is found in the maintenance area. These four jobs could potentially be filled many times over by the Hanakau workforce. There would probably be competition among ex-plantation workers for these jobs, since hotel jobs usually pay as high or higher than plantation work (projected wages at the Anan Resort have not been determined and/or disclosed by the developers).

The other sectors of resort employment, although not related as directly to plantation work as the maintenance sector, offer promising opportunities for Hanakau Sugar workers. Employees who were involved in office work may find that their skills are desired and readily transferable. Certain supervisors and managers may also make a smooth transition. Housekeeping and food and beverage jobs, however, might require considerable re-training and adaptability on the part of ex-plantation workers.
Working on a resort is quite different from working on a plantation. However, many Haiku residents already work in South Kohala hotels, including many family members of displaced Haiku workers. This experience of hotel work in Haiku has familiarized much of the population with the realities, both beneficial and adverse, of resort employment.

Training programs currently in development under the coordination of the Haiku Assistance Steering Committee may help identify interested workers, connect them with Anan Resort (among other hotels), and sponsor training. Such agency actions will considerably ease the transition from the plantation to resort and other employment activities.

The developers report that all employees at Anan Resorts worldwide undergo extensive, paid training as part of their employment. Because of the unique and specialized market of Anan Resorts, such training is vital.

The developers also expect that many food and beverage positions at the resort would be filled by the Haiku High School graduates who wish to enter the hotel business but not leave their home town. It is the experience of many hotel managers that young residents from the local area make excellent and enthusiastic employees. Many of them work for several years before going away to college, joining the military, or relocating for other reasons (allowing other young people to cycle in). Some decide to make a career in the visitor industry based on favorable early experiences.

Satisfaction

When the Lanai Company sought approvals from the state Land Use Commission to construct an 18-hole golf course and luxury residential units to add to an existing hotel and conference center, the social impact assessment performed by CHI (1991a) sampled the opinions of current plantation workers as well as former plantation workers whose broader base and mission give them the best familiarity with the special needs of Haiku.

Some hotel workers mentioned that they were uncomfortable with the formal atmosphere, uniforms, and hours. This opinion was not shared by the majority, apparently. For potential employees currently working in pineapple, the most preferred type of future job was landscaping. Few reported wanting jobs with significant amounts of public contact (particularly food and beverage jobs). Instead, "back of the house" resort jobs (e.g., housekeeping) were preferable. CHI reasoned that some of the reluctance arose from deficiencies and discomfort with oral and written communication skills, particularly among Filipino migrants.

In the case of Anan Resort, which would be the first of its kind in Hawaii (not to mention Haiku), one may only speculate about potential job satisfaction. Worker satisfaction is reported to be high and job turnover low at other Anan Resorts throughout the world. Most of these resorts, however, are located in Third World countries and their experiences may not transfer to Hawaii. It is important to note, however, that job satisfaction of any kind is possible only when one has a job. As employment opportunities are unfolding in Haiku, a job at the Anan Resort is likely to be prized.

3.2.6.3 Impacts of Alternative Scenarios

Under Alternative 1, no new employment would be generated by activities in the area that would have been occupied by the resort. Thus, the potential of the proposed project to alleviate the unemployment of the area would not be realized. Alternative 2 would generate short-term jobs during the construction of homes and/or agricultural infrastructure. Agricultural jobs might also arise, although the experience with most 30-acre or smaller agricultural lots is that actual farm production is modest. Some of these lots, however, might employ some members of the resident family full- or part-time in some agricultural pursuit (e.g., fruit orchards or pig raising).

3.2.6.4 Potential Mitigation Measures

The following mitigation measures would maximize the benefit of the added employment to the community:

- The developers should make a concerted effort to recruit locally for all positions.
- The developers should coordinate recruitment efforts with the Haiku Assistance Steering Committee and/or similar groups whose broader base and mission give them the best familiarity with the special needs of Haiku.
- The developers should coordinate training efforts with the appropriate State, County or private agencies.

The issue of indirect and induced jobs has not been discussed in this analysis because the location and nature of such jobs are simply too unclear to analyze. However, as the economic analysis in Section 5.1 reveals, the impact of those jobs are considerable. Not only would they provide a further source of employment and income to the region, they would add a measure diversity to the tourism-related direct jobs. In this sense, direct and induced jobs act as a mitigating measure for the specialization of the jobs brought in by the resort.
3.2.7 Recreational Impacts

This section addresses the additional pressure on existing recreational facilities and areas, both formal and informal, imposed by the proposed development. Of major concern to local residents are impacts to Waipio Valley.

3.2.7.1 Temporary (Construction)

Construction of the resort and infrastructure for the Residential Lots is expected to have little effect on recreation. Renovations and improvements to the Social Hall and the existing park might temporarily remove these features from use, but this loss would be more than compensated by their added usefulness once work was complete.

3.2.7.2 Operational

Among the community benefits associated with the resort are recreational facilities. Although the exact nature of these benefits are to be determined in consultation with the community, the developers have offered the following:

- New and/or improved Social Hall
- Improvements to and maintenance of the existing parks
- Construction and maintenance of a new park with a swimming pool, playground, tennis courts and exercise facilities

Since very few organized recreational opportunities exist within Kukuihaele today, the addition of these facilities, even accounting for the population increase, must be seen as a net beneficial impact.

As discussed in Section 2.1.4, the main recreation activities for most residents consist of hiking, fishing, gathering, and farming activities. These take place outside of designated public or commercial facilities at locations throughout Hamakua. The physical location of the proposed resort would not substantially interfere with such activities. To the extent that greater population puts increased pressure on such resources, there could be a small negative impact on recreation.

The principal area of conflict, at least as perceived by many residents of the area, is Waipio Valley. As discussed in Sections 1.3.3 and 3.1.5, increased visitation of Waipio Valley, at least under present conditions, is viewed as undesirable by the major landowner, many Waipio residents, and the State Department of Land and Natural Resources. Recent years have seen as many as 60,000 shuttle and/or horse tour visitors alone in Waipio (TF 1991).

A calculation can be made to assess the potential number of additional Waipio visitors generated by the hotel component of the resort. Assuming 40 rooms (the Plantation Inn plus the Anahinahinahinahine), an occupancy rate of 80 percent, an average stay of 3 nights and an average of 2 guests per room, as many as 7,700 individual resort visitors can be expected annually.

It can be assumed that many visitors to the resort would desire some activity related to Waipio. Some may be content with a view of the valley from the lookout on the rim. Others would participate in an organized “shuttle tour” or a horseback ride, and others may opt for a self-guided trip into the valley to hike and see. Because the resort is expected to generate considerable repeat business (as most resorts do elsewhere in the world), many visitors would have already experienced Waipio and may not be drawn to do so on each visit. As a rough estimate, between 10 and 50 percent, i.e., between 770 and 3850 visitors per year, may descend into Waipio from the hotel resort. An unknown proportion of this figure may be redundant, in the sense that if the resort were not constructed, they may have visited another resort on the island and visited Waipio anyway.

The occupants or residents of the Residential Lots would also visit Waipio Valley. There are several unknowns that make it difficult to assign an annual number to these visits. First, it remains unknown what proportion of the Residential lots would be occupied full-time and what proportion would essentially be vacation homes. Second, data on the frequency of Hamakua residents’ trips to Waipio are lacking. It is reasonable to assume, however, that significantly fewer visits per year would be generated from this component of the resort.

In any case, the total number of visits generated by the resort may add approximately 5 percent to the number of visitors to Waipio.

This magnitude of increase, though in itself not greatly significant, is of concern because it occurs at a time when increased tourism is seen as extremely stressful. The outcome of current negotiations being undertaken by the Task Force to Preserve Waipio Valley would be critical importance in determining how future pressure on Waipio’s resources are handled and, therefore, what impact any given project would have. Some possible mitigation measures are discussed in Section 3.2.7.4.
3.2.7.3 Impacts of Alternative Scenarios

Under Alternative 2, the recreation facilities associated with the resort would not be constructed and residents would continue to lack such amenities. Community efforts and/or funding by the county and state could eventually redress such deficiencies. Although no new visitors to Waipio would be generated from the Kohala area, existing trends would continue.

Alternative 3 presents probably the most adverse impact in terms of recreation. Subdivision in accordance with existing zoning might swell population without producing as many recreation benefits as have been offered by the Amn Resort developers. Waipio visitation of an internal nature would probably rise considerably, since a much larger population would have immediate access than is currently true, and impacts to Waipio might actually be worse than in the full project scenario.

3.2.7.4 Potential Mitigation Measures

The recreational facilities proposed by the developers constitute a significant benefit to the social well-being of the community. Steps already taken by the developers indicate that the community would have considerable control over the precise nature of the improvements, which would maximize the beneficial effect.

As discussed in Section 3.2.7.3, impacts concerning tourism in Waipio Valley cannot be fully assessed nor mitigation measures developed until the work of the Waipio Task Force has been completed and an official policy on Waipio developed and adopted by the State and County. In the absence of such a policy, the following measures can be tentatively suggested:

- The developers should cooperate and meet with the Waipio Task Force in their efforts to minimize adverse effects of tourism. This mitigation measure has been formalized in the Developer's Letter of Commitment.
- The developers should prepare materials that advise guests concerning sensitive and responsible use of Waipio Valley, per opening rules and recommendations from the Waipio Task Force and/or responsible government agencies.
- The developers should not contract for group or individual tours of the valley without consultation with the Waipio Task Force and/or responsible government agencies. This mitigation measure has been formalized in the Developer's Letter of Commitment. The developers have committed informally to adding no more than one van per day to Waipio traffic.

CHAPTER 4 EXISTING ECONOMIC CONDITIONS

4.1 Regional Economic Setting, 1970-1990

The economy of the state of Hawaii grew rapidly during the 1970s and the 1980s. In current dollars, the Gross State Product grew at an average annual rate of 10.8 percent during the 1970s and at 8.6 percent during the 1980s. Hawii County's economy grew faster than that of Oahu over the same period. Using Personal Income as an indicator, Table 4.1 shows that the Hawaii County economy grew at an average rate of 4.6 percent. Jobs and employment also grew faster in Hawaii County than they did on Oahu. Table 4.2 shows that jobs grew at a rate of 3.4 percent and employment grew at a rate of 4.0 percent per annum. It was during this period that rapid resort development took place in the South Kohala and North Kona districts, boosting the construction industry to its peak.

The sugar industry has been the economic mainstay of the Hamakua region since the late 1800s. Today, sugar cane production and raw sugar processing accounts for a large share of direct employment and personal income earned from all sources in the region. In 1991, 1,250 sugar-related jobs accounted for an estimated 30 percent of all employed persons. (Hawaii State Department of Labor and Industrial Relations tabulation for County of Hawaii; Hamakua Sugar Company, Huna Kea Agribusiness employment estimates).

Two major sugar companies, Hamakua Sugar Company and Huna Kea Agribusiness, and a member of small independent cane growers cultivated a combined 45,000 acres of land along the Hamakua coast. This acreage amounts to 79 percent of the 57,000 acres that was devoted to sugar production on the island, and 27 percent of sugar acreage in the state in 1990. The combined output of these companies and independent growers amounted to 819,631 short tons of 95% raw sugar, or 19.8 percent of total state output in 1990.

Unlike other districts in the county, there has been minimal shift to the production of tourism services in the Hamakua region, a result of climate and historical land use patterns. Major agricultural products include sugar and pineapple. The region also supports ranching and small truck farming activities (ginger, taro, and tropical flowers and ornamental).
Table 4.1  
Personal Income, By County

<table>
<thead>
<tr>
<th>Item and Period</th>
<th>State</th>
<th>Honolulu</th>
<th>Hawaii</th>
<th>Maui</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personal Income ($'000)</td>
<td>$29,477</td>
<td>$18,233</td>
<td>$1,860</td>
<td>$799</td>
</tr>
<tr>
<td>Per Capita Personal Income ($)</td>
<td>$18,379</td>
<td>$19,171</td>
<td>$14,969</td>
<td>$15,585</td>
</tr>
</tbody>
</table>

Real Growth Rates (Average Annual):  
1970-1980: 2.9% 3.4% 6.0% 5.3% 6.9%  
1980-1989: 2.8% 2.4% 3.0% 4.5% 4.1%  
1970-1989: 2.8% 3.0% 4.1% 4.5% 4.5%  


Table 4.2  

<table>
<thead>
<tr>
<th>Item and Period</th>
<th>State of Hawaii</th>
<th>City and County of Honolulu</th>
<th>County of Hawaii</th>
<th>County of Maui</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL JOBS</td>
<td>2.8%</td>
<td>2.7%</td>
<td>2.6%</td>
<td>2.8%</td>
</tr>
<tr>
<td>1970-1980</td>
<td>2.6%</td>
<td>2.0%</td>
<td>4.1%</td>
<td>5.0%</td>
</tr>
<tr>
<td>1970-1980</td>
<td>2.7%</td>
<td>2.4%</td>
<td>3.4%</td>
<td>3.9%</td>
</tr>
<tr>
<td>CIVILIAN EMPLOYMENT</td>
<td>2.0%</td>
<td>1.7%</td>
<td>3.8%</td>
<td>4.5%</td>
</tr>
<tr>
<td>1970-1980</td>
<td>2.0%</td>
<td>1.7%</td>
<td>3.8%</td>
<td>4.5%</td>
</tr>
<tr>
<td>1970-1980</td>
<td>2.0%</td>
<td>1.7%</td>
<td>3.8%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

Source: Hawaii State Department of Labor and Industrial Relations, Labor Force Data Bank, updated annually.

The 1986 State Department of Health survey reported that 46 percent of all employment derives from agriculture, forestry or fisheries, using employment as an indicator of the relative contribution of each industry.

Table 4.3  
Hawaii: Employment by Industry, 1990

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture/Forestry/Fishery</td>
<td>48.0</td>
</tr>
<tr>
<td>Construction</td>
<td>4.7</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>6.4</td>
</tr>
<tr>
<td>Transportation/Communications</td>
<td>1.3</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
</tr>
<tr>
<td>Retail Trade</td>
<td>7.2</td>
</tr>
<tr>
<td>Finance/Insurance/Real Estate</td>
<td>3.8</td>
</tr>
<tr>
<td>Business &amp; Repair Service</td>
<td>1.3</td>
</tr>
<tr>
<td>Personal Service</td>
<td>1.3</td>
</tr>
<tr>
<td>Professional and Related Service</td>
<td>11.2</td>
</tr>
<tr>
<td>Public Administration</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: Hawaii Regional Plan 1991

The balance of employment reflects the spillover impact of hotel development in the neighboring South Kohala region. It has been estimated that 35 percent of Hawaii's 1990 labor force, approximately 900 to 1,000 Hanalei residents, are employed by South Kohala hotels. To a lesser extent, tourism-related employment represents services sold locally to nonresidents who pass through the region or who use Hanalei's 14-room hotel or bed and breakfast accommodations.

4.2 Regional Economic Conditions Since 1990

4.2.1 State Economy

A combination of events including the Gulf War of 1991, recession on the mainland, and changing economic conditions in Japan have contributed to an economic slowdown since 1991. Visitor arrivals, the primary barometer of the health of the tourism industry, declined during 1991 and the first six months of 1992. Statewide, visitor arrivals were off by 2.8 percent when compared to the same time period in 1991. Visitor arrivals to the County of Maui was down by 7.3 percent. Hotel occupancy rates held relatively steady statewide at 9.1 percent, but occupancy rates for the neighboring island counties were down. For the County of Hawaii, occupancy rates stood at 57.7 percent, down 5.0 percent from the first six months of 1991. (Sources: Hawaii Visitors Bureau: 1990, 1991, 1992)

Statewide civilian unemployment rates have also risen from an average of 2.6 percent to 4.8 percent for the first six months of 1992. The County of Hawaii, which typically has the highest unemployment rate of all the counties, logged an increase in unemployment from 5.0 percent to 7.1 percent in the six-month period. Job counts statewide have fallen slightly, with much
larger decreases registered in the sugar industry. Sugar production is off both statewide and for the County of Hawaii, falling by 2.7 percent and 12.3 percent, respectively. Construction permit value, a measure of construction activity, has decreased statewide but shows a gain for the County of Hawaii, primarily the result of a single, large hotel construction project. (Source: First Hawaiian Bank “Economic Indicator, May-June 1993).  

4.2.2 Hawaii County Economy  

Beginning in 1990, the Hawaii County economy has taken a downturn as have all other island economies. In addition to the drastically declining tourist trade, the island economy is undergoing a further economic ill with the impending closure of a number of sugar operations.  

Sugar Industry in Decline  

It is generally agreed that the sugar industry is irreversibly declining in Hawaii. Statewide, lands under sugar cane production fell from 224,617 acres in 1960 to 161,591 acres in 1990, a contraction of 38 percent. Two-thirds of this contraction occurred in the decade from 1980-1990 alone. During this decade, lands under sugar production in Hawaii County shrunk from 91.2 to 57.9 thousand acres, a decrease of 37 percent. In the Hamakua region, sugar cane lands shrunk from 59.5 to 45.1 thousand acres, a decrease of 24 percent. (Hawaiian Sugar Planters Association, various years)  

In the Hamakua producing region, both Hamakua Sugar Company and Mauna Kea Agribusiness have suffered financial setbacks resulting from low yields. In 1992 Hamakua Sugar Company received a $15 million low-interest loan from the Hawaii Department of Agriculture to offset cash flow shortfalls. By 1996, despite a downsizing in operations based on reductions in acreage and employment, cash flow did not improve sufficiently for the company to redeem its accumulated debt of $90 million. The company at that time identified approximately 5,000 acres that it would sell in order to meet its financial obligations. In August 1992, Hamakua Sugar Company filed for Chapter 11 bankruptcy.  

First Hawaiian Bank's loan to Hamakua Sugar Company's trustees has extended its life for another year, but the sugar company has practically ended its long-standing operation. Together with the expected closing of Hilo Coast Processing at the end of 1994, the Hamakua closing will cause 1,102 immediate unemployment and will have as yet undetermined but significant impact on the economy.  

The longer term economic outlook for the nation and the state does not appear to be bright. The decade of the 90's is pictured to be very different than the 80's, and is likely to be a "slow growth period, basically reflecting slow recovery of the global economy with which U.S. and Hawaii economies are largely connected.  

Transition to Service Producing Economy  

For both the State of Hawaii and the County of Hawaii, the structure of the economy has changed from that of a commodities producer to that of a services producer. Table 4.4 shows the shift toward service production during the period from 1980 to 1991, using the distribution of civilian jobs by industry as an indicator.  

For Hawaii County, the share of jobs representing contract construction and manufacturing fell from 12.6 percent in 1980 to 9.9 percent in 1991; agricultural job share fell from 16.1 percent in 1980 to 10.5 percent in 1991. Despite an increase in job counts in diversified agriculture, the service sectors of the County's economy grew significantly more over the decade.  

The overall picture is similar for the State of Hawaii, with agriculture playing an even smaller role. Contract construction and manufacturing job share fell from 10.5 percent to 9.2 percent over the corresponding time period; agricultural share fell from 3.4 percent to 2.3 percent.  

Use for Economic Adjustments  

Agriculture, and especially sugar, has been the economic backbone of the Hamakua region in the County of Hawaii, holding a way of life for the rural families who live and work in the area. However, the sugar industry in Hawaii is rapidly disappearing. Elsewhere in the State, this contraction has been accompanied by the conversion of former sugar lands to alternative agricultural uses, and in some instances, to urban residential use, with differential economic effects. Hawaii county, particularly East Hawaii, will have to make long-term adjustments to the ever-changing and evolving economy. Although there is a wide range of possible agricultural products that can be grown in this region, the list is very short for those that can be produced at profit within a relatively short term horizon.
### Table 4.4
Jobs by Industry: Annual Averages For 1980 and 1991 Percent Distributions, and Average Percent Change

<table>
<thead>
<tr>
<th>Industry</th>
<th>1980 Jobs</th>
<th>1991 Jobs</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL JOBS</strong></td>
<td>18,390</td>
<td>14,800</td>
<td>24.6</td>
</tr>
<tr>
<td><strong>CONTRACT CONSTRUCTION</strong></td>
<td>2,850</td>
<td>2,550</td>
<td>-2.1</td>
</tr>
<tr>
<td><strong>MANUFACTURING</strong></td>
<td>2,850</td>
<td>1,750</td>
<td>-37.7</td>
</tr>
<tr>
<td><strong>TRADE</strong></td>
<td>7,000</td>
<td>13,850</td>
<td>97.2</td>
</tr>
<tr>
<td><strong>FINANCE, INSURANCE &amp; REAL ESTATE</strong></td>
<td>1,200</td>
<td>2,400</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>SERVICES &amp; MISCELLANEOUS</strong></td>
<td>6,950</td>
<td>8,000</td>
<td>15.7</td>
</tr>
<tr>
<td><strong>FEDERAL</strong></td>
<td>3,100</td>
<td>1,200</td>
<td>-61.3</td>
</tr>
<tr>
<td><strong>LOCAL</strong></td>
<td>600</td>
<td>500</td>
<td>-12.8</td>
</tr>
<tr>
<td><strong>AGRICULTURE</strong></td>
<td>3,550</td>
<td>3,550</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>SELF-EMPLOYED</strong></td>
<td>2,850</td>
<td>2,550</td>
<td>-12.8</td>
</tr>
<tr>
<td><strong>TOTAL JOBS</strong></td>
<td>44,300</td>
<td>40,800</td>
<td>7.6</td>
</tr>
<tr>
<td><strong>CONTRACT CONSTRUCTION</strong></td>
<td>2,850</td>
<td>1,750</td>
<td>-37.7</td>
</tr>
<tr>
<td><strong>MANUFACTURING</strong></td>
<td>2,850</td>
<td>1,750</td>
<td>-37.7</td>
</tr>
<tr>
<td><strong>TRADE</strong></td>
<td>7,000</td>
<td>13,850</td>
<td>97.2</td>
</tr>
<tr>
<td><strong>FINANCE, INSURANCE &amp; REAL ESTATE</strong></td>
<td>1,200</td>
<td>2,400</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>SERVICES &amp; MISCELLANEOUS</strong></td>
<td>6,950</td>
<td>8,000</td>
<td>15.7</td>
</tr>
<tr>
<td><strong>FEDERAL</strong></td>
<td>3,100</td>
<td>1,200</td>
<td>-61.3</td>
</tr>
<tr>
<td><strong>LOCAL</strong></td>
<td>600</td>
<td>500</td>
<td>-12.8</td>
</tr>
<tr>
<td><strong>AGRICULTURE</strong></td>
<td>3,550</td>
<td>3,550</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>SELF-EMPLOYED</strong></td>
<td>2,850</td>
<td>2,550</td>
<td>-12.8</td>
</tr>
</tbody>
</table>

SOURCE: Hawaii State Department of Labor and Industrial Relations, Work Force Data Book, as updated annually.

### CHAPTER 5 ECONOMIC AND FISCAL IMPACTS

#### 5.1 Economic Impacts

##### 5.1.1 General Methodology

The economic impacts of the proposed resort development project utilize the methodology of input-output analysis. Input-output models measure the cumulative effect of changes in final demand for goods and services on economic output, employment, and household income, by quantitatively measuring the inter-relationships between various sectors in the economy. An increase in final demand for construction services, for example, would generate demand for the output of other sectors, such as the mining of aggregate material, the milling of lumber and wood products, the refining of diesel and gasoline, trucking and warehousing services, and intermediate output of the construction industry itself. An increase in demand for the output of these sectors, in turn, generates a round of new demand for the output of other sectors.

Multiplier values are typically used to estimate the total impact of a change in final demand. An output multiplier measures the effect of a $1 change in final demand on total economic output; an income multiplier measures the effect of a $1 change in final demand on total household income; an employment multiplier measures the effect of a newly-created job on total employment.

This study uses multipliers from the State of Hawaii Department of Business and Economic Development and Tourism's most current Input-Output model (1991) to estimate the impacts of the project. Direct impacts represent the initial expenditure or job creation; indirect impacts represent inter-industry purchasing effects; induced impacts represent household spending effects.

For the purposes of these analyses, it is assumed that construction of the project would begin in the latter part of 1992, with an opening of the resort targeted in the latter part of 1995. The current development plan envisions a total of 84 dwellings built. The Amaremont would have 36 bungalow units spread over 15 acres, and it would also include the plantation homestead. Initial development of the 45 residential lots for the development site would take place at the same time that Amaremont is built.

#### 5.1.2 Employment Impacts

The proposed Amaremont project generates three types of employment opportunities:

- Direct Employment: jobs that are created by the project, such as permanent resort staff, resort workers such as maintenance crew, cooks, and the like.
o Indirect Employment: jobs that are created as the development project begins to buy goods and services from local business entities.

o Induced Employment: jobs created as the project-related employment begins to spend their income.

The project also creates employment in two phases: short term employment during construction of the resort and long-term employment during operation of the resort.

5.1.2.1 Employment During Construction

Direct Employment

As noted above, the construction of Anarensort, required infrastructure, and on-site development for 45 residential lots would occur in the latter part of 1994 and continue into 1995.

Direct employment is estimated based on experience of comparable resort-related facility construction projects in the state. During the one-year construction phase, the project is expected to generate jobs for 81 persons, with an estimated construction payroll of $3.83 million.

Indirect and Induced Employment

The direct employment of construction workers at the resort development would bring the purchase of goods and services on the island and elsewhere in the State. The latest (1988) State OBEDETZ'S input-output model calculates that 2.18 additional full-time jobs are generated for every full-time job in the building industry and 1.77 additional jobs for every full-time job created in the infrastructure sector of the construction industry. As indicated in Table 5.1, the additional 157 jobs would be created as a result of these indirect and induced employment multipliers.

The proposed Anarensort entails a relatively small-scale construction project and it is expected that the construction job generated by the project would be fully absorbed by the Hawaii County construction industry. However, the bulk of an additional 157 jobs created by indirect and induced employment may be captured by other islands, particularly by Oahu.

Total Employment

The total employment generated by the project during the construction period is estimated to be 238 person-years. As noted above, the county is expected to capture at least 81 direct employment and some fraction of the remaining 157 jobs created by indirect and induced employment.

5.1.2.2 Employment During Operation

Direct Employment

The proposed operational employment is summarized in Table 5.1 and Table 5.2 below. The total of 101 full-time jobs would be generated from the operation of the Anarensort project.

Indirect and Induced Employment

Direct operational employment would create additional employment in both the county and also elsewhere in the State. The indirect and induced employment multiplier for resort operation (basically dining, drinking and amusements sector) is estimated to be 0.9.

This means that an additional 9.1 of full-time equivalent indirect and induced jobs is generated for each full-time employment in resort operations. Thus, indirect and induced employment can be expected to be 90 full-time equivalent positions during the operational period.

5.1.2.3 Employment During Construction Of Residential Lots

Construction of the Residential Lots also creates both direct and indirect/induced employment over the construction period. Table 5.2 shows that 75 direct jobs would occur when the houses are being built. In addition, 156 jobs can occur as indirect/induced employment for the same period.

5.1.3 Income Impacts

Anarensort development at Kukuihaele would be expected to have a positive impact on personal and household income for residents of the island and state. It is quite possible that businesses establishments both in Honokaa town and Waimea may realize benefits from visitor spending. There may even be new shops catering to visitors in Kukuihaele. How much business the new resort development would generate depends on a number of factors such as occupancy rate of the resort, spending pattern of the visitors and so on. Nevertheless, business would capture a share of both direct and indirect and induced income generated by the development.
### Table 5.1
Projected Direct Employment for Facility Construction (Person-Years)

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Construction Cost ($'000)</th>
<th>Direct Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bungalow and Other Hotel¹</td>
<td>4,250</td>
<td>53</td>
</tr>
<tr>
<td>Infrastructure²</td>
<td>6,529</td>
<td>32</td>
</tr>
<tr>
<td>Land Development²</td>
<td>7,100</td>
<td>16</td>
</tr>
<tr>
<td>Residential Lots²</td>
<td>11,250</td>
<td>75</td>
</tr>
<tr>
<td><strong>Total Direct Employment</strong></td>
<td></td>
<td><strong>156</strong></td>
</tr>
<tr>
<td>Indirect/Induced Multiplier³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotel Construction</td>
<td>2.10</td>
<td>72</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>1.77</td>
<td>45</td>
</tr>
<tr>
<td>Residential Lots</td>
<td>2.18</td>
<td>164</td>
</tr>
<tr>
<td><strong>Total Indirect/Induced Employment</strong></td>
<td></td>
<td><strong>321</strong></td>
</tr>
<tr>
<td><strong>Total Payroll¹</strong></td>
<td></td>
<td><strong>3,825</strong></td>
</tr>
</tbody>
</table>

**Notes:**

¹ Construction job for hotel units is based on the average of one full-time construction job generated for every $100,000 spent to build the site.
² One generation for infrastructure construction is based on 0.7 jobs per $100,000 spent.
³ Based on construction of 45 units at $250,000 per unit.

### Table 5.2
Planned Employment at Amawresort

<table>
<thead>
<tr>
<th>Operation</th>
<th>Number of Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rooms</td>
<td>10</td>
</tr>
<tr>
<td>Food and Beverage</td>
<td>35</td>
</tr>
<tr>
<td>Minor Operations Department</td>
<td>10</td>
</tr>
<tr>
<td>General Administrative</td>
<td>22</td>
</tr>
<tr>
<td>Marketing</td>
<td>1</td>
</tr>
<tr>
<td>PHRC (facility Mgmt)</td>
<td>17</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>101</td>
</tr>
<tr>
<td>Indirect and Induced Employment</td>
<td>90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>191</td>
</tr>
</tbody>
</table>

#### 5.1.3.1 Direct, Indirect/Induced Income During Construction

Personal income is defined as wages and salaries paid to direct construction and operational employees at Amawresort. Household income is that which is generated as indirect/induced income.

Estimated construction expenditures for Amawresort is $13.9 million. Upon completion, an output of $13.9 million would be created and at the same time direct personal income of $4.56 million would also be generated. This direct personal income would generate an additional $4.57 million household income as the indirect/induced income. Thus, the combined total personal and household income (direct, indirect/induced) during the construction period can reach $9.14 million, as shown in Table 5.3 below.

#### 5.1.3.2 Direct, Indirect/Induced Income During Operation

Once Amawresort opens it would continue to generate direct personal income for each year of operation. Table 5.3 summarizes direct, indirect/induced output and income by activities. For example, direct income from the first year of operation is estimated to be $1.626 million. An additional $1.1 million is expected to be generated as indirect/induced income. Thus, for the first year the project could generate a total income of $2.7 million. By year 2000, the total income from operation of Amawresort can reach $5.9 million and $7.6 million by year 2004 as shown in Table 5.3.
### Table 5.3
Output and Income Impacts During Construction and Operation (1993 Dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anahuan Resort Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>4.229</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect &amp; Induced</td>
<td>0.995</td>
<td>4.229</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hotel Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>6.529</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect &amp; Induced</td>
<td>1.099</td>
<td>6.558</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Land Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>3.160</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect &amp; Induced</td>
<td>1.033</td>
<td>3.192</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resort Operation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>0</td>
<td>3,123</td>
<td>8,543</td>
<td>11,205</td>
<td></td>
</tr>
<tr>
<td>Indirect &amp; Induced</td>
<td>1.073</td>
<td>0</td>
<td>7,251</td>
<td>9,274</td>
<td>12,023</td>
</tr>
<tr>
<td><strong>Total Direct Expenditure</strong></td>
<td>13,879</td>
<td>3,123</td>
<td>8,543</td>
<td>11,205</td>
<td></td>
</tr>
<tr>
<td><strong>Total Direct Income</strong></td>
<td>4,562</td>
<td>1,026</td>
<td>2,841</td>
<td>3,683</td>
<td></td>
</tr>
<tr>
<td><strong>Total Indirect/Induced Expenditure</strong></td>
<td>12,915</td>
<td>3,251</td>
<td>9,274</td>
<td>12,023</td>
<td></td>
</tr>
<tr>
<td><strong>Total Indirect/Induced Income</strong></td>
<td>4,573</td>
<td>1,191</td>
<td>3,048</td>
<td>3,952</td>
<td></td>
</tr>
<tr>
<td><strong>Total Output Impact</strong></td>
<td>27,794</td>
<td>6,474</td>
<td>17,917</td>
<td>23,228</td>
<td></td>
</tr>
<tr>
<td><strong>Total Income Impact</strong></td>
<td>9,136</td>
<td>2,287</td>
<td>5,889</td>
<td>7,625</td>
<td></td>
</tr>
<tr>
<td><strong>Residential Lots</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>7,750</td>
<td>3,750</td>
<td>3,750</td>
<td>3,750</td>
<td></td>
</tr>
<tr>
<td>Indirect/Induced</td>
<td>0.995</td>
<td>3,731</td>
<td>3,731</td>
<td>3,731</td>
<td></td>
</tr>
<tr>
<td><strong>Total Output</strong></td>
<td>7,750</td>
<td>7,481</td>
<td>7,481</td>
<td>7,481</td>
<td></td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>2,459</td>
<td>2,459</td>
<td>2,459</td>
<td>2,459</td>
<td></td>
</tr>
</tbody>
</table>


5.1.4 Summary of Economic Impacts

The economy of the County of Hawaii, and in particular that of the Hamakua region, would benefit from the development of the proposed Anahuan Resort project at Kualoa. During construction approximately 81 direct jobs at site would be created, with an additional 157 indirect/induced jobs to support the construction activities.

During the construction period, approximately $4.5 million in direct income would be generated, with an additional $4.5 million in indirect and induced income that can also be generated within the State of Hawaii.

Once the resort is in operation it would create 104 permanent jobs, with an additional 96 direct/indirect jobs. Total new jobs for the State economy is estimated to be 190; total increased output for the State economy is estimated to be $27.8 million. During the years of resort operation it is expected to generate a total annual income of $2.1 million in 1995 to $7.6 million in year 2004. The direct effects are expected to have primary impact on the economy of the County of Hawaii; the indirect and induced effects are expected to have some impact on the state-wide economy.

The Anahuan development is expected to contribute in creating 75 direct and 164 indirect/induced employment. This development would also generate $7.3 million in direct and indirect/induced income over the construction period.

5.2 Fiscal Impacts

This section describes the expected fiscal impacts of the proposed development in terms of additional revenues and expenditures for the County of Hawaii and the State of Hawaii.

5.2.1 Methodology

The analysis separates the effects of construction from the effects of operation for the purpose of estimating revenues. State revenues, accruing from the construction phase, use estimated tax burdens and are based on the estimated value of construction. These revenue impacts are sensitive to the assumptions underlying construction value estimates. Likewise, county revenues accruing from property taxes on improvements to property are based on the estimated value of construction and are sensitive to the underlying assumptions.

State revenues from resort operation are conservative. These revenues are limited to the general excise tax receipts resulting from retail operations of the resort.

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Increased resident and visitor populations resulting from the project would create fiscal impacts at both the State and County levels. It is assumed that the increased demand for residential living space would require greater public services and infrastructure, which in turn would result in increased revenues for the State and County. It is also assumed that the increased demand for professional services would result in increased revenues for those service providers as well.

It is further assumed that the increased population would result in a need for additional public services, such as education, healthcare, and law enforcement. The increased demand for these services would result in increased revenues for the State and County. The increased population would also result in increased demand for goods and services, which would result in increased revenue for the State and County.

For visitors, the analysis uses a modified average revenue and cost approach with visitor expenditure data from the Hawaii Visitors Bureau and visitor-sensitive components of State and County operating budgets.

Per capita estimates of revenue contain all sources of revenue, including taxes, user fees, and other sources. These revenues are roughly proportional to population and income, and the average revenue approach produces results which are neither aggressive nor conservative. At the State level, revenues are allocated to the extent that new residents of the project are already residents of the State. At the County level, revenues are allocated to the extent that new residents of the project are already residents of the County. The analysis uses these average estimates for full-time residents of the project, assuming 25 percent of the project population.

Per capita estimates of expenditure estimates contain all expenditures, including operations, maintenance, debt service, and cash capital expenditures. These estimates are likely to be conservative because the average cost approach does not account for economies of scale in the production of government services.

5.2.2 State Fiscal Impacts

Tax revenue during the construction phase of the project is expected to result from general excise tax on direct cost of construction, property tax on building material, conveyance tax, and income tax. The total tax revenues to the state from construction of Anahilea Hotel is estimated to be $913,700. Anan Villa homes are being constructed, too, would generate similar tax revenues to the state amounting to additional $926,600 as indicated in Table 5.4. The total construction-related tax revenue is $1,850,300.

**Table 5.4**

<table>
<thead>
<tr>
<th>Tax Type</th>
<th>Rate (%)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Excise Tax</td>
<td>4.17</td>
<td>$576.8</td>
</tr>
<tr>
<td>Excise Tax on Building</td>
<td>4.17</td>
<td>$576.8</td>
</tr>
<tr>
<td>Material Tax</td>
<td>0.13</td>
<td>$19.0</td>
</tr>
<tr>
<td>Conveyance Tax</td>
<td>0.05</td>
<td>$4.9</td>
</tr>
<tr>
<td>Income Tax</td>
<td>3.40</td>
<td>$116.0</td>
</tr>
<tr>
<td>Construction of Residential Lots</td>
<td>4.17</td>
<td>$588.4</td>
</tr>
<tr>
<td>General Excise Tax</td>
<td>0.13</td>
<td>$18.7</td>
</tr>
<tr>
<td>Excise Tax on Building</td>
<td>0.05</td>
<td>$2.2</td>
</tr>
<tr>
<td>Material Tax</td>
<td>3.40</td>
<td>$132.3</td>
</tr>
<tr>
<td>Total Taxes/Construction</td>
<td></td>
<td>$1,850.3</td>
</tr>
</tbody>
</table>


1Income tax revenue based on direct, indirect, and induced income with tax burden of 2.4 percent.
2Excise tax rate of 4.17 percent on 65 units of residential lots at $250,000 per unit.
3Income tax revenue based on direct, indirect, and induced income from residential lots and improvements and construction with tax burden of 3.4 percent.

As indicated in Table 5.5 below, the annual excise tax revenues from the resort operation is estimated to be $124,900. Annual tax revenues from primary residents is estimated to be $98,400. Annual state excise tax revenue from visitors, who are assumed to pay income and other taxes elsewhere, is estimated to be $265,900. The total state tax revenue from operation is $391,900.

In addition, during the operational phase of the development, part-time and full-time employees would pay income taxes, excise taxes, inheritance tax and other taxes. The visitors would be paying excise tax on their expenditure.
Table 5.6
State of Hawaii Operating Expenditures1

<table>
<thead>
<tr>
<th>Source</th>
<th>Total</th>
<th>Per Resident</th>
<th>Per Visitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Government</td>
<td>$331,005,886</td>
<td>$259</td>
<td>0</td>
</tr>
<tr>
<td>Public Safety</td>
<td>$121,889,765</td>
<td>$119</td>
<td>$119</td>
</tr>
<tr>
<td>Highways</td>
<td>$12,841,632</td>
<td>$72</td>
<td>$72</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>$45,750,104</td>
<td>$41</td>
<td>$41</td>
</tr>
<tr>
<td>Health &amp; Sanitation</td>
<td>$186,316,810</td>
<td>$168</td>
<td>$168</td>
</tr>
<tr>
<td>Hospitals &amp; Institutions</td>
<td>$167,947,449</td>
<td>$152</td>
<td>0</td>
</tr>
<tr>
<td>Public Welfare</td>
<td>$478,658,769</td>
<td>$428</td>
<td>0</td>
</tr>
<tr>
<td>Education</td>
<td>$1,122,513,027</td>
<td>$1,013</td>
<td>0</td>
</tr>
<tr>
<td>Recreation</td>
<td>$43,298,776</td>
<td>$40</td>
<td>$40</td>
</tr>
<tr>
<td>Utilities &amp; Other Enterprises</td>
<td>$221,061,909</td>
<td>$191</td>
<td>0</td>
</tr>
<tr>
<td>Debt Service</td>
<td>$276,820,256</td>
<td>$246</td>
<td>0</td>
</tr>
<tr>
<td>Retirement &amp; Pension</td>
<td>$71,299,811</td>
<td>$64</td>
<td>0</td>
</tr>
<tr>
<td>Employer's Health &amp; Hospital Insurance</td>
<td>$1,013,474</td>
<td>$1</td>
<td>0</td>
</tr>
<tr>
<td>Employment Compensation</td>
<td>$47,845,711</td>
<td>$43</td>
<td>0</td>
</tr>
<tr>
<td>Grants in aid of Counties</td>
<td>$73,471,454</td>
<td>$66</td>
<td>$66</td>
</tr>
<tr>
<td>Urban Redevelopment &amp; Housing</td>
<td>$721,005,449</td>
<td>$290</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$87,479,422</td>
<td>$79</td>
<td>0</td>
</tr>
<tr>
<td>Cash Capital Improvements</td>
<td>$203,833,695</td>
<td>$274</td>
<td>$274</td>
</tr>
<tr>
<td>Total</td>
<td>$4,774,409,841</td>
<td>$3,586</td>
<td>$780</td>
</tr>
<tr>
<td>Adjusted Total (1992$)</td>
<td>$1,094,120</td>
<td>$1,054</td>
<td>$860</td>
</tr>
<tr>
<td>1990 Resident Population</td>
<td>1,106,229</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Table 5.5
Projected Annual Revenues to the State From Operation of Anaresort

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation/Excise Tax1</td>
<td>$124.9</td>
</tr>
<tr>
<td>On Resort Residents</td>
<td>$120.2</td>
</tr>
<tr>
<td>General Excise Tax1</td>
<td>$202.6</td>
</tr>
<tr>
<td>Income Tax</td>
<td>$30.0</td>
</tr>
<tr>
<td>Other Tax</td>
<td>$177.6</td>
</tr>
<tr>
<td>Visitors</td>
<td></td>
</tr>
<tr>
<td>General Excise Tax2</td>
<td>$265.5</td>
</tr>
<tr>
<td>Income Tax</td>
<td>0</td>
</tr>
<tr>
<td>Other Tax</td>
<td>0</td>
</tr>
<tr>
<td>Total State Revenue/Operation</td>
<td>$988.8</td>
</tr>
</tbody>
</table>

Notes:
1. Based on Anaresort total revenue at 4 percent tax rate.
2. Based on average annual income generation of $6.23 million from resort employment and $6.8 million from permanent residents from Anaresort with estimated tax burden of 2 percent.
3. Based on average annual income generation of $3.71 million from resort employment and $9.8 million from Anaresort development with estimated tax burden of 2 percent. It is expected that there would be 2.5 percent freedom equivalent development at the 450-unit development site. The average increase in population of 50 persons and 10 housing units per permanent residents are assumed.
5. Based on 19,787 visitor days with average daily expenditure of $500 at 4 percent tax burden less item (3) above (Visitor Expenditure Survey 1991).

As is shown in Table 5.6 below, the annual state expenditures for primary residents in Hawaii is $240,046 or $2,954 per person and for visitors in $46,440 or $860 per visitor. The total annual expenditure attributable to the proposed Anaresort project is $386,484 as shown in Table 5.7.
Table 5.7
Projected Annual State Expenditure
Due to Amnorsort
(1993 Dollars)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Resort Visitors'</td>
<td>54</td>
</tr>
<tr>
<td>Residents, Net Change</td>
<td>86</td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
</tr>
<tr>
<td>On Resort Visitors'</td>
<td>$46,440</td>
</tr>
<tr>
<td>Residents</td>
<td>$240,044</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>$286,484</td>
</tr>
</tbody>
</table>

Notes:
1Average occupancy rate of 69.5 percent, average two persons per room, 39 rooms.
2$900 per person state expenditure.

The net fiscal revenue and expenditure for the state due to the development of Amnorsort is summarized in Table 5.8 below. The estimated annual revenues are $988,800 and the annual expenditures are $386,484, resulting in a net increase of revenue of $602,316. Revenue/expenditure ratio is 2.6. In addition, the state realizes a one-time construction-related revenue of $914,000.

Table 5.8
State Government Annual Revenue and Expenditure
Due to Amnorsort
(1993 Dollars)

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Annual Revenue</td>
<td>$988,800</td>
</tr>
<tr>
<td>New Annual Expenditure</td>
<td>$386,484</td>
</tr>
<tr>
<td>Net Additional Annual Revenues</td>
<td>$602,316</td>
</tr>
<tr>
<td>Revenue/Expenditure Ratio</td>
<td>2.6</td>
</tr>
<tr>
<td>One-Time Additional Revenue from Construction</td>
<td>$914,000</td>
</tr>
</tbody>
</table>

Table 5.9 summarizes the projected annual County tax revenue from the Amnorsort development. The hotel facilities would generate $74,250 annually. Other improvements such as lodge, swimming pool, tennis court, community improvements, water and sewer improvements would generate an additional $65,290. Improved residential lots are expected to result in a revenue of $128,775, including buildings that are expected to come on line over the project life. Other county tax revenues from such sources as liquid fuel tax, motor vehicle weight tax, utility franchise tax, and other fees that result from new residents to the county are estimated to be $26,024. The total annual revenue from real property tax is estimated to be $268,349.

Table 5.9
Projected County Tax Revenue From Amnorsort Development
(1993 Dollars)

<table>
<thead>
<tr>
<th>Source of Tax Revenue</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel</td>
<td>$74,250</td>
</tr>
<tr>
<td>Other Facilities</td>
<td>$65,290</td>
</tr>
<tr>
<td>Improved Residential Lots</td>
<td>$128,775</td>
</tr>
<tr>
<td>Other Taxes</td>
<td>$26,024</td>
</tr>
<tr>
<td>Total</td>
<td>$268,349</td>
</tr>
</tbody>
</table>

Notes:
1Based on estimated value of $100,974 per room for 39 rooms, including plantation Inn and a combined land and building tax rate of $10 per $1,000 of assessed value.
2Other improvements valued at $6,529 million at $10 per $1,000 of assessed value.
3Total of homes with land value of $100,000 and improvements of $250,000 each.
4Total of $125 million less $25 million residential exemption (assuming 10 such exemptions) at $10.50 per $1,000 of assessed value.
5Assumed $210 per resident based on county revenue, excluding real property.

The annual county expenditure for residents is $60,746, or $811 per resident (see Table 2.10). The County also spends $227,864 or an average of $911 per visitor per year. Total annual expenditures that would be incurred by the County government attributable to Amnorsort development is summarized in Table 5.10. As a result, the total annual County government expenditure on account of Amnorsort is $97,340.

5.2.3 County Fiscal Impacts

The expected county revenue is generated primarily from the property tax levied on the new Amnorsort facilities, including 45 home development lots. The real property tax schedule indicates that all land except unimproved residential lots are taxed at $10 per $1,000 of assessed value, whereas $8.50 per $1,000 of assessed
### Table 5.10
**Projected Annual County Expenditure Due to Anahresort Development**

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Resort Visitor</td>
<td>54</td>
</tr>
<tr>
<td>Residents, Net Change</td>
<td>86</td>
</tr>
<tr>
<td><strong>Expenditure</strong></td>
<td></td>
</tr>
<tr>
<td>On Resort Visitor</td>
<td>$27,594</td>
</tr>
<tr>
<td>Residents</td>
<td>$65,746</td>
</tr>
<tr>
<td><strong>Total Expenditure</strong></td>
<td>$97,340</td>
</tr>
</tbody>
</table>

*Notes: 69.5% average occupancy rate, 2.4 persons per room, 39 rooms. $201 per resident and $412 per visitor expenditures by county.*

Comparison of County revenue and expenditure is recapitulated in Table 5.12. The County's annual revenue is $268,249 and its expenditure is $97,340. The net fiscal benefit to the County in the form of additional revenue is $171,009. The ratio of revenue and expenditure is 2.74.

### Table 5.11
**County of Hawaii Operating Expenditures, 1990**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Per Resident</th>
<th>Per Visitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Government</td>
<td>$12,648,854</td>
<td>$105</td>
<td>0</td>
</tr>
<tr>
<td>Public Safety</td>
<td>$36,102,476</td>
<td>$200</td>
<td>$160</td>
</tr>
<tr>
<td>Highways</td>
<td>$6,095,315</td>
<td>$50</td>
<td>$50</td>
</tr>
<tr>
<td>Health &amp; Sanitation</td>
<td>$4,851,235</td>
<td>$40</td>
<td>$40</td>
</tr>
<tr>
<td>Public Welfare</td>
<td>$3,294,277</td>
<td>$27</td>
<td>0</td>
</tr>
<tr>
<td>Public Schools</td>
<td>$250,239</td>
<td>$2</td>
<td>0</td>
</tr>
<tr>
<td>Recreation</td>
<td>$7,215,110</td>
<td>$60</td>
<td>$60</td>
</tr>
<tr>
<td>Interest</td>
<td>$5,083,110</td>
<td>$42</td>
<td>0</td>
</tr>
<tr>
<td>Bond Redemption</td>
<td>$3,022,600</td>
<td>$25</td>
<td>0</td>
</tr>
<tr>
<td>Pension &amp; Retirement</td>
<td>$5,909,407</td>
<td>$50</td>
<td>0</td>
</tr>
<tr>
<td>Mass Transit</td>
<td>$499,637</td>
<td>$4</td>
<td>$2</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$2,457,295</td>
<td>$20</td>
<td>0</td>
</tr>
<tr>
<td>Cash Capital Improvements</td>
<td>$1,067,000</td>
<td>$9</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$588,472,405</td>
<td>$735</td>
<td>$943</td>
</tr>
<tr>
<td>Adjusted Total (1992$)</td>
<td>$817,551</td>
<td>$811</td>
<td>$551</td>
</tr>
</tbody>
</table>

1990 Resident Population 127,317

CHAPTER 6 SUMMARY EVALUATION OF IMPACTS AND MITIGATION

The purpose of this brief chapter is to summarize concisely the socioeconomic impacts and associated mitigation measures discussed in previous chapters. Each impact that was judged to be of concern during the analysis in this report is considered here. The reader is referred to previous chapters for in-depth discussion of these impacts.

6.1 Significant Impacts

Several impacts associated with the proposed project may be reasonable judged to meet the definitions of "significant" in the sense of Chapter 341, HRS, and Title II, Chapter 200 of the Hawaii Administrative Rules.

Title II, Chapter 200, Section 12 includes among other criteria of significance the following:

4. Substantially affects the economic or social welfare of the community or State;

5. Involves substantial secondary impacts, such as population changes or effects on public facilities.

The proposed project has the potential to increase the population of Kukuihaele 75%, from 315 to approximately 550 residents. Whether this impact should be judged to be main concern or beneficial, however, is a matter of opinion in a community of diverse opinions. This impact is not mitigable because it is an essential component of the proposed project. Secondary impacts involving public facilities would be mitigated by a combination of the community benefit package (e.g., recreational facilities) and county and state requirements (e.g., roads, water system upgrades).

It should also be noted that a population increase of at least this magnitude could also be achieved through simple subdivision of the land in accordance with existing zoning.

A second significant impact is the potential contribution to the economy of Kukuihaele, Hana, and the County of Hawaii. Once the resort is in operation it would create 101 permanent jobs and an additional 90 direct/indirect jobs, yielding a total increased output in the State economy of approximately $7.8 million over its operating period. In addition, the annual fiscal revenues of over $3.77 million would be generated by the resort for the County and State (after consideration of per-visitor expenditures made by these governments). Although these figures may seem modest when considering the total State economy, they are very significant in the context of the economy of Kukuihaele and Hana. Furthermore, the property tax trust fund proposed by the developer will shield residents from negative, indirect impacts of this economic boost. Considering all these factors, the economic and fiscal impacts of the proposed project are significant and beneficial.

6.2 Summary of Other Impacts

Rural Lifestyle

Many of the concerns related to degradation of the rural lifestyle are mitigated by the design and theme of the resort. It is unlikely that a one-story, well-landscaped hotel of 16 rooms hidden on a large parcel accessed by a single, small road will constitute a major intrusion. Also, the "mixed with nature" theme of Kukuihaele Resorts, which seeks out and attempts to preserve local cultures and natural landscapes, is ideally suited as any resort hotel can be to maintaining the rural atmosphere of Kukuihaele.

Specific concerns related to cemetery expansions and residents' use of the developers' land appear to be easily mitigable using the provisions of the Developer's Letter of Commitment.

The aspect of the project least compatible with preservation of the existing atmosphere of Kukuihaele is the residential lots component. Even with strict enforcement of architectural and landscaping covenants proposed by the developers, these units have the potential to be intrusive.

The issue of the perceived identity and style of Kukuihaele village and the Hanaus District, along with potential value conflicts between locals and hotel guests/tenants, may continue to be troubling to certain individuals living in or near the community.

Nevertheless, it must be recognized that the rural lifestyle of Kukuihaele might be impacted independently of the hotel. If, as is assumed in Alternative 3, subdivision of the subject property proceeds in accordance with existing zoning, the greater densities and smaller lots might produce a less "rural" atmosphere than in the full-project scenario. Only if the land remains vacant (Alternative 4) will Kukuihaele be preserved precisely as it is. Even then, subdivision of adjacent Hanaus Surplus lands might bring about higher densities in the future.

Socioeconomic/Ethnic Change

The proposed project will introduce new residents whose background will be quite different from the existing community. Whether this impact will be enriching and broadening or a source of conflict depends upon the individuals involved.

77
Property Tax
The creation of a trust fund by the developer, as provided in the Developer's Letter of Commitment, can mitigate this impact completely.

Social Impacts of Employment
Viewed in the context of the Nanakuli District, with its large number of unemployed plantation workers and no alternative employment, the jobs entailed in the proposed project are undoubtedly welcome. Many of the positions in the Anaholu Resort, including maintenance and landscaping, require skills that are readily transferrable from plantation work. Furthermore, the resort will probably employ graduates of Nanakuli High School who will probably find it difficult to obtain local employment. Construction and indirect jobs will also provide benefits to residents.

It is still unclear to what extent current residents of Nanakuli will directly benefit from new employment opportunities. It is likely that many of those who help build the hotel and residential lots and work in the hotel will be from Nanakuli and other surrounding towns.

Some training will be necessary to prepare both former plantation workers and young employees for the hotel jobs. It appears that given coordination between the existing government programs and the practices of Anaholu Resorts itself, this training can easily be accomplished. It is also expected that satisfaction with jobs at the Ananahu Resort will be high, in keeping with that of the visitor industry in general and small, tourist hotel in particular.

Recreational Impacts

The community package offered as part of the Developer's Letter of Commitment, which includes upgrades to the Social Hall and construction of a swimming pool, a playground and other amenities, is an important community benefit.

The only potentially adverse recreational impact is the addition of visitors to an already "stressed" Waipio Valley. Although this project would likely add less than 5% to the existing number of visitors, the valley is currently over-capacity. This impact can be controlled by sensitive consultation of the developer with the Waipio Task Force, the shuttle companies and the appropriate state and county agencies.

REFERENCES


Hawaii County Planning Commission. 1991. Transcript of October 17, 1991 Hearing at Nanakuli High School in the Matter of Planning Director Initiated General Plan Amendment Change of Zone Amendment; Hanana Sugar Company State Land Use Boundary Amendments; Change of Zone Applications; Use Permit Applications; Special Use Permit Area Use Permits. Hilo.


Barbara Dart: Paiaillo resident and District Supervisor (Kohala to Waikaloa) for Hawaii County Economic Opportunity Council (HCEOC) for the last 25 years.

Kevin Bileg: President of the Hanakoa Business Association, owner of local construction and trucking company, and Paiaillo Resident.

Clyde Inada: Officer at Pioneer Federal Savings and Loan and representative of Hanakoa District Development Council, who was raised in Kuakiahele and is currently a resident of Honokaa. He visited Amana Dari in Bali.

Debbie Gudulao: Property owner in Waipio whose husband is from Kuakiahele; she works for HCEOC.

Reynolds Hanakeiwoole: Policeman, Honokaa resident, and president of the Hawaiian Civic Club of Hamakua.

John Keppeler: First Deputy, Hawaii State Department of Land and Natural Resources.

Jitsoe Nishida: Native of Kuakiahele living in Hilo.

Mildred Oshiro: Lifelong Kuakiahele resident and former postmistress.

Gladys Abiao: Kuakiahele native living in Waikaloa.

Bob Impean: Kuakiahele resident and owner of Last Chance Store.

Steve Strauss: Land Use attorney, community activist and resident of Kuakiahele (near Paiailloshieo).

Hidemi Miyasaka: Kuakiahele resident and former plantation supervisory employee.
Okay, it’s to disclose and uncover information. An Environmental Impact Statement does not make a decision one way or the other. It brings out information that the public and government agencies can use to help them decide what they should do, and so a good EIS brings out all the information it can.

What can we accomplish tonight? Well, first of all, we can review the project concept. We have maps, diagrams and other material here that can help you understand the project, and we have someone who is going to explain it. Well secondly, we can identify issues and concerns and we can encourage an open discussion of your thoughts, feelings, opinions, concerns about the project, both positive and negative. Third, we can contribute ideas to improve the project. Fourth, create a dialogue for future interaction. We plan to have another meeting of our Social Impact Assessment Team with the community, and we want you to help us structure that meeting. We also want you to help us identify other people and organizations who may want to contribute their view points to this Social Impact Assessment. They may not all be here tonight. We want to know about them.

So tonight’s meeting, what’s the format? First of all, we have an introduction, kind of boring, but it’s almost over. Then we have a project concept presentation and Roy Takemoto is going to do that tonight because he’s very familiar with the details of the project. Then we are going to have a short question and answer period on the project facts, and I say facts here. This is where you ask information of Roy about, you know, exactly how big is it going to be, how many homes, where is it going to be, that sort of thing — factual things. Then we are going to take a ten-minute break, and at that time you might want to come up and look at the exhibits for a little, and when we get back together again we are going to have an open comment period. And that’s when it’s time to voice your thoughts and concerns. I have some rules it’s like everyone to follow so we can have an orderly meeting and everyone can be heard and that is first of all, please state your name so that we know who is speaking, okay. We are recording this, and this will be part of a transcript that will be included in the Environmental Impact Statement, so we need to know who you are and what you want to say. Also, in your comments I would appreciate it if you try to state them in a positive way. In other words, what we don’t want is attacks on other people in this room or out of this room. We want to hear your opinion, but we should not attack others opinions because we want a free and open dialogue. We don’t want to have a situation where people are afraid to say what they want to say because of what someone else will say, so try to be as candid as possible. And at the end of all this, for those who are interested, we’ll have a round table, or maybe more like a square table discussion of the future meeting, where we want to do it, how we want to do it, who we want to have there, okay?

So, thank you very much. Without further ado, Roy is here to explain the details of the project.
Boy Tenante:

I will be explaining the project following the fax sheet. Do all of you have a fax sheet? If you don't, there is some outside. Raise your hand and someone can distribute a copy to you. So follow along on the fax sheet and also can you see this? Okay, what is Amanresorts? You folks have a history here of projects being proposed to you that we're not part of. We're not too aware of what's gone on before. This is a totally new project. Later on I will explain who is Amanresorts, but right now let me just explain the project as is in today, okay. I know a previous proposal was something like 200 hotel units. This one is very different. Amanresorts consists of three components. The first component is the high-rise hotel. The hotel is in this area. Just to give you an orientation of how a guest would get to the hotel. This is the turn-off through Kukuihaele, the broken bridge. The present proposal is to take the guests, let them feel the community of Kukuihaele going down this road. Take the road by the Rotan Catholic Church and enter here right to the lobby, and then there are 36 units and there's a restaurant, meeting room, library, other things that comprise a very low scale hotel.

The second component is Aman Hideaway. That's the plantation manager's house that would be preserved and renovated into four suites. It will be kind of like a bed and breakfast operation. All the landscaping at the plantation manager's house will be preserved as it is and maintained.

Third component is Aman Villas. Aman Villas is 36 lots, and these lots are spread out in this area by the Rotan Catholic Church area the county cemetery and a little bit here between the plantation manager's house and the social hall right in here. So that basically is the plan of the Amanresorts.

The supporting facilities, the water, waste water, roads, etc. are in the process of being worked out in detail. Presently, there will be no improvements, but to what extent, that's where we need to hear your input. Water, there will be probably a new well or something like that developed to give Kukuihaele Water System more capacity. Waste water would be a private treatment plant serving the hotel and civic facilities serving the individual lots. But the main benefit to you folks, you are here thinking what is there for us? The community benefits as presently proposed. You know, whatever I state tonight is not set in stone. That's what we are here for, so now is the time to express your ideas. The design can change. This is early enough in the project. The community benefits anyway include expansion of this social hall into an improved social hall and recreation center. What exactly that looks like, that's where we need your input and the developer needs your input to design that facility. What he proposes is for the guests and the residents to share that facility. I'll get into that later.

Another community benefit is to improve the existing Kukuihaele Park and the developer will also maintain that park. Another benefit, mainly for employees of the resort, would be housing or rental housing behind Tiger Camp. So that's the project. Now you may wonder how this project differs from other resorts on this island. That's where you need to understand Amanresorts. There's a folder behind the seats that you can look through the book that shows some examples of Amanresorts in other places around the world. The format that makes Amanresorts so successful, in fact, there's an article in that folder that shows one of the Amanresorts ranked in the top ten in the world, but what makes Amanresort special from the other resorts on this island, basically there are four things, and these are the objectives that I have listed under the project description on the fax sheet.

1. Maintain a low-key presence. This will not be like Wailea, Hawaii, you know, with a big sign that says, "Here is Kukuihaele." The Amanresorts likes to stay, you know, real low-key. The sign will be just a simple sign. If you didn't know Amanresorts was here you would probably drive right past the sign. Besides a low-key entrance, low-key, they also want one-story buildings. You know, everything is set down into the environment. Nothing big hotels like Mauna Kea multi-story or anything like that.

2. Another objective is to design the facilities to blend with the natural surroundings. Now, what does that mean? In this case, it means the rolling contours like at the point there where the Amanresort is proposed, it's kind of a slopey area. What they propose is not to alter that land form too much. They want to just design the site so that it fits in with the existing contours. Another means to design with a natural surroundings is the color of the buildings. They want everything to blend with the natural color, you know, browns, greens, things like that. And a lot of landscaping.

3. A third objective is to maintain the rural feeling of Kukuihaele. This especially is what kind of makes Amanresorts different. Some of you, a few of you may have been lucky to be sent to Bali, Indonesia, to visit on the Amanresorts there, and they will tell you that that resort kind of, one of the features is how it features the local culture. They hire local with good intentions. They want the guests to interact with the locals and that adds to the guest's experience. So in this case the developer came here, looked at Kukuihaele, and said, "This is it!" And why they picked Kukuihaele, I'm not too sure. It must be because of the ruralness here - your chickens, your pigs, your dogs, that sort of thing because that's why the developer probably picked Kukuihaele to give the guests this kind of rural experience in Hawaii.

4. The fourth objective is to integrate with the community. That's something, I don't know if that happens in any other resort in Hawaii, where the hotel operator deliberately tries to brings the guests in touch with the community.
Usually the locals are kind of second-class citizens, but in this case, you are one of the reasons, one of the attractions which the guests will come and experience at this resort. If you are nasty or give them stick, then probably they won't return. But on the other hand, that's why the developer wants to work with the community so that you accept his project. Be a part of that experience and give the guests that aloha spirit that they are trying to capture here at their resort which is a big reason why they decided to share this social hall and recreation center.

Now who is Amanresorts? Let me back up a little bit. The developers of this project are two entities — Royal Coast and Silverleafs, and Silverleafs is just another name for Amanresorts. Amanresorts is a hotel operator. They don’t just develop the hotel, sell it and run away. They develop the hotel, stay and they operate it. So that’s what kind of makes Amanresorts different from all the other projects that may have been brought before you in the past. Amanresorts currently has ten other resorts worldwide, and like I mentioned before, one of them was in the top ten, the one in Thailand.

Time Table: What are we talking about in terms of implementing this project? The EIS which we are engaged in now is targeted for completion by the end of this year. Throughout the process we will be updating comments from the community and anybody who wants to be heard on this project. A lot of you may not want to come up and speak tonight. That’s fine. Come to us between the breaks, after meetings call me at home. My contact, my number is on the fax sheet. Write letters to us. We want to hear, we want your input. So anyway, the EIS is targeted for completion by the end of this year. There are other permits that also need to be obtained. State Land Use District Boundary Amendment where some of the lands which are County rezoning. Now the target date to obtain those permits is May of next year. A second one is the currently zoned agriculture would need to be reclassified to urban. A third permit is Know, if the project is successful in getting those permits by May of next year, they shift gears to full steam in designing the project and that takes roughly six months. So by the end of 1994 is when they plan to start construction. Construction will begin sometime next year, the middle of next year is when work begins. I believe the plantation phases out sometime next year so the timing may be perfect to just slide into the job opportunities for this project. So, anyway, that’s all I’ve got. Any questions?

Christopher Ballhaus: I had a couple of questions that I wanted to ask. My name is Christopher Ballhaus. I’m Treasurer of the Wai Kukuihele Community Association. I also happen to be one of the people that was sent over to the Amanresorts in Bali. Do you have any kind of firm architectural plan about what the hotel is going to look like, or has that been considered yet?

Ray: Basically, a project like this goes through about three phases in design. There’s a conceptual schematic phase, that’s phase one. Then there’s design development where they go into more details. That’s phase two. Then there’s construction documents which is phase three where they go into really good detail. This project is at ground level — phase one is conceptual schematic design, so all we have at this stage is the site plan, and some of those renderings give you an idea of what the guest units would look like and a cutaway and elevation of the building.

Christopher Ballhaus: Well, I guess the reason I’m asking is because we went to the Aman Dari, like you say, it blended completely into the community. I mean, you could hear the pigs eating on the other side of the wall and stuff and it was really amazing how you could stand right there and not even know that it was there. It just looked like the rest of the community. But then we went across the Aman to the Aman Reef and it was like, you know, the ultimate nightmare of what an ugly resort can look like as far as I was concerned, you know. So as far as you know, getting the community to accept the idea of putting a resort here, I think a big part of that would be to give them a good idea of what exactly it’s going to look like, because, you know, how it appears, it’s going to have a real big impact, I’m sure. The other question I was wondering is how attached are you to the time schedule that you’ve set out there because...

Ray: That’s one of the few things that’s hard to change. We are very locked in to that.

Christopher Ballhaus: Locked into the time schedule. Because that was one of the points that they made with the Aman Dari. They spent twelve years negotiating with the community as far as getting all the little details worked out, and I look at that and it looks like we have nine months at the outside before you intend to get your permits, and it’s maybe going to be a little bit harder to work out the details in that amount of time.
Bay:

Well, I don't know how much we can do about the schedule, but between us here we are at your disposal to get as much as quickly your concerns as possible, so we do our best under those constraints.

You can move up. If you want to speak, you can just line up or something.

Merrie Toledo:

My name is Merrie Toledo. I'd like to hear what our councilman has to say first.

Councilman:

Good evening. Thanks Merrie. I was expecting this. As far as I can recall, we had one briefing about this project that was some time last year. And also had a few things to say, and it's only because I wanted to make it clear for one thing at that time to the community that this proposed project was not in any way connected with Hamakua Sugar Company, and I think that was made clear tonight. When Eugene McCain who is one of the principals in this project first got involved with Hamakua Sugar Company, and that was that he was principally in charge of marketing the lands so that Hamakua Sugar Company would be able to continue its operations, and then we found that because of the original attempt to sell the land was not successful at that time. It's simply because what they were testing to sell were agriculturally zoned lands in large parcels. So at that time, I'd like to go through this to give you a history of where we came from and why we are here now.

At that time, the state and the county jointly decided to get together and see if they could look at certain lands from the entire Hamakua Coast and provide for zoning which would enhance the value of those lands and this is something that most of you were a part of when we went through the reviewing process and the process of drafting the so-called Regional Plan. We know that the focus of that plan was Waipio Valley because the obviously this land if given the proper zoning would greatly enhance its value, and because it's a valuable place near a beautiful place that if so, the lands here alone would have brought enough revenue to enable the sugar company to continue operating. And the basic reason why the Regional Plan was drafted and adopted was only to provide jobs and continue providing jobs for Hamakua Sugar Company workers. That was the primary reason. And through the negotiations to the drafting of the plan that's when I really got to know Mr. McCain because being one of those who was in charge of the marketing aspects, he had to come and speak to those who were involved and who would ultimately be making the decisions. So in our discussions because it was going to be a large project. And when we speak of community benefit assessments, he is in some ways committed to one thing: one of the community benefit assessments was to continue this highway 200 up to Nuuanu Road and connect up at Kualoa. That's one of those, and the Regional Plan on this also suggested that Hamakua Sugar Company or the bank provide for 18 acres of land at Honokaa adjacent to Honokaa School for future expansion to provide land also along side Hamakua Highway above the transfer station a site for future building of a fire station. Over here we provided for a solid waste transfer station. It provided for these lands here which are leased by its present owners to be deeded in fee to those who are presently on it and to also provide the lands in fee to those along Tiger Camp in Kohala Camp and to those homes at the park site that the Chilimansu, Tuakumsu and Algares to also have those lands which they are using now which was previously used by them for gardening or for whatever uses, and at that time the company said you can use it as long as you need. So because of that sort of arrangement, it was decided that all of these would be deeded in fee to those who own the land. And it was also agreed that the park would be expanded and a new community center would be built and that the gravely expansions in the bottom part of the highway, the county and Japanese graveyards, would also be expanded and this was a request of the community. The community had a great deal of input into all of these discussions. When you come down to the more detailed development of the project at that time it was suggested that the railroad be moved away from the existing highway and that access to whatever new development would be at a different point. The main reason is that they didn't want to see traffic traverse on this village road because of its narrowness. And they also agreed that they would widen it and provide for bikeway and jogging so all of that was agreed upon. And upon that basis the community along the entire coast felt that in lieu of the fact that jobs would continue, a trade-off such as this could be accepted, and I know there were differences of opinions by many people. But at that point they agreed with it. Even for one is the very beginning when this very proposal was briefed across me, I told them look, basically what we've been looking at is visiting destination areas primarily located along the south Kohala coast, and that's where the concentration has been, but only because it's not the need to have our sugar company continue did I consent and participate in this. Unfortunately, things did not materialize as we wished it would have. And at that point when Mr. McCain asked that things not going, that way he approached me and asked me of my opinion about the sugar company's house and certain other lands that he could probably get in return for his services. And I said, all we need to see is a conceptual plan or something that we can look at and make a determination. That's where we left off at that time and he came back from time to time with additional information because I believe he had to work with his other partner, Mr. Zepha in trying to put some kind of working arrangement together and see the investments that they will be making. And when it finally started to have some indication that this would be a good project, he then came to the community association. Conceptually, I told him because of the jobs that could be provided, let's take a look at it. I can see that it may be good for the community. I told him my concerns at the time, and in fact, even during the original planning of the route here, he indicated that he'd provide beach access. In fact, down at cement pier where we all are familiar with where we used to go fishing, he suggested that he
could put up a pavilion and a picnic area for people who go fishing. And be mentioned that and then during these discussions, you know, I told him, look, the previous attempt by the Hamakua Sugar Company and the bank to rezone this area included a real property tax package. In fact, we negotiated with Hamakua Sugar Company at that time because the whole community would be enveloped with tourism development it would sure be an increase of evaluation of the property. And because of that valuation, a real property tax would be so high that people would not be able to pay for it. In fact, the demographics show the majority of the people living here are already pensioned and that was our concern. So what we did was to have them to commit to put money into a trust fund so that as they develop and the real property tax increased, the trust fund would address the increase in real property taxes that you folks had to pay. In fact, the trust fund would be paying the additional tax that you folks would be levied with should this resort be built. That was all agreed upon at that time. So when he talked to me I told him about the same concern. I told him about some of the commitments he made in which I would expect him to adhere to. And he said he executed and he said we can leave this for further discussion and negotiations at a later date. But finally I told him, you know, because of the nature and the situation that is involved now, because it will no longer address the very intent that we had when we drafted the original plan. My support would only be on the contingency that the community would support it and that's the commitment I gave him. And to be honest with you folks, I would support the project only if the community would extend its same support. So, we are looking at this as a positive way. I think Ron said clearly that they are open, and if you people feel that it is something that you'd like to further explore, and if you think that things weren't addressed, or that should be addressed because this is just preliminary, sit down with them and talk to them and express your concerns. And at the very end if you still feel that you folks can hardly support it, then so be it.

How, I'm open for any questions. Jim.

Jim:

Is this area here (inaudible)? How do you feel? I mean, I...

Councilman:

It's borders are from Paunilo extending until the northern boundary of Waipio Valley, so just on the, you know, the zigzag road, that whole cliff. That's how I interpret that.

Jim:

If we're talking about renewing apa. And, how do you feel about that?

Councilman:

Well, let me tell you the sentiments expressed in the council is that, because there was some individuals who mentioned the fact that this was in the making and it was no secret because it was already published. And then some of the council individuals, even I said that, look, we understand that certain applications have been submitted. We will have to consider that project and any other project that may come in on its merits and see what, well basically on its merits. And notwithstanding the fact that the resolution has been passed. The resolution I have to remind you folks is not a law. It's just a statement of facts and making a statement. It does not have a cause and effect of law unless you have an ordinance. So, but the farming community development council was the actual sponsors of the resolution. And as I stated again in the other meeting, I was a conduit in which that came about. My staff worked on it and then that came about. Any further questions?

Jim:

The ordinance is still in effect (inaudible) 3 tax key.

Councilman:

No, it's not. The mayor submitted an ordinance to the council and it's still held in abeyance. I'm, some of us are trying to see if we can get that up for consideration and have it adopted. It will have a blanker effect on the entire island. It will freeze property taxes I think in 1990 or 1991 level.
Jim:
He's talking about some ten-year assessment, you know.

Councilman:
That's a different measure. That's in effect already.

Jim:
(Inaudible).

Councilman:
Yeah, that's in effect already.

Jim:
(Inaudible).

Councilman:
Yeah, that's in effect. You can still do it.

Jim:
(Inaudible).

Councilman:
Yeah, well that's really no big problem. But the thing is, after every ten years it's left for review and you got to reapply, and when you reapply after every tenth year they come in there and appraise your land. If that is the one, then that's what it says. You know, after ten years, the first ten years okay. You pay low tax. Then all of the developments come in. Your property escalates in value. Then at the tenth year when you got to renew that exemption they come in and reappraise your property and it will be on the prevailing evaluation so every tenth year you see an increase in your property. The measure that the mayor submitted to the council is the one that we want to see, but some people basically can't accept the results of what actually would, how that would be applied and they contend it's not fair. Larry.

Larry:
So the assessment on the taxes, you said every ten years they reassessed it. The price will go up if you have a resort coming and your taxes go up, how would that work as far as, you know, down the road if you want to dedicate up to your family. Is that also reassessed the value also? You know, if you give it to your children.

Councilman:
It does not cover that situation. We're looking at a way at which we can provide for exemptions in which let's say, for instance, a couple owns a home and then to some unfortunate circumstance, they go through a divorce. You know, then you have to divide that estate, you know. So we'd like to make it so they cover that kind of situation. We'd like to make it so that you can cover those who are elderly in which the one that's going to be in the home, okay. So if you transfer ownership in the sixth or seventh year, you got to go all the way back to the first year to pay the back taxes. It's like an ag. dedication measure. David.

David Cicela:
Since this is being recorded, we are going to have people come up to the mike to give their questions. Otherwise, we might not be picking it up at all.

Councilman:
David Cicela, the main use I understand that we want to make of the sugar company lands is diversified agriculture, and I guess any resort, no matter how well designed it is, it is going to be a signal to land speculators that this land is going to be only for resorts, and as soon as land prices go up, then you can't afford to be a farmer. So, you know, diversified agriculture is only going to work if land prices stay low enough that a guy can afford ten acres and then plant whatever and make a profit on it. That's my main concern. You know, it looks like a great resort, but it's a resort and what it does to land prices is just going to ruin agriculture.

I'd like to find out if we have any more questions for Mr.-inaudible here. Thank you very much councillor.

Larry Miller:
Thank you Ta-K. My name is Larry Miller. I'm the vice-president of the Waipio Kukuihaele at Lahainaluna Community Association and that's the same if anybody comes up and says Waipio Kukuihaele Community Association. So, the question on the resort I thought you stated that the entrance would come down this road between the social hall and the store. That would be the main entrance into the resort. Okay.
And that is true, okay. And we'll all say trucks and maintenance, you know, delivery trucks use that same route. Yes, they will use the same route. What will be the entrance to the manager's house? Will it be the same route?

Roy:

Will it be the same route? Yes.

Larry Miller:

Yeah, by the store, up to the manager's house. So the houses that are going to be developed Aman Villa, will that be the same entrance?

Roy:

Right.

Larry Miller:

Past the store...

Roy:

Uh-huh. One, two, three, four, five, six units.

Larry Miller:

Yeah, six, okay. So, how will you develop an entrance? Will it be the same entrance to the affordable houses then, or will that come out the main highway?

Roy:

That has not been designed.

Larry Miller:

Oh, I see.

Roy:

I'm not sure if the State would allow access from this highway.

Larry Miller:

Okay, so that possibly could come the entrance, also. And so everybody in this camp is going to get a lot of traffic past the store, okay.

Roy:

No traffic, they have no, but we have retained a traffic engineer who will be studying the traffic.

Larry Miller:

Could you explain to me your relationship with Eugene McCain and Amanta...? Who pays you and that kind, I mean, are you being paid by Amanta...?

Roy:

We are like any private project in Hawaii. The EIS is funded by the applicant in this case. Aman Silverlinks (inaudible) Coast, yes.

Larry Miller:

Okay, and you are in charge of that EIS, is that correct?

Roy:

Right. I am...

Larry Miller:

You're the leader of the...

Roy:

Right, I'm the lead consultant for the EIS.

Larry Miller:

Okay, thank you very much.

Jim Kane:

Hello, my name is Jim Kane. I live in Wai'anae. I must say for objective folks you do a pretty good job of PR. And the reason I say that is all the little graphs and things
I've seen I see all these positive things being put forth, but there is no question on whether or not the people here really want to see any resort at all. You know, I'd much rather see something like a pet factory there instead of all these hotels and resorts. The question is do I have access into Waipio and what is the ultimate goal of the resort? About a month and a half ago I happened to be at the River Mouth in Waipio at the beach with my family and Eugene McCain was there. And we got to talking and he mentioned he had plans of a horse trail ride down the access road into Waipio for access for his guests into the valley. Has this been mentioned? You know, I'd like to know what the status is on this plan.

Roy:

(inaudible).  

Jim Kane:

Eugene McCain told it to me himself.

Roy:

If that is a real proposal, then we need to discuss it in the EIS and then you have an opportunity to comment, and if that's something that you are concerned about, then that's something that they should probably reconsider.

Pam Ketcha:

Hi, I'm Pam Ketcha from the Honokaa area, and I just was curious, what is the largest acreage that Ananesorts has at their other locations?

Roy:

I can't answer that question. I wish I was able to go to all the others, but I don't know.

Pam Ketcha:

Yeah, I noticed on your paper that you say this particular one is approximately 113 acres?

Roy:

113 acres, yes.

Pam Ketcha:

Yeah, is there a possibility down the road that they will also purchase other adjoining property or properties nearby and continue developing this resort?

Roy:

Um, that wouldn't know. That's something that in subsequent meetings with the developer (inaudible) in our Ananesorts you can raise that question. If that's the concern that you have about future expansion, we need to identify that in the EIS, and if there's ways that we can mitigate it or control it some how, then we need to work with you to try to flush out those ideas.

Pam Ketcha:

Yeah, I would be concerned about also setting a precedent that once this is established that other developers will also try to buy tracts of land even if it isn't by Ananesorts, and this will definitely change the community. My husband and I came out of a community that was rural and developers came in and the entire community lost its history, lost every meaning that it had. And the newcomers just went out to work, came back in their homes and could care less about the community. So Kukuihale is a special place as is this whole area, and you know, I think all we are just concerned, you know, what will happen.

Joseph Baladosa:

Aloha everybody. I'm Joseph Baladosa from Waipo Valley. Now I'm at Kukuihale. You know, last year we had some development come over here, and we had a lot of people that came in more than a crowd, you know we are concerned about people that, you know, on the job. You know, on the last year subject we had we had were talking about the road because we were concerned about our guys. Like our guys, we, we're over 72 years old and I saw one of the trad __ over here in the Kukuihale Community, Hanalei Cloud. You know, supporting these developments come in. Is these going to be a safety for everybody, because now, you know, over here in Kukuihale a lot of problem, it would be a safety that for everybody. The reason why I ask this because, you know, right now we live in Kukuihale, we have peace, we have no problem, and I think, I don't know how long we're going to last because I know we have the future of our children. But, you see the point is supporting this development come on. Right now I live at Tiger Camp. Tiger Camp at least we can see where they get hula onto Hilo, whether they get it off or what. The only point we consider, tonight I'm going to come here for this meeting and I'm going to say something because when we were down here, nothing was getting involved, we don't see anything that has been built up. Anyone in Waipo are going to be, really know about tourism, I know the tourist doesn't make trouble with
us. But the point is, all we are asking for is the future of the old people like us guys. You know, today we have a lot of young guys. You know, I can go more than ten minutes to talk five minutes, but new age is how developments change and good safety is the guarantee that jobs going to be for the people just in case Hamatuk Sugar Company may fold up. Because, you know, I want to entertain that Mauna Kea be shut down. Rarely seldom though. Now, supposing the people doesn’t come on, how guaranteed they are going to support the people on the job. May God bless you all.

Roy:

Let me just make sure I got that. So your concerns were the guarantee of jobs and safety. By safety mean the traffic or crime?

Joseph B.:

Traffic.

Roy:

Traffic, okay.

Myron Kidasii:

My name is Myron Kidasii. I live, that’s me right over there. The closest, almost the closest. I think the closest is the little bit more close than me in this resort or whatever it is. First of all, I’d like to say that being that he brought out that you guys working for Mr. McCall in development, how you can be blessed to this project being an EEL? That’s one question you can answer later. Another thing is we want to bring out that this area is not part of the plantation land, in the first project it was brought it’s Catholic Church land, right. The first project, I think, wasn’t even included in this. You know, thing. And now all of sudden the plantation is still going down and then they are taking over this side of the land. One other thing is, uh, just as was mentioned to Mr. Terry. Animals, like you say, in the resort area they have all kind of animals running around, and like everybody got dog, I got chickens, maybe some guys got pigs. But like you say, we in the RS designation, right? Well, yeah. Okay, we in the RS designation, we, like you say, we not supposed to have animals. Now the ambience, or whatever you call them, of this resort area is we all have animals. So how, like when people come in and the resort like this comes up, what they going to say? Okay, you got animals, you not supposed to have animals. That’s one thing you have to address. You know, we got all dogs and lot of. You saw one tonight, you got to shoot him, eh? Okay.

Yeah, and also like Taka, everything he said before they going to in fee simple the people the land. Is that still on from the last meeting. You know, everything was concerned about the guys living at Tiger Camp, yeah. The fee simple area. Is that still on, or what’s happening with that? Mr. Aligas, Mr. Takeshii? Also, I have this letter from the engineer which we have this drainage problem, and did the engineer talk to you?

Roy:

I saw the letter.

Myron Kidasii:

Okay, I want it to be addressed because of the flooding situation that might occur with the Amasoroort such as this, and...

Roy:

That particular situation if they allow it to develop they will address that.

Myron Kidasii:

Okay. That’s why I just wanted the letter to make sure that the people in that area which is us and us guys over there are protected.

Roy:

And another thing, when you said about those lands in fee. The last time I talked to him, and I think that’s the last time we had a meeting here, as far as I know he was going to convince him, he committed to giving all those to the owners all the way from the Christians, Takames, Alegras and whatever lands they want. That’s my understanding, and if it was presented to me that way if the support is there that is something that we get to write into the ordinance.

Myron Kidasii:

Okay, and we got to address all the animals and whatever yet. And I might think of something else. Hopefully, it will be a biased sort of thing which you guys can all, unbiased, yes. Gee, I used the wrong word, but hopefully it is the wrong word. Thank you very much.
Ray:
Okay, I'm not sure if we're kind of getting into the broader issues beyond the project description. And according to Ron's schedule we're going to have a break. I don't know if you folks want a break now, then we'll come back and concerns that will be raised can be recorded. If you folks don't want a break, you want to go on and finish early, it's fine with us, too.

Jim Hunt:
My name is Jim Hunt and I live here. Actually, I really don't want anything to do with this thing. I don't want to see it happen here at all, but I'll ask a particular question anyway because I worked on this for quite a while before. When we were working trying to represent the community's interests before on developing plans we had a cul-de-sac up here by Tiger Camp and we had traffic coming down, where is it? Right here, and then people would go on out to Tiger Camp from here. Nobody would be going through there. There's lots of kids in there, and we specifically designed it so that there would be no traffic impact in that area. Now you've got the main thing going right by there again. I don't think that's a good idea at all. And water, with the big development, we came up with major wells being drilled way up mounds just below the forest reserve to get good clean water. And all that water was going to be brought down and service everything. I know Mr. McCain's lands that he got out of his little deal that he worked out don't go up very high and he's talking about drilling some well, and I don't see how he's going to avoid drilling them in the same water table that our present water system is working off of right now. And my understanding is that that water system is mixed out already, and I don't really understand how he intends to get water any place else that's going to be from another source and not put our water supply in jeopardy. So that's just two pertinent questions to this that I wanted to throw out right now. Thanks.

Ray:
Okay, we'll be. Yeah. Okay. I was just going to respond to them, or should I, maybe just give me the questions. I'm writing it down and after the break I'll get your questions and then we can get to Mr. Hunt's questions. You want to raise a question and we just write it down, respond after the break?

Kurt Von der Heyden:
My name is Kurt Von der Heyden. I live in Kapilama. I design houses among other things. I notice you've got the affordable housing jacked up there on the highway and the expensive all in a nice area. How locked into that are you? Well, I expect that, but it pleases me off, okay. That's just a design question, I mean really a specific thing. They are strung out in a line along the road. There's many, many ways to design affordable housing. I mean, some of the villages you see all over the world, they don't cost much but they have a different design approach and I wonder how open you would be to a different approach than that one. You know, stripping them along the highway, okay?

Ray:
I'm sure any ideas, you being a builder, and all these emerging ideas about town development and community that that plan can be improved.

Larry Miller:
Larry Miller. Sorry, I just had two more questions. Do know the cost per night of the hotel units?

Ray:
That I'm not sure, but if it's basic, if it's similar to what you see in those other brochures, Thailand, Indonesia, U.S. dollars, I think, was $300 to $500 a night.

Larry Miller:
Okay, and what are the cost of the villas, what will the cost of the land and a single villa be?

Ray:
That I don't know at all.

Larry Miller:
Okay.

Ray:
Let's take a break.

Christopher Rathbus:
This is Chris Rathbus, again. I had three more questions about the actual facts about the proposed Ammasseni. My first question concerned the Aman Villas. I noticed they're kind of drawn in on the plan as, you know, certain. I was wondering,
are they going to be built by Amareneet, or are you just going to sell the lots and
the people are going to build whatever they please on the lots.

Roy:

On Amara Villas. Amara Villas, the 45 lots will sell for simple. However, there will
be very strict covenants that will require the owner to design to the resort's standards.
If you design any other covenants to protect your consents that you might have, then you
should raise them and we can suggest that those also be incorporated as covenants.

Christopher Ballhaus:

Another very important question since I'm a Waipio resident is about visibility from
Waipio of the resort and of the various houses during the Hamakua Master Plan, we
were to go through to assure that nothing would be visible from anywhere in
Waipio, and I'm wondering if the same was being taken with this resort.

Roy:

One section of the EIS would be scenic resources impact assessment. What we hope
to do there, it's kind of the state of the art, it's still developing, but what we are going
to try to do is get the architect to shoot pictures back from Waipio Valley, different
places in Waipio Valley - the beach, maybe further in towards further inland, and
shoot back towards the valley and towards the resort and have like red flags the height
of the buildings. So if the red flags show up in the photograph, then you know it
can be seen. If they don't, then it's likely that it won't. And also, we will try and
have someone kind of sketch in into the photograph at scale the building as it's being
proposed.

Christopher Ballhaus:

My final question concerns the social hall here. The community uses this constantly,
you know. It's like a really valuable resource to us, and most people that I've talked
to seem to like it just the way it is. What exactly are your plans for the social hall?

Roy:

That, I understand, is completely open. That’s one area that definitely the community
should have maximum input. As far as how we deal with it in the EIS, we can
definitely identify that in a concern that the community wants that input, and if you
can suggest specific ways that you want to provide that input whether you want
meetings, at certain stages we can also go into that type of detail. But, at this point
all we can do is EIS considerations is document the view that this social hall has, and if
you want to keep it as is we can also state that. But if you have more definite ideas
as far as how you want to redesign it, we can also include those alternatives.

Christopher Ballhaus:

I think basically what I was trying to bring up is just the historical value of this
building itself. Thank you very much.

Roy:

Okay, answers line. Animals. I'll answer this question first. Animals. We by just
speaking off the top of my head how we can address that in the EIS. The objective is
not for you to discontinue what you're doing now. If the problem is that the on
the current only rules you are not supposed to do that, but you are doing it now, then
maybe what we need to do is insure that you can continue using it if it's maybe going for
a rural-type marry, swimming, or some other thing that would allow you this type of
use. And if that is something you want to pursue, then that's a rezoning action that
can take place separately. Or if you want to throw it in with this action, you know,
maybe we should talk about that. Don't be shy.

Russell Pauzak:

Okay, those of you who I went around during the break and talked to you and I did
with a bunch of stuff down, now you may want to speak up. We can get it down on
a official chart or on tape so you be sure that I got it down, okay? Thank you.

Doug Genskie:

My name is Doug Genskie. I'm from the John Enos Kaua family of Waipio Valley. Basically what I want to say is that I'm in opposition to this development.
The reason is if you look at the design plan that you've shown us tonight, just by the
sheer size of what you are talking about, you are actually going to change this village.
You are going to change it. You will not be able to control the traffic. I cannot see
tourists only using one or two roads. They are going to use every road that's
available here. You are also going to increase the value of the land which in the
future is going to mean that the people that are here today will not be able to afford
to live here in the future. I think that if the developer really has concern for the
community, for the village, and wants to see it preserved in this way, then they
should move the development to another site. There is a lot of land in the Hamakua
Coast, and I think that for the future of the whole area here which includes Waipio
Valley that we should preserve it in this way and that I have no objection personally
gainst resorts. I used to work for resorts in the past. However, I just again I think
it's in the wrong location. It will definitely change this community and a question
that we have to ask ourselves is, do we care enough for this village the way it is, or
are we going to allow it to just disappear with a whole new village. Thank you.
Myron Kidani:

This is Myron Kidani again. I wanted to address the issue of the helicopter issue with helicopters riding around, and they're using the ballpark actually. And I talked to George Euchita about this and the landing of the DLNR guys or the scientists use them. But I told them this park here is a park no matter whether it's unused, designated unused, but shouldn't be a hell-pit for the people, DLNR guys. But they're still using them anyway. He used to call me and tell me they come on a certain day, but lastly he forgets, I think, cause I see the helicopter still landing. Also Mr. Bukalski had to go home and he asked me to bring up the cemetery issue, whether more land was going to be given to the cemetery.

Bay:

Which one, the county, or the...

Myron Kidani:

The county, or I'm not sure which one he mentioned, but he said if I could bring that up. I think Mr. McCloskey may have said they're going to give some more land or, you know, for the cemetery, and what I asked where treatment plant is going to be located. It's not shown on that map you have, yeah, because of the wind situation we have. Oh, I addressed that earlier thing about the berm, and then we got a letter from Taka knows about the problem which we are having about the ditch they dig behind Mr. Christians's place here and all the water coming down to Taka's place. So I addressed that to Taka already and so I go think some more. Thank you.

Merle Lekaklie:

I'm Randy Lekaklie, resident. I have two questions. Do you folks have the lease on the land yet, or you folks purchase it?

Bay:

About one-third is already in the name of Royal Coast and Silverlink and the balance is being leased already from Roman Catholic Church.

Merle Lekaklie:

The next question I want to keep this place in (inaudible). Thank you.

Bob Impson:

Hi, I'm Bob Impson. I have the Last Chance store across the street. Not to really get into specifics on the project, but I think we have two general problems that need to be addressed. One is I don't think that everybody realizes what's going to happen when the million dollar payroll is gone per month payroll. I think you're going to see the bank with fewer workers, the grocery store with fewer workers, and you are going to see small businesses boarded up like Kohala was. So that is the problem that needs solving. Now whether this solves it or not is another question that should be addressed. The second problem we have here is Royal Coast and Silverlink own this property as Merle just asked, and they lease with an option to buy that property. Now what happens if this resort doesn't go through. We now have property that cannot be controlled by us and they can do basically what they want to do. It's zoned 7500 sq. ft. residential up here. They don't have to give us the social hall; they own it. They can have houses at the plantation location, the plantation house. They can put a house every 7500 sq. ft. because it's zoned that way. Whether they do it or they sell it so somebody else, that's a potential. And we have destroyed a landmark there. They can sell the land at the Catholic Church and somebody can go down there on the bluff as we have had over the last few years where a number of houses were built on the bluff with no control whatsoever from us. I mean, they have the right, they can build a farm house there and farm if they want to, but they can do what they want to and they can build what they want to without any control, which came up, from us. At least on a project we have some control, and that's what we should be exercising exactly what we want it to be if we want it. Otherwise, we are just a big question mark. Thanks.

Larry Miller:

So I just got a bunch of paperwork, and I need to be back here. My name is Larry Miller. Again, I'm the vice-president of the Waipio Kukuihala Hawaiian Community Association, and what I would like to begin with is that we have conducted over the past three years three separate surveys on resort development in this area. The first one was conducted by Chris Ruthfin who did a survey of all the landowners in Waipio - 132 landowners and got a 65% return, or no, I got a 57%, 43% return on it. One of the questions is, "Do you think resort development is appropriate above Waipio?" which would be this area. 16% yes, 72% no, 12% not sure. We conducted a community association on the last Hamakua development proposal, Hamakua Regional Plan in 1991, and we also did a survey. "Do you think resort development is appropriate above Waipio?" Yes - 20%, No - 63%, not sure - 17%. We just conducted a survey in the spring of this year with exactly the same results. In this last survey, we wrote down what this development is, which hasn't changed very much at all besides a couple of words. They used to call it one million dollar houses, and now they call them villas. So, "Are you in favor of this proposed resort in Kukuihala?" Yes - 18%, No - 72%. So with that, our statement as of
right now from the community association is, we of the members of the Wai'pio Kukuhaile Hanalike Community Association believe a very viable alternative to resort development in Kukuhaile would be: A) Keep the area in agriculture. This would be more in keeping with the rural lifestyle, the Hamakua area which is a vital part of the Big Island. We are agricultural people, i.e., taro farmers, sugar plantation workers, flower and vegetable farmers; again, we are farmers. B) A play factory in Kukuhaile. This would be a more appropriate use of the area and provide needed employment. C) That the State is a part of their settlement from the $10,000.00 loan to Hamakua Sugar should acquire the buffer zone as it currently exists in the Hamakua Regional Plan under roof of Wai'pio Valley. I'll give you all this information.

And now for my personal comment. That was the community association. July of 1992 the county came up with this draft report on the County of Hawaii Agricultural Development Plan. Now there was five pages of different groups which participated in this. There was 50 or 60 different farming groups alone plus participants in all these meetings all over this island. One of the main objectives that they got out of all this and wrote this six page green book about was that the goals, visions, strategies, objectives and plans of action to keep agriculture as a viable future in this area. The County of Hawaii agriculture character should be preserved because of its importance to local lifestyles and the tourism industry. Strategies: The key is major role in agriculture is to protect land suitable for agriculture from conversion to non-agricultural land uses.

Now, objectives and a plan of action. Land use availability objectives. The land use system that defines prime agricultural land and projects that prime agricultural land from non-agricultural uses such as golf courses and urban development. A land use system which directs golf courses and urban development to areas unsuitable and inappropriate for agriculture. That's what this is. This is an agricultural area. The main problem all over the world, and where I'm from on the mainland, it's the same story. I grew up working on farms from the time I could walk, and there isn't a farmer left there because development came in and priced the farmer out. He could not afford to live there. We're talking about the same thing here. We do not know what is going to happen with Hamakua Sugar yet. The county is sending a very strong signal to keep it in ag. so that could be a very viable alternative, keeping it in ag. Thank you very much.

Joycie Babas:

My name is Joycie Babas and I'm a resident and a landowner of Kukuhaile. My family lived here for three generations. In fact, I lived on the same property with my grandma and grandpa and with my mom and me and my husband. My family and I are not for the development because first we would like to remain in ag. My family now consists of ten goats, three dogs, two chickens and everything else that comes in our yard, but we really enjoy our animals, and I can see it because I lived on Oahu.

After awhile, you cannot even own a chicken, after awhile not even a dog and we do live in the country and we need these animals. Another thing, your development looks really good, seems like you did work a lot into it. But no matter how much trees you put you can develop all you want, put pines, put whatever and kids it with lot of bushes, a lot of flowers, palisades and trees. It doesn't matter because when tax time rolls around it affects us. I really know that for a fact because I just appealed my land tax and they couldn't help me because everybody builds around me, even built in Kana'ia so they cannot help me with my tax. I'm caught between a rock and a hard place.

In our community, going to Tiger Camp, you're lucky if you have four houses that people go out and work. So with Kona Camp, you're really lucky if you have this many families that go out and work. Most of the houses, everybody is retired. When you are retired you have a tax break; you taxes are low. Some is maybe only $25.00. When these people die, most of them will go to their children. Now, how can their children afford to live here? They will not be able to afford to live here. That is really God's truth. After awhile, even how nice your resort is, none of us will be able to live here. That means the whole Kukuhaile will be gone, and I mean gone. The reason we're not going to be here, we can't afford it tax wise and otherwise. Socially, it will be so, it's not like home anymore. My husband wants for a hotel away from here and he drives to work like 50 miles each way everyday, and I know other people do too. But they don't mind driving cause when they come home they're at home. You're in the country; it's peaceful. Someone said it's better to work 40-50 miles away and come home and you're at peace instead of walking down the hill when you come home you're still looking at your job.

Okay, you spoke to us; I got the feeling like we're just renters. We're just passing by. But most of us here in this room, we're landowners and we own the land that we live on and we are very much concerned about what happens around us. We're not passing through. Most of us, this is all we have and this is where we want to live, we want to work, we don't want to develop, we just want to live in peace and farm and just die here. So development is not our way of, how would say, advancing. At this stage we maybe want to be at peace instead of getting rich. Like some people would get really rich with this project, and that's not our goal. Our goal is really to live a peaceful life.

Rec-Terry:

That was pretty eloquent. Do we have some more comments here. Okay, come on up please.
Hannah Loa:

My name is Margaret Loa and I have property at Tiger Camp. The reason I am here is because I'd like to go on record should the resort go through that we the residents of Tiger Camp would like to have the privilege that was given us to have the property in the back of us would be given to us and not taken away because according to your plan there the afford able homes will be directly in the back of Tiger Camp and some of our boundaries are planned and we are using the property beyond the pin. And according to your plan there you would be having affordable homes in the back of us and we would like to go on record that we would like to have continued use of the property or give it to us upon your surveying, give it to us in black and white through a deed. We would also like to go on record that at the last meeting we had that we attended at the plantation manager's home on the tax for our property we understood there's two different ways that we understood that we were talking about it in the back there. One is that we understood that for ten years we would have a tax exemption on the property and we would pay according to the assessment that was given to us by the county. Upon selling the property, then we would have to pay the back taxes of the property. Say for example on the sixth or whatever year between the tenth year that if we would sell the property, then we would have to pay the taxes from back one because we were not being assessed the full value of the property. The other way that the people in the community understand is that the tax would be that we would not have to pay the back taxes if we were selling within the, from the tenth, before the tenth years, we would not have to pay taxes unless we would sell it above the value that we are being assessed. Say, for example, if we are being assessed by the county at $50,000, then we would be paying taxes on that because we have exemptions. But then, if we were to sell our properties say, for about $200,000, then they would, the person that brought this up to me said that then we would have to pay the additional taxes above the $50,000 which would come a profit of $40,000 and not go back to your one. And so this is what we'd like to have clarified at this time, or if at later time. So this is what we'd like to go on record. And according to this, I've read everything in here and I understand that the Amanstead already have owned one-third of the revenue property that is included. They also have the lease and the option to purchase the property from the Catholic Church. This is what it has in here. I am in favor of the resort because I worked at the resort area for seventeen years, and believe you me, the people that were in the hotel, they like to see how the local people live. I invited many of them on trips into Waipio, I invited many of the guests that were in the hotel to different places, and it's a different feeling for them altogether. I've had friends that had invited a guest into their homes to see how local people live, and if according to what the plan is that they will not eliminate or do away with our lifestyle, then I say we go ahead with the resort. Yes, it's true that the plantation will not be sure whether they are going to succeed after they harvest all the cane that's in. We don't know what's going to happen, and we'd like agriculture to continue, but then we'd also like to have jobs for our people when they come out. And according to this plan, jobs will be available. And like any other resort area, any hotel, they always have training periods and this will be good for them. Many of them that work in the plantation will be able to work in this different resort, and I would like to see the plantation people be given first preference to these jobs that will be available upon the resort being completed or going forth. So there are a lot of people in the community that are for this resort, but like some of them, do not want the main traffic coming from down Tiger Camp into this area over here. What we understood was the road was going to be between Tiger Camp and Koa Camp going down to the old plantation road down to the mill. That's what I thought it was going to be further down. So with that in mind, then that would eliminate the heavy traffic coming through our town over here. And then, like I told Roy, we'd also like it to go down on record about the Catholic Church, I was the one that brought that up about the cemetery, because I have all my family buried at the Catholic Cemetery. Right now it's dark, but one of these days you should all try to go down there to the cemetery and see how the road is. I'm sure that if the resort goes through the road will be opened up and we would be able to go down there more often. But as it is right now it is an eyesore the way the road is. But I asked between the Catholic Church and the Catholic Cemetery to have that portion there continued for the cemetery. And likewise, I also asked about the county section to continue to have that portion there for the county cemetery. So I'd like to say that there are some people who are against it, some people are for it, but I think like Bob said, it's food for thought for us to see because you people owned this area right here right now as it is and some other areas that we are leasing from, so this is all I have to say.

Rae Terry:

I think your questions about the tax should be taken up with Mr. Domingo here. We were referring to it earlier and the county is right now deliberating on tax proposals to relieve people throughout the county of the problem of assessments going up and tax rates going up. So while the resort may make the problem worse, it's actually something that's happening everywhere. And I hope that the county does respond to it.

Kia Franda:

My name is Kia Franda and my ohana comes from Waipio. We are descendants of Niiola, high chief Niiola from Waipio who took care of Kamehameha. I'm a resident of Waipio and I am the acting president of the Waipio Community Association. Skullhado means moving light. Waipio means water, but it also means the water that starts and it moves up and it comes back down again. It then goes into the complete circle. That is the rain that comes down and it seeps through the soil. The water that comes out of the ground, the spring water that goes into the taro patch, then it goes into the river out into the ocean and the process starts over again. And each one of you have that in you. Egg in this area is important. Food is what feeds us. Water is
what feels the ground. We are talking about an area that is the goose, and that goose lays the golden egg. The resort will kill the goose that laid a golden egg.

Jim Hunt:

Yes, this is not like going to make the decision in any way, shape or form, but I just thought it would be nice to get an idea. I didn't know myself, and I was curious to know.

Bob Imposa:

Well, all it really tells us is who's here tonight. That's all it can really tell us.

Jim Hunt:

Okay, a couple of things. Jobs, on the survey that we did I was involved with about 45 homes here in town, and out of those 45 homes, three people said they might be interested in working for the hotel. And what that told me is, is that the majority of the people who would be working here are not going to be from here. And then their probably from Hanokaa. They are going to be displaced workers from the sugar company or whatever. My feeling is, if you look at this, this thing is taken over two-thirds of our town at least. Why do we need to be burdened by this for the sake of people who are going to be working here from some place else? If that's the case, let them take this whole thing and move it down the coast somewhere where it's not going to affect us. Why should it affect us? It was fine when it was going to save Hanakaa Sugar. There was a good reason then. We were willing to make sacrifices. Now, there's no good reason for it that I can see.

I was in Salt Lake City. I was the first guy sent out there. Free trip, sure why not. And while I was there, Eugene McCain came over and we hung out together. I've known him for 15 years, and he was negotiating with the bank trying to get this deal set up here. And part of the deal behind all of this is that he and Brian Sharp Construction Company up in Walane would be marketing and building all these homes. That's built into the contract. When you buy your million dollar house, how many of you out here are going to be buying million dollar homes by the way? Anyway, you sign on to get Brian Sharp Construction Company building your home and Eugene McCain is going to market it and get his commission. Guess who's going to get two free lots and sit up here and live happily ever after selling land and building homes? These guys have this whole thing set up for their lives for to be profitable. They may or may not stay and at what cost? It's been said before, we're not going to be here in five or ten years. We won't be able to afford it, and yet they'll be fat and happy. And it's really not fair and we don't deserve it, I don't think, at all.

The jobs we do need, Larry was going to say something about the buffer zone. I think the state should have taken over the manager's home. When they had the chance they should have made it into a Hawaiian cultural preserve center, hired some people, and maybe even Hanakaa Sugar, all the different history all you folks know.
preserve it and display it here and make it something of a community resource that we can all be proud of and hire some people to run it and participate in it. Get the buffer zone and put in some bike paths and hiking trails and run tours and hire some people there, too. Outdoor things, you know. Maybe run some ag, things up in there, too, as demonstration dry land taro patches, or you know, that the tourists how sweet potatoes and dry land taro were grown by the Hawaiians and still could be. These kinds of things. The rest, if we get something like that in here, it's going to be an open door to more of that same kind of thing and this whole lifestyle here that is so precious and so beautiful is going to be gone. And I don't see, the only thing that is going to be worth anything in Eugene McClain is going to be making a lot of money out of this. It's not going to save Hamakua Sugar any more, as it just can't be worth it. I just don't see anything that makes it worth it at all.

Bob Impe: Next.

Morgan Toledo: My name is Morgan Toledo. I'm a taro farmer in Waipio Valley and also a resident in Kukuihaele. I'm really against this project. I hope to see the land stay on the ag so I can grow more taro. That's all, thank you.

Debbie Ternica: My name is Debbie Ternica, and for the record I'm representing the Waipio Taro Farmers Association. I have my members signing in here and our association is in a position to the resort, and we're not in support of what you know, has been presented.

Ron Terry: Can you get a little closer to the mike?

Debbie Ternica: We have been in this process for many years now, and we have testified and submitted our testimony to the county council when our councilman, Domingo, introduced a resolution to make sure that those lands remain in ag, and so it's in direct conflict with what our association stands for and we will be submitting written statements addressing issues perhaps next week. And personally I was born and raised in Kukuihaele and the Waipio taro farmers have been very active in the community. And, I don't know if you are aware of this, but we do have a Waipio Taro Task Force which we are trying to deal with issues relating to Waipio. And in going over your proposed economic fact sheet, I notice that there is no listing of Waipio. And Waipio is one of the gateways that this island promotes. And the issues that we are talking about right now, personally for me, is the read issues and also the impact, too few roads with too many people on it. We have not even as a task force going on three years, addressed how are we going to control the numbers that are impacting our roads. And you have to realize that it's not only cars going through Kukuihaele, but also cars entering into Waipio which is a big concern to the county. And you talk about disturbing a lifestyle. We can talk about low-key, blend with nature, maintain natural, integrate with community. We're the effects of a big scale development like this, and we are already having a lot of negative impacts in Waipio. It's very difficult for the farmers to operate continuing what we do as we perceive as being cultural because of, you know, the limited amount of two openers going down which is a problem for us. I can foresee what is going to happen in this community. There's a lot of people in this community that is sitting right here in this room tonight, and I'd like to refer to them as the roots of this community who have not spoken, but it's through people like me and my association that we go forward and bring it to people like you that are very ingrained, they have a sense of community. And sense of community means sharing and caring for one another, and for what I see as this resort, you have not addressed the issue too much. You very lightly covered the read improvements being done only as necessary. We already have congestion on this road with the building I have come up in this community in the last year or two. We have already created more congestion. And the water source will be developed on the existing system upgraded to provide water to the development. I don't think that very many of you are aware of it, but we have been organizing already in the community of Hamakua which we consider to be a blend on the whole district of Hamakua, and we are diversified ag, as the way of income for this community and also, more importantly, keeping our people together socially and giving them a firm economic base. The community has been working. I have been in a lot of process here throughout this district that has anything to do with the Hamakaua area, and just a lot of people that I represent that you do not see here tonight, but strongly feel that this Hamakaua Coast, especially in Kukuihaele should remain ag. And we will promote it, not only from Waipio, but we will come up top and continue to promote this community as an ag community and keep it in rural. Thank you.

Jim Cain: My name is Jim Cain and I live in Waipio, and I'd like to state for the record that I'm 100% against this resort proposed for Kukuihaele. I was sent down to Valley last year also to check out the resort there, and yes, it was a nice resort. But one thing that stands in my mind is the whole of boulevard where we stayed. If you went out far enough, you looked down one side of the river, there was a big resort they were building. And if you looked to the other side, there was another huge resort going on up river, and I see the same thing here. I grew up in Honolulu and over in Maui, and I've seen the same thing happen and I see it just, this is just the start.
of something much, much bigger that will destroy Kukuihule and reach into Walipio as well. Thank you.

Ron Terry:

Yeah, come on up. We're getting kind of near the close of this meeting. We wanted to run from 7:00 to 10:00, and I wanted to reserve some time near the end to talk about the format, structure, place, time of the next meeting. So pretty soon, I think, we'll have to wrap this up and set the parameters for a new meeting. And after we close we'll just maybe gather around here at this front table and we can start to talk.

But you've got something to say.

Jim Cain:

Yeah, I'm sorry. I forgot this the last time. Bob mentioned that Eugene McCain does have ownership of surrounding properties here. All this land up in here is zoned 7,500 square feet. There's no way he's going to get a million dollar homes on 7,500 sq. ft. lots. That's why he needs this rezoning. That's why he's going for the Catholic Church land to get that broken up so he can get one acre, is it? Is that, about one acre lots so he can build his big mansions on there. Have any of you really stopped to visualize what 45 one-million dollar homes is going to be like and feel like and look like around here? He can't do it if he does not get the rezoning. What he can do, but he won't cause I've already heard him say he's going to sell it to somebody else and let them deal with it. Someone else will pick it up, and they'll have the zoning. We've got 60 lots, and Loew knows. I mean, I've been teaching this school for 20 years and I see the kids get out and have a hard time. There's not a whole lot of 7,500 sq. ft. lots available at a reasonable price. It would sure be nice if someone would come in and do something up here and provide lots for our graduates and our young people and give them a chance to build something and raise families here. Most likely, if they were able to do that, the homes they would build and the price they would pay for the land would not increase our taxes which is one thing we are all afraid of. So to me, the alternative is keep the 60 homes with the 7,500 sq. feet, do a low-cost residential, blend it in with our local lifestyle here, don't raise our taxes, and beyond that, I don't know. The manager's home I'd still like to see a historical center. Is that clear on that? The zoning to me is a critical thing here. 7,500 sq. ft. is not going to bring a million dollars.

Kay:

That was Jim Hunt.

Kurt Van der Heyden:

My name is Kurt Van der Heyden. I live in Kapulana. I'm not going to talk to them. I'm going to talk to you. Mr. Domingo clarified the political process of what happens from here, who actually says yes or no to this. And he said if the community wants it, it sounds to me like they will try to find a way to make it happen. If the community doesn't want it, it's not going to happen. That's really encouraging, so I just wanted to pass that on to you. There's a lot of different issues involved with this at the butt end of it. A few times in my life like myself I came from a couple of places that started out rural and I don't even want to go back and look at any more over the last 20 years. So the specifics of design and the taxes that we are worried about, I don't believe they are going to help our taxes. Up in Kapulana, are they going to go to that far? Are they going to take care of everybody in Honolulu and Ahalani? I mean, where do they stop? It's going to affect all of these people.

I am a recent member of the Hamaku Farmers Coop, and it's pretty exciting what's going on right now. We have a tremendous opportunity here to do ag., and by ag. I don't mean 10,000 acres of monoculture. I mean, at least the way I think about it is diversified, in other words, two and agriculture and sandalwood and bamboo, and this is one of the best places in the world to grow anything. We all know that much. 100 jobs, you know, twelve farms can do that. 100 jobs is nothing. We're talking about 1,000 jobs or 2,000 ten years down the road. How many people are employed in Walipio Valley? You know. The last thing I want to say and it's more of a spiritual thing, I guess, but certainly the people are struggling with is now in the valley. The reason that they want to come here to make a retreat and not the Kona Coast. 'They're not trying to put this in Waikiki. They're trying to put it here. Why? It's there's a spiritual resource here, there's a cultural resource here. There's a natural resource here of beauty and of this community. They want to come here to look at you, at us. I live down the road. I won't be looked at so much. They go by my house at 60 mph, but here, they want to look at you. This place goes on. The visitors here will come and I'm not trying to down that whole issue in terms of tourism. But the effect of it is, it's very subtle. I mean, you know, your children will be used to seeing their dances, it's no longer sitting around in the back and playing the guitar. It will be go to the hotel and see the act. That's what happens. The culture gets trivialized. It gets turned into a show. I don't think you want that to happen here. I mean, it's, tourism as an industry has a dehumanizing effect. Diversified agriculture is an empowering thing, okay. It reinforces culture. It reinforces independent thinking. You're not going down, okay, my life depends on the tourism habits of somebody from Wisconsin. Your life depends on the rain and the soil. We have that. That's a much better way to go, so that's what's my vote. By the way, I'm against it if you didn't figure that out.
Cynthia Kanaka:

My name is Cynthia Kanaka and I'm a resident of Kukuihaele. In fact, I’m the resident that is overlooking where the resort, they want to put the resort. And when I get up in the mornings I would like to just see the ocean and not the resort that has been planned. And speak about jobs for the plantation workers. On the paper it says 100 jobs. Now if 400 people going to be laid off on the plantation, where will the other 300 go and how are we guaranteed that our families will be, or the residents will be employees of the resort? In speaking of having jobs here, I have two sons. They work in the hotel business, and you know, they are often on call because there is not enough jobs. And so, somebody told me about facing reality. This is reality, and all in all, what I have to say is I’m against the development.

Sylvia Thompson:

My name is Sylvia Thompson.

Roy:

I think it would be a good idea, maybe you should speak to the people.

Sylvia Thompson:

Ok, sure. Actually, I’m not a public speaker. However, I sat there and I thought if I didn’t come up and say what I felt, then you know, I would go home and be frustrated. I know there’s a lot of people here that sitting in the audience, Mr. Altger and my dad, for instance. They would like to express themselves, too, but it’s hard for them. It’s hard for me, so it would be harder for them. However, just thinking about Kukuihaele and you know, we just had a class reunion and there’s lot more people like me in my age group that have grown up here and would very much come here and testify that they would be against this in their town where their parents live. And seeing that our parents are all retired and all the talk of taxes, for sure that would happen. The county cannot guarantee that these taxes would not be raised or the hotel people would pay for it in later years, whatever. Looking down this facts sheet - Objectives. I would think the first thing would be on this would be their objective would be to profit. These people wouldn’t just come in to do all these things for us. We have all these things. How could maintain a low-key presence? How could you not notice any new dwelling or face in Kukuihaele? This surely would be noticed. Designed to blend with the natural surroundings. Okay, fine, Hotel want to blend in with the natives. But how about us trying to blend in with them? I can’t see us changing all our lifestyles to blend in with a resort. Employment - about 100 jobs. Would it be absorbed by the plantation workers or the residents? And also, it says here about employee housing and/or rentals. I don’t see that anybody here in Kukuihaele doesn’t have a roof over their heads, so this housing would be provided for probably people coming from the outside being employees here. So that I couldn’t see also. Infrastructure, anybody mentions police protection, fire? The traffic people have said. An example would be the bridge here that hasn’t been fixed for some time now. During the break I heard somebody mention maybe having these resort people come in, this would be done, things would be done rather than come from the government. I’d rather put my money on the government because we are the government and we can have a say, but with the resort people, we won’t have a place to say anything once it’s done. And who’s to say that all these things that are listed here that’s 36 sales, whatever, whatever, that’s all that’s ever going to be. It’s going to be more and more and more. So along with my family, the MockChews, I know that we are against this resort.

Larry Miller:

I’m sorry to take up time. Since it was mentioned, I just wanted to report on the results of the survey on one question. Are you in favor that the plantation manager’s home in Kukuihaele being preserved as a cultural museum learning center for Hawaiian values? Yes - 88%. No - 9%. Not sure - 3%. And that was the same results from all three surveys that we’ve done. Now if I may, write comments received from our survey. As for the development, let’s keep it where residents benefactor before all other motives. Keep Kukuihaele the way it is. Biggest written response. Keep it as. Still there 3 - 10 acre parcels to Honokaa Sugar Employees. Resorts should stay in Kona. I believe that if resorts come in, we, most of the people that live in Kukuihaele, will not be able to afford to live here in 10 to 15 years because of the luxury houses and hotels with high taxes. If you let one person or company come in, change the zoning, it gives the rights to others to come.
APPENDIX F

TRAFFIC IMPACT ANALYSIS REPORT: AMANRESORT
TRAFFIC IMPACT ANALYSIS REPORT

AMANRESORT

Kukuihaele, Hawaii

October 1993

Prepared For:
Roy R. Takekuma
Planning Consultant

Prepared By:
Julian Ng, Inc.
P.O. Box 816
Kaua'i, Hawaii 96744

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<td>5</td>
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TRAFFIC IMPACT ANALYSIS REPORT
AMANRESORT
KUKUIHALE, HAWAII
October 1993

The potential traffic impacts of a resort development in Kukuihale (Exhibit 1) were assessed using highway capacity and other engineering analyses procedures. This report describes the existing traffic conditions in the area, provides an estimate of future traffic conditions without the proposed project, and evaluates future conditions with traffic due to the proposed project.

The traffic analyses were conducted for a proposed Amansort at Kukuihale consisting of a 26-suite luxury hotel located along the cliff's edge, a four-suito inn at the former Plantation Manager's Estate, and 45 additional units on individual one- or two-lots in various locations around Kukuihale. These individual lots will be privately owned and would each have a single dwelling unit. The hotel will include swimming pools, a restaurant, gift and sundry shops, and resort service areas. The Plantation Inn will include dining and other facilities, to be shared with the individual units; maid and room service would be available from the resort. The resort, which is estimated to provide 70 jobs, is expected to open by the end of 1993.

The description of existing conditions is based on field observations made on Thursday, July 2, 1993. Traffic counts were not conducted because of a temporary road closure due to a bridge failure on the Old Route 240 (Kukuihale's main street) in March 1993. While most of the village is west of the bridge, some of the stores in the village, which also serves as the village's post office, and the county owned community center are to the east. Repairs to the bridge and eventual reopening of the roadway are expected. Estimates of existing traffic volumes therefore, assume a roadway system similar to that in place prior to March 1993.

Highway volumes on the Hawaii Belt Road (Highway 19) and the Honokaa-Waipio Highway (Highway 240) are from traffic counts taken by the State Highways Division in 1992. Growth factors for highway traffic are based on traffic projections from the Island of Hawaii Long Range Highway Plan final report. Future conditions for year 1996 were evaluated.

The traffic due to the proposed resort was estimated using trip generation factors for resort hotels from Trip Generation, a reference published by the Institute of Transportation Engineers. Analysis methods from the Highway Capacity Manual and Transportation Research Circular 373 Interim Materials on Unsignalized Intersection Capacity were used to determine traffic conditions, with highway and intersection conditions being described by a Level of Service (LOS) ranging from "A" (good) to "F" (poor). An appendix to this report provides descriptions of these levels of service.

Existing Traffic Conditions

The site of the proposed project is in and around the village of Kukuihale, which is located near the Waipio Valley lookout at the west end of the Honokaa-Waipio highway. The Honokaa-Waipio highway (State Highway 240) is a two-lane highway, with twelve-foot lanes and wide (greater than six-foot wide) shoulders, and is generally posted for a speed limit of 45 miles per hour (MPH). An old portion of the highway ("Old Route 240") parallels the existing highway for about 1.2 miles, providing local service to Kukuihale village. The speed limit on Highway 240 is 35 MPH near its eastern intersection of the Old Route 240.

Old Route 240 is a two-lane roadway, approximately 18 feet wide with minimal shoulders. Generally oriented in an east-west alignment, Old Route 240 connects to the newer Highway 240 at stop-controlled intersections at both ends. Approximately halfway between these intersections, a one-lane north-south roadway connects Old Route 240 with the newer Highway 240. This roadway, stop-controlled at both ends, is identified as "Mud-Lane Road" and has a pavement width of 12 feet.

Two-way traffic volumes on all roadways in the Kukuihale area except Highway 240 are estimated to be less than 100 vehicles per hour (VPH). At all driveways and intersections, minimal delays (LOS A) are encountered by all users.

Traffic conditions on Highway 240 between Kukuihale and Honokaa were determined using traffic count data from the State Highways Division's stations C-13-D (Honokaa-Waipio Road at Kawailoa Bridge). A 24-hour count taken in June 1992 showed a two-way volume of 1,652 vehicles per day (VPD). The highest hourly volume occurred between 9:30 and 10:30 AM, with a two-way volume of 138 VPH. Highest hourly volumes during the time of the day most affected by the proposed project are 122 VPH in early afternoon (1:15 PM-2:15 PM) and 137 VPH during the normal PM peak period (3:00 PM-4:00 PM). Peak hour conditions on Highway 240 are described by LOS A.

Highway 240 is also the main street through the town of Honokaa. While traffic volumes are higher through the town than at Kawailoa Bridge, field observations indicate no significant delays at any of the side streets which intersect Highway 240.

Traffic between the project site and east Hawaii (Hilo direction) would use Highway 240 to its junction with the Hawaii Belt Road (Highway 19). Eastbound traffic on Highway 240 is stop-controlled at Highway 19, which has a posted speed limit of 35 MPH. Left turns from eastbound Highway 19 to Highway 240 are made from the through lane, behind any eastbound vehicles on Highway 240 (but no more than two) waiting to enter Highway 19.
While no new turning movement counts were taken at the junction of Highway 240 and Highway 19, analysis of this intersection using an afternoon count taken in 1992 shows LOS C or better for each controlled movement; field observations indicate that actual conditions may be better than the analysis findings at this intersection. On Highway 19 east of this junction toward Hilo, a 1992 State Highways Division count showed a peak hour volume of 419 VPHL, or LOS B on the two-lane highway.

Traffic between project site and west Hawaii (Waimea direction) would use Lehua Street, located about 1.5 miles west of the Highway 19/Highway 240 junction, to access Highway 19. Lehua Street, a two-lane roadway for most of its length, is the stop-controlled area of the T-intersection with Highway 19. A median deceleration and storage lane, approximately 650 feet in length, is provided on Highway 19 for left turns from the eastbound lane of Highway 19 into Lehua Street. On Highway 19 west of Lehua Street, a 1992 State Highways Division count showed a peak hour volume of 461 VPHL, or LOS C on the two-lane highway.

The State Highways Division traffic count data discussed above are summarized in Table 1.

<table>
<thead>
<tr>
<th>Table 1 TRAFFIC COUNTS</th>
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<tbody>
<tr>
<td>Highway 240 at Kawailoa Bridge</td>
</tr>
<tr>
<td>Westbound</td>
</tr>
<tr>
<td>24-hour (June 22-23, 1992)</td>
</tr>
<tr>
<td>Early afternoon (1:15-2:15 PM)</td>
</tr>
<tr>
<td>PM Peak Hour (3:00-4:00 PM)</td>
</tr>
<tr>
<td>Highway 19 east of Highway 240</td>
</tr>
<tr>
<td>Westbound</td>
</tr>
<tr>
<td>24-hour (June 22-23, 1992)</td>
</tr>
<tr>
<td>Early afternoon (1:15-2:15 PM)</td>
</tr>
<tr>
<td>PM Peak Hour (4:00-5:00 PM)</td>
</tr>
<tr>
<td>Highway 19 west of Lehua Street</td>
</tr>
<tr>
<td>Westbound</td>
</tr>
<tr>
<td>24-hour (June 22-23, 1992)</td>
</tr>
<tr>
<td>Early afternoon (1:30-2:30 PM)</td>
</tr>
<tr>
<td>PM Peak Hour (4:00-5:00 PM)</td>
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Traffic Impact Analysis Report
Amami, Kauai, Hawaii
preparation by: Julius Ng, Inc. page 3
October 1993

Future Traffic

Traffic volumes on Highway 19 and on Highway 240 have been increasing and are expected to continue to increase. The Long-Range Highway Plan for the Island of Hawaii indicated projections of future traffic volumes on various segments of highways. For Highway 19, daily traffic volume on the segment between Akaka Falls Road and Mamane Street (Highway 240) was projected to increase from 5,056 VPD in 1989 to 9,500 VPD in year 2000, or an average compounded rate of 4.6% per year. Increases of 4.7% per year were projected for Highway 19 west of Mamane Street, in segments to Hualalai Street, and between Mililani Street and Mamane Street. Traffic growth on three segments of Mamane Street were projected to be 2.7% per year. These projections are summarized in Table 2.

<table>
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<th>Table 2 TRAFFIC INCREASES</th>
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<tr>
<td>1989</td>
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<tr>
<td>Hawaii Belt Highway (HWY 19)</td>
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<tr>
<td>Akaka Falls Road to Mamane Street</td>
</tr>
<tr>
<td>Mamane Street to Hualalai Street</td>
</tr>
<tr>
<td>Pualalu Street to Lehua Street</td>
</tr>
<tr>
<td>Lehua Street to Mauna Loa Bridge</td>
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</tbody>
</table>


Peak hour volumes are expected to increase in proportion to daily volumes. Traffic volumes in the immediate vicinity of the proposed project, therefore, were increased 2.5% per year to reflect estimated short-term growth. Similarly, a factor of 4.5% was used to increase traffic volumes on Highway 19 to the future year.

Traffic assignments showing peak hour volumes for 1996 at the intersection of Highway 240 and Highway 19 are shown in Exhibit 2.
Project Traffic

Traffic volumes generated by the proposed resort were estimated for the hotel and for other components of the project. Total trip ends were calculated and the estimated internal movement between two parts of the resort were deducted to derive a net traffic generation from the resort. A higher estimate for the hotel based on the number of employees was used for total trip ends at the hotel, while the lower estimate based on the total 85 units of the resort was used as a check of the net traffic (total trip ends less internal trip ends) from the hotel site. Traffic generated from the individually owned units on one-acre lots and the Plantation Inn units was based on per-unit factors, while traffic due to the social hall and recreation center was estimated assuming a gross floor area of 4,500 square feet in the building. Table 3 presents the factors used and Table 4 summarizes the traffic generation estimates.

Table 3 TRAFFIC GENERATION FACTORS

<table>
<thead>
<tr>
<th>variable</th>
<th>Daily</th>
<th>Mid-Afternoon</th>
<th>PM Peak Hour</th>
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<tbody>
<tr>
<td>Hotel employees</td>
<td>10.27</td>
<td>0.82</td>
<td>47%</td>
</tr>
<tr>
<td>One-acre lots unit</td>
<td>10.16</td>
<td>0.67</td>
<td>47%</td>
</tr>
<tr>
<td>Plantation Inn unit</td>
<td>10.16</td>
<td>0.67</td>
<td>47%</td>
</tr>
<tr>
<td>Social Hall/rec. center 10000GSF</td>
<td>25.00</td>
<td>4.00</td>
<td>50%</td>
</tr>
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Table 4 TRAFFIC GENERATION

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>Mid-Afternoon</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In-Out</td>
<td>In-Out</td>
<td>In-Out</td>
</tr>
<tr>
<td>Hotel</td>
<td>100</td>
<td>1,030</td>
<td>39</td>
</tr>
<tr>
<td>One-acre lots</td>
<td>45</td>
<td>450</td>
<td>14</td>
</tr>
<tr>
<td>Plantation Inn</td>
<td>4</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>Social Hall/rec. center 4.5</td>
<td>110</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total trip ends</td>
<td>1,630</td>
<td>63</td>
<td>69</td>
</tr>
<tr>
<td>Less Internal trips</td>
<td>180</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Net project traffic</td>
<td>1,450</td>
<td>55</td>
<td>61</td>
</tr>
</tbody>
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Traffic distribution, which considers the location of the other end of these vehicular trips, was based on field observations and an evaluation of traffic count data. Table 3 shows the trip distribution factors used in the analyses.

Table 5 TRIP DISTRIBUTION

<table>
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<th>In-1- Acre</th>
<th>Plantation</th>
<th>Village</th>
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<tr>
<td>Hotel lobby</td>
<td>0%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Kukiahaole Valley</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Honokaa</td>
<td>40%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Wainee</td>
<td>30%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Pa'auilo</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>beyond Pa'auilo</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

A new access road will be constructed to provide access to the resort. An existing dirt/gravel road passing near and on the Honokaa side of the Pizzazz Manor's Estate would be upgraded to County standards. This new roadway would also serve seven one-acre lots and would minimize traffic impact to the existing community. This roadway would intersect Highway 240 in a T-intersection. The traffic assignment shown in Exhibit 3 represents the estimates of peak hour traffic at this T-intersection; these estimates include a portion of the existing traffic using Old Route 240, since this connection is expected to provide an alternate path to/from the highway. Exhibit 4 shows the traffic estimates for the intersection of the new access road with Old Route 240.

An alternative location of the project access road, following a dirt road between the social hall and existing homes to the east, is also being considered. Greater impacts to the existing road may result with this alternative and estimated volumes are shown in Exhibit 5. The connection of this alternative access road to Highway 240 would also be a T-intersection and the volumes would be as shown in Exhibit 3.

Away from Kukiahaole, the greatest impact of the project traffic is expected at the intersection of Highway 240 and the Hawaii Belt Highway (Highway 19). With project traffic estimates are shown in Exhibit 2.
Capacity Analyses

The traffic assignments at intersections (Exhibits 2, 3, 4, and 5) were analyzed using the UMC's Interchange Analysis procedure from the Highway Capacity Manual to determine peak hour conditions. This analysis determines the capacity of the left turn into the side street and the capacity of the controlled side street movement by estimating the number of adequate gaps available in the uncontrolled movements at the intersection. The volumes wishing to make these movements are deducted from the capacity, and the difference (or "reserve capacity") determines a level of service. The findings of the intersection analyses are presented in Tables 6, 7, and 8, assuming that left and right turns from side streets share a single lane.

Table 6
INTERSECTION LEVELS OF SERVICE

<table>
<thead>
<tr>
<th>Highway Intersections</th>
<th>Reserve Capacity</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 240 at Highway 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing (1993) PM Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Turn into Highway 240</td>
<td>640</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of Highway 240 (stopping)</td>
<td>189</td>
<td>D</td>
</tr>
<tr>
<td>Future (1995) PM Peak Hour (without project)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Turn into Highway 240</td>
<td>612</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of Highway 240 (stopping)</td>
<td>128</td>
<td>D</td>
</tr>
<tr>
<td>Future (1995) PM Peak Hour (with project)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Turn into Highway 240</td>
<td>601</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of Highway 240 (stopping)</td>
<td>103</td>
<td>D</td>
</tr>
</tbody>
</table>

| Project Access Road at Highway 240 |                 |                  |
| Future (1995) mid-afternoon Peak Hour |                 |                  |
| Left Turn into project access road | 959              | A                |
| Shared lane out of project access road (stopping) | 553              | A                |
| Future (1995) PM Peak Hour |                 |                  |
| Left Turn into project access road | 959              | A                |
| Shared lane out of project access road (stopping) | 530              | A                |

The peak hour volumes at the intersection of the project access road and Highway 240 (Exhibit 3) are well below the volumes which would warrant a separate left turn storage lane on the highway. The PM Peak Hour volumes are only about 35% of those meeting a warrant for the separate lane² on a two-lane highway with speeds of 60 miles per hour and 20% left turns from the highway.

Table 7
INTERSECTION LEVELS OF SERVICE

<table>
<thead>
<tr>
<th>Proposed Access Road and Old Route 240</th>
<th>Reserve Capacity</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop Sign Control on Proposed Access Road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-afternoon Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Turn into Access Road</td>
<td>946</td>
<td>A</td>
</tr>
<tr>
<td>Left Turn into Anahiibestway</td>
<td>997</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of Access Road</td>
<td>687</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of Anahihawesway</td>
<td>713</td>
<td>A</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Turn into Access Road</td>
<td>939</td>
<td>A</td>
</tr>
<tr>
<td>Left Turn into Anahihawesway</td>
<td>998</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of Access Road</td>
<td>667</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of Anahihawesway</td>
<td>699</td>
<td>A</td>
</tr>
<tr>
<td>Stop Sign Control on Old Route 240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-afternoon Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Turn from Access Road</td>
<td>928</td>
<td>A</td>
</tr>
<tr>
<td>Left Turn from Anahihawesway</td>
<td>932</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane (eastbound)</td>
<td>805</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane (westbound)</td>
<td>614</td>
<td>A</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Turn from Access Road</td>
<td>914</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane (eastbound)</td>
<td>805</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane (westbound)</td>
<td>933</td>
<td>A</td>
</tr>
<tr>
<td>All-way Stop Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VFC ratio *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-afternoon Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound Old Route 240</td>
<td>0.36</td>
<td>A</td>
</tr>
<tr>
<td>Westbound Old Route 240</td>
<td>0.04</td>
<td>A</td>
</tr>
<tr>
<td>Northbound Access Road</td>
<td>0.11</td>
<td>A</td>
</tr>
<tr>
<td>Southbound Access Road</td>
<td>0.08</td>
<td>A</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound Old Route 240</td>
<td>0.22</td>
<td>A</td>
</tr>
<tr>
<td>Westbound Old Route 240</td>
<td>0.04</td>
<td>A</td>
</tr>
<tr>
<td>Northbound Access Road</td>
<td>0.11</td>
<td>A</td>
</tr>
<tr>
<td>Southbound Access Road</td>
<td>0.04</td>
<td>A</td>
</tr>
</tbody>
</table>

* for All-way stop control, Level of Service denoted from average delay related to volume-to-capacity (VFC) ratio.
Table 8

INTERSECTION LEVELS OF SERVICE
Other Intersections Along Old Route 240

<table>
<thead>
<tr>
<th>Location</th>
<th>Reserve Capacity</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Roadway at Old Route 240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-afternoon Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left turn into private road</td>
<td>963</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of private road</td>
<td>883</td>
<td>A</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left turn into private road</td>
<td>968</td>
<td>A</td>
</tr>
<tr>
<td>Shared lane out of private road</td>
<td>886</td>
<td>A</td>
</tr>
</tbody>
</table>

WITH TRAFFIC FOR ALTERNATIVE ACCESS ROAD:

Haleiwa/Plantation Roadway at Old Route 240

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Location</th>
<th>Reserve Capacity</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-afternoon Peak Hour</td>
<td>Left turn into Plantation Inn</td>
<td>961</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of Plantation Inn</td>
<td>883</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Left turn into Aahilideaway</td>
<td>935</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of Aahilideaway</td>
<td>651</td>
<td>A</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td>Left turn into Plantation Inn</td>
<td>963</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of Plantation Inn</td>
<td>884</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Left turn into Aahilideaway</td>
<td>942</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of Aahilideaway</td>
<td>646</td>
<td>A</td>
</tr>
</tbody>
</table>

Social Hall/Recreation Center Driveway at Old Route 240

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Location</th>
<th>Reserve Capacity</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-afternoon Peak Hour</td>
<td>Left turn into Social Hall</td>
<td>901</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of Social Hall</td>
<td>768</td>
<td>A</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td>Left turn into Social Hall</td>
<td>882</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of Social Hall</td>
<td>800</td>
<td>A</td>
</tr>
</tbody>
</table>

New Access Roadway at Old Route 240

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Location</th>
<th>Reserve Capacity</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-afternoon Peak Hour</td>
<td>Left turn into access road</td>
<td>891</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of access road</td>
<td>889</td>
<td>A</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td>Left turn into access road</td>
<td>644</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Shared lane out of access road</td>
<td>630</td>
<td>A</td>
</tr>
</tbody>
</table>

For the intersection of the proposed access road with Old Route 240 (Table 7), stop controls on the access road were first considered. However, because existing sight distances along Old Route 240 are limited and because the volumes on the access road would be higher than those on Old Route 240, stop controls on Route 240 were also considered. In each case, all controlled (stopped or yielding) movements would operate at Level of Service A.

This interaction was also analyzed as an all-way stop. In this analysis, level of service is related to the estimated volume-to-capacity (V/C) ratio, with V/C ratios less than 0.42 representing Level of Service A conditions.

Conditions on extended segments of two-lane highways were also analyzed. Because of the long travel distances on the island of Hawaii, the availability of opportunities to pass any slow moving vehicles affects operating conditions; LOS C conditions are desirable. The two-lane highway analysis, based on highway characteristics and two-way volume, was used on segments of Highway 19 nearest Honokaa and on Highway 200 between Honokaa and Kekahaikwa to determine levels of service and to compute volumes with the service (maximum) volume for LOS C. Table 9 presents the peak hour volumes and findings of the two-lane highway analyses.

Table 9

TWO-LANE HIGHWAYS

<table>
<thead>
<tr>
<th>Highway</th>
<th>Volume</th>
<th>LOS</th>
<th>V/C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 240, Kekahaikwa to Honokaa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing (1992) Mid-afternoon</td>
<td>122</td>
<td>A</td>
<td>0.13</td>
</tr>
<tr>
<td>Existing (1992) PM Peak Hour</td>
<td>137</td>
<td>A</td>
<td>0.14</td>
</tr>
<tr>
<td>Future (1996) PM, with project</td>
<td>149</td>
<td>A</td>
<td>0.15</td>
</tr>
<tr>
<td>Future (1996) PM, with project</td>
<td>259</td>
<td>A</td>
<td>0.26</td>
</tr>
<tr>
<td>Highway 19, Mud Lane to Lehua Street</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing (1992) Mid-afternoon</td>
<td>337</td>
<td>B</td>
<td>0.34</td>
</tr>
<tr>
<td>Existing (1992) PM Peak Hour</td>
<td>461</td>
<td>C</td>
<td>0.69</td>
</tr>
<tr>
<td>Future (1996) PM, without project</td>
<td>555</td>
<td>C</td>
<td>0.83</td>
</tr>
<tr>
<td>Future (1996) PM, with project</td>
<td>586</td>
<td>C</td>
<td>0.88</td>
</tr>
<tr>
<td>Highway 19, Pa'a Pili to Namane Street</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing (1992) Mid-afternoon</td>
<td>305</td>
<td>B</td>
<td>0.32</td>
</tr>
<tr>
<td>Existing (1992) PM Peak Hour</td>
<td>419</td>
<td>B</td>
<td>0.56</td>
</tr>
<tr>
<td>Future (1996) PM, without project</td>
<td>505</td>
<td>C</td>
<td>0.68</td>
</tr>
<tr>
<td>Future (1996) PM, with project</td>
<td>532</td>
<td>C</td>
<td>0.72</td>
</tr>
</tbody>
</table>

* V/C = ratio of volume to service volume for LOS C
As indicated in Table 9, the addition of the proposed project's traffic would be a large proportion of existing or future traffic on Highway 240; however, LOS A conditions will remain and total volume would still be below the maximum desirable volumes (service volume for LOS C). On Highway 19, the addition of the project traffic would increase peak hour traffic volumes by about 5% but not change highway levels of service.

Continued growth in volumes on Highway 19 beyond 1996 may require improvements if LOS C conditions in the peak hour are desired. The Long Range Highway Plan recommends widening, to occur between 2000 and 2005, "to provide passing lanes in each direction. These passing lanes should be located at various locations and alternate in direction. Passing lanes increase capacity and improve the flow of traffic by allowing vehicles to pass slower-moving cars and trucks."

Conclusions and Recommendations

The analysis showsthat the proposed project will have a noticeable effect in increasing traffic volumes in the Kuakini area because existing volumes are low. However, because existing volumes are low, the addition of project traffic will not cause a deterioration of operating conditions. Stop controls on all intersections within the Kuakini area were found to be adequate, with little or no delays to users. Stop controls at the intersections of the proposed access road with Old Route 240 could be placed on either roadway or on all approaches for Level of Service A conditions.

Further from the project site, the project's traffic impact will be smaller, increasing traffic on Highway Belt Road (Highway 19) near Honaunau by about 5 percent. The highway would operate at acceptable levels of service with or without the addition of project traffic. The most critical movement that could be affected, the afternoon peak hour left turn from Highway 240 to Highway 19 toward Hilo, was found to have sufficient capacity.

New roadways serving the project should conform to applicable standards. Each connection to an existing roadway should be designed to accommodate the largest vehicle (including delivery and emergency vehicles) expected to enter or exit the resort roadways. Stop signs should be installed to control traffic exiting from the project. Other appropriate signage should be placed if desirable sight distances are not available along Old Route 240.

References


7. M. D. Harnik, "Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersections", Highway Research Board, National Research Council, Highway Research Record Number 211, Washington, D.C., 1967. (Figure 17)
APPENDIX - LEVELS OF SERVICE

A qualitative measure used by traffic engineers to describe traffic operational conditions is the level of service (LOS). Six levels have been defined, from LOS A (best operating condition) to LOS F (worst). The Highway Capacity Manual describes analysis procedures for different types of facilities. For uninterrupted flow facilities such as freeways, other divided highways, and two-lane rural highways, factors such as speed and travel time, freedom to maneuver, comfort and safety, and continuity of flow are used to determine levels of service.

On multi-lane highways, levels of service are related to maneuverability within the traffic stream traveling in the same direction; directional volume and traffic density are used to determine capacities and levels of service. On two-lane highways, levels of service are affected by a driver's ability to pass slow-moving vehicles; opposing volume is also a factor. Descriptions of the levels of service for two-lane rural highways are:

LOS A represents free flow. Travel at desired speeds is uninterrupted, so passing of any slow-moving vehicle is infrequent and can be done easily. Planarmana of vehicles would be three times or less.

LOS B describes stable flow. Travel at desired speeds becomes significant and planarmana of vehicles increases.

LOS C also describes stable flow. Planarmana and restrictions to passing become noticeable and while flow remains stable, some congestion may occur because of slow-moving vehicles or turning movements.

LOS D is characterized by opposing traffic flows operating separately. Passing is extremely difficult as opportunities are very limited.

LOS E describes unstable operation at near capacity levels. There are no usable gaps in the traffic stream, and any attempt to flow causes congestion. Flow is unstable as slow-moving vehicles and other interruptions cause intense planarmana and congestion; passing is virtually impossible.

LOS F represents a forced or breakdown flow caused by traffic demand volume exceeding capacity; actual volume served will drop as speed decreases and congestion increases. LOS F is used to identify bottlenecks or points of congestion, and operations within the queue behind these bottlenecks.

Levels of service are identified for the controlled movements at unsignalized intersections. The analysis procedures describing the reserve capacity (total capacity less volume) of a controlled movement such as left turn against opposing traffic, or traffic entering a roadway from a side street controlled by a stop sign:

<table>
<thead>
<tr>
<th>Reserve Capacity</th>
<th>Level of Service</th>
<th>Expected Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 400</td>
<td>A</td>
<td>Little or no delay</td>
</tr>
<tr>
<td>200 - 399</td>
<td>B</td>
<td>Short traffic delays</td>
</tr>
<tr>
<td>200 - 299</td>
<td>C</td>
<td>Average traffic delays</td>
</tr>
<tr>
<td>100 - 199</td>
<td>D</td>
<td>Long traffic delays</td>
</tr>
<tr>
<td>0 - 99</td>
<td>E</td>
<td>Very long traffic delays</td>
</tr>
</tbody>
</table>

Reference North

Not to Scale

Highway 240

Highway 19

Highway 240 at Highway 19
PM Peak Hour

Traffic Impact Analysis Report
AMANRESORT AT
KUKUIHAIELE, HAWAII
prepared by John R. M. October 1991
APPENDIX G

EVALUATION OF KUKUIHAEL WATER SUPPLY ALTERNATIVES
EVALUATION OF KUKULUKEI WATER SUPPLY ALTERNATIVES

AMANRESORT
Kukuihalii, Hawaii

September 1993

Prepared By:
Waiwai Water Services Inc.
POB 325
Kamuela, HI 96743

Prepared For:
Kukuihaele Development Company
Eni Hay R. Fucnemoto
Planning Consultant

SITE DESCRIPTION

The proposed project site (Exhibit 1 & 2) is comprised of seven parcels, TMK (3) 4-6-31, 13, 44, and 44, totaling approximately 150 acres, located in Kukuihaele, Hamakua, Hawaii. The lands lay makai (east) of Highway 240 over looking the pali of Hamakua and range in elevations from 200 feet at the pali to 600 feet at the highway (Exhibit 3).

WATER DEMAND

The estimated water demand for the Kukuihaele project is outlined in the Table 1 below. The residential demands are based on the County standards of a maximum day demand of 600 gallons per day (gpd) per housing unit.

Table 1 reviews the estimated water demand for the Kukuihaele project. Using the maximum daily demand for potable water, which is based on the average daily demand times 1.5, dictates the needed installed pumping capacity for potable wells and water system design for permit needs. The 600 gpd for one housing unit is the max. day amount as used by the County (400 gpd ave. daily use times 1.5). This amount for potable water would equal about 58,000 gpd or one potable supply well (1 well at 41 gpm).
### ESTIMATED MAXIMUM DAILY WATER DEMANDS - TABLE 1

<table>
<thead>
<tr>
<th></th>
<th>KUHIHALE PROJECT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POTABLE WATER</strong></td>
<td>* GPD/USE/UNIT</td>
<td></td>
</tr>
<tr>
<td>45 HOUSING AND</td>
<td>600</td>
<td>27,900</td>
</tr>
<tr>
<td>1 ACRE LOTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 RESORT UNITS</td>
<td>600</td>
<td>21,600</td>
</tr>
<tr>
<td>1 MANAGER'S HOUSE</td>
<td>2,400</td>
<td>2,400</td>
</tr>
<tr>
<td>1 SEWAGE TREAT. BLDG.</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>52,000</td>
<td></td>
</tr>
<tr>
<td><strong>IRRIGATION WATER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 ACRES LANDSCAPING</td>
<td>3,000</td>
<td>60,900</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>112,000</td>
<td></td>
</tr>
</tbody>
</table>

* County Design Standard (maximum day demand)

400 average daily demand x 1.5 x maximum daily demand = 600 gpd

gpm - gallons per minute

POTABLE DEMAND - TABLE 2

<table>
<thead>
<tr>
<th></th>
<th>AVE. DAY</th>
<th>MAX. DAY</th>
<th>PUMP CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRESENT DEMAND</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dept. Water Supply</td>
<td>42,000 (30 GPM)</td>
<td>63,000 (44 GPM)</td>
<td>144,100 (100 GPM)</td>
</tr>
<tr>
<td><strong>PROJECTED</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNCOMMITTED CAPACITY</td>
<td>54,000 (37 GPM)</td>
<td>81,000 (56 GPM)</td>
<td></td>
</tr>
</tbody>
</table>

KUHIHALE

**ESTIMATED 8.13 MNTN**

24,000 (7 GPM) 50,000 (40 GPM)

According to the Dept. of Water Supply (written comments), the uncommitted capacity is subject to low dry
teo weather flows and portions of this capacity will be needed for ohana dwelling requests and 2 lot subdivisions
in the future.
IRRIGATION DEMAND

(Table 2 continued)

The Kukuluaea Project demand estimates include the typical household irrigation demand. It is estimated that a portion (50%) of the DWOS Standard potable maximum day demand rate is for normal household irrigation or about 200 gallons daily. For the year 1984-85 (a dry year), the Dept. of Water Supply (DWS) average daily demand at Kukuluaea was 297 gallons per service (household unit). In 1986-88 the daily demand averaged 242 gallons per service.

Using the multiplier of 1.5 for the maximum daily demand in the dry year (297 gpd) would give a maximum day actual demand of 445 gpd versus a maximum day design demand of 600 gpd per household unit. It would appear that a maximum day demand of 600 gpd is more than adequate to handle the irrigation for the proposed household units.

In addition, irrigation will probably be supplied to an estimated 10 acres of landscaped area for maintenance purposes. This would total approximately 60,000 gallons per day (gpd) and will fluctuate seasonally as the rainfall may be adequate for much of the year. An irrigation requirement of 60,000 gpd from a water source will likely be needed.

RESOURCE DESCRIPTION

RAINFALL AND STREAM FLOW

Rainfall is typically orographic and increases in the mauna direction as shown in Exhibit 4. Historically, seasonal dry spells are expected in summer. Prolonged droughts of several months duration also occur. Runoff is flashy and nearby streams are normally dry unless subjected to rainfall from the lower Hanalei Ditch. More sheet runoff nearby can be expected as sugar furrows are removed.

GEOLGY

The project site lies on the interface of the Kohala and Mauna Kea volcanoes. Exhibit 5A contains a recently prepared geologic map, based on detailed field studies of the U.S. Geological Survey. Generally, the lavas at sea level are best described as thin-beded pahoehoe flows interbedded with clasts. These lavas (Pohole) when found in the basal aquifer produce an excellent well yield. Locally, Mauna Kea lavas overlie the weathered soil surface of the Pohole volcanic series of the Kohala Mountain. The Kukuluaea springs are perched on this soil (see Hydrogeologic Section, Exhibit 5B).

GROUNDWATER

Groundwater recharge from rainfall may be considered moderate as a result of the thin soil on sloping land. As described above, perched groundwater is known to occur on the soil surface of the Pohole lava. It can be expected that such springs will be sensitive to variations in rainfall. A basal groundwater lens will be found at sea level with an approximate head of 3 to 4 feet above sea level. No wells exist in the immediate vicinity; however, the geology at sea level is quite similar to the Hanalei area where basal water levels have been established (see Exhibit 6A and 6B).
groundwater table at Hono'ooa has a slope of about 3.5 feet per mile. Assuming a hydraulic conductivity of 500 feet per day is reasonable, an estimate of groundwater flow through the area would be on the order of 5 mgd per mile of aquifer (water bearing rock) width. Your and Associates Inc. in March of 1992 estimated the sustainable yield of the Hono'ooa hydrologic unit at about 31 mgd or 3 mgd per mile of aquifer width. These estimates seem reasonable based on the newly drilled State well in Hono'ooa. A well drilled at Kukuiula capable of producing from 100 to 200 gpm of fresh water appears to be feasible. A well producing water from the basal aquifer will not affect or impact perched water springs and stream flows.

GROUND WATER SOURCES

Groundwater pumping is presently restricted to Kukuiula Spring (State Code #0734-01) at an average of 42,000 gpd or 39 gpm. The source has no flow records and is reported to be susceptible to dry weather conditions. The Department of Water Supply for the County of Hawaii is planning on developing a deep well groundwater source to replace or supplement the spring. The spring, at an elevation of 540 feet, reportedly has a capacity of 100 gpm. The supply of water is lifted by two 100 gpm booster pumps to a 100,000 gallon reservoir at elevation 940 feet.

The map in Exhibit 6B shows the locations of existing, planned or permitted potable wells as recorded with the State Water Commission, the County or known development plans.

It is likely that basal groundwater ranging in quality from 50 to 100 mgd chlorides, can be found within the Project site. A well could be constructed for this purpose. Such a well if used for irrigation purposes could be drilled from elevation 700 +/- feet. A potable well should be located on the Hideway facility at about elevation 800 +/- feet.

All water resources for this area are reviewed by the State Water Commission and its staff to define and regulate the sustainable yield, well spacing, and pumpage rates.

SURFACE WATER SOURCES

The Lower Hamakua Ditch runs across the property (see Exhibit 7). The flow in the ditch historically averages approximately 2.2 million gallons per day (mgd) (see flow diagram in Exhibit 7). The Ditch is located about 25 yards upstream of the EWS water reservoir serving the Kukuiula water system (see photo in Exhibit 8).

The ditch flow is subject to seasonal fluctuations and maintenance. It is also deemed a surface water source and would require treatment and monitoring to use as potable water.

The Kukuiula project may require approximately 50,000 gallons per day of irrigation water which could be taken from the Lower Hamakua Ditch at the project site. Arrangements would be required to be made with the operator of the Ditch for any waters removed. Also transmission lines to the project will need to be constructed as this would be dual system, irrigation waters in one and potable water in the other.
WATER SUPPLIES: OPTIONS FOR POTENTIAL SOURCE AND SUPPLY SYSTEMS

1. POTABLE WATER

1. The County of Hawaii operates the Kukulahe water system (Exhibit 9 & 10) which runs to the rim of Waipio Valley, 1.5 miles to the north and to Hakalai Gulch, 2.5 miles to the south. The County water system and capacity would seem to meet the potable water demands for the Kukulahe project. The County may eventually require increased source capacity in the system to meet all the expected future needs. It is likely that a well could be drilled to elevation 50 feet at the existing County reservoir at about 940 feet elevation.

2. The developer could also construct and operate a private water potable water system with its own well, storage, and transmission lines to serve the portion of the project south of the old highway. A well could be drilled on the maka‘a portion of the project at elevation 800 to 900 feet. A 10,000 gallon storage reservoir could be constructed on-site next to the well. Along with water main improvements on site adequate fire flow requirements could be met for the resort hotel units (Anuenue Forest) and all units below the old highway. It would be assumed that the units above the old highway, the Anuenue Highway, the Recreation Center, and the affordable housing would be connected to the County system for service and fire flow.

This option would meet the needed water requirements for development. This option is not recommended if it require duplicate services already provided by the County. This option would use the DOW system as an emergency or standby source. A cooperative program with the County as

3. Typically, stand alone wells constructed by the developer and which are to be dedicated to the County Department of Water Supply (DOW) for operation require an allocation of 50% of the water for DOW use and 50% for the developer. This option may require additional fire flow capacity in the transmission line and storage. However the fire flow needs for the resort hotel units could be met with irrigation water and storage on property, thus eliminating the need to increase the transmission line sizes. The exact requirements will be determined on negotiations with the County.

The developer could assist the County by bonding the future development of a potable well for the DOW Kukulahe water system. There are potable water sources available in the area for this project. Potable well water sources can be developed on or maku‘a of the property.
2. Irrigation Water

1. Irrigation water sources for the project landscaping can be found across the project from the Lower Hamakua Ditch system. Cooperative use of this resource may be developed with the owners/operators of the ditch. Any irrigation water would need to be stored on the site to provide the appropriate pressure and volumes to meet demand. Because the irrigation demand is at the hotel portion of the project, the water from the ditch could be stored on-site and be incorporated into water fixtures of the hotel project.

The irrigation water could also be stored on-site to provide the required fire flow demands of the hotel portion of the project. This demand would need to be engineered and incorporated into the piping plans of the structures.

2. A fresh or brackish water well may be developed on site for project irrigation. These wells will need to be properly located to integrate with irrigation system of the project.
WWTP EFFLUENT, ON SITE

Waste Water Treatment Plant (WWTP) effluent is a valuable source of irrigation water for this property. Effluent can be produced to be used for irrigation. The cost to bring water to the site has been included in the drinking water supply and the water should be recovered as an irrigation source. This water can be used to blend with irrigation water sources.

It is recommended that all WWTP water produced on the site be kept on the site and processed. To assure the highest quality effluent and to provide additional protection of the existing spring source, the use of stand-alone WWTP plants should be used by the 10-acre lots andSmall of the highway. This water can be blended with irrigation water and used based on current State regulations. Such outlying plants should be operated by the resort WWTP operators.

Any sub-surface disposal of sanitary waste water should be handled in the lowest portion of the project area. This will provide maximum protection of the perched ground water.

Storm water disposal via shallow drain wells are likely to increase pollution potential to the perched water beyond that which already exists.
HAWAII
Major Stream Divertions

Wailuku Drainage, Wailuku Aquifer System

Kohala Mountain Streams

Kohala Mountain Streams

Upper Hamakua Ditch

10 MGD

Upper Hamakua Ditch

3020 ft.

Kawaiul Stream

16 MGD

Kawaiul Stream

1927 ft.

Alakahi Stream

8 MGD

Alakahi Stream

Kolawe Stream

4 MGD

Kolawe Stream

Welima Stream

1 MGD

Welima Stream

20 MGD Lower Hamakua Ditch

965 ft.

Hamakua Irrigation

from Hawaii Water Resources Protection Plan
March 1992

LOWER HAMAKUA DITCH FLOW
KUKUHALE PROJECT

EXHIBIT 7

LOWER HAMAKUA DITCH PHOTO
KUKUHALE PROJECT

EXHIBIT 8
APPENDIX H

DEVELOPER'S LETTER OF COMMITMENT
COMMITMENTS FROM AMANRESORT PROJECT DEVELOPERS
TO THE SURROUNDING COMMUNITY

The following represent significant community concerns and issues that we, the Amanresort developers (Silverlink Holdings Limited and Royal Coast Resorts Corporation) are attempting to address by way of making specific commitments to the community:

1. Potential Property Tax Increase On Surrounding Land Owners

   We intend to provide a fund to be used to assist in the subsidizing of any increases to the homes in our immediate area (approximately 50-60 homes). To qualify for this subsidy the property owner (1) must have residually zoned property; (2) must dedicate their property under the existing County Ordinance No. 91-122 which allows them to freeze their property taxes for ten years (adjusted only by the Consumer Price Index), and re-dedicate their property for the next ten year period when the first expires, and (3) continue to retain ownership of their property. A map will be prepared which clearly delineates which homes qualify, but generally speaking it will include Kona Camp, Tiger Camp, the camp behind the Last Chance Store and all other residences in Kukuihaele extending to the Waipo'o Lookout.

   We will create a Property Tax Trust Fund that initially will be funded with $25,000 and increased by funding of 2% of the gross sales price of each of the 45 one-acre lots when they are sold. These funds will stay in an interest bearing account during the ten-year period in which the existing ordinance is freezing the tax amount. When the homes that still qualify re-dedicate for the next ten years, they will be re-assessed by the County. This is when there is a potential impact on increases to the homeowner.

   The Property Tax Trust Fund will then begin covering the difference between the taxes being charged after reassessment and the previous assessed taxes, adjusted only by the Consumer Price Index increases. There is no way to accurately predict how much the taxes will increase. This fund will provide from $100,000 to $100,000 at the end of the first ten-year period.

   If a new ordinance is passed in the County which changes the assessment procedures so that property taxes are only re-assessed when a home is sold, this will make this subsidy unnecessary and these funds would become available for other community benefits.

Commitments From Amanresort Project Developers
To the Surrounding Community

2. Traffic Impact On Kukuihaele Town Road

   The residents of Kukuihaele have expressed their concern about having the traffic for the project use the existing town road. To minimize this impact, we are prepared to access the project from the State Highway on the west side of Waiokeoo stream. Access to the Amanresort would only require creating the town road in one place. Or, as an alternative, the entry can come off the State Highway just west of Tiger Camp so that it would enter the town road on the Last Chance Store side of Tiger Camp. This would require us to use the town road for about two hundred yards. We are prepared to go ahead with either of these alternate routes. We are also looking to the Department of Public Works for guidance on these access routes.

3. Additional Lands to Local Homeowners

   Many of the local homeowners have used the former Hamakua Sugar Company lands over the past 30-50 years. We have made a commitment to the owners of lots at Tiger Camp to deed to them the areas they have been using. In many cases these additional lands represent areas of equal or greater size than the actual lots themselves. There are some additional lots near the former grade school playground where we will also deed land to the existing lot owners.

   Because these additional lands are all on Agricultural minimum 40 acre lot sized parcels, we will need to apply for rezoning, and in some cases, State land use boundary amendments for parcels as part of our overall land use permitting applications.

4. Community Lands and Recreational Facilities

   An area of approximately 11.5 acres, including the social hall site, the field adjacent to it and lands extending to behind Tiger Camp are being dedicated for community use. An Advisory Committee of community representatives will be formed to determine how the community wants to use these lands. A fund of $125,000 will be set aside for improvements, which may include exteacting or replacing the existing social hall, and developing facilities such as a playground, ball field, bus facilities or parking. The area may also be used for taro or other agricultural uses or for a pot factory. We have also committed to improve and maintain the existing playground/park on the mauka side of the village road by the former grade school.
5. Affordable Housing

We initially proposed building affordable staff rental units on lands near Tiger Camp. As many residents feel that this will crowd Tiger Camp, we have altered our proposal to offer $200,000 in cash funds to the County to be used toward building out one of the existing affordable housing sites in Honolulu. If the County of Hawaii determines that these funds would be better spent on community benefits, such as those listed above, these funds may be made available for these in lieu of additional affordable housing funds. Based on the recommendations of the State Housing and Finance Department Corporation, we are also prepared to construct up to ten units of employee housing in an area within the project site that will not impact the Tiger Camp lot.

6. Concern Over Proposed 45 Residential Lots On Land To Be Reserved For Resort

Concerns have been raised over the impact of these residential lots. We have committed to a minimum one-acre lot size even though portions of the land are currently zoned RS-15 (1/3 acre lot). In our initial proposal we intended to apply for a change of State Land Use Designation for the residential development areas from Agricultural to Urban and from County Agricultural Zoning to Resort. We have now decided to leave most of these areas in Agricultural designation and apply for County one-acre agricultural zoning.

While the intention to have these homes used as residences affiliated with the hotel has not changed, we believe that keeping the land in State Agricultural designation for most of these lots will alleviate concerns regarding future expanded resort use on the property. This change means that only 25 acres of the 77 acres presently in the State Agricultural designation will be taken out of this designation. These 25 acres of Urban State Land Use are being requested for the hotel site, for seven resort-residential one-acre lots, for up to ten units of employee housing and for driving areas to adjoining residential lot owners.

We hope that this reduction of only 25 acres coming out of Agricultural land use will make some of the Kukuihule residents more comfortable that their current agricultural lifestyle and use of their lots (keeping chickens, pigs, etc.) will not be jeopardized.

7. Concern Over Increased Density

The developers have committed to not increase the current density on the project lands. The project property of 110 acres is currently zoned to allow for approximately 81 residential units on small 12,000 square foot lots and four larger Ag lots. This residential density of 81 units is almost all crowded onto about 28 acres in the middle of Kukuihule. The proposed project calls for the same density of 85 units, but spread out over approximately 100 acres. The bungalow style hotel will have only three detached bungalow "rooms" per acre. The residential lots will be minimum one acre in size with significant open space surrounding them so that the overall density is closer to one per two acres of gross land area.

8. Access To and Preservation Of The Plantation Manager’s Estate

The Plantation Manager’s Estate will be preserved in its original state. The grounds are now being carefully maintained and will be further maintained along the lines of the original estate. We recognize the importance and are committed to the protection of the unique stand of 85 year old trees on the property. The house itself will be restored and used as a first-rate Plantation Inn. Because of the interest of the public not to be cut off from the property, there will be buffets/barbecues on the estate lawns held on weekends open to the public.

9. Impact On Walapio Valley

We understand that some of the residents and farm owners of Walapio Valley are concerned that the development will create more use on the already dangerous access road into the Valley. We would like to work with the various government and local organizations that have been studying the problem to find ways to minimize our impact.

10. Additional Cemetery Lands

Various community members have expressed their concerns that there may not be adequate room to expand the existing Roman Catholic Church and Hawaii County cemeteries. Therefore, we have agreed to deed a strip of land 50 feet wide on two sides of each of these cemeteries to the Church and to the County.
11. Lifetime Residence To Kokilauale Resident

When we acquired these lands from Hamakua Sugar Company, it included one house on about one acre of land that had been leased for decades to the Reynon family. Mr. Reynon now lives there alone. The former lease expired. We have agreed to let him live out his life on the property.

12. Need For Training For New Job Opportunities

We will participate in providing training programs for former Hamakua Sugar Company employees interested in hotel employment.

13. Need For Project To Support Hawaiian Culture

Some of those in the Hawaiian community have asked us to please try to use Hawaiian names and Hawaiian themes throughout the project and to support Hawaiian activities and Hawaiian culture. Many resorts in Hawaii are now reflecting an international resort culture rather than Hawaiian culture. As with all the Amanresorts in the Pacific Islands, we are committed to supporting local culture and lifestyle and incorporating it into the guest experience. We will be working closely with leaders of the Hawaiian community to seek ways to best support the Hawaiian culture.
APPENDIX I

COMMENTS AND RESPONSES TO THE EIS PREPARATION NOTICE
COMMENTS AND RESPONSES TO THE EIS PREPARATION NOTICE

The EIS Preparation Notice (EISPN) was published in the August 8, 1993 OEQC Bulletin. This publication date was the official start of the 30-day Consultation Period, which officially ended on September 7, 1993. The EISPN included a brief description of the project, the environmental setting, and the potential impacts and mitigation measures to enable reviewers to understand the scope of the project and provide any comments and concerns they believed should be addressed in the Draft EIS.

The EIS Consultant sent the EISPN to the agencies, organizations, and individuals listed below who may have had a potential stake or interest in the project. Those who responded with a comment that required a response are marked with a double asterisk (**). Those who sent "no comment" or "no impact" letters are marked with a single asterisk (*). All others without asterisk(s) did not respond.

The comments received during the Consultation Period and the respective responses to those comments are reproduced in this Appendix. The "no comment" letters are grouped together at the end of this Appendix.

1 Federal
   1.1 U.S. Department of Agriculture, Soil Conservation Service**
   1.2 U.S. Army Corps of Engineers, Pacific Ocean Division**
   1.3 U.S. Department of Interior, Fish and Wildlife Service
   1.4 U.S. Department of Interior, Geological Survey**

2 State
   2.1 Department of Agriculture**
   2.2 Department of Business, Economic Development and Tourism
   2.3 State Land Use Commission**
   2.4 Department of Education*
   2.5 Department of Hawaiian Home Lands*
   2.6 Department of Land and Natural Resources
      2.6.1 Director**
      2.6.2 Land Management Division
      2.6.3 State Historic Preservation Division
      2.6.4 State Parks Division*
      2.6.5 Aquatic Resources Division
      2.6.6 Water Resources Division*
      2.6.7 Forestry and Wildlife
      2.6.8 Na Ala Heiau**
   2.7 Department of Health**
   2.8 Department of Accounting and General Services*
   2.9 Department of Transportation**
   2.10 Office of State Planning**
   2.11 Office of Hawaiian Affairs
   2.12 Department of Human Services
   2.13 University of Hawaii
      2.13.1 Water Resources Research Center
      2.13.2 Environmental Center

3 County
   3.1 Planning Department
   3.2 Department of Public Works**
3.3 Department of Parks and Recreation
3.4 Department of Research and Development
3.5 Department of Water Supply**
3.6 Department of Housing and Community Development*
3.7 Fire Department**
3.8 Police Department*
3.9 Civil Defense Agency**

4 Other

4.1 Utilities
   4.1.1 HELCO
   4.1.2 Hawaiian Telephone

4.2 Community and Environmental Groups
   4.2.1 American Lung Association
   4.2.2 Hamakua Development Council
   4.2.3 Waipio/Kukuihaele Ohana Hanai Like Community Assoc.
   4.2.4 Hawaiian Civic Club (Honokaa)
   4.2.5 Sierra Club
   4.2.6 Life of the Land
   4.2.7 Public Access Shoreline Hawaii
   4.2.8 Historic Hawaii Foundation
   4.2.9 Waipio Taro Farmers Association**
   4.2.10 Hamakua Soil & Water Conservation District
   4.2.11 E Mau Na Aia Hele**

4.3 Business and Labor Groups
   4.3.1 International Longshoremen Workers' Union (ILWU)
   4.3.2 Hamakua-Kohala District Council of the Hawaii County Economic Opportunity Council (HCBOC)
   4.3.3 Hawaii Chamber of Commerce
   4.3.4 Hawaii Visitors Bureau
   4.3.5 Big Island Business Council*
   4.3.6 Portuguese Chamber of Commerce
   4.3.7 Japanese Chamber of Commerce
   4.3.8 Kona-Kohala Chamber of Commerce
   4.3.9 Hawaii Building & Construction Trades Council
   4.3.10 Plumbers & Pipefitters Local 675
   4.3.11 Bricklayers, Masons & Plasterers, Local 1
   4.3.12 Laborers' International Union, Local 368
   4.3.13 Sheet Metal Workers, Local 293
   4.3.14 Hawaii Operating Engineers
   4.3.15 Hawaii Hotel Association, Big Island Chapter
   4.3.16 Hawaii Island Board of Realtors
   4.3.17 Hawaii Island Contractors Association
   4.3.18 Hawaii Island Economic Development Board
   4.3.19 Kohala Coast Resort Association
   4.3.20 Kona Board of Realtors

4.4 Individuals
   4.4.1 Lani Ma'a (relative of Kukuihaele resident)
   4.4.2 Henry Ross
   4.4.3 Linda Dina**
4.4.4 Jack Kanaa**
4.4.5 Bob Impson**

4.5 Media
4.5.1 West Hawaii Today (Arlene Stephi)
4.5.2 Tribune Herald (Gordon Pang)
4.5.3 Advertiser (Hugh Clarke)
4.5.4 Pacific Business News (Christine Rodrigo)

4.6 Politicians
4.6.1 County Council
   4.6.1.1 Spencer Kalani Schutte
   4.6.1.2 Brian De Lima
   4.6.1.3 Takashi Domingo
   4.6.1.4 James Arakaki
   4.6.1.5 Bob Rosehill
   4.6.1.6 Helene Hale
   4.6.1.7 Keiko Bonk-Abramson*
   4.6.1.8 Keola Childs**
   4.6.1.9 James Rath

4.6.2 State Legislature
   4.6.2.1 Senate
      4.6.2.1.1 Andrew Levin*
      4.6.2.1.2 Richard Matsuura
      4.6.2.1.3 Malama Solomon
   4.6.2.2 Representatives
      4.6.2.2.1 Jerry Chang
      4.6.2.2.2 Virginia Isbell
      4.6.2.2.3 Robert Herkes
      4.6.2.2.4 Larry Tanimoto
      4.6.2.2.5 Harvey Tajiri
      4.6.2.2.6 Dwight Takamine
Mr. Roy Takekomo
211 Hoolaula Street
Hilo, Hawaii 96720

Dear Mr. Takekomo:

Subject: PROPOSED AMAN RESORT
Kukuihaele, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice
Request for Concerns

We have completed review of the proposed resort development at
Kukuihaele. Land grading is anticipated; soil and slope conditions at
the site will require a comprehensive erosion control plan. This
erosion control plan should be closely integrated with a detailed storm
drainage plan.

Historically, the Kukuihaele area is consistently affected by flooding
and erosion caused by high intensity rainfall on land with highly
eroptive soils. The potential nonpoint source pollution of the ocean
should be addressed.

In addition, it appears the present water supply and distribution system
must be improved to support installation of the erosion control plan and
proposed development.

We appreciate the opportunity to provide comments and suggestions for
preparation of the Environmental Impact Statement. Should you have any
questions, please feel free to contact Mike Tulang at 896-2630.

Sincerely,

[Signature]
NATHANIEL R. CONNER
State Conservationist

cc: Ms. Virginia Goldstein, Director, Hawaii County Planning Department
25 Aupuni Street, Hilo, Hawaii 96720,
Mr. Lindsey Carter, District Conservationist, Hawaii Field Office

Roy R. Takekomo
Land Use Planning & Law Consultant
177 Pueo St., Hilo, HI 96720
Phoneline: (808) 935-1212

October 20, 1993

Mr. Nathaniel Conner, State Conservationist
Soil Conservation Service
U.S. Department of Agriculture
P.O. Box 50004
Hilo, Hawaii 96720

RE: PROPOSED AMAN RESORT
Kukuihaele, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Conner:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman
Resort. Your comments will be addressed in the Draft EIS as follows:

1. Erosion Control, Drainage, Non-Point Source Pollution. The Draft EIS will analyse the
   susceptibility of the soils to erosion. Appropriate mitigation measures will be suggested as part
   of the erosion control plan to control erosion and minimize non-point source pollution. A
   drainage master plan will be prepared during the design phase of the project for review by the
   Department of Public Works.

2. Water Supply. The Draft EIS will assess the availability of the existing water supply and identify
   necessary additions to the water supply system.

We will send you a copy of the Draft EIS when it is completed. We anticipate completion in the latter
part of November. You will have an opportunity to review the document and provide additional
comments.

If you have any questions or additional comments, please call me.

Yours truly,

[Signature]
Roy Takekomo
cc: Planning Department, County of Hawaii
Kukuihaele Development Company
DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
Planning Division

August 30, 1993

Mr. Roy Takenoto
Land Use Planning and Law Consultants
3181 Kaimuki Street
Honolulu, Hawaii 96820

Dear Mr. Takenoto:

Thank you for the opportunity to review and comment on the Environmental Impact Statement (EIS) for the Proposed Anan Resort, Kukuihaele, Hawaii. The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1968 and to the Department of the Army for permits under the Clean Water Act, the Rivers and Harbors Act of 1899 and the Marine Protection, Research and Sanctuaries Act.

a. Any work performed in Waialae and Waikaehe Gulches may require a DA permit. The drainage plans will need to be coordinated with our Operations Division. In addition, the EIS should include a botanical and wetland survey to substantiate the statement that wetlands are not present. For further information, please contact our Operations Division at 438-6552 and refer to file number 2093-079.

b. The flood hazard information presented on page 6 of the report is incorrect.

Sincerely,

James A. Nelson
Director of Engineering

Roy R. Takenoto
Land Use Planning & Law Consultants
131 Komalani Street, Suite 600
Honolulu, Hawaii 96820

September 10, 1993

Mr. Kim Cheung, Director of Engineering
Department of the Army
U.S. Army Engineer District, Honolulu
Building 220
Fort Shafter, HI 96858-5440

RE: PROPOSED ANAN RESORT
Kukuihaele, Hamakua District, Hawaii
Environmental Impact Statement Preparatory Notice—Response to Comments

Dear Mr. Cheung:

Thank you for your interest and time in responding to the EIS Preparatory Notice for the proposed Anan Resort. Your comments will be addressed in the Draft EIS as follows:

1. The Draft EIS will contain information on wetlands from the Wetlands Inventory conducted by the U.S. Fish and Wildlife. There will be no work performed within the setbacks. The Draft EIS will state that drainage plans should be coordinated with your Operations Division during the design phase of the project to ensure that the wetlands have not been impacted.

2. The Draft EIS will include the flood information contained by your department as being currently presented in the EIS Preparatory Notice.

We will send you a copy of the Draft EIS when it is completed, probably in the latter part of October. You will have an opportunity to review the document and provide additional comments.

If you have any questions, please call me.

Yours truly,

Roy Takenoto

cc: Planning Department, County of Hawaii
Kekaha Kai Development Company
September 30, 1993

Mr. Roy Takekoma
171 Hoomaluh Street
Hilo, Hawaii 96720

Dear Mr. Takekoma:

Subject: Proposed Ainan Irrigation, Kukahaha, Hamakua District, Hawaii

Environmental Impact Statement Prepared Notice

The Department of Agriculture has reviewed the subject proposal and offers the following comments.

According to the proposal, the applicant will seek to amend the designation of the subject parcels in the Hamakua District from agricultural to urban uses. Examples of urban type uses include the construction of resorts or villages, a recreation center, and others (including gift shops, a restaurant, and diving facilities). The proposed development will require the preparation of an Environmental Impact Statement.

The subject area is located in Kukahaha, southeast of Waipio Valley. The proposal would result in the urbanization of approximately 65 acres in farmland upland lands.

Issues That Should be Addressed

Our Department would like to see the following issues addressed in the Environmental Impact Statement:

- The relationship of this project to any other planned developments in the Hamakua Development Plan area;

- An agricultural impact analysis which includes the assessment of the proposed project's potential impact on alternative future agricultural activities which may replace Hamakua sugar cane operations, and on the agricultural policies of the State of Hawaii. The analysis needs to include the full impact of the project on the economic viability of the agricultural options. The analysis would include the loss in potential production per acre, lost revenues, cost of replacement field preparation if any, and any other indicators of adverse impact.

- The economic feasibility and potential of establishing viable agricultural uses on the project site;

- The possible impacts of the project on the Lower Hamakua Ditch and other users of the system.

- The broader economic resource impact on the State from the irrecoverable loss of "prime" agricultural lands;

- Conformity to the State Agriculture Functional Plan, 1991, and its objectives and policies, particularly, Implementing Action 13(2)(1); and

- The relationship to the following Hawaii State Plan policies and priority guidelines:
  226-71d(10) "Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs."
  226-103(1) "Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries."
  226-103d(1) "Identify, conserve and protect agricultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural districts."
  226-104d(1) "Make available marginal or non-agricultural lands for agricultural urban uses while maintaining agricultural lands of importance in the agricultural districts."

Thank you for the opportunity to comment. We will provide further comment upon our review and review of the Environmental Impact Statement.

Sincerely,

[Signature]

Chairperson
Department of Agriculture

C: Hawaii County Planning Department
Office of Environmental Quality Control
October 20, 1993

Mr. Yukio Kinigawa
Chairman, Board of Agriculture
Department of Agriculture
1478 South King Street
Honolulu, HI 96814-2312

RE: PROPOSED AMAN RESORT
Kukuihakai, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Kinigawa:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

1. Planned Developments: The Draft EIS will list known planned developments in the Hamakua area and discuss the relationship of the proposed project to these planned developments.

2. Agricultural Impact: The Draft EIS will discuss the viability of diversified agriculture as an alternative use of the Project Site. The extent of conformity with the State Plan, including the agricultural policies, will be discussed. The agricultural suitability of the soils will also be discussed.

We will send you a copy of the Draft EIS when it is completed. We anticipate completion in the later part of November. You will have an opportunity to review the document and provide additional comments.

If you have any questions or additional comments, please call me.

Yours truly,

[Signature]

cc: Planning Department, County of Hawaii
Kukuihakai Development Company
August 31, 1993

Mr. Roy Takemoto
171 Kamehameha Street
Hilo, Hawaii 96720

Dear Mr. Takemoto:

Subject: Environmental Impact Statement Preparation Notice (EISP) for Aman Resort, Kukuihaele, Kauai District, Hawaii

We have received the EISP for the subject Aman Resort project transmitted with your letter of August 18, 1993, and have the following comments:

1) Based on the location map and site plan, we find that portions of the proposed project are located within the State Land Use Urban and Agricultural Districts. It appears that the proposed Amanestu and Aman Villas are within the Agricultural District, while the Kauai Science and Social & Recreation Center appear to lie within the Urban District as stated on page 9 of the EISP. Based on the site plan, the proposed affordable housing appears to be in the Urban District, not in the Agricultural District.

2) Based on page 9 of the EISP, we understand that a petition for district boundary amendment in connection with the project will be filed with the Land Use Commission in the future. However, as noted above, the location of the amendment area in relation to the project site is not clear. We suggest that the draft EIS include a map showing the project's boundaries in relation to the State Land Use Districts.

We have no further comments to offer at this time. Thank you for the opportunity to provide comments on this matter.

Should you have any questions on this matter, please feel free to call me or Bert Sasakari of our office at 808-382-3822.

Sincerely,

Roy R. Takemoto
Executive Officer

cc: Planning Department, County of Hawaii
Kukuihaele Development Company
Mr. R. Takamoto

We will forward our Historic Preservation Division comments as they become available.

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Yugasa at our Office of Conservation and Environmental Affairs, at 567-3277, should you have any questions.

Very truly yours,

[Signature]

Mr. Roy Takamoto
171 Hosuei Street
Hilo, Hawaii 96608

Dear Mr. Takamoto:

Subject: Environmental Impact Statement Preparation Notice (EISP)
Proposed Zen Resort, Kohala, North District, Hawaii

We have reviewed the EISP information for the subject project transmitted by your letter dated August 10, 1993, and have the following comments:

Commission on Water Resources Management

The Commission on Water Resources Management’s (OWRM) staff comments that the EISP indicates that “the proposed project will share in the cost with the County for a new groundwater source, transmission, and storage facilities which will upgrade the entire Kohala municipal water system.”

Pursuant to Chapter 168, Hawaii Administrative Rules, a Well Construction and a Pump Installation Permit may be required by OWRM for the proposed new groundwater source development.

Office of Conservation and Environmental Affairs

The Office of Conservation and Environmental Affairs (OCEA) comments that the northern (makai) boundary of the proposed project is located near the Limited “L” shoreline of the Conservation District. OCEA suggests that the applicant consult with the State Land Use Commission on the precise location of this boundary.
October 20, 1993

Mr. Keith Ahue, Director
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96813

RE: PROPOSED AMAN RESORT
Kukuihaele, Hamakua District, Hawaii
Environmental Impact Statement Preparing Notice—Response to Comments

Dear Mr. Ahue:

Thank you for your interest and time in responding to the EIS Preparing Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

1. Drinking Water Source. The Draft EIS will acknowledge the applicability of the well construction and pump installation permit to the proposed drinking water wells.

2. Conservation Districts. The Draft EIS will include a map showing the Conservation district boundaries relative to the Project Site location.

We will send you a copy of the Draft EIS when it is completed. We anticipate completion in the latter part of November. You will have an opportunity to review the document and provide additional comments.

If you have any questions or additional comments, please call me.

Yours truly,

[Signature]
Roy Takeda

cc: Planning Department, County of Hawaii
Kukuihaele Development Company
October 20, 1993

Mr. Rodney Ohira
Na Alii Hule
Department of Land and Natural Resources
P.O. Box 4849
Hilo, HI 96720-0849

RE: PROPOSED AMAN RESORT
Kukulua, Hamakua District, Hawaii

Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Ohira:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

- Trails and jeep access road. We appreciate your efforts to conduct a special field investigation. The Draft EIS will identify the shoreline trail. Since this trail is located outside the Project Site, there should be no impact. The Draft EIS will also identify the access to Kukulua’s Landing.

Since the jeep trail within the Project Site has not been used to access the Landing, the project will not impact public access to Kukulua’s Landing. If there is a special significance of the jeep trail, we would appreciate any information.

We will send you a copy of the Draft EIS when it is completed. We anticipate completion in the latter part of November. You will have an opportunity to review the document and provide additional comments.

If you have any questions or additional comments, please call me.

Yours truly,

[Signature]

cc: Planning Department, County of Hawaii
Kukulua’s Development Company
Mr. Roy Takemoto
September 20, 1993
Page 2

Any questions regarding this matter should be directed to Mr. Denis Law of the Clean Water Branch at 586-4309.

Solid Waste

1. The applicant should develop an overview of the solid waste impacts resulting from the proposed resort, including a conceptual plan for minimizing the generation and disposal of waste during construction and operations. This plan should be based on the State's waste management hierarchy and goals and any applicable County goals or conditions.

2. The developer should, based on the impact analysis, participate in the funding and construction of necessary solid waste disposal and diversion facilities, on a pro-rata basis, as determined by the State's Departments of Health and the County's Department of Public Works.

3. At the time of local zoning approval, a detailed Integrated Waste Management Plan for the development should be submitted to the County's Department of Public Works, which would address specific waste diversion programs necessary to assist in meeting the State and County reduction goals.

4. The developer should investigate the use of secondary resources (recycled materials) whenever possible in the construction of the project, including but not limited to the use of crushed glass as an aggregate substitute in road paving and the use of locally-produced greenwaste compost as a soil amendment in landscaping.

Any questions regarding this matter should be directed to Mr. John Harder of the Office of Solid Waste Management at 586-4260.

Underground Injection Control (UIC)

1. The UIC program administers Hawaii Administrative Rules, Title 11, Chapter 23, “Underground Injection Control.” If any injection wells, including drywells for storm water runoff, are proposed, the UIC program must review and approve the plans prior to commencing construction.

2. UIC rules prohibit injection wells within 1/4 mile of a drinking water well.

3. Individual Wastewater Systems (IWS) serving residential and non-residential buildings which receive non-hazardous wastewaters less than one thousand (1000) gallons per day (gpd) of wastewater are excluded from UIC Chapter 23 regulations. If an IWS, including a septic tank, receives greater than 1000 gpd of wastewater, then it would be a sewage injection well, which is prohibited by Chapter 11-23 above the UIC line.

If you should have any questions on this matter, please contact Mr. Kevin Wood of the Safe Drinking Water Branch at 586-4276.
Mr. Roy Takei
September 20, 1993

Drinking Water

1. Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 30 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules, Title 11, Chapter 20, "Rules Relating to Potable Water Systems."

2. Section 11-20-29 of Chapter 11-20 requires that all new sources of potable water serving a public water system be approved by the Director of Health prior to its use. Such an approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set forth in Section 11-20-29.

3. The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses performed by a laboratory certified in the state of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional tests may be required by the Director upon his review of the information submitted.

4. Section 11-20-30 of Chapter 11-20 requires that new or substantially modified distribution systems for public water systems be approved by the Director. However, if the water system is under the jurisdiction of the County of Hawaii, the Department of Water Supply will be responsible for the review and approval of the plans.

If you should have any questions regarding this matter, please contact Mr. Stuart年度的 Safe Drinking Water Branch at 586-4271.

Wastewater

1. The subject project is located in the non-critical wastewater disposal area as determined by the Hawaii County Wastewater Advisory Committee.

2. Although cesspools may be allowed in this area under our rules, we would like to begin phasing out the installation of cesspools whenever possible. As such, we would like to begin recommending the use of treated individual wastewater systems when a treatment plant (municipal or private) is not feasible or compatible with the land area. The use of septic systems would help minimize contamination to the underground water resources and prevent further cesspool failures.

3. As there is no existing sewer service system in the area, the Department of Health (DOH) concurs with the use of a private treatment plant to serve the resort and recommends the use of treated individual wastewater systems (septic systems) for wastewater treatment and disposal from the 4-telefon and villas. The treated effluent from the private treatment plant should be reused for irrigation purposes wherever possible.

Mr. Roy Takei
September 20, 1993

Page 4

All wastewater plans must conform to applicable provisions of the DOH's Administrative Rules, Chapter 11-60, "Wastewater Systems."

If you should have any questions on this matter, please contact Mr. Earl Kajiwara of the Wastewater Branch at 586-4250.

Very truly yours,

John C. Edmison, M.D.
Director of Health
C: Clean Water Branch
   Safe Drinking Water Branch
   Waste Water Branch
   Office of Solid Waste Management
October 20, 1993

John C. Lewis, M.D., Director
Department of Health
October 20, 1993
Page 2

If you have any questions or additional concerns, please call me.

Yours truly,

Roy Takemoto

cc: Planning Department, County of Hawaii
Kauai Heritage Development Company

Dear Dr. Lewis:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

1. Water Pollution. The Draft EIS will acknowledge the applicability of the NPDES Permit to construction activities.

2. Solid Waste. The Draft EIS will estimate the potential volume of solid waste that could be generated by the project based on county standards. Mitigation measures will include a requirement for the hotel operator to develop an integrated solid waste management plan to reduce and recycle waste, as well as a requirement for the contractor to consider use of recycled materials such as crushed glass as an aggregate substitute.

3. Underground Injection Control (UIC). The Draft EIS will acknowledge the applicability of the UIC Permit to steamwater drywells if the drywells meet the definition of injection wells. The project will not use individual wastewater systems that receive greater than 1000 gpd since the entire Project Site is above the UIC line. Since a proposed alternative is to drill a drinking well within the Project Site, the Draft EIS will note the restriction to locate injection wells within 1/4 mile of the drinking water well. Thank you for clarifying the applicability of these UIC rules.

4. Drinking Water. The Draft EIS will identify water supply alternatives. Since one alternative will be to drill a well serving a "public water system," the Draft EIS will acknowledge the applicability of Hawaii Administrative Rules Chapter 11-20 to the new potable source.

5. Waste Water. The Draft EIS will state DOH's preference for septic systems in lieu of cesspools even if cesspools may be permitted. Regarding the effluent from the proposed private treatment plant to serve the hotel, the Draft EIS will include reclamation for irrigation purposes as a disposal alternative.

We will send you a copy of the Draft EIS when it is completed. We anticipate completion in the latter part of November. You will have an opportunity to review the document and provide additional comments.
Mr. Roy R. Takemoto  
171 Honoapiilani Street  
Hilo, Hawaii 96720

Dear Mr. Takemoto:

Subject: EIS Preparation Notice  
Proposed Aman Resort  
Kukulua, Hamakua District, Hawaii

A Traffic Impact Analysis Report (TIAR) for the proposed development should be prepared and made a part of the draft EIS. Our comments will be submitted after our review of the TIAR.

Thank you for the opportunity to provide comments.

Sincerely,

Rex D. Johnson  
Director of Transportation

October 30, 1993

Mr. Rex D. Johnson, Director  
Department of Transportation  
869 Punchbowl Street  
Honolulu, HI 96813

RE: PROPOSED AMAN RESORT  
Kukulua, Hamakua District, Hawaii  
Environmental Impact Statement Preparation Notice–Response to Comments

Dear Mr. Johnson:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. The Draft EIS will include a Traffic Impact Analysis Report for your review.

We will send you a copy of the Draft EIS when it is completed. We anticipate completion in the latter part of November. You will have an opportunity to review the document and provide additional comments.

If you have any questions or additional comments, please call me.

Yours truly,

Roy R. Takemoto  
Land Use Planning & Law Consultant  
171 Honoapiilani Street, Hilo, HI 96720

Phone/Fax (808) 961-0105

cc: Planning Department, County of Hawaii  
Kukulua Development Company
August 25, 1993

Mr. Roy Takemoto
Land Use Planning and Law Consultant
171 Hoomalu Street
Hilo, Hawaii 96720

Dear Mr. Takemoto:

Subject: Review of Proposed Aman Resort Environmental Impact Statement Preparation Notice

We have reviewed the referenced document and have the following comments:

Although the project site is not within the Special Management Area (as noted on page 10 of the referenced document), the project site is located within the existing zone management area and thus the State's Coastal Zone Management (CZMA) law, Chapter 205A, Hawaii Revised Statutes, is applicable. With the recent passage of Acts 91 and 93, the coastal zone management area now includes all land areas, as well as all marine waters extending to the limit of the State's police power and management authority. State funds reserve funds were allocated to meet these objectives and policies. These are now the objectives and the supporting policies that should be addressed by the project site.

The primary coastal management concerns for this project relate to the impact of coastal ecosystems, scenic and open space resources, and historic resources. We will be interested in reviewing in more detail specific plans relating to these concerns in forthcoming documents. At this time we do not have any specific comments on the proposal in its current outline. However, we may comment when more information becomes available in the draft environmental impact statement.

We appreciate very much the opportunity to review the proposal. If you have any questions, please contact Terry Hildebrand at 387-2881.

Sincerely,

Harold S. Maunumo
Director

Roy R. Takemoto
Land Use Planning & Law Consultant
171 Hoomalu Street, Hilo, HI 96720

September 10, 1993

Mr. Harold Maunumo, Director
Office of State Planning
State of Hawaii
220 S. High Street, 4th Floor
Honolulu, HI 96813

RE: PROPOSED AMAN RESORT
Kukuihule, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Maunumo:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

1. The Draft EIS will discuss the Coastal Zone Management Act as amended by Acts 91/93 and Act 256/93. Thank you for bringing to our attention these recent amendments.

2. The Draft EIS will analyze the relationship of the proposed project to the objectives and policies of the Coastal Zone Management Act, with particular focus on the coastal ecosystems, scenic and open space resources, and historic resources.

We will send you a copy of the Draft EIS when it is completed, probably in the later part of October. You will have an opportunity to review the document and provide additional comments.

If you have any questions, please call me.

Yours truly,

Roy Takemoto

cc: Planning Department, County of Hawaii
Kukuihule Development Company
August 30, 1993

MR ROY TAKEMOTO
LAND USE PLANNING & LAW CONSULTANT
171 HUMUHULA STREET
HILO HI 96720

SUBJECT: EIS PREPARATION NOTICE - PROPOSED AMAAN RESORT
Applicant: Royal Coast Resorts Corporation and Silverlink Holdings, Ltd.
Location: Kukuiula, Hanalei, Hawaii
TMK: 4-6-6: 3, 9, pars. 11, 12, 43, 44

We have reviewed the subject application and have the following comments:

1. Provide a flood study for all streams crossing the subject parcels and a site drainage study. All development generated runoff shall be disposed of on site and shall not be directed toward any adjacent properties.

2. All new and/or existing driveway connections shall be constructed/reconstructed to Public Works standards.

3. Portions of the old Waipio-Honokaa road fronting and leading to the proposed development shall be improved and widened to meet minimum standards for two-way movement of traffic.

4. Submit a traffic impact analysis report for review.

Should you have any questions, please contact Stanley Takemura at 808-833-8510.

GAIEN H. KOHE, Acting Division Chief
Engineering Division
STHBY

cc: Planning Department

Ray R. Takekuma
Land Use Planning & Law Consultant
171 Huumala Street, Hilo, HI 96720

September 30, 1993

Mr. Galen Koho, Acting Division Chief
Engineering Division
Department of Public Works
County of Hawaii
25 August Street, Room 202
Hilo, HI 96720

RE: PROPOSED AMAAN RESORT
Kukuiula, Hanalei District, Hawaii
Environmental Impact Statement Preparation Notice - Response to Comments

Dear Mr. Koho:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

1. Drainage: We will provide a flood study, as required by your department. The timing of this study, if required, would be during the detailed design phase of the project, which will be after the EIS has been completed and comments have been received. For the Draft EIS, the engineers will analyze drainage on the basis of the Flood Insurance Rate Maps and known flood problems in the area. Runoff will be disposed on site and not be directed toward any adjacent properties.

2. Driveways: Driveway connections will be in accordance with Public Works standards.

3. Roads: The Preliminary Engineering Report will include improvements to the old Waipio-Honokaa Road for the portion leading to and from the proposed project.

4. Traffic: A traffic impact analysis report will be included in the Draft EIS.

We will send you a copy of the Draft EIS when it is completed, probably in the latter part of October. You will have an opportunity to review the document and provide additional comments.

If you have any questions, please call me.

Yours truly,

Ray Takekuma
CC: Planning Department, County of Hawaii
Kukuiula Development Company
Mr. Ray R. Takeno
Land Use Planning & Law Consultant
171 Noeau Street
Hilo, Hawaii 96720

EIS PREPARATION NOTICE
PROPOSED AMAN RESORT
KUKUIHALE, HAWAII
TAX MAP KEY 4-B-086-3, 9, 11 (POR.), 13, 43, AND 44

Pursuant to Section 23-84 of the Hawaii County Code, a water system shall be
provided in accordance with the Department's Water System Standards and Rules and
Regulations.

Compliance with the following conditions relative to source development and water
system design and construction is required.

1. Submit water master plan for the required offsite and onsite water system
   improvements. The plan shall include design calculations, construction cost
   estimates and development time schedules. Water system improvements shall
   include sources, storage reservoirs, booster pumps, and pipelines.

2. Submit construction plans prepared by a registered professional engineer for
   review and approval. Plans shall include, but not be limited to, sectional
   drawings, plot plans and maps showing the exact locations for proposed water
   system facilities, and construction specifications. As-built plans must be
   submitted after construction.

3. Submit engineer's and hydro-geologist's report on the sustainable yield of
   the groundwater aquifer that will be affected by proposed wells.

4. Submit a Well Completion Report as required by the State of Hawaii Department
   of Land and Natural Resources.

5. Submit test records which shall include time, pumping rate, drawdown,
   chloride content, and water quality data.

6. Submit engineer's report which complies with applicable rules of the State of
   Hawaii Department of Health (DOH).

7. Submit DOH's approval of all proposed drinking water sources.

...Water brings progress...
September 10, 1993

Mr. H. William Sevaka, Manager
Department of Water Supply
County of Hawaii
2308 South Street
Hilo, HI 96720

RE: PROPOSED AMAN RESORT
Kukuihaele, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Sevaka:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Amun Resort. Your comments will be addressed in the Draft EIS as follows:

1. A Water System Report will be included in the Draft EIS that will provide a geohydrological analysis and preliminary water system design. A detailed water master plan with calculations and cost estimates will be provided during the design phase of the project.

2. The Draft EIS will acknowledge the permit requirements pursuant to the State Water Code (e.g., well drilling permit) and Safe Drinking Water Act.

3. The appropriate allocation of costs will be a subject of negotiation and confirmation during the Review Period of the Draft EIS. The Draft EIS will provide sufficient information that will facilitate such negotiations. Any preliminary agreements can be documented in the Final EIS.

We will send you a copy of the Draft EIS when it is completed, probably in the latter part of October. You will have an opportunity to review the document and provide additional comments.

If you have any questions, please call me.

Yours truly,

[Signature]

cc: Planning Department, County of Hawaii
Kukuihaele Development Company
Mr. Roy R. Takesoto
Land Use Planning & Law Consultant
171 Hoohau Street
Hilo, Hawaii 96720

Dear Mr. Takesoto:

Re: Proposed Awa Resort
Kukuihaele, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice - Request for Comments

Basic requirements by the Fire Department are on fire apparatus access and water supply for fire protection as stated in the Fire Code:

"Fire Apparatus Access Roads

"Sec. 10.207. (a) General. Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) Where Required. Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access.

"EXCEPTION: 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, unacceptable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.201 (b).

"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"(c) Width. The unobstructed width of a fire apparatus access road shall be not less than 20 feet.

"(d) Vertical Clearance. Fire Apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"EXCEPTION: Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) Permissible Modifications. Vertical clearances or widths required by this section shall be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) Turning Radius. The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) Turnarounds. All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) Bridges. When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus." (20 tons)
Mr. Roy R. Takenoto  
Page 4  
August 18, 1993  

"(i) Grade. The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief.

"(k) Obstruction. The required width of any fire department access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) Signs. When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both.

"Premises Identification

"Sec. 10.208. (a) General. Approved numbers or addresses shall be placed on all new and existing buildings in such a position as to be plainly visible and legible from the street or road fronting the property. Said numbers shall contrast with their background.

"(b) Street or Road Signs. When required by the chief, a street or road shall be identified with approved signs.

"Key Box

"Sec. 10.209. When access to or within a structure or an area is unduly difficult because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the key box shall be a type approved by the chief and shall contain keys to gain necessary access as required by the chief.

"Sec. 10.201. (c) Water Supply. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which buildings or portions of buildings are hereafter constructed, in accordance with the respective county water requirements. There shall be provided, when required by the chief, on-site fire hydrants and mains capable of supplying the required fire flow.

"Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

"The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be protected as set forth by the respective county water requirements. All hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 10.207."
September 10, 1993

Mr. Nelson Tsuji, Fire Chief
Fire Department
466 Kamehameha Street
Hilo, HI 96720

RE: PROPOSED AMAN RESORT
Kukuihaele, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Tsuji:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

1. Fire Access: The resort buildings will be designed in accordance with the Fire Code requirements for fire access. The Draft EIS will acknowledge awareness of this requirement; detailed compliance will occur during the design phase of the project at which time the designers will be consulting your department.

2. Fire Flow: A Water System Report will be included in the Draft EIS that will address the capacity of the proposed system to meet fire flow requirements.

We will send you a copy of the Draft EIS when it is completed, probably in the latter part of October. You will have an opportunity to review the documents and provide additional comments.

If you have any questions, please call me.

Yours truly,

[Signature]

Ray R. Takekuma
Lead Use Planning & Law Consultant
131 Honolua Street, Hilo, HI 96720

cc: Planning Department, County of Hawaii
Kukuihaele Development Company
October 20, 1993

Mr. Harry Kim, Administrator
Civil Defense Agency
520 Uliuani Street
Hilo, HI 96720

RE: PROPOSED AMA Resort
Kualoa, Hawi District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Kim,

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments regarding flooding problems will be addressed in the Draft EIS by identifying the need for a drainage study during the design phase of the project.

We will send you a copy of the Draft EIS when it is completed. We anticipate completion in the later part of November. You will have an opportunity to review the document and provide additional comments.

If you have any questions or additional comments, please call me.

Yours truly,

[Signature]

cc: Planning Department, County of Hawaii
Kualoa Development Company
September 1, 1993

Mr. Ron Terry
Mr. Roy Takemoto
E.I.E. Consultants

Re: The Amanestor at Kukuihaele

Dear Mr. Terry and Mr. Takemoto,

Thank you for your presentation (of August 26, 1993) on the proposed Amanestor at Kukuihaele, Hawaii, and for the opportunity for all to express their interests and concerns regarding this development.

Our organization, The Waipi'o Taro Farmers Association, would like to submit this statement as our official stance concerning the proposed Amanestor at Kukuihaele. For the record, we stand united and in overwhelming opposition to this development.

Our membership is comprised of long-time residents, representing generations of families from Kukuihaele-Waipi'o Valley area. We also represent a variety of ethnic backgrounds and have been an example of successfully integrating diverse cultures into a peaceful and harmonious community. The agricultural lifestyle and rural setting of this area is highly valued and is an integral part of our lives.

We are not against resort development per se but we are against the idea of changing and losing our community at Kukuihaele. Placing the proposed development in the heart of our village will undoubtedly change our community and will eventually lead to the loss of our way of life at Kukuihaele.

We believe that the proposed development will attract increasing numbers of visitors into Kukuihaele and will create traffic hazards and new challenges for our young and older residents. The building of an upscale development will increase the value of land in Kukuihaele and this in turn will make it unaffordable for our children. It is not difficult to see that this development will also have a negative effect on our limited water supply and will only add to other infrastructural concerns.

We have other concerns regarding the impact of this proposed development but all concerns can be traced back to the underlying concern—which is the realization of the inevitable loss of our village at Kukuihaele, if this development is allowed to be constructed.

We therefore appeal to the developers to not to build this development in Kukuihaele Village and we also ask all those in positions of influence and authority to disallow the building of the proposed Amanestor in Kukuihaele Village.

Respectfully,
The Waipi'o Taro Farmers Association
c.c. Mayor Stephen Yamashin, Hawaii County
Chairman Kalani Schenke & Members of the Hawaii County Council
Takahiro Domingo, County Councilman & Chairman of the Task Force to Preserve
Waipi'o Valley
Representative Dwight Takamine
Senator Malama Solomon
September 10, 1993

Proposed Akamai Resort

Kahuku, Hawaii

Dear Mr. Watanabe:

Thank you for your interest in becoming a part of the Draft EIS for the proposed Akamai Resort. Your comments and suggestions are invaluable to the Hawaii Department of Land and Natural Resources in preparing the Final EIS.

1. The Draft EIS will evaluate the environmental impact of the proposed Akamai Resort and its associated activities. Your comments will be considered in the preparation of the Final EIS.

2. The Draft EIS will consider different mitigation measures and alternatives to reduce or avoid the environmental impacts. If you have any comments or suggestions on the proposed measures or alternatives, please let us know.

We will send you a copy of the Draft EIS when it is completed. If you have any questions or comments, please call me.

Yours truly,

[Signature]

Planning Department
County of Hawaii
Kahuku Development Company
Ms. Sandra Fiechter Schutte
Boehlig, Boehlig, Wilson, Harris, Schutte & DeSilva
101 Alapuni Street, Suite 124
Hilo HI 96720

Dear Ms. Schutte:

The trails group E Mau Na Ala Hele would like to be a
consulted party in the preparation of the EIS for the Aman
Resort at Kukuihaele, Hilo.

We have reviewed the EIS Preparation Notice and find
some inaccurate statements in it. Our board is concerned for
effects on the natural environment. Also the resort, if
built, would overwhelm the small Kukuihaele community where it
is situated. Here are points we wish you to address in your
EIS:

1. The EIS should clearly delineate existing trails,
park rights of way and public roads on the property.
Please specify the developer's public access provisions. Is
any loss of public access envisioned?

2. Why does the developer seek "resort" zoning for
approximately 60 acres of land for a "resort" resort? We
don't believe the Hideway (with 4 suites) requires resort
zoning, nor does the proposed villa development, which
consists of lots. The large acreage being sought for
"resort" zoning (double that of the Punalu'u Resort, for
example) suggests a much larger project than the one
described by the Notice. The EIS should explain why "resort"
zoning is being sought in these instances, and set forth
maximum build-out figures based on such zoning, even if a
larger project is not part of present planning.

3. We believe the project should be presented as "in
addition to," not "in lieu of," the neighboring Intermediate
Resort above Waipio Valley. The zoning for the Intermediate
Resort, on the property of an adjacent landowner, was voided
by the circuit court on a technicality, and there is good
reason to suppose that the landowner will reapply. We ask
that the EIS acknowledge the prospect of a neighboring
Intermediate Resort and include population, labor and
traffic figures that, in a scenario, are cumulative.

4. On what basis do you say that the resort land area
is not a primary habitat for the Hawaiian hawk, an
dangered species? And, irrespective of whether it's
primary or not, on what grounds do you say the resort will
not have a significant effect on the hawks? We believe the
EIS should discuss impacts of the resort development on the
endangered species.

5. Would you please clearly describe sewage
arrangements for various portions of the resort. Are
injection wells planned? Will there be an STP?

6. Fiscal impacts on the county and state will be more
extensive than acknowledged by the Notice. We hope the EIS
will develop the topic thoroughly. For instance, why would the
County government share the cost of water source
development for the privately owned resort, and what might
that cost be?

Thank you for the opportunity to participate.

Sincerely,

Judith Graham
Board of Directors

cc: Planning Director, County of Hawaii
Director, Department of Water Supply
September 19, 1993

Ms. Judith Graham, Board of Directors
E Mus Na Ala Hele
P.O. Box 6384
Kamuela, HI 96743

RE: PROPOSED ANAN RESORT
Kukiohaele, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Ms. Graham:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aunan Resort. Your comments will be addressed in the Draft EIS as follows:

1. Public Access. The Draft EIS will identify existing trails and public rights of way, and the impact of the project on public access. The basis for this information will be the Na Ala Hele trails inventory, tax maps, and interviews. Any other sources of information you may have would be appreciated.

2. Recreation Zoning. The Draft EIS will explain the rationale for the proposed zoning. The impact of this zoning in terms of the maximum allowable build-out will be addressed.

3. Construction Impact. The Draft EIS will discuss cumulative impacts in terms of proposed projects that have applied for or been granted approvals. The status of the proposed Intermediate Resort on the neighboring property will be specifically addressed.

4. Nutrient Sources. The Draft EIS will contain a report by a biologist to provide information on the impact to endangered species, particularly endangered birds.

5. Waste Water System. The Draft EIS will include a Preliminary Engineering Report that will describe the proposed waste water treatment and disposal system. The impacts of the proposed system will be analyzed.

6. Fiscal Impact Analysis. The Draft EIS will include a fiscal impact analysis prepared by an economist. The rationale for any cost sharing with the County will be explained.

We will send you a copy of the Draft EIS when it is completed, probably in the latter part of October. You will have an opportunity to review the document and provide additional comments.

E Mus Na Ala Hele
September 10, 1993
Page 2

If you have any questions, please call me.

Yours truly,

[Signature]

cc: Planning Department, County of Hawaii
Kukiohaele Development Company

Roy Takenato
29 August 1993
Kapalua, Hawaii

Aichi Mr. Nakamoto,

I attended the public hearing on the proposed Aman Resort on Thursday, Aug. 26, 1993. Although I did not speak on that evening, I would like my input to be part of your E.I.S.

I am opposed to the Aman Resort being built here in Kapalua. It will be a new form area that has been replaced by development and destroyed communities, culturally, socially and economically.

No matter how hard Aman tries to integrate into this place, it will not happen because our people have taken many years to establish themselves. The other would be a planned attempt to build in a brief time something that looks like Kapalua but lacks its true values.

Many of my concerns were voiced by my community. Just a few that I have in mind need to be considered.

One being the approach to building. I have seen beautiful bag trees, groves of bamboo, and fruit bearing trees stripped from the ground. The area looked by development, then they build and landscape to make it look like a natural area. We would like to see, if the resort goes through, a way of building that would not disturb the established growth that already exists.

Does landscaping also include gardens for vegetables, bananas, & fruit?

Also will this be job training, or will job training be merely service work? Can they provide meaningful training to educate people here in more wages than the lowest paid jobs?

I guess that's all for now. Look forward to the next meeting.

Mahalo,

Uncle Dina

PO Box 1728, Honokaa, Hawaii 96727
September 10, 1993

Ms. Linda Dima
P.O. Box 1728
Hilo, HI 96720

RE: PROPOSED AMAN RESORT
Kukulauke, Hamakua District, Hawaii
Environmental Impact Statement Preparation Notice—Response to Comments

Dear Ms. Dima:

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resort. Your comments will be addressed in the Draft EIS as follows:

1. Impact on Kukulauke Community. The Draft EIS will analyze the socio-economic impacts on Kukulauke. Although the analysis will be as objective as possible, in fact we are aware that such objectivity may not capture the intangible, unquantifiable, values and feelings that make a community. The Draft EIS will suggest mitigation measures and alternatives to reduce the impacts. The accuracy of the analysis and the acceptability of the suggested alternatives will depend on your careful review of the Draft EIS and constructive comments.

2. Landscaping. The Draft EIS will include a mitigation measure that significant existing vegetation should be preserved to the extent possible. We welcome your input to specifically identify those "significant" specimens. "Edible landscaping" is an interesting concept that will be mentioned in the Draft EIS.

3. Job Training. The Draft EIS will describe the proposed job training program. The types of jobs will also be described.

We will send you a copy of the Draft EIS when it is completed, probably in the latter part of October. You will have an opportunity to review the document and provide additional comments.

If you have any questions, please call me.

Yours truly,

Roy R. Tokunaga

cc: Planning Department, County of Hawaii
Kukulauke Development Company
from the desk of  JACK KAAUA
149 S. Forest Ave, B-035, Denver, Colorado 80222 (303) 921-8365

September 6, 1993

Maui Rodney Nakano/Nich Marshauer
County of Hawaii, Planning Dept.
25 Anupani Street
Hilo, HI 96720
(1081) 961-8288

Re: EIS Preperation Notice
(Concerns & Comments)

Dear Ms. Nakano/Marshauer,

My mother, Mrs. C. Kauana-Rabensteiner, has an undivided-interest ownership in several pieces of property on the Hamakua Coast. These properties have been family-owned for generations. One of the parcels is TMH 3/4-6-0619. I have been given my mother's Power-Of-Attorney in all matters concerning these properties.

It has only recently come to my attention, following inquiries on another matter, that Kukuihele Development Company (Eugene McCain) has filed the above referenced Notice for an AAMA RESORT. Parcel 9, mentioned above, is located within this planned resort.

Although Mr. McCain and I have personally met twice (in February of this year), and have had a few telephone conversations, I was not made aware of this Notice or a General Plan Amendment Application (which I have been told he has also filed). The Notice is dated July 26, 1993---FIVE WEEKS AGO!

As a landowner with a piece of property that is strategically located within the boundaries of this planned resort, I feel it is my right to any and all documents which apply to, and affect, this property. May I be placed on the Section 3 mailing list? I will pay any copying and postage charges, if necessary.

I also have some very serious concerns and questions about the Notice:

1) In Section 4 (4.1) it states: "A 3-acre portion of the project site is in the process of being finalized with the landowner." If this refers to my property then that statement is inaccurate at best. My last communication to Mr. McCain was a letter dated June 1, 1993 which was basically ignored. I then called him on July 9th and 10th (finally being successful in reaching him). In a lengthy discussion of the property he agreed to send me a new proposal letter dealing with this property. This he has not done to date, and I have heard nothing further from him. It is very likely that my property will not be included in the planned resort.

2) I do not understand the term "FIR" in Section 4.3 on page 3. It is obviously an acronym for something, but what? Financially Independent Tourist, i.e., the wealthy?

3) Also Section 4.3 states there will be 45 villa suites. Are these villa suites rentals? Private homes? Lot sites only for either of the foregoing? What exactly are they? The August 16, 1993 Pacific Business News quotes then as being "50 single-family homes."

4) There is also mention of access in Section 4.4, but it implies there will be only one entrance to the project. If this is so, it concerns me. Should not there be at least two for a project this size?

5) What will the density of the villas be, i.e., how many villas per acre?

6) How will taxes be affected? On page 8 in Section 5.2 the notice contradicts itself by stating that "...the County is considering measures to limit increases in property taxes for residents." and a few lines later saying "the project will generate increased revenue to the County through higher property taxes (my emphasis)." What if I build on my property? Will I benefit by any tax exemption or deferral?

7) How will property values be affected?

8) What of quiet enjoyment of my property?

9) I need copies of all the Permits (applications?) referred to in Section 6.7 of the Notice. Is not my signature required on most of them that apply to my property, e.g., Rezoning, etc.? These are some of my concerns. Naturally, I cannot make an accurate assessment with so little information. If my questions are misdirected here, please refer this letter to the proper source. Any advice you can give would be helpful.

Thank you for your time and assistance in this matter. I await your reply.

Sincerely,

Jack L. Kauana
for Mrs. C. Kauana-Rabensteiner
owner of TMH 3/4-6-0619
October 20, 1993

Mr. Jack Kasu
540 S. Forest Street, 8-203
Denver, CO 80222

RE: PROPOSED AMAN RESORT
    Kokoiki, Hamakua District, Hawaii
    Environmental Impact Statement Preparation Notice—Response to Comments

Dear Mr. Kasu:

My apologies for not sending you a copy of the EIS Preparation Notice. Hereafter, you will receive all documents relating to the EIS process—this includes the Draft EIS and the Final EIS. The Draft EIS will include a full description of the proposed project, and will also address the concerns you expressed in your letter to the Planning Department (e.g., impact on property taxes).

The developer has informed us that he is attempting to negotiate an agreement with you in which you would join in the application. If the negotiations are unsuccessful, the developer will complete the subdivision process and exclude your lot from the application.

We anticipate completion of the Draft EIS in the latter part of November. You will have an opportunity to review the document and provide additional comments.

If you have any questions or additional comments, please call me.

Yours truly,

Roy Takanoto

cc: Planning Department, County of Hawaii
    Kukuihaele Development Company
AS I SEE IT

Hanakua has a problem. And it's going to get worse. We need jobs. Many find it hard to believe that what happened in Kohala could ever happen here—the boarded-up town of Hawi, people leaving, children growing up with no opportunity of staying close to home. Malama Solences (Kohala) made this statement in the Honolulu High cafeteria, "without the Hanakua Sugar Co, families are going to have to move to where the jobs are, or the husband will have to go and leave the family behind."

The Plantation is going to close in approximately one year. The over 1 1/2 million dollar monthly payroll ($1,500,000) will be history. This 744 person payroll and the other expenses of the plantation, which generated another 937 jobs of all kinds on this Island will be no more. Larger employers will have to trim payrolls, smaller employers will terminate all employees, or just leave.

Should a major casualty to the mill occur, there is a serious possibility of closing earlier than next year.

Lifestyles are going to change—that is the only sure thing. Change will happen to some people who think they are not affected. It will impact on everyone, some more than others. To expect the government (Federal, State, or county) to maintain the status quo is to ignore the earlier Kohala disaster, and the Kukuihaele bridge.

The only thing that will keep life close to what it is now is to replace the sugar company payroll—that means new jobs.

Some jobs are obviously better than others. A steel mill and Hanakua are not compatible. A prison has been mentioned by the government. Agriculture jobs are, of course, the most desirable. Why didn't they happen in Kohala with all the millions spent by the State to bolster that economy? Hanakua has the rain that Kohala lacks—and the steep hills and the rocks and the soil that has grown nothing but sugar cane for 130 years. How soon can any agriculture project get off the ground? Right now, according to state officials, there are no projects in the planning stage. A is definitely the goal, but it won't be easy as there is no large market near, the ground is worn out and not easily farmed. It will take time. In the meantime, people will be uprooted and lives will forever be changed.

Those who feel that they for sure will not be affected by the shutdown cannot be too selfish about their good fortune. For those fortunate few, please keep an open mind when an opportunity for your friends occurs.

There may be an opportunity to replace approximately 100 of the 744 jobs we have lost and are losing at the plantation. Like everything else, there's the good news and the bad news. As previously stated, the ideal would be to replace all the jobs in ag. The bad news is that is not going to happen in the foreseeable future, and when it does happen all the old workers will have gone away.

The opportunity for the 100 permanent jobs comes from a development consisting of a 36 unit bungalow type hotel resort built within the Catholic Church in Kukuihaele, a vacation rental at the plantation manager's house, and the eventual construction of 45 houses adjacent to the plantation house and the hotel. The development company now owns the land from Tiber Camp to the Waipio side of the plantation manager's house, and between Hwy 240 and the Kukuihaele road. They have a lease with an option to buy land below the Catholic Church. As far as development goes, this is a very low key approach compared to other Hawaiian resorts.

However, there will be impacts and benefits on the Kukuihaele community. Others in the Hanakau District will enjoy the job benefits that will make it possible for up to 230 more families to continue living in their homes (the 100 direct jobs, plus 130 indirectly created jobs). Much of the impact can be controlled, and significant community benefits can be received in mitigation. The following are impacts of which I am aware, and the conditions I demand of the developer. If these conditions are satisfied, I will be in support of the development as presently planned. Other developments cannot presently be controlled (see the example attached taken from the West Hawaii Today newspaper). We can, if we plan properly, have some cake and eat it too.

THE NEW JOBS: The jobs (engineers, computer operators, electricians, landscapers, groundskeepers, housekeeping, clerks, kitchen, etc.) must go in the following preference order: (1) Kukuihaele residents (2) immediate family of Kukuihaele residents (3) Hanakau residents. A recent survey of Kukuihaele residents showed that 33% of those surveyed would like to work at the resort.
ROADS: The developer says that they prefer an unobtrusive entrance off the main highway, and that is why they suggested the present entrance to the village. I also prefer a simple entrance such as we have now, but the impact of the present entrance might be too great on the residents of Tiger Camp (a traffic study will be made to determine the impact). The entrance should be on the Waipio side of Tiger Camp, join the present road Honokea side of Last Chance Store, improve this roadway and eliminate the two blind curves (a dead child is waiting to happen here) prior to the Catholic Church road, and finally bring this road up to county standards to the resort entrance. In addition the present entrance at Tiger Camp should be closed to eliminate all but homeowner traffic. All of the above must be completed prior to start of resort construction.

UTILITIES: Improve as required by county officials. In addition all cables should be placed underground.

SOCIAL HALL: Dedicate in perpetuity as a park area the present social hall and the approximately 7 acres which encompasses it. The maintenance of the new park would be by the developer and included in the dedication. It should be designed primarily for the use and enjoyment of Kukuihele residents, but would be open to the public. It would include the following:
(1) Swimming pool with a minimum of 25x50' dimension, a wading pool for toddlers, and a diving facility.
(2) Softball/little league baseball field with back screen and a wire outfield fence
(3) Horseshoe facilities
(4) A playground similar to the one at Kamuela park
(5) Farmer's market roofed pavilion, 100x20', with tables and benches suitable for a farmer's market and/or social occasions, located adjacent to the present social hall.
(6) Picnic tables and benches scattered throughout the area as appropriate
(7) Stone BBQ facilities convenient to the picnic tables
(8) Water fountains adjacent to activities area
(9) Parking lot for 30 vehicles
(10) Renovation of the existing social hall including a full service kitchen capable of food preparation for 150 people and toilet facilities for a gathering of 150 people. This social hall would be operated basically as it is presently--reservations to be made by the general public with only a damage and cleaning deposit required. The bylaws for use and care of the hall are to be included in the dedication. Construction of the above conditions, along with the present park improvements must begin prior to or concurrently with resort construction.

PRESENT KUKUIHELE PARK: Design and construct an area for archery, a chipping and putting golf greens, improve existing basketball court, install water fountains and park benches. The permanent dedicated maintenance contract in the paragraph above would include this park.

AFFORDABLE HOUSING: First, deed fee simple to the residents of Tiger Camp their garden plots. Second, affordable housing should be primarily low income rental only for present residents of Kukuihele who may be displaced. Third, all design be coordinated closely with the residents for Tiger Camp so that sight and sound impacts are minimized. The deed and the design are to be completed prior to resort construction.

FUTURE HOMEOWNER'S TAXES: The Hawaii County Council is presently considering some form of tax relief for homeowners. However, until this occurs, Kukuihele and Kona Camp residents should be offered by the developer the following guarantee with adequate collateral in escrow to be determined by consultant selected by the Hawaii County Council and at the developer's expense) to insure the guarantee: Any present Kukuihele homeowner who makes the Hawaii County 10 year Non-speculative Residential Use Dedication would have all the benefits that dedication, and also at the end of their 10 year dedication, their new property assessment will be no greater than the old assessment, plus no more than the Consumer Cost of Living Index increase over the previous 10 years as determined by the U. S. Government. The developer will guarantee that he will pay the difference between that figure and the Hawaii County property value assessment as long as the resident remained in the dedication, but would not include penalties and back tax assessment if the owner opted out of dedication for capital gains on the property. This would include homeowners at the time of the developer's approval. (example: tax is $200 on dedication, the tax for the next ten years is $200 per year. If the consumer price index increases 2% average per year during this fixed tax dedication period, the new tax for the next ten year period could be no more than $200 plus the 2% per year, or $243.80. If the county assessed the property at twice the previous property value ($400) the developer must pay the additional $116.20 each year as long as the homeowner stays in County dedication.) The present County dedication would allow the homeowner to renew as many times as he desires. It also allows the property to be passed to the family when the owner dies, and has many other provisions to protect the homeowner and family. A copy is available at the Last Chance Store.

COVENANTS FOR THE RESORT LOTS: The covenants shall state unequivocally that the purchaser realizes that he is purchasing property in a
rural community, a community that enjoys the keeping of animals near the home, and that they will violate their covenant should they make or cause complaints concerning the local resident’s traditional ways with animals.

THE PLANTATION MANAGER’S HOUSE AND GROUNDS. ACCESS: The developer must agree to a down zoning of the present house and grounds so that it may never be subdivided. Community access to the house and grounds is to be granted periodically for a “Plantation Day” event. This is a historically important site for the community, and future generations should be able to appreciate its heritage.

FUTURE DEVELOPMENT: If this project is approved, Kukuihale will be doing more than its share for the people in Hamakua. To prevent further development a Rezoning Ordinance must remove the following: (1) a perpetual Waipio Valley Preservation Buffer zone with a 100’ setback from the valley rim mauna to the present public lookout, (2) a perpetual Preservation Buffer zone of Hamakua Sugar Co. lands, with a 400’ shoreline setback, from the present public valley lookout and continuing along the shoreline to the Hamakua boundary of TME 50-0-1:4 (Hamakua side of Kona Camp), and (3) the remaining lands between this shoreline buffer zone and State highway 240 be no less than Ag 40 zoning. These actions would affect the owner (Western Farm Credit Bank) negatively. In exchange the bank should be offered favorable rezoning near other communities in Hamakua to repay them for the taking, and in order that these communities can share in the creation of new jobs.

As other concerns become apparent and important to the community, additional positions may be taken.

There is one other concern, and it is important only to the residents of this community. The property mauna of the present village road, and a section of highway 240 is owned by the developer. This area, and possibly the Catholic acreage, would be sold by the developer if resort approval is not granted (they have stated that they are not interested in any other development use). As presently zoned, a new buyer/developer could build 65 houses on the mauna portion alone without any rezoning application. They also could cause removal of the present social hall, and the eviction of an elderly resident living on the property.

This is not likely to happen as long as the Hamakua district is in a depressed state. However, should a person or any other large facility be constructed by panicked politicians to “save” the district, smaller households such as these would be attractive for the workers, no matter where in Hamakua the facility was located.

Within Kukukihale there has been more than 29 houses and/or other rentals built in the last 10 years—and the pace is accelerating. Residents have not seen increased taxes as more structures are built, we will become less “country” like it or not, we will have little or no control on this growth, we will receive no job benefits, and we will still have a dangerous road situation, and, sadly for the children, no recreation facilities.

THese ARE MY THOUGHTS AND MY POSITION. YOUR THOUGHTS ARE WELCOME AND NECESSARY SO THAT ALL THE RESIDENTS OF KUKUIHALE MAY PARTICIPATE IN OUR FUTURE. PLEASE DROP YOUR COMMENTS THRU THE LITTLE WINDOW AT THE LAST CHANCE STORE. YOU MAY SIGN YOUR NAME OR NOT, WHATEVER YOU FEEL. I WILL FORWARD YOUR COMMENTS TO THE STATE COMMUNITY LIASON OFFICER AND THE COUNTY COUNCIL.

Bob Immon
Owner, Last Chance Store

*All the information I can gather about the project, the developers, and the status will be available for anyone who wishes to learn more. Come in and browse through the info at your leisure.*
Kaloko houses called unsightly, are legal

By DAN BREEDEN
West Hawaii Today

The rapid transformation of more than three acres "unsightly" on agricultural land north of Palani Junction has renewed among area residents about whether they will soon be living beside a volume school, vacant housing project or possibly even a low-security detention center.

But the most likely use of the identified five-acre, six-building, buildings will be as private rental units capable of housing at least as five dwelling units according to construction plans filled with the county. Full utilization could mean as many as 100 people living in the project.

The Crazy Horse Ranch subdivision consists of the 1.3 acres just at the makai end of Government Drive, each with separate units which allow two houses per parcel. The development is owned by World Square of Kalua-Kona and has Harold A. Brown as a general partner. Brown did not return messages left at his house Wednesday.

"It's not conducive to the community," said one resident. "But it's going to be a nuisance up there.""Schreiber said he is concerned about the impact of having as many as 100 families and individuals living in a subdivision that is supposedly agricultural and is required to make no improvements.

The impact is obvious in that the subdivision that is supposed to be a maximum of five agricultural residences.

The concept of the project was originally discussed as a way to provide a home for their grown children or vice versa.
August 28, 1993

Roy R. Takemoto
171 Hoohu Street
Hilo, HI 96720

RE: Aman Resort at Kukuihaele

Dear Mr. Takemoto:

I have the following comments in response to the EISPN:

1. **Affordable Housing.** The EIS should consider the consequence of locating such housing elsewhere as an alternative. I believe a strong case can be made that most of such housing units should be closer to the urban center where family support and amenities exist, such as schools for the kids, shopping and medical care, with minimal transportation needs (except for a ride to and from work at the proposed project site).

While I am open minded to the case which the applicant may make, I have very strong concerns about placing more low/moderate income families at a location which will be inconvenient for them in the non-work setting, and which may create an unnecessarily greater demand on county services reaching the site (such as social service worker visits, hand-waves, and medical service shuttles). I think it may well be prudent to provide a small number of rental apartments at or near the site, to provide a transitional facility for newcomer or peak season, temporary employees.

If the developer insists on creating all the proposed employee housing at the site, a careful analysis of the social impacts and fiscal impacts from demand for county support services at the site should be included in the EIS.

2. **Scenic Resources.** The visual plane analysis should pay careful attention to visual impacts from (i) the north end of the beach, (ii) the top of the trail leading north to/from Waianu Valley, and (iii) the ocean view from Waipio and Waianu Valley, as the project would be seen by the increasing number of kayakers running between Waipio and the Kohala area.

Discussion of view impacts should expressly contemplate building architectural appearance with any explicit landscaping commitment which the developer is willing to make, as well as building including roof colorations.

3. **Waipio Valley.** The EISPN doesn’t suggest any impact other than visual is being contemplated for Waipio Valley. It is essential that the EIS assume a certain percentage of its guests and employees (and the employees’ family members, guests and relatives) will be walking or riding into the valley and crossing its roads and trails. The percentages will be the major variable of concern, not whether or not the visitors and employee-families will impact the valley directly. The mitigation proposals will be the second most important consideration, particularly how they will relate to the need for island residents access to not become significantly constrained merely because a visitor demand is created from the project.

I believe it is entirely possible that project approval may be justifiable with sufficient mitigation measures in place. Properly done, a low-key visitor facility on this site could be a positive contribution in many respects. "Properly done" may, however, be difficult at a sensitive location such as this. I look forward to reviewing the applicant’s proposal.

Sincerely,

Keola Childs
Councilmember

Roy R. Takemoto
Aman Resort EISPN
August 28, 1993
Page 2
Roy R. Takemoto  
Lead Use Planning & Law Consultant  
177 Hoomale Street, Suite 300, HI 96720  

September 10, 1993  
Honorable Keola Chilida, Councilman  
County Council  
County of Hawaii  
25 Aupuni Street  
Hilo, HI 96720  

RE: PROPOSED AMAN RESORT  
Kukuihaele, Hamakua District, Hawaii  
Environmental Impact Statement Preparation Notice—Response to Comments  

Dear Councilman Chilida:  

Thank you for your interest and time in responding to the EIS Preparation Notice for the proposed Aman Resorts. Your comments will be addressed in the Draft EIS as follows:  

1. Affordable Housing. The Draft EIS will address the alternative of locating affordable housing on site possibly through payment of a fee in lieu of actual construction. The community and County Council will then be able to decide the best location to use the contributed fees.  

2. Scenic Resources. The Draft EIS will include view plane analyses. Mitigation measures, such as landscaping and building color, will also be addressed.  

3. Waipio Valley. The resort's impact on Waipio Valley in terms of increased visitation will be addressed in the Draft EIS. Mitigation measures will be suggested to reduce such impacts.  

We will send you a copy of the Draft EIS when it is completed, probably in the latter part of October. You will have an opportunity to review the document and provide additional comments.  

If you have any questions, please call me.  

Yours truly,  

[Signature]  

Ray R. Takemoto  

cc: Planning Department, County of Hawaii  
Kukuihaele Development Company
United States Department of the Interior
GEOLLOGICAL SURVEY
WATER RESOURCES DIVISION
677 Ala Moana Blvd., Suite 415
Honolulu, Hawaii 96813

August 26, 1993

Mr. Roy Takenoto
Land Use Planning & Law Consultant
171 Hoomalau Street
Hilo, Hawaii 96720

Dear Mr. Takenoto:

Subject: Proposed Anam Resort, Environmental Impact Statement
(EIS) Preparation Notice, Kukuihaele, Haukau District, Hawaii

The staff of the U.S. Geological Survey, Water Resources Division, Hawaii
District, has reviewed the subject EIS Preparation Notice and we have no
comments to offer at this time.

Thank you for allowing us to review this EIS Preparation Notice.
We are returning the EIS Preparation Notice to your office for your future
use.

Sincerely,

William Meyer
District Chief

Enclosure

Mr. Roy Takenoto
171 Hoomalau Street
Hilo, Hawaii 96720

Dear Mr. Takenoto:

SUBJECT: Environmental Impact Statement Preparation Notice
Anam Resort, Kukuihaele, Haukau District, Hawaii

We have reviewed the subject preparation notice and have
determined that the proposed resort will have minimal impact on
the public schools in the area.
Thank you for the opportunity to comment.

Sincerely,

Charles T. Tom
Superintendent

CCT: Mr.
co: A. Suga
A. Carson

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER
August 17, 1993

Mr. Roy R. Takenoto
Land Use Planning and Law Consultant
171 Hoomalu Street
Hilo, Hawaii 96720

Dear Mr. Takenoto:

Subject: Proposed Amam Resort, Kehaukele, Hamakua District, Hawaii, Environmental Impact Statement Preparation Notice

Thank you for allowing our review of information on the proposed project enclosed with your letter of August 11, 1993.

We concur that an Environmental Impact Statement should be prepared, but anticipate no direct impacts upon the programs and projects of this department.

Warmest aloha,

H. William Drake, Chairman
Hawaiian Homelands Commission

August 19, 1993

Roy Takenoto
171 Hoomalu St.
Hilo, HI 96720

Dear Mr. Takenoto:

Thank you for the opportunity to review the EIS Preparation Notice for Amam Resort.

There are no existing state park concerns regarding your project. Waipio Valley and the eastern valley rim are of interest but there are no active proposals for any portions of these areas to become part of the state park system.

Sincerely,

RALEIGH H. NAGATA
State Parks Administrator
Mr. Roy R. Takenoto
171 Hooulu Street
Hilo, Hawaii 96720

Dear Mr. Takenoto:

Environmental Impact Statement Notice
Proposed Anan Resort, Nakalua, Hamakua, Hawaii

Thank you for your August 10, 1993 letter requesting our comments for the Environmental Impact Statement for the subject project. We have reviewed the notice and have no comments to offer at this time.

Sincerely,

[Signature]

Makahau Tageni
Manager, Chief Engineer

GA:ck

Mr. Roy Takenoto
171 Hooulu Street
Hilo, Hawaii 96720

Dear Mr. Takenoto:

Subject: Proposed Anan Resort
Nakalua, Hamakua District, Hawaii
EIS Preparation Notice

Thank you for the opportunity to review the subject document. We have no comments to offer.

If there are any questions, please have your staff contact Mr. Ralph Yuhomo of the Planning Branch at 566-0498.

Very truly yours,

[Signature]

Gordon Matsumura
State Public Works Engineer
August 17, 1993

Roy Takenoto
171 Hocsmu Street
Hilo, Hawaii 96720

Subject: Proposed Anan Resort Environmental Impact Statement Request for Comments

This is to acknowledge receipt of your Request for Comments on the Environmental Impact Statement Notice for the proposed Anan Resort in Kukahake, Hawaii.

The Office of Housing and Community Development has no comments at this time.

Thank you for the opportunity to participate.

[Signature]

Edwin S. Thara
Assistant Housing Administrator

September 14, 1993

Mr. Roy Takenoto
171 Hocsmu Street
Hilo, Hawaii 96720

Dear Mr. Takenoto:

RE: PROPOSED ANAN RESORT
KUKAHAKE, HAMAKUA DISTRICT, HAWAII
ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE—REQUEST FOR COMMENTS

The EIS Preparation Notice for the proposed Anan Resort project has been reviewed and we foresee no adverse effect.

Sincerely,

[Signature]

Vitor G. Vierra
Chief of Police

cc: Captain Edwin Kapaoro
Monday, August 23, 1993

Roy Takemoto
Land Use Planning & Law Consultant
171 Hoomalu Street
Hilo, HI 96720

Dear Mr. Takemoto,

Thank you for your letter of August 17, 1993 requesting input from the Big Island Business Council on the Anuan Resort Project's Environmental Impact Statement. B.I.B.C. forms its positions through consensus of all member groups. As you can imagine this is a time consuming process requiring consent of each member organization's Board of Directors.

Therefore, I have enclosed a list of our member groups and would suggest that you contact them directly as it would be impossible to reach a consensus within your time frame. Thank you for satisfying our input.

Sincerely,

Kimberly Barrett
President

August 27, 1993

Roy Takemoto
171 Hoomalu Street
Hilo, Hawaii 96720

Dear Mr. Takemoto

Thank you for the EIS preparation notice for the proposed resort at Kukiohale. I am receiving this notice but am also interested in reviewing the Draft EIS before making specific criticism or addressing concerns. Please keep me informed of when this draft will be prepared.

Thank you.

Aloha,

Keiko Sone-Abramson
Councilwoman

KBA/ctd
CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY. SEE FRAME(S) IMMEDIATELY FOLLOWING.
Monday, August 23, 1993

Roy R. Takenoto
Land Use Planning & Law Consultant
171 Keomalu Street
Hilo, HI 96720

Dear Mr. Takenoto,

Thank you for your letter of August 17, 1993 requesting input from the Big Island Business Council on the Amans Resort Project’s Environmental Impact Statement. BIBC forms its positions through consensus of all member groups. As you can imagine this is a time consuming process requiring consent of each member organization’s Board of Directors.

Therefore, I have enclosed a list of our member groups and would suggest that you contact them directly as it would be impossible to reach a consensus within your time frame. Thank you for soliciting our input.

Sincerely,

Gloria Bennett
President

August 27, 1993

Roy Takenoto
171 Keomalu Street
Hilo, Hawaii 96720

Dear Mr. Takenoto

Thank you for the EIS preparation notice for the proposed resort at Kukulaka. I am receiving this notice but am also interested in reviewing the Draft EIS before making specific criticism or addressing concerns. Please keep me informed of when this Draft will be prepared.

Thank you.

Aloha,

Kiko Ono-Abrasson
Councilwoman

KBA/ctd
August 13, 1993

Mr. Roy R. Takenoto
Land Use Planning & Law
Consultant
171 Hoomaluh St.
Hilo, Hawaii 96720

Dear Mr. Takenoto

Thank you for your letter dated August 11th concerning the proposed Amap Resort.

Although I appreciate your taking the time to write to me, I really have no concerns or issues to raise at this time. May I urge that you contact Senator Malama Solomon, if you have not already done so, since Hanaakoa is the district that she represents.

Very truly yours,

[Signature]

ANDREW LEVIN
Senator, Third District

AL:CEY
APPENDIX J

COMMENTS AND RESPONSES TO THE DRAFT EIS
Official notice of availability of the Draft EIS was published in the OEQC Bulletin on November 23, 1993. The 45-day public review period commenced from that publication date and ended on January 7, 1994.

The Draft EIS was sent to various agencies, organizations, and individuals including those listed in Appendix I. The following is a list of those who sent comments during the review period of the Draft EIS. This appendix includes copies of the comment and corresponding response in the order listed below.

- = "no comment" or "no impact"; no response necessary
* = substantive comment requiring a response

I. Federal
   A. U.S. Department of the Navy
   B. U.S. Department of Interiors, Geological Survey
   C. U.S. Army Engineer District, Honolulu

II. State
    A. Office of State Planning*
    B. Office of Hawaiian Affairs*
    C. Department of Accounting and General Services
    D. Department of Budget and Finance, Housing Finance and Development Corporation*
    E. Department of Business, Economic Development, and Tourism
    F. Department of Business, Economic Development, and Tourism, Land Use Commission*
    G. Department of Defense*
    H. Department of Health*
    I. Department of Land and Natural Resources*
    J. Department of Land and Natural Resources, Na Ala Hele
    K. Environmental Center, University of Hawaii at Manoa*

III. County
    A. Department of Water Supply*
    B. Fire Department

IV. Other
    A. Utilities
    B. Community and Environmental Groups
       1. E Mau Na Ala Hele*
       2. Waipio/Kukuihale Ohana Hana Like Community Assoc.*
    C. Business and Labor Groups
    D. Individuals
       1. Angelo, R.*
       2. Badua, K.*
       3. Berinoluis, L.*
       4. Cain, J.*
       5. Coates, D.*
       6. De Luz, D.*
       7. Hunt, K.*
       8. Impson, R.*
       9. Kanaa, J.*
      10. Kanekoa, C.*
      11. Kaneshiro*
12. Kurashige, E.*  
13. Kurashige, M.*  
14. T. Chew, J., Mr. & Mrs.*  
15. T. Chew, S. & H.*  
16. Phillips, L.*  
17. Revilla, S.*  
18. Ross, H.*  
19. Soares, A.*  
20. Sotelo*  
21. Texeira, D.*  
22. Toko, A. & S.*  
23. Toledo, D.*  
24. Toledo, M.*  
25. Tompkins, S.*  
26. ?? (P.O. Box 1395)*  
27. Tommmons*  

E. Media  
F. Politicians
Planning Department, County of Hawaii
25 Aupuni Street
Hilo, HI 96720

Gentlemen,

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Ananestrotic development at Kukiohele, Hamakua District, Hawaii. The Navy has no comments to offer at this time. We will maintain a copy of the DEIS in our files for future reference. If you have any questions, please call LT Bob Keiser at (808) 332-0241.

Sincerely,

Lt. R. E. Keiser
Lieutenant, CEC, USN
by direction of
the Commander

Copy to:
State of Hawaii
Office of Environmental Quality Control
220 S. King Street
Fourth Floor
Honolulu, HI 96813

Kukuihaele Development Company
Attn: Eugene McCall
P.O. Box 44294
Kawaihae, HI 96743

Case & Lynch
Attn: Sandra Fechter Schutte
460 Kilauea Avenue
Hilo, HI 96720

United States Department of the Interior
Geological Survey
Water Resources Division
677 Ala Moana Blvd., Suite 415
Honolulu, Hawaii 96813

Mr. Rodney Nakamaya
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Nakamaya:

Subject: Ananestrotic, Draft Environmental Impact Statement (DEIS)

Hamakua, Hawaii

We are in receipt of the subject DEIS. We regret that due to prior commitments, we are unable to review the subject DEIS for the January 7th deadline.

As requested, we will return the DEIS to the Office of Environmental Quality Control for your future use.

Sincerely,

William Meyer
District Chief

cc: Office of Environmental Quality Control
220 South King Street
Honolulu, Hawaii 96813

Mr. Eugene McCall
Kukuihaele Development Company
P.O. Box 44294
Kawaihae, Hawaii 96743

Ms. Sandra Fechter Schutte
Case & Lynch
460 Kilauea Avenue
Hilo, Hawaii 96720
CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY.
SEE FRAME(S) IMMEDIATELY FOLLOWING.
United States Department of the Interior

Geological Survey
Water Resources Division
677 Ala Moana Blvd., Suite 615
Honolulu, Hawaii 96813

October 2, 1993

Mr. Rodney Nakano/Josyn Aral
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Nakano/Aral:

Subject: Amearu, Draft Environmental Impact Statement (DEIS), Hamakua, Hawaii

We are in receipt of the subject DEIS. We regret that due to prior commitments, we are unable to review the subject DEIS for the January 7th deadline.

As requested, we will return the DEIS to the Office of Environmental Quality Control for your future use.

Sincerely,

[Signature]

William Hager
District Chief

cc: Office of Environmental Quality Control
250 South King Street
Honolulu, Hawaii 96813

Mr. Eugene McCain
Kukuihaele Development Company
P.O. Box 4494
Kawailoa, Hawaii 96763

Ms. Sandra Pechter Schutz
Case & Lynch
460 Kilauea Avenue
Hilo, Hawaii 96720

Planning Department, County of Hawaii
25 Aupuni Street
Hilo, HI 96720

Gentlemen,

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Amearu development at Kukuihaele, Hamakua District, Hawaii. The Navy has no comments to offer at this time. We will maintain a copy of the DEIS in our files for future reference. If you have any questions, please call LT Bob Keiter at 471-3324.

Sincerely,

[Signature]

R. K. Keeser
Lieutenant, CEC, USN
By direction of the Commander

Copy to:
State of Hawaii
Office of Environmental Quality Control
220 S. King Street
Fourth Floor
Honolulu, HI 96813

Kukuihaele Development Company
Attn: Eugene McCain
P.O. Box 4494
Kawailoa, HI 96763

Case & Lynch
Attn: Sandra Pechter Schutz
460 Kilauea Avenue
Hilo, HI 96720
December 6, 1993

Mr. Rodney Nakano
County of Hawaii
Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Nakano:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement for the Aman Resort, Kamuela, Hawaii (EIS 9-8-6-3, 13, 43, 44; por. 9 and 11). We do not have any additional comments to offer beyond those provided in our previous letter dated August 30, 1993.

Sincerely,

[Signature]

Kiauk Cheung, P.E.
Director of Engineering

Copies Furnished:
Mr. Eugene McCain
Kukuihule Development Company
P.O. Box 44394
Kawaihae, Hawaii 96743

Ms. Sandra Pechter Schutte
Cate and Lynch
460 Kilauea Avenue
Hilo, Hawaii 96720
January 4, 1994

The Honorable Virginia Goldstein
Planning Director
Planning Department
County of Hawaii
Hilo, Hawaii 96720

Dear Ms. Goldstein:

Subject: Draft Environmental Impact Statement for Amenity at Kohukukule, Hamakua, Island of Hawaii, TMO: 4 846: 3, 13, 43, 64, area 9 and 11

We have reviewed the above referenced document proposing a 26-unit, one story luxury mobile home, a 4-unit inn for the old Planning Manager's residence, 39 residential-agricultural lots and 7 residential-rental units. It is our understanding that the project area is approximately 112 acres within the Agricultural Districts. The proposal Amenity House will encompass approximately 15 acres which the applicant proposes to reclassify to the Urban District.

The Office of State Planning is currently developing an 'Interim Planning Document' for the Hamakua region which will discuss low density resorts and ecotourism as an alternative for the region.

We have no further comments at this time. If you have any questions, please contact the
Land Use Division at 881-3486.

Sincerely,

[Signature]

H. S. Masumoto
Director

cc: Kohukukule Development Company
Kace & Lynch

Ray R. Takehito
Land Use Planning & Law Consultant
P.O. Box 131, Hilo, HI 96721

February 4, 1994

Mr. Harold S. Masumoto, Director
Office of State Planning
State of Hawaii
P.O. Box 3500
Hilo, HI 96711-3540

RE: Draft Environmental Impact Statement for Amenity, Hamakua, Hawaii

Dear Mr. Masumoto:

Thank you for your comments dated January 4, 1994. We hope you consider the proposed low density resort project as a model of ecotourism that fits with the plans for the Hamakua region. We welcome any comments to improve the fit of the project as it relates to the ecotourism objectives.

Yours truly,

[Signature]

Ray R. Takehito

cc: Planning Department, County of Hawaii
Kohukukule Development Company
January 14, 1994

Planning Development, County of Hawaii
25 August St.
Hilo, HI 96720

Dear Sir/Madam:

We have reviewed the Draft Environmental Impact Statement for the AMANRESORT development at Kukuiahae, District of Hanakaa, Hawaii. Enclosed you will find a copy of a report outlining our response to the proposed development. Please contact Linda Delaney at 586-3740 should you have any questions about this report.

Sincerely yours,

[Signature]
Dante & Lankaer Administration

Enclosure

cc: Kukuiahae Development Company
Case & Lynch
Clayton Hain, Chairperson, OHA Board of Trustees
to conclude that lands in the area are marginally suited for agriculture and that the development of AMARRESORT would probably be the best and highest land use. Literally, the following is said at page 26:

"However, since the soils do not strictly meet all of the Department of Agriculture's criteria for "prime agricultural land", it must be presumed that these soils were classified on the basis of their use for sugarcane cultivation at the time of the mapping. The Soil Conservation Service rated the capability of the soils in Class III or IV."

Also a footnote is included on page 26:

"State of Hawaii, Department of Agriculture, Agricultural Lands of Importance to the State of Hawaii (Revised), brochure, November 1977. The brochure discusses the classification criteria. One criterion for prime agricultural land is that the soil must not be thixotropic."

These two paragraphs are in clear conflict with the soil description given in page 24 of the EIS and the ranking of the area as prime agricultural land by the Agricultural Lands of Importance to the State of Hawaii (ALISH) system (page 26).

The description in page 24 of the EIS states that soils in the area belong to the soil series Paauhau and Kukalau. These soils are well drained, medium textured, volcanic-ash soils (Andepts) with unique soil physical properties (including thixotropy) stemming from their high organic matter content and dominance of amorphous materials. These characteristics confer them unlimited potential for agricultural use. In fact, volcanic ash soils in Hawaii and elsewhere are the most productive soils in the world providing that sound soil and crop management practices are instituted. Furthermore, and contrary to what is stated in the footnote on page 26, thixotropy does not render soils less suitable for crop production.

Slope steepness could be one factor constraining agricultural use of the soils in the area. But Figure 17 of the EIS fails to show that steep slopes prevail in the area. Furthermore, the slope ranges given on page 24 of the EIS are average values for the soil series and may not be indicative of slopes prevailing in the area.

Overall, OHA finds the Soil and Topography section of the EIS lacks depth and substance to truly discern land qualities and uses for lands in that portion of the Kukuihaele area.

Diversified Agriculture

The EIS states that diversified agriculture is not a feasible alternative for the Kukuihaele area (page 123) and some statistics are given to support this contention. It is stated that due to the breakdown of the sugarcane industry, a large segment of the population is or will be unemployed. But it is stated that only a small portion of this idle population is actually interested in pursuing diversified agriculture. It is also stated that only 20% of the agricultural area in the Hamakua Coast will be needed to
cover islandwide potential markets for diversified agriculture's products and that lands in the Kukuihaele area are not part of the lands for diversified agriculture. After a careful analysis of these arguments, OHA states the following:

1. A wealth of knowledge indicates that given equal opportunity, diversified agriculture is a viable alternative to plantation agriculture. There are several attributes of diversified agriculture which are highly appealing to the Hamakua Coast but which have not been fully explored. Among these are:

- Its diversity, that is the growing of various crops under various cropping systems, reduces the risks of crop failure and precludes economic hardship.
- Diversified agriculture operates at a much smaller scale than plantation agriculture. That is, farmers operate small tracts of land. This broadens the opportunities for more people to engage in diversified agriculture.
- Diversified agriculture provides a wide range of accessory employment opportunities derived precisely from this diversity.
- Diversified agriculture brings opportunity for change and renewal to areas agencies traditionally engaged in plantation agriculture.
- Diversified agriculture is practiced worldwide but the available technology is less than adequate to tackle soil and environmental constraints. Given the similarity in soils and environments, the Hamakua Coast has an unique opportunity and a comparative advantage to develop technology for worldwide application.

2. The apparent dismissal of diversified agriculture as a viable economic activity for the Hamakua Coast apparently stems from an analysis of the local markets. It is true that local markets are too small to absorb products from diversified agriculture. But one important key element is missing in the analysis. That is diversified agriculture possesses the means to produce high quality products able to (i) stand long distance shipment, and (ii) compete in foreign markets. Thus, it is important to place the prospect of diversified agriculture in the Hamakua Coast beyond the Big Island's boundaries and within a statewide, Pacific Basin, and Southeast Asia context.

3. Diversified agriculture in the Hamakua Coast lacks visibility. This stems from factors such as (i) current academic and practical training are strongly oriented to plantation agriculture and few opportunities exist for research and training in diversified agriculture, (ii) diversified agriculture is often wrongly equated with subsistence agriculture, and (iii) very few people actually understand the scope and extent of diversified agriculture. To increase visibility, there is need to (i) reorient academic curriculum to address current and future changes in
agriculture, and (ii) develop the mechanisms to increase awareness and understanding of the capabilities, requirements, and scales of operation of diversified agriculture.

4. If OHA allows loosely constructed arguments to justify the use of good agricultural areas for resort uses, it will miss the opportunity to increase diversified agriculture and provide the State of Hawaii with a broader economic base.

Overall Conclusion

The Office of Hawaiian Affairs strongly encourages and supports developments in the Hanakua Coast that will lessen economic hardship brought by the closing of the sugar cane industry. But OHA has serious doubts that resort developments such as ANAHRENSORT will bring economic relief to the local population and will benefit segments of the population which are vastly underrepresented in the workforce. Agricultural activities, with innovative approaches such as diversified agriculture, are feasible strategies for economic development in the Hanakua Coast. If properly implemented, diversified agriculture has the potential for reaching people with neither the means nor the skills to pursue other economic ventures.

After a careful review of the EIS, OHA is not prepared to endorse the arguments used in the EIS to propose the permanent and irreversible removal of prime lands from agriculture and placement in some sort of resort use.
February 4, 1994

Mr. Dante Carpenter
Administrator
Office of Hawaiian Affairs
State of Hawaii
711 Kapiohi Boulevard, Suite 500
Honolulu, HI 96813-5249

RE: Draft Environmental Impact Statement for Ammunition, Hamakua, Hawaii

Dear Mr. Carpenter:

The following responds to the comments from your staff dated January 18, 1994:

1. **Agricultural Suitability.** There are alternative soil classification systems that rate the soils on a scientific basis for agricultural suitability. The State Land Use Law (Hawaii Revised Statutes Chapter 203) uses the Land Study Bureau or Soil Conservation Service's rating system instead of the ALISH system. The Land Study Bureau and Soil Conservation Service both rate the soil as "suitable" for agriculture. The ALISH system is not as detailed in its evaluation as the Land Study Bureau or the Soil Conservation Service. Furthermore, the soils within the project site do not meet the ALISH criteria as noted in footnote 8 in the Draft EIS. The Final EIS will revise footnote 8 to clarify that the criteria of not being thinsoils in the Department of Agriculture's criteria taken from their brochure referenced in footnote 8. The soil within the project site may be good, but there are acres of better soil along the Hamakua Coast which are rated prime according to a consensus of these classification systems. The overall policy objective is to preserve all land that was used for sugarcane or other agricultural use, but rather to preserve as much as possible the best or "prime" soils.

2. **Diversified Agriculture.** This project does not preclude diversified agriculture in Hamakua—there are 40,000 acres becoming available with the closure of Hamakua Sugar Company. This project would withdraw 65 acres of land formerly used for sugarcane—less than 1% of the total available land. Every square foot of the 40,000 acres does not have to be devoted to diversified agriculture; the market could absorb the production. This project offers an alternative use that could stimulate the start-up of diversified agricultural ventures in the vicinity (see for example the article cited in footnote 44 of the DEIS discussing a former Land plantation worker who has started a farming business selling his produce to Keola Lodge). The EIS relied on statistics from the State Department of Agriculture in the feasibility assessment; your arguments do not provide specific data to refute the Department of Agriculture's projections. The Department of Agriculture must have considered all feasible markets in their analysis, including foreign markets if these have proven feasible.
DEC 8 1993

County of Hawaii
Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Attention: Mr. Rodney Nakano

Gentlemen,

Subject: Amanresort
Draft EIS

Thank you for the opportunity to review the subject document. The proposed project will not impact any of our facilities. Therefore, we have no comments to offer.

If there are any questions, please have your staff contact Mr. Ralph Yukumoto of the Planning Branch at 586-0488.

Very truly yours,

Gordon Matsumoto
State Public Works Engineer

cc: Kukuihiaele Development Company
Case & Lynch

1/7/93

Mr. Rodney Nakano
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Nakano:

Subject: Draft Environmental Impact Statement (EIS) for Amanresort 995: 4-9-6/13, 15, 43, 44, per 9 and 11, Hanaus, Hawaii

We have reviewed the subject Draft EIS and have the following comments to offer:

1. While the payment of in-lieu fees is acceptable, the Housing Finance and Development Corporation would prefer the construction of affordable housing. The Hawaii State Housing Functional Plan Policies A(2) and B(3) were formulated to ensure that housing projects and projects which impact housing provide a fair share/adequate amount of affordable for-sale or rental opportunities to residents of Hawaii.

2. However, if the payment of in-lieu fees is made, the amount of subsidy required to provide affordable housing units of $12,500 per unit as stated may not be adequate to actually produce the required units. We estimate the in-lieu fee to be approximately $14,500 per for-sale unit (1993) which is based on the following assumptions:

   a. Affordable units are for homeownership.

   b. The 1993 Department of Housing and Urban Development's (HUD) median income for a family of four in the County of Hawaii is $22,660.
c. The affordable sales price is based on a 30-year mortgage and at an interest rate of 8%.
d. A per unit subsidy is calculated as the difference between the cost of development and the affordable price.

Attached is an assumption sheet indicating how the estimated in-lieu fee is derived.

3. If units are to be rented, HFDC is willing to assist in calculating the in-lieu payment.

If you have any questions, please contact Michele Otake of my Planning staff at 897-0637.

Sincerely,

[Signature]

Joseph H. Cowan
Executive Director

Attachment

c: Mr. Eugene McCain, Kukuihaele Development Company
Ms. Sandra Fletcher Chute, Case and Lynch
February 4, 1994

Mr. Joseph Conn, Executive Director
Housing Finance and Development Corporation
State of Hawaii
617 Queen Street, Suite 300
Honolulu, HI 96813

RE: Draft Environmental Impact Statement for Anamareet, Hamakua, Hawaii

Dear Mr. Conn:

In response to your comments dated 4 January 1994, the applicant will add an area to provide employee housing within the Projet Site. However, to minimize the impact on the community, this area will be limited to accommodate a maximum of 10 units.

The applicant will also contribute in-lieu fees to enable the County to determine the best location for the built of the affordable housing relative to schools and other infrastructure rather than to cram all of the units within the boundaries of Kokuahele. The County will consider your comments in determining the appropriate amount of the fee relative to homeownership or rental assumptions, and factoring as appropriate the on-site employee housing. The Final EIS will identify the specific amount of the fee as an unresolved issue to be resolved during the review process.

Thank you for your comments.

Yours sincerely,

Ray R. Takemoto

cc: Planning Department, County of Hawaii
    Kokuahele Development Company

December 14, 1993

County of Hawaii, Planning Department
25 Joplin Street
Hilo, Hawaii 96720

ATTN: Mr. Rodney Nakano, Planner
Mr. Daryn Apan, Planner

Gentlemen:

SUBJECT: Anamareet, Island of Hawaii
District of Hamakua
Tax Map Key: 4-B-6:13,43,44, par. 9 & 11

We wish to inform you that we have no comments to offer on the subject Draft Environmental Impact Statement (DEIS).

Thank you for the opportunity to submit any comments or recommendations.

Sincerely,

H. Kaya
Energy Program Administrator

KOC:130008

cc: Kokuahele Development Company
    Case & Lynch
Ms. Virginia Goldstein
Planning Director
County of Hawaii Planning Dept.
35 Aupuni Street
Hilo, Hawaii 96720

November 24, 1993

Dear Ms. Goldstein:

Subject: Draft Environmental Impact Statement (DEIS) for Anareoats, Kekuaula, Kauai, Hawaii

We have reviewed the DEIS for the subject project and have the following comments:

1) Based on pages 11-12 of the DEIS, we note that there are several components of the subject project that have changed since we reviewed the Environmental Impact Statement Preparation Notice (EISP) in our letter dated August 16, 1993. We understand that one of the changes includes the replacement of the originally planned resort villa lots with "residential-agricultural" lots. We further understand that the applicant does not intend to file a petition for land use district boundary amendment with the Land Use Commission in connection with the project as was earlier implied in the EISP.

2) Based on figure 36 on page 98 of the DEIS, the State Land Use District boundaries appear to be incorrectly delineated. We have enclosed a copy of the official map showing the district boundaries in the area for your information.

We have no further comments to offer at this time. We appreciate the opportunity to comment on this matter.
February 4, 1994

Ms. Esther Ueda, Executive Director
Land Use Commission
State of Hawaii
Room 104, Old Federal Building
335 Merchant Street
Honolulu, HI 96813

RE: Draft Environmental Impact Statement for Anahawan, Hamakua, Hawaii

Dear Ms. Ueda:

The following responds to your comments dated 24 November 1993:

1. The proposed site plan requires reclassification from Agriculture to Urban of four separate areas:
   a. hotel site (15.0 acres);
   b. residential-resort lots and employee housing (8.757 acres);
   c. boundary adjustment for mineral lot on the Waipio side of the Planning Manager's House to be consolidated and redivided into the existing residential lot (0.25 acres); and
   d. boundary adjustment for mineral residential lot to be consolidated and redivided into the existing residential lot (0.837 acres).

   The applicant will submit a petition to the County Planning Department or the State Land Use Commission, as appropriate, to reclassify these areas.

2. The map of the existing State Land Use District boundaries (DEIS, Figure 36, p. 99), shows the boundaries within the Project Site. When compared to the copy of the official map you sent, the figure appears correct.

Thank you for your comments.

Yours truly,

Raf R. Takehito

cc: Planning Department, County of Hawaii
     Kukuihaele Development Company
STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE
NO. 30000
HONOLULU, HAWAII

January 6, 1994

TO: Mr. Rodney Nekano
Mr. Daryn Arai
Planning Department
County of Hawaii

FROM: Roy C. Price, Sr.
Vice Director of Civil Defense

SUBJECT: GRAFT ENVIRONMENTAL IMPACT STATEMENT (GEIS); MAUNAKeA RESORT

We appreciate this opportunity to comment on the DEIS by the County of Hawaii Planning Department, on Mauna Kea, Hualalai District, Island of Hawaii; THK: 3/4-6:6:3, 15, 43, 44, par. 9 & 11.

State Civil Defense (SCD) does not have direct comments specifically directed at the DEIS. However, the project site is not covered by any siren warning device. We oppose that one electronic siren and siren support infrastructure be purchased and installed by the developer to help alert residents of a impending or actual event that threatens the area. The siren must be solar powered, have a maximum output of 115 dB and be compatible with the existing civil defense siren warning system. The proposed siren requires a 100-foot radius buffer zone in which there are no residential buildings. The suggested location for the siren is at the northeast corner of Keauha Park as shown on the copy of Figure 10, Overall Mauna Kea Master Plan. The site is annotated in red (the color on this copy did not show up well, therefore, the coverage shown is only an estimate).

In the "SUMMARY" page V, paragraph 9, "UNRESOLVED ISSUES," subpara-
graph D.1, "Utility Infrastructure," "Note," the need to agree on the access road and the extent of improvements is addressed. In the resolution of this issue, SCD proposes that the transportation engineers design and construct the road and in question for use as a potential ingress/egress for emergency vehicles and, further, as a potential evacuation route. Just as parks, schools, fire hydrants, underground/overhead utilities and sidewalks are planned as integral parts of a development, so must mitigation measures, early warning and emergency warning devices and evacuation routes be planned for the safety of communities. Additionally, Section 3, "ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES," paragraph 3.1, "PHYSICAL CHARACTERISTICS," subparagraphs 3.1.2, Climate, and 3.1.5, Natural Hazards, address the elevation of the project site and the natural hazards of flooding, volcanoes and earthquakes. The suite threat of storm driven waves, torrential rains destructive winds resulting from tropical storms/hurricanes must be considered. With the alaka’i and maka’ahiki boundaries of the project site ranging from 500' above mean sea level (MSL) and 650' MSL respectively, terrain amplification associated with tropical storms/hurricanes, require serious consideration. Residential structures as well as the Social Hall and Recreation Center within the project area must be designed and constructed to withstand the terrain amplified winds at their respective elevation and location. The Social Hall and Recreation Center should be surveyed and given serious consideration for use as a public shelter for area residents and resort guests in the event of an emergency.

Our SCD planners and technicians are available to discuss this further if there is a request. Please have your staff call Mr. Nob Nishihara of my staff at 724-2181.

Enc:
cc: Mr. Eugene McCool
Kukuihaele Development Company

Mr. Sandra Pechter Schulte
Case & Lynch

Office of Environmental Quality Control
Ray H. Takemoto  
Land Use Planning & Law Consultant  
P.O. Box 131, Hilo, HI 96721  
Phone/Fax (808) 956-0169

February 4, 1994

Mr. Roy C. Price, Sr., Vice Director of Civil Defense  
Department of Defense  
State of Hawaii  
3849 Diamond Head Road  
Honolulu, HI 96816-4495

RE: Draft Environmental Impact Statement for Ammunitort, Hamakua, Hawaii

The following responds to your comments dated 6 January 1994:

1. **Siren.** The EIS will identify the potential need for a civil defense siren. If the County requires a siren, the applicant's consultants will coordinate the location and design of the siren with your agency.

2. **Excavation Route.** The EIS will recommend that the access route be designed to accommodate emergency vehicles and to serve as an evacuation route.

3. **Public Shelter.** The EIS will recommend that the design of the Social and Recreation Center consider the use of this facility as a public shelter.

Thank you for your comments.

Yours truly,

Ray H. Takemoto

cc: Planning Department, County of Hawaii  
Kukuihaele Development Company
Ms. Virginia Goldstein  
January 10, 1994  
Page 2

If you should have any questions on this matter, please contact Ms. Shirley Hamaize of the Environmental Planning Office at 808-683-37.

The Department of Health recommends that the developer and/or contractor be required to hold a public informational meeting in the surrounding community to describe the project and potential environmental impacts and to respond to concerns relating to the project.

Very truly yours,

[Signature]

JOHN C. LEWIS, M.D.  
Director of Health

Ms. Virginia Goldstein  
January 10, 1994

Attention: Rodney Nakano

Dear Ms. Goldstein:

Subject: Environmental Impact Statement (EIS)  
Proposed Anahau Project  
Kukuihaele, Kona District, Hawaii  
T.R.: 4-8-6: 3, 9, 11, 13, 43 & 44

Thank you for allowing us to review and comment on the subject document. Besides the comments that we made on the EIS Preparation Notice, dated September 20, 1993, we have the following additional comments to offer:

Nonpoint Source Pollution Concerns

Proper planning, design and use of erosion control measures and management practices substantially reduces the total volume of runoff generated, thereby decreasing sediment loads. Steps should be taken to minimize onsite erosion which may become a source for nonpoint source pollution during construction activities.

a. Conduct grubbing and grading activities during the low rainfall months (April - October).

b. Replant or cover bare areas as soon as grading or construction is completed. New plantings will require soil amending, fertilizers, and temporary irrigation to become established. Use high seeding rates to ensure rapid stand establishment.

c. Maximize the use of pervious ground covers (vegetation, gravel, and pervious asphalt) to reduce the amount of additional runoff generated.

d. Sediment basins, diversions, dikes, and any other structural erosion control practices require frequent maintenance to sustain their runoff capacity and to remain effective.
February 4, 1994

John C. Lewis, M.D., Director
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96810

RE: Draft Environmental Impact Statement for Anahineo, Hamakua, Hawaii

Dear Dr. Lewis:

In response to your comments dated 10 January 1994 relating to nonpoint source pollution, the Final EIS will include your list of additional mitigation measures to supplement the list already included in the EIS. The project's engineers will use this list of management practices to develop an appropriate erosion and sedimentation control plan. Your agency will review this plan through the NPDES Permit process. The County will also review the plan through the Grading Permit process.

The applicant has held public informational meetings in the community and plans to hold additional meetings in the future. The County will hold public hearings as part of the various permit processes (e.g., rezoning, State Land Use District Boundary Amendment, General Plan Amendment).

Yours truly,

Roy R. Takehara

Ref: Takehara

cc: Planning Department, County of Hawaii
    KohalaReal Development Company
Ms. V. Goldstein

Date: 22 September 1993

The Honorable Virginia Goldstein, Director
Planning Department
County of Hawaii
25 Anuenue Street, Room 109
Hilo, Hawaii 96720

Dear Ms. Goldstein:

Subject: Draft Environmental Impact Statement (DEIS): Kukui Nani, Waikoloa, Hawaii, Triples 4-0-06, 1, 13, 43, 44, Parsons 9 & 11

We have reviewed the DEIS information for the subject project received on November 22, 1993, and have the following comments:

Commission on Water Resource Management

The Commission on Water Resource Management (CWRM) staff comments that Waikoloa Gulch appears to run through the site of the proposed resort. The information submitted with the SPA permit application does not appear to indicate any alteration or diversion of this gulch.

Stream permits are required when the bed or banks of stream channels are altered (Section 169-30, Hawaii Administrative Rules (HAR)), or when stream diversion works are constructed or altered (Section 168-32, HAR). In addition, the interstream flow standards would have to be reviewed if the proposed project would alter the flow of streams (Section 168-40, HAR).

If the applicant proposes to modify or alter the bed or banks of Waikoloa Gulch or divert water from the gulch, the applicant should:

1. Determine whether the gulch can be characterized as a stream following the definition of "stream", "stream channel" and "continuous flowing water" in Section 13-169-7, HAR.
The Honorable Virginia Goldstein, Director  
Planning Department  
County of Hawaii  
25 Aupuni Street, Room 109  
Hilo, Hawaii 96720  

Dear Ms. Goldstein:  


The following are our additional comments on the DEIS for the proposed project which supplement those forwarded by our previous letter dated December 29, 1986:  

Division of Aquatic Resources  

The Division of Aquatic Resources (DAR) comments that the DEIS has provided adequate information about the various activities proposed including the resort facilities and infrastructure. Mitigation measures have been described that would prevent or limit possible impacts to aquatic resource values, including the disposal of wastewater and the disposition of storm runoff and drainage water.  

Access from the cliff to the shoreline is difficult due to rugged terrain. However, any traditional or historical public access from the cliff top to the shoreline should be maintained.  

DAR comments that no intercourse should be blocked or interrupted during the development of the project. DAR also notes that mitigation measures should be implemented that would prevent or limit erosion, soils, petroleum products, fertilizers, debris, construction materials and other potential contaminants associated with the development from entering the aquatic environment.
February 4, 1994

Mr. Keith W. Ahue, Director
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

RE: Draft Environmental Impact Statement for Anahoom, Hamakua, Hawaii

Dear Mr. Ahue:

The following responds to your comments dated 22 December 1993 and 10 January 1994:

1. Commission on Water Resource Management. Your comments is correct that the applicant does not propose any alteration to the bed or banks of Waikoloa Gulch (or any other gulch within the project site) nor will any water be diverted from this stream. Therefore, a stream permit would not be required for this project.

2. Division of Aquatic Resources. The Final EIS will discuss two known access routes that traverse the project site: 1) on the Waipio side of the project site, there is an unimproved road to the County's chlorination station; there is no trail from the chlorination station to the shoreline; and 2) a trail on the Honesa side of the project site that provides an alternative access to Kukuihaele Landing. The applicant will keep both roads open for public access. No watercourse will be blocked or interrupted (see comment in § above). Eroded soils and other sources of nonpoint source pollution will be regulated under the County's grading permit and the State's NPDES permit.

Thank you for your comments.

Yours truly,

Roy R. Takemoto

cc: Planning Department, County of Hawaii
Kukuihaele Development Company
Mr. Roy Takeo
371 Hoomalu St.
Hilo, HI 96720

RE: Proposed Annex Report
Kukuihale, Hamakua District, Hawaii

Dear Mr. Takeo:

Review of environmental impact statement indicates no adverse impact on the Na Ala Hele program.

Sincerely,

Rodney T. Oshiro
Na Ala Hele - Hawaii

January 31, 1994

Mr. Rodney Nakano and Mr. Daryn Aral
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Gentlemen:

Draft Environmental Impact Statement
Annenorot
Hamakua, Hawaii

The referenced project, proposed by Kukuihale Development Company, will be located on approximately 113 acres in Kukuihale on the Hamakua Coast. The project will include a resort resort consisting of a 35-unit resort hotel, the Annenorot, and a 6-mile plantation front; 38 1-acre residential-agriculture lots; 7 1-acre residential-resort lots to be sold in fee simple; and various community benefits.

We have been assisted in this review by Davinna McGregor, Ethnic Studies; Suzanne Tung, School of Law; and Huillin Dong, Environmental Center.

GENERAL COMMENTS

The document seems to address most concerns relative to the potential impacts of the project. However, it appears that some impacts have not been fully appreciated, and that proposed mitigation measures may not be adequate.

References footnoted throughout the Draft EIS are helpful; however, in several instances, materials incorporated by reference are not widely available, and information cited this is not empirically verifiable or amenable to critical review. For instance, botanical characteristics of the project area are identified in Section 3.1.4, to which we referenced a survey performed previously for a separate project. The reviewer has no access to the original survey except through library or other reference resource

Division of Forestry & Wildlife - Dept. of Land & Natural Resources - P.O. Box 4243 - Hilo, Hawaii 96723-0243

An Equal Opportunity/Affirmative Action Institution
Mr. Rodney Nakano and Mr. Darwin Atari  
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procurement. Simultaneously, reference is made to a community relations program undertaken for a separate project on Lanai (Section 3.2.2, p. 67), yet details and contents of the program are not readily available for comparison and evaluation. While the cross-referencing is commendable as far as it goes, our reviewers note the last sentence of Section 11-200-19, EIS Rules, which states:

Care shall be taken to concentrate on important issues and to ensure that the statement remains an essentially self-contained document, capable of being understood by the reader without the need for undue cross-references.

HYDROLOGY AND FLOODING IMPACTS

1. It is not clear from the EIS what use will be made of the water formerly diverted for the plantation into the Lalakai Reservoir.

2. We are concerned about the impact upon the Waipio farmers of developing a new well or diverting water for the resort. From reading the EIS, it is unclear to us what the impact will be.

3. Potential problems resulting from use of an underground leach field system if the applicant and County need to dig a well are unresolved.

4. Waipio Valley is noted for its susceptibility to periodic flooding. Without the plantation to disperse the increased flow into their irrigation system or for the fields to absorb the excess, the resort with its paved thoroughfares and buildings may contribute to the flooding problem.

SOIL PROPERTIES

Both the Draft EIS (Section 3.1.2) and the preliminary engineering report (Appendix A) note the low bearing capacity of the Pauhau and Kukuihi soils found on the proposed project site. Although soil engineering studies are called for, our reviewers suggest that certain aspects of the project preliminary design, in particular the placement of structures relative to the cliff edge, are fully dependent on results of these studies. In addition, foundation remedies for soil stability and compressibility may significantly increase preliminary cost figures for construction, thereby altering the project economics. While it may be true that geotechnical studies "usually are done in the normal course of design and submitted with the building permit," in cases where soil conditions promote uncertainty, more thorough investigations at the outset may pay handsome dividends in reducing subsequent project costs.

Mr. Rodney Nakano and Mr. Darwin Atari  
January 7, 1994  
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EARTHQUAKE HAZARDS

Section 3.1.5.1 (p. 44) correctly identifies the current UBC designation of Earthquake Zone 3 for the entire island of Hawaii. However, concern about seismic risk considerations statewide have been raised, and the geophysical and engineering communities are currently engaged in deliberation of prospective suggested amendments to the current UBC.

In particular, citation of the April 2, 1973 subcrustal earthquake draws attention to the shortcomings of the current UBC rating. While the Magnitude of that event is registered at 6.2, the Modified Mercalli Intensity rating in the vicinity of the proposed project was VII, which corresponds to a peak ground acceleration of >0.3 g. Such an intensity rating falls within the range of UBC Zone 4. Even more significant is the record of the April 2, 1968 earthquake, which shows an Intensity in the area of VIII. The following descriptive excerpt from "Earthquake History of the United States" (NOAA, 1970, v. 41, no. 1) is illustrative:

Nearly every wooden house at Kula, Pahau, Naniloa, and beyond was knocked off its foundation or tumbled over, and straw houses with posts in the ground were torn to shreds. It shook down almost every wall in Hilo and caused landslides beyond Hilo, as far as Waipio and Hamakua.

Given the noted instability of soils in the project area, the earthquake hazard leads our reviewers to suggest that blanket reliance on provisions of the existing UBC may not be sufficient to prevent serious structural failure, even in single-story buildings.

SOCIO-ECONOMIC IMPACTS

The economic analysis and fiscal impacts in the EIS are incomplete. The entire economic justifications of the project are based on a few key assumptions, however, the validity of these assumptions are not tested in the analysis. For example, in appendix E, Table 5.5, revenues to the state are given based on Amusement's total revenue at a 4 percent tax rate, and the projected revenues to the Amusement can be inferred. However, we notice that data on numbers of guests staying and their daily average expenditures which provide the basis of the revenues are taken from a state-wide survey in 1993. Little has been revealed about how the resort will induce the kind of expenditures anticipated by the guest, since surveys have ever been conducted among the actual visitors to the valley on their willingness to stay in the resort and their spending patterns. Nor does the economic analysis take into consideration the economic fluctuation facing the Hawaii tourism industry at present and in the near future. The benefits projected in the EIS to the State and the County seem to be rather speculative, and in the absence of a formal market assessment providing more concrete data, the underlying market assumptions cannot be substantiated.
Overall, the developers seem to want to be a good neighbor to the Kukuihale community. They appear to want to be sensitive and responsive to the community. This is reflected in the establishment of the trust fund for property tax relief, the re-configuring of boundaries, the involvement of the community in the design of the community park, and the use of the Waipio Valley Task Force, etc. Nevertheless, we can still identify certain unavoidable negative impacts to the Kukuihale community and Waipio Valley farmers:

1. The property tax fund or county ordinance may postpone the impact of increased property values. However, one can only speculate that eventually surrounding property owners with higher incomes may find themselves unable to afford the increased property taxes. The impact may not be felt until the next generation is faced with having to pay inheritance taxes. One can envision the gradual phasing out of the current rural and local character of the community as old timers pass on and heir, facing high property assessments may have to sell the property to pay inheritance taxes. The character of the neighborhood will eventually be transformed due to the lack of affordable housing. This problem has not been alleviated by the applicant's election to contribute in-lieu fees of $150,000 instead of satisfying the 21 unit on-site affordable housing requirement. The fees are based on $12,500/unit, which appears to be a rather aggressively low estimate for providing acceptable housing in the community. One possible solution would be to put a certain percentage of profits from the resort or the building cost back into community educational or job training programs, or into a housing trust fund.

2. Economic stratification within the area is likely to occur and be reinforced due to the influx of high-income new owners and guests in a community characterized by an above-average percentage of elderly and adults with work disabilities (p. 30). Contrary to what the EIS claims, such economic polarization in a rural community undisturbed by extravagant ways of modern living will prove to be destructive rather than constructive. Roughly a third of the 100 or so jobs generated by the project are classified as management level, which require managerial skills that the local employees don't have; from experience at the Lanai resort, the 27 positions in food and beverage won't be filled by former agriculture workers; only the few positions in housekeeping and landscaping are preferred by former agriculture employees. The job opportunities created for the community are therefore limited, and job satisfaction is likely to be less than anticipated.

3. The impact on Waipio Valley is unavoidable, despite the apparent willingness of the applicant to cooperate with and abide by the policies of the Waipio Valley Task Force. The resort will increase use of the Valley and exert pressure for changes to accommodate the increased number of visitors. Applicants claims to be culturally sensitive in their practices at other sites in Third World countries. These claims would be more meaningful if substantiated or documented by non-biased agencies or the local communities on those sites.

Thank you for the opportunity to review and comment on the document.

[Signature]
John Harrison, Ph.D.
Environmental Coordinator

cc: OEQC
Kukuihale Development Co.
Case & Lynch
Roger Pujols
Daviana MacGregor
Suzanne Tiapula
Susan Ding
February 4, 1994

Mr. John Harrison, Ph.D., Environmental Coordinator
Environmental Center
University of Hawaii at Manoa
2550 Campus Road, Crawford 317
Honolulu, HI 96822

Re: Draft Environmental Impact Statement for Amanresort, Hamakua, Hawaii

Dear Mr. Harrison:

The following responds to your comments dated 7 January 1994:

I. Cross-references. Enclosed is a copy of the botanical report referenced in the DEIS. The Land
reference you mentioned is generally available as part of an EIS. Please note that the EIS Rules also state:

Data and analyses in a statement shall be cross-referenced with the
importance of the impact, and less important material may be
summarized, consolidated, or simply referenced. (EIS Rules, §11-708-
19, emphasis added).

The botanical issue was considered important based on the findings of the previous study and because the project site is almost entirely abandoned sugarcane fields. Similarly, the Land
community relations program was mostly cited as an example where details were not deemed
important; interested readers could refer to the generally available EIS for the details.

II. Hydrology.

A. No use is proposed for the Lake K Reservoir; this will be classified in the Final EIS.
B. Perched groundwater sources sustain the base flow for perennial streams that flow into
Walipio Valley (EHE, p. 85). The proposed wells would tap the basal groundwater
source, not the perched groundwater source; therefore, the wells would not impact the
streamflow of the Walipio Valley streams. To assure that no significant impacts occur,
any well drilling would first need a permit from DLNR. DLNR evaluates the impact of
the proposed well on the hydrology of the area. If the well has any possibility of
affecting the streamflow of the Walipio Valley streams, then either the location of the well
or the pump capacity could be changed or the permit denied altogether if there were no
acceptable mitigation measures.
C. The location of the leaching field would be downgradient from any well. To ensure that
no significant impacts occur, the Department of Health would evaluate the impacts of the
projected wastewater treatment system under Hawaii Administrative Rules Chapter 11-62.
D. The project area for the resort is not within the drainage area of Walipio Valley;

therefore, the increased area of impermeable surfaces resulting from the project would
not affect the flooding susceptibility of Walipio Valley. Since the project does not
propose any use of the plantation irrigation system, the project has no control on the
impact of the irrigation system on the flooding susceptibility of Walipio Valley.

III. Soil Properties. In consultation with a reputable soils engineer, the proximity to the cliff and the
soil characteristics in the area are valid concerns. However, the FEIS will clarify that these
concerns are mitigated by either setting the structures back from the cliff edge as a distance to
be determined by geological investigations, or to allow building closer to the cliff edge using
structural styles that are anchored with piers to solid rocks and structurally tied from front to back.
The proper geological studies are costly and justified only if the project is approved. Projects
in similar conditions close to a cliff edge have been allowed to proceed with the proper structural
mitigation measures (e.g., Princeville on Kauai). Once the project is approved, the geological study
is done almost inevitably for the very reason you suggest—i.e., structural costs comprise a
significant proportion of the construction costs. The developer analyzes and adjusts total project
costs throughout the design phase as the project design progresses through the schematic, design
development, and construction document stages. At each milestone in the design phase, if the
estimated cost does not comport with the preferred feasibility projections, then the design is
adjusted through a "value engineering" process to find alternative means to reduce the
construction cost until the project is brought in line to be economically feasible. Finally, when a
feasible and acceptable design is completed, the plans and specifications are submitted to the
County along with bidding studies such as the geological report for the County to review in
terms of public health and safety (not feasibility). Although the geological report is reviewed
by the County at the building permit stage, the study itself is done very early in the design phase.

IV. Embankment Hazards. As noted in the DEIS and the preceding paragraph, unless otherwise
specifically noted, the soils engineering study will be done and will discuss the structural design of the building. Hawaii County adopted
the most recent UBC effective November 8, 1992. The recent UBC includes several new
requirements to address hazards from earthquakes and strong winds. The project will be designed
to meet the applicable building code standards; if the standards change as a result of the
deliberations by geophysical scientists and engineers, then the project will be designed
accordingly.

V. Socioeconomic Impacts.

A. Projected Income. The annual revenue projections are based on conservative
assumptions. The projected annual revenues of $214,900 from the operation of the resort
were projected by the operator based on their experience of the ten similar Aman resorts.
The figure is the first year proforma projection, which is the most conservative before it
is the start-up year, and assumes 50% occupancy. Obviously, operators do not spend all
this money at the resort; they purchase goods and services from businesses other than
the resort such as restaurants, gifts, and transportation. The extent of this spending
cannot be easily estimated. Although the guests staying at Aman resorts are usually in
the higher income brackets, the fiscal analysis based on average statistics from
general visitor surveys. The study estimated the amount the visitor spends at Aman
resorts (based on proforma projections by the operator) from the total average statistical
Mr. John Harrison, Ph.D., Environmental Coordinator  
February 4, 1994  
Page 3

per capita daily amount of $100 (based on visitor surveys) to calculate the direct tax revenue generated by the visitor outside the resort.

B. Economic Eclipsation. Amuse resorts have not followed the worldwide downward trend of the visitor industry. When other resorts have had to scale back, Amuse resorts are expanding. Amuse resorts offer a unique product—very small (less than 60 units), exceptional quality, exquisite locations in remote settings, integrated with the culture—hence, its top ratings in Forbes and Conde Nast. Amuse’s track record speaks for itself. During recent downturns when worldwide competition intensified for the limited visitor supply, perhaps what Hawaii’s visitor industry needs most is an injection of new vitality and image. Amuse, with its high quality mountain approach, projects a image different from typical resorts in Hawaii like the Hyatt, Sheraton, and Hilton. Your suggestion of formal market studies will not provide meaningful input into the decisionmaking process since such studies were not used to justify past resort developments in Hawaii, and this proves the unreliability of these studies.

C. Property Tax Impact. The closest model for the proposed project is Hana Hotel. Hana Hotel is a low-scale, high-quality hotel in a rural setting. Old timers have continued to live in that community, and have not been forced out over the generations as a result of the property taxes or inheritance taxes.

D. Affordable Housing. The in-line contribution of fees was intended to enable the County to determine the best location for affordable housing relative to schools and other infrastructure rather than to even the units within the boundaries of Kukuihale. The amount of the fee is determined by the County. The amount is not intended to cover the full cost of construction, but rather is intended to provide an affordable unit to a target group based on income and family size (DEIS, p. 71). In response to comments from the Housing Finance & Development Corporation, the applicant will add an area to provide employee housing within the Project site. However, to minimize the impact on the community, the area will be limited to accommodate a maximum of 10 units. The applicant will also still contribute the in-line fees. The Final EIS will identify the specific amounts of the fees as an unresolved issue to be resolved during the rezoning process.

E. Economic Stimulation. The purpose of job training is to qualify the local population for the various positions, including managerial positions. The job training will begin at least a year before the resort opens. The State will initially coordinate the job training in close association with the hotel operator (DEIS, p. 71). The job training programs will strive to learn from and improve upon the experience at Lanai.

F. Waipio Valley. The pressure on Waipio Valley is already exists. The land can control the number of trips into the Valley; the local residents and independent visitors using rental cars cannot be readily controlled. The resort would comply a very low percentage of the total visitors entering the Valley (DEIS, p. 65), and the operator has agreed to limit the number of trips by the County with input from the Waipio Task Force or other agency. The major problem is to control the residents and independent visitors who will comprise over 90% of the impact on Waipio Valley. Attached is an article on Amuse that provides a perspective of the resort's operations.
BOTANICAL ASSESSMENT SURVEY
WAIP'I O MAUKA AND WAIP'I O MAKAI
HAMAKUA DISTRICT, HAWAI'I

by

Winona P. Char
CHAR & ASSOCIATES
Botanical/Environmental Consultants
Honolulu, Hawai'i

Prepared for: BELT COLLINS & ASSOCIATES
March 1991

BOTANICAL ASSESSMENT SURVEY
WAIP'I O MAUKA AND WAIP'I O MAKAI
HAMAKUA DISTRICT, HAWAI'I

INTRODUCTION

The project site consists of approximately 3,720 acres of land at Waip'i O, on the island of Hawai'i, District of Hamakua. The site is bound by the ocean to the north, sugar cane fields and Waipunahoe Gulch to the east, pasture lands to the south, and Waip'i O Valley to the west. Highway 240 divides the property into two parcels; the parcel north or seaward of the highway is "Waip'i O Makai" and the parcel south or inland of the highway is "Waip'i O Mauka". The town of Eukuihaele is found on the makai parcel. Actively cultivated sugar cane fields cover roughly 80% of the site. 'Ohia' forest, covering some 1,400 acres, can be found on the mauka parcel adjacent to Waip'i O Valley, above Hi'ilawe and Hakalau Falls. Gulches which run through the property generally support mixed forests of 'ohia' and various introduced tree species. Coastal cliffs on the makai parcel support ironwood forests and low, wind-swept coastal scrub.

Field studies to describe the major vegetation types and search for threatened and endangered plant species were conducted on 23-26 February and 02-03 March, 1991. Four botanists, working in teams of two each, were used in the survey work. The botanical assessment report will be incorporated into an Environmental Assessment (EA) which will be prepared for a land use boundary amendment, zone change, use permits for golf courses, and other approvals.
SURVEY METHODS

Recent colored aerial photographs and topographic maps of the site were examined prior to the field studies to determine vegetation cover types, terrain characteristics, access, boundaries and reference points. Access to both parcels was from Highway 240. From the highway, major cane haul roads, as well as smaller, overgrown cane haul roads, provided access onto most parts of the property. Major cane haul roads, gullies, "Hun Lane", and Lulakea Reservoir show clearly on the aerial photographs and were used as reference points during the field studies.

Areas covered by sugar cane fields were not surveyed in detail as sensitive native plant communities are not likely to occur in such areas; spot checks were made along major avenues of access. Areas most likely to harbor native plant communities or rare species, as the coastal cliffs, the gullies, and the forested areas along Waipi'o Valley were more intensively examined. Notes were made on plant distributions and associations, substrate types, topography, exposure, soil moisture regimes, etc. Species were identified in the field; plants which could not be positively determined were collected for later identification in the herbarium and for comparison with the recent taxonomic literature.

DESCRIPTION OF THE VEGETATION

In the following discussion, flowering plant names (Monocots and Dicots) follow Wagner et al. (1980); ferns and fern allies follow Lamoureux (1981). Of the five major vegetation types recognized on the site, two, coastal vegetation and 'ohi'a forest, support native species. Tables 1 and 2 list the native species occurring in these two vegetation types.

1. Coastal Vegetation

Along the seaward facing portions of Waipi'o Haka'i are wave-cut sea cliffs which plunge precipitously down to the ocean on the eastern half of the coast. On the western half, from about Ikuikihale Landing to the end of the property well before Honokapo Landing, is a narrow cobbled and boulder beach which lies at the foot of the sea cliffs.

At the tops of the cliffs, where they border the cane fields, is usually a line of trees. These were planted there by the plantation to intercept salt spray thereby lessening damage to the sugar cane plants. From about Ikuikihale Landing to the eastern boundary at Waipuna Gulch, the cliffs are lined by ironwood trees (Casuarina equisetifolia, Casuarina flaccida), from 40 to 50 ft. tall. Scattered clumps of Christmas berry (Schinus terebinthifolius) and koa ho'ole or 'opena (Ursinia microcephala) shrubs are found along the edges of the ironwood forest. Thick mats of California grass (Pachypodium muticum) are locally abundant where the ironwood trees are less dense. On the western half of the coastal cliff area, Java plum trees (Syzygium cumini) and Christmas berry shrubs form a dense thicket; again the more open areas are dominated by thick mats of California grass.

Where the cliff face is more sloping, naupaka kahakai or beach naupaka (Scaevola sericea) forms a dense shrubland from 3 to 5 ft. tall. Also on these cliff faces are low, wind-swept stands of ironwood trees. A few natives such as nehe (Lippia heterotricha), 'aweoweo (Chenopodium abovenense), pua ka'ia (Artemisia flaccida), ahinahina (Artemisia australis), and hohehe (Cocculus trigobus) can be found clinging to the cliff faces.

On the coastal bench at the foot of the cliffs, vegetation consists of stands of ironwood and hala (Pandanus tectorius). Naupaka kahakai shrubs fill in the matrix between the trees.

The ocean bottom along the coastal cliffs is boulder-strewn and at least seven Green Sea Turtles or Honu, one 4 ft. across, were observed feeding on the algae growing on these boulders.
<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Common name</th>
<th>Status</th>
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<tbody>
<tr>
<td><strong>MONOCOTS</strong></td>
<td></td>
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</tr>
<tr>
<td>Cyperaceae (Sedge Family)</td>
<td></td>
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</tr>
<tr>
<td>Fimbristylis cymosa R. Br.</td>
<td></td>
<td></td>
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<tr>
<td>Muriaca jarovica (Bout.)</td>
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<tr>
<td>Merr. &amp; Metcalf</td>
<td>'ahu 'awa</td>
<td>I</td>
</tr>
<tr>
<td><strong>PANDANACEAE (Screwpine Family)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pandanus tectorius S. Parkinson et Z.</td>
<td>hala</td>
<td>I</td>
</tr>
<tr>
<td><strong>DICOTS</strong></td>
<td></td>
<td></td>
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<tr>
<td>Asteraceae (Sunflower Family)</td>
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<tr>
<td>Artemisia australis Less.</td>
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<tr>
<td>Lepochaeta integrifolia (Nutt.) A. Gray</td>
<td>nehe</td>
<td>E</td>
</tr>
<tr>
<td><strong>CHENOPODIACEAE (Goosefoot Family)</strong></td>
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<td></td>
</tr>
<tr>
<td>Chenopodium oahuense (Heyen)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keilen</td>
<td>'awoweo, 'oheha</td>
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</tr>
<tr>
<td><strong>CONVOLVULACEAE (Morning Glory Family)</strong></td>
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<tr>
<td>Ipomoea indica (J. Bums.)</td>
<td></td>
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</tr>
<tr>
<td>Merr.</td>
<td>koali 'awa</td>
<td>I</td>
</tr>
<tr>
<td>Ipomoea pes-caprae agg.</td>
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<tr>
<td>brasiliensis (L.) Dutsch.</td>
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<td></td>
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<tr>
<td>puehuehaka</td>
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<tr>
<td><strong>GOODENIACEAE (Godetia Family)</strong></td>
<td></td>
<td></td>
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<tr>
<td>Scaevola sericea Vahl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>oaopeke kahakai</td>
<td></td>
<td>I</td>
</tr>
<tr>
<td><strong>MENTHISPERMACEAE (Monesed Family)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coelacanth crilbus (Thunb.) DC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>huehehe</td>
<td></td>
<td>I</td>
</tr>
<tr>
<td><strong>PAPAYRACEAE (Popsy Family)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argeone glauca (Nutt. et Fria)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frupe</td>
<td>pua kala</td>
<td>E</td>
</tr>
</tbody>
</table>

1 Status:
E = endemic, native only to the Hawaiian Islands
I = indigenous, native to the Islands and elsewhere

2. Sugar Cane Fields

Roughly 80% of the project site is covered by actively cultivated fields of sugar cane (Saccharum officinarum); a few fields on the Waipi'o Hauka parcel, near the Waipi'o Valley edge, are recently followed. Two grasses which may be locally abundant along roadsides and drainageways are California grass and Vasey grass (Paspalum urvilleanum). Generally though, the plants found in this vegetation type are a weedy mixture of species. These weedy species are commonly associated with agricultural lands and are primarily annuals adapted to frequent disturbance. Among the more frequently encountered weeds found on both parcels are malle bohono (Ageratum conyzoides), Crambecephalum crepituens, broad-leaved plantain (Plantago major), milkwort (Polygoma paniculata), honohono (Cosmea diffusa), Haden alba, and hairy crabgrass (Digitaria ciliaris).

On Waipi'o Hauka and the lower half of Waipi'o Hauka, the yellow-flowered wild radish (Raphanus raphanistrum) is locally abundant along the margins of cane haul roads, and even on the roads themselves. The cane fields on the upper one-half of Waipi'o Hauka, from about the Lahaina Kanoa to the pasture lands (1,500 to 2,400 ft. elevation), are wetter and cooler and support a number of plants which prefer these environmental conditions. Among them are white clover (Trifolium repens), Indian paintbrush (Castilleja arenaria), Lotus subfilius, St. John's wort (Hypericum guttatum), marsh marigold (Caltha palustris), and Cyperus halper.

The only natives found in this vegetation type are popolo (Saliva americana) and koali 'awa (Ipomoea indica), both wide-spread species.

3. Gulch Vegetation

Running through the cane fields on the project site are a number
of gulches from about 100 to 300 ft. wide, some of which have perennial streams, others intermittent. Gulch bottoms are usually
soil bars of eroded down to the bedrock and swept clean of
vegetation from the frequent, heavy rains. Vegetation cover
within the gulches is variable. In the gulches of Waipi'o Hauka
and the lower portion of Waipi'o Hauka, where it adjoins the
highway, the gulch vegetation is dominated by introduced or alien
tree species as ironwood (Casuarina equis) and Java plum. Shrub
of guava (Psidium guajava) and Christmas berry are common in
these areas; a few small patches of banana (Musa X paradisiaca)
also occur here.

Gulches on Waipi'o Hauka, especially in the section above Lalakese
Reservoir, are dominated by a mixed forest of 'ohi'a (Metrosideros
pulverulenta) and Introduced trees and shrub species. The introduced
trees generally occur as blocks of plantings and include tropical
ash (Frasinus uhdii), silk oak (Ceiba pentandra), swamp mahogany
(Eucalyptus robusta), banana (Ficus spp.), taung (Carpoctemia
lappacca), and ironwood. In some gulches, the native swass or
nonele'u (Rhus sandwicensis) is locally abundant. Shrub of the
introduced strawberry guava (Psidium cattleianum) often form a
dense understorey layer in these gulch forests. Ubiquitous throughout
most of these gulches is kahili ginger (Hedychium gardnerianum),
which forms a dense, course growth from 3 to 7 ft. tall. Smaller
clumps of yellow ginger (Hedychium flavescens) also occur in
these areas, usually along the gulch margins where it adjoins the
cane fields.

A few of the native species found associated with the 'ohi'a
forest vegetation type also occur sparingly within these mixed
'ohi'a-introduced trees' dominated gulches. These include pilo
(Coprosma subsecunda), kōpī 'ula (Psychotria hawaiiensis),
kāu'u (Ilex anomala), hapu'u (Cibotium glaucum), hapu'u 'i'i
(Cibotium chemisso), lepelepe-moa (Coleoginea arborea),
palapale (Micropleuris striata), nanini (Pipturus albida),
Clermontia kohala, and ko'olii 'awa.

4. Eucalyptus Forest

Northeast of Lalakese Reservoir is a planting of swamp mahogany or
eucalyptus (Eucalyptus robusta) which covers some 380 acres of
gently sloping land. The trees are from 50 to 70 ft. tall. Other
smaller stands of trees are found on the western edge of the
forest and include tauti, black wattle (Acacia melanoxylon),
tropical ash, and ironwood (Casuarina equis).

The understorey is grassy and open in most places except where the
kahili ginger is thick. The grassy, open areas are dominated by
large patches of palm grass (Setaria palifolia). Common in these
areas are Glenwood -māo (Saccopodium indica), honohono, Pycreus
polystachos, thimbleberry (Rubus rosifolius), mā ohona,
and downy wood fern (Christella dentata). Scattered through this
planted forest are shrubs of guava, strawberry guava, and ti
(Cordyline fruticosa). The few natives found here are hapu'u,
hapu'u 'i'i, kopiko, and nenele'u.

5. 'Ohi'a Forest

Along the southwestern corner of Waipi'o Hauka is a 440-acre
forest dominated by the native 'ohi'a or 'ohi'a-lehua tree
(Metrosideros pulverulenta). Lalakese Stream and at least three
somewhat smaller streams drain this forested area. Typically this
forest consists of 'ohi'a trees with a few, scattered trees of
tropical ash (Frasinus uhdii). The tropical ash are large specimens,
from 70 to 80 ft. tall, which tower over the 'ohi'a canopy. On
the southern two-thirds of the forest, the 'ohi'a trees tend to
be somewhat shorter, 15 to 25 ft. tall. Although there are a few,
somewhat stunted, 'ohi'a, about 40 ft. tall, the forest is
healthy and shows no other signs of 'ohi'a dieback. Under the
'ohi'a trees, kahili ginger (Hedychium gardnerianum) forms a
dense growth; the thick rhizomes of this ginger are everywhere on
the ground. Normally, one would expect a good complement of
native shrubs and ferns with this forest type but the aggressive
ginger plants have displaced most of the native components. A
few natives as kopiko, manono, and kaua'u may be found. Epiphytic
ferns and fern allies, perched on the 'ohi'a trees and away from
the strangling ginger rhizomes, are numerous. Among the most
common are wahine-nuhi-manoa (Adenophorus tamariscifolius), kolokolo
(Crasmita tetramis), pahakaha (Pleopeltis chamberlains), aua
(Pallium nodum), and Adenophorus plumifolius.

On the lower one-third of the forest, the 'ohi'a trees are some-
what taller, from 30 to 40 ft. tall, but the canopy more open.
Strawberry gages and guava form a dense subcanopy layer in this
part of the forest.

Two variants of this forest type are discussed below. They are
(1) the open 'ohi'a forest with large grass and sedge dominated
areas and (2) the stream/gulch system 'ohi'a forest.

A large part of the 'ohi'a forest, usually on broad slopes,
consists of a grass and sedge association with scattered stands
of 'ohi'a trees. This can be picked up on the aerial photos as
the light-green colored, irregularly-shaped areas running through
the dark-green canopied 'ohi'a forest. These open, sunny parts of
the forest are often visited by the cattle which are allowed to
graz in the area and the grass-sedge association is kept low,
from 4 to 6 inches in most places. Pools of standing water and
small streamlets are common. Glencoe grass is the most abundant
plant with smaller, scattered patches of Hilo grass (Paspalum
congatense), and narrow-leaved carpet grass (Arundo flexuolius).

Among the sedges, the most abundant are Epipactis heliosa, rush
(Juncus planifolius), and Japanese mat rush (Juncus effusus).
Other species occurring here in rather large numbers are marsh
parslane, St. John's wort, honohono, and killi'o-pu (Heliant
brevifolia). A small pond filled with water ilies (Nymphaea sp.)
and a community of wrinkled frogs (Rana rugosa) is found in this
area.

Lalakea Stream and the other streams on this part of the project
site have created large, V-shaped gulches: in some places the
Lalakea Stream/Gulch system is 500 to 600 ft. across. All the
streams are perennial, eroded down to the solid, more resistant
lava flows, and, in many places, covered by large, water-worn,
rounded boulders. Spectacular waterfalls and plunge pools are
frequent along the streams. Some of the larger ones, such as
Waialoa Falls, can be seen on the colored aerial photos.
The slopes along these stream/gulch systems are steep and the
'ohi'a forest is open, about 40 to 50% cover. The 'ohi'a trees
are also taller-statured, from 40 to 50 ft. tall. Because the
slopes are open, receive greater exposure to sunlight, and also
because the kahilii ginger tends to be less dense in these areas,
the stream/gulch systems support a greater number of native
species. In many places, the Cibotium understory is well developed.
Shrubs of kopiko, pilo, hame (Antidesma plattphyllus), Clermontia
kahalae, manono (Hedoria teratoplia), kaua'u (lex anomala),
'sokole' (Boehmeria sandie), orona (Tochardia latifolia), and
manakie (Pipturus abidus) are occasional. The last three species
were used by the Hawaiians to make a course-textured tapa cloth.
Less frequently observed (uncommon to rare) are papale
(Kearnsia corymbosa), oloa (Chelidonium trilobul), kokea
lau nui (Macelis latifolia), and kanawo (Poumalus argua).
On some of the more steeply sloping gulch sides, large mats of
uluhe (Plectonema lineare), and, less frequently, uluhe-lau-
ului (Plegonema pictatum) are found.

All the native species recorded in this vegetation type during
the field studies are presented in Table 2.
<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Common name</th>
<th>Status</th>
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<tbody>
<tr>
<td><strong>FERNS &amp; FERN ALLIES</strong></td>
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<tr>
<td>Aspidiaceae (Shield fern Family)</td>
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<tr>
<td>Dryopteris wallichiana (Sp. Ny.)</td>
<td>lako-a-kuhi</td>
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<tr>
<td>Aspleniacaeae (Bird's-nest Fern Family)</td>
<td>Asplenium contiguum Kaulf.</td>
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<tr>
<td>Dennstaedtieae (Dennstaedtia Family)</td>
<td>Microlepia strigosa (Thunb.) Presl</td>
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<tr>
<td>Dicraniaceae (Tree Fern Family)</td>
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<tr>
<td>Cibotium chamissoni Kaulf.</td>
<td>Hep'u 'i'i</td>
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</tr>
<tr>
<td>Cibotium gleum (J. Sm.) Boot. &amp; Arn.</td>
<td>Hep'u</td>
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<td>Elaphoglossaceae (Elaphoglossum Family)</td>
<td>Elaphoglossum cressatifolium (Gaud.) Anders. &amp; Crosby</td>
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<td>Elaphoglossum akeha-ula, ho-e-a-Kau</td>
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<tr>
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<td>Adenophorus tamariscinus (Kaulf.) Hook. &amp; Cres.</td>
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<tr>
<td>Adenophorus pinnatifidus Gaud.</td>
<td>wahine-nohe-mauna</td>
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<td>Grammitis tenuis Kaulf.</td>
<td>kolokolo, mahina-lau</td>
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<td>Gleicheniaceae (Fern Family)</td>
<td>Diacranopteris linearis (Burm.) Underw.</td>
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<td>Ulohe</td>
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<td>Diploteridium pinnatum (Lunze)</td>
<td>Ulohe-lau-nui</td>
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<td>Hyemenophyllaceae (Filmy Fern Family)</td>
<td>Hyemenophyllum recurvum (Gaud.) Copel.</td>
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<tr>
<td>'ohi-ku</td>
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<tr>
<td>Sphaeropteris lanceolata (Hook. &amp; Arn.) Copel.</td>
<td>Palai-hinahina</td>
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<td>Vandenboschia davallioloides Gaud.</td>
<td>Kila, palai-hini</td>
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<td>Lindsaeaceae (Lace Fern Family)</td>
<td>Sphenomeria chinensis (L.) Mason</td>
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<td>Palu-apalapa</td>
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**Table 2. (continued)**

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<th>Scientific name</th>
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<tr>
<td>Lycomitaceae (Club Moss Family)</td>
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<td>Lycodium cernuum L.</td>
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<td>Lycophyllum ilicium Hook. &amp; Arn.</td>
<td>wawa-&quot;iole</td>
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<td>Nephrolepidaeae (Sword Fern Family)</td>
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<tr>
<td>Nephrlepis eximia (L.) Schott</td>
<td>kupukupu, ni'a'i'u</td>
<td>I</td>
</tr>
<tr>
<td>Oplocladaceae (Adder's Tongue Family)</td>
<td>Ophioglossum pendulum asp. falcatum (Presl.) Clausen</td>
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</tr>
<tr>
<td>Polypodiaceae (Common Fern Family)</td>
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<tr>
<td>Pleopeltis thurberiana Kaulf.</td>
<td>pakahakaha, 'ekaha-'akoles</td>
<td>I</td>
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<tr>
<td>Polypodium pellucidum</td>
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<tr>
<td>Kaulf.</td>
<td>'ae, 'ae-lau-nui</td>
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<td>Psilotum nodum (L.) Benuv.</td>
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<tr>
<td>Selaginellaceae (Small Club Moss Family)</td>
<td>Selaginella arbuscula (Kaulf.) Spring.</td>
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<tr>
<td>lepelape-le-moa</td>
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<td>E</td>
</tr>
</tbody>
</table>

**MONGOTS**

| Pandanaceae (Screwpine Family)       |                      |        |
| Freycinetia arborea Gaud.            | 'ie'ie              | I      |

**SHILACACEAE (Cathrier Family)**

| Smiles selastomifolia Sw.            | hoi kushivi          | E      |

**DICOTS**

| Amaranthaceae (Amaranth Family)      |                      |        |
| Charpentiera ovata Gaud.             | papela               | E      |
| Araceaceae (Hango Family)            |                      |        |
| Rhus sandwicensis A. Gray            | helelele, nenelele   | E      |
Table 2. (continued)

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<th>Status</th>
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<td>Alyssia olliviformis Gaud.</td>
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<td><strong>AQUIFOLIACEAE (Holly Family)</strong></td>
<td>Ilex anomala Hook. &amp; Arn.</td>
<td>kahu'u</td>
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<tr>
<td><strong>ARALIACEAE (Ginseng Family)</strong></td>
<td>Cheirodendron trigynum (Gaud.) A. Heller</td>
<td>olopa</td>
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<tr>
<td><strong>CAMPAULACEAE (Bellflower Family)</strong></td>
<td>Clermontia Kohalae Hook.</td>
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<td>Ipomoea indica (J. &amp; A. C. Richards) Merr.</td>
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<td>Antidesma platyphyllum</td>
<td>hame, ha'a, mehane</td>
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<tr>
<td><strong>GOODERIACEAE (Goodenia Family)</strong></td>
<td>Sceroila chamissonisiana Gaud.</td>
<td>naupaka kauhi</td>
</tr>
<tr>
<td><strong>HYDRANGEACEAE (Hydrangea Family)</strong></td>
<td>Hydrangea arguta Gaud.</td>
<td>kanawao, pu'ahehue</td>
</tr>
<tr>
<td><strong>MALVACEAE (Hibiscus Family)</strong></td>
<td>Hibiscus tiliaceus L.</td>
<td>hau</td>
</tr>
<tr>
<td><strong>MELASTOMACEAE (Myrtaceae Family)</strong></td>
<td>Myrsine leaunium A. DC.</td>
<td>kolea law nut</td>
</tr>
<tr>
<td><strong>NYCTAGINACEAE (Hollyhock Family)</strong></td>
<td>Mentha polygona J. &amp; A. C. Richards</td>
<td>'ohi'a, 'ohi'a lehua</td>
</tr>
<tr>
<td><strong>NYCTAGINACEAE (Four-o'clock Family)</strong></td>
<td>Passiflora sandwicensis Hillebr.</td>
<td>'ala'a</td>
</tr>
<tr>
<td><strong>Piperaceae (Pepper Family)</strong></td>
<td>Piper moschatum (C. Forster) Hook. &amp; Arn.</td>
<td></td>
</tr>
</tbody>
</table>

1 Status
E = endemic, native only to the Hawaiian Islands
I = indigenous, native to the islands and elsewhere

12

13
RESULTS AND DISCUSSION

Roughly 80% of the 3,720-acre project site is under sugar cane cultivation. A smaller percentage is occupied by coastal vegetation, gulch vegetation, eucalyptus forest, and 'ohi'a forest. Native species become common to abundant components only on the steep sea cliffs, in some of the gulches which run through the cane fields, and in the 'ohi'a forest. None of these native species found during the field studies are officially listed threatened and endangered plants (U.S. Fish and Wildlife Service 1989); nor are any candidate or proposed for such status (U.S. Fish and Wildlife Service 1990). The majority of these natives are distributed widely throughout the 'ohi'a forests of the Hamakua and Kohala areas.

The future changes and developments proposed for the project site will impact the areas now in sugar cane cultivation. There are no botanical reasons or concerns to impose any restrictions, conditions, or impediments to the use of these areas. No development is planned for the portion of the site occupied by the 'ohi'a forest. This site is unsuitable anyway due to the extremely wet conditions and large gulches in the area. One use which has been proposed is to retain this forest as a preserve and equestrian area. This is an excellent and compatible proposal. The picturesque streams, waterfalls, and pools as well as the sweeping vistas of Waipi'o Valley below make this a good site for such use. Perhaps, hiking trails for bird-watching, botanizing, and other such activities could also be planned.

LITERATURE CITED


Bali Hideaway

Gary Topping finds Paradise preserved at Amandari, a resort that respects the island's culture and is designed for green tourism.

Six young Balinese girls sat in the sunshine of blue and green emerged from the banana groves along the river 250 feet below my window. With baskets of fruit and vegetables going from one to another, they seemed to be so happy and yet so young.

As I walked through the village I was struck by the difference between old and young. The children were so happy and the women so content with their daily tasks. The village seemed to be in harmony with the land.

The resort, Amandari, has been designed in a way that respects the culture and environment of the island. The buildings are made of local materials and the gardens are maintained with traditional methods.

Amandari is not just a place to stay, but a way of life. It is a retreat from the hustle and bustle of modern life.

The resort is surrounded by nature and the air is fresh and clean. The staff is friendly and always willing to help.

Amandari is a place where you can truly relax and enjoy the beauty of Bali. It is a sanctuary from the stresses of everyday life.

Amandari is a place where you can truly enjoy the beauty of Bali. It is a sanctuary from the stresses of everyday life.
Trinidad: Anandia

including the Steeple

word for square pillar and

the Balinese name for the

sacred image on which one

stands in the pavilion

vesper prayers from about three o'clock

during the day or night. This house might follow one house.

Across the street from the very well-adorned tree-lined path, a small garden with a stone wall and a small water feature can be seen. One could stand here and admire the beauty of the garden, with its small pond and wooden benches.

The Mullen's contemporary design of the Balinese houses, with their distinct shapes and colors, can be seen in the surrounding area. The houses are built on a hill, with the trees providing a natural canopy.

The Mullen's own traditional Balinese house is a hill above Ubud. Two stone balancing stones were used for a year at Anandia binding the stone into the bed, making it stronger. This design is a common feature in Balinese architecture, with its strong connection to nature and its use of natural materials.
On the slopes of Mount Baluran a road leads to the sea and the coast. We were en route to one of the best beaches.

The town of Ubud is a charming little village, nestled in the heart of Bali. A short drive from the bustling city of Denpasar, Ubud offers a glimpse into the rich culture and traditions of Bali.

Ubud is known for its beautiful rice terraces, traditional art schools, and the famous Monkey Forest. The town is also famous for its markets, where you can find local handicrafts and souvenirs.

The town of Ubud is a great place to spend a day or two, exploring the local art galleries and enjoying the peaceful atmosphere.

On the outskirts of Ubud, you can visit the Ubud Monkey Forest, home to hundreds of monkeys that are a popular attraction for tourists.

Ubud is a great place to experience the local culture and get a taste of the traditional Balinese way of life. Whether you're interested in art, nature, or simply relaxing, Ubud has something for everyone.

One of the most popular activities in Ubud is taking a traditional Balinese dance and music class. These classes are a great way to learn more about the local culture and make new friends.

The town of Ubud is also known for its delicious Balinese cuisine. Be sure to try some of the local dishes like nasi campur, a traditional rice dish topped with various meats and vegetables.

In conclusion, Ubud is a must-visit destination for anyone visiting Bali. With its beautiful scenery, rich culture, and delicious food, Ubud is sure to leave a lasting impression on any visitor.
(Text content is not legible due to image quality)
To: Planning Department  
Attention: Rodney Nakano/Daryl Arai

From: Nelson M. Tanji, Fire Chief

SUBJECT: AMARISORT  
ISLAND OF HAWAII, DISTRICT OF HAMAKUA  
TAX MAP KEY: 4-8-513, 15, 44, 44.00, 9, 8, 11

We have no additional comments on the Draft Environmental Impact Statement for the above-referenced project which was sent to us by the State office of Environmental Quality Control.

Nelson M. Tanji  
Fire Chief

INT/00

CC: GEQC  
Pukuhale Development Co., Attn: Eugene McCain  
Case & Lynch, Attn: Sandra Pechter Schutte

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII  
25 AUPUNU STREET • Hilo, HAWAII 96720  
TELEPHONE (808) 961-6211 • FAX (808) 961-6218

December 1, 1993

TO: Planning Department  
ATTENTION: MR. RODNEY NAKANO AND MR. DARYL ARAI

FROM: H. William Smoke, Manager

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT  
PROPOSED AMARISORT  
KUKUHALE, HAMAKUA  
TAX MAP KEY: 4-8-513, 9, 11(PORTION), 13, 43, AND 44

Pursuant to Section 23-90 of the Hawaii County Code, a water system shall be provided in accordance with the Department's Water System Standards and Rules and Regulations.

Compliance with the following conditions relative to source development and water system design and construction are required:

1. Submit water master plan for the required off-site and on-site water system improvements. The plan shall include design calculations, construction cost estimates, and development time schedules. Water system improvements shall include sources, storage reservoirs, booster pumps, and pipelines.

2. Submit construction plans prepared by a registered professional engineer for review and approval. Plans shall include, but not be limited to, sectional drawings, plot plans and maps showing the exact locations for proposed water system facilities, and construction specifications. As-built plans must be submitted after construction.

3. Submit engineer's and hydro-geologist's report on the sustainable yield of the groundwater aquifer that will be affected by proposed wells.

4. Submit a Well Completion Report as required by the State of Hawaii Department of Land and Natural Resources.

5. Submit test records which shall include pumping rate, drawdown, chloride content, and water quality data.
Planning Department  
Page 2  
December 1, 1993


7. Submit DOH’s approval of all proposed drinking water sources.

8. Comply with other applicable requirements of the Department’s Rules and Regulations, which shall include the construction of all water system improvements and payment of inspection fees for private water systems and facilities charges and other fees for public water systems.

The above requirements were discussed with the developers' consultants. The Department is receptive to a joint participation in the construction of the offsite improvements, which will include a deep well source, storage reservoir, and transmission pipelines. The improvement costs, which do not include land acquisition, surveying and design, is roughly estimated to be in excess of $2,000,000. Specific details need to be worked out. Construction of required offsite improvements is the developers' responsibility.

[Signature]
M. William Schmitz  
Manager  
QA  

cc: AG. Sandra Pechter Schmitz, Case & Lynch  
Mr. Eugene McCain, Kukuihaele Development Company  

Roy R. Takimoto  
Land Use Planning & Law Consultant  
P.O. Box 131, Hilo, HI 96721  

February 4, 1994

Mr. H. William Sewake, Manager  
Department of Water Supply  
County of Hawaii  
25 Andrews Street  
Hilo, HI 96720  

RE: Draft Environmental Impact Statement for Anahola, Hamakua, Hawaii  

Dear Mr. Sewake:

A water study done for the Draft EIS concluded that the existing County system could accommodate the possible water requirements of the proposed project with reserve capacity for contingencies such as low flows or unanticipated future needs—your comments dated 1 December 1993 did not confirm nor refute this conclusion. The applicant will be in touch with you to determine the nature and extent of water system improvements required to service this project. The Final EIS will identify the water system requirements as an unresolved issue (just as the Draft EIS did) to be resolved during the hearing process.

Yours truly,

[Signature]
Roy R. Takimoto  

cc: Planning Department, County of Hawaii  
Kukuihaele Development Company
January 3, 1994

Ms. Virginia Goldstein, Planning Director
County of Hawaii
35 Apa`a Street
Hilo HI 96720

RE: Draft EIS, Ananresort, Hanaka`u District

Dear Ms. Goldstein:

Please accept our organization's review of the draft EIS for Ananresort. In September we submitted comments which pointed to information we had wanted to see developed in the draft EIS.

1) Old Government Road

Earlier, we asked for a delineation of existing trails and public rights of way. The draft document has not provided this (pages 88-89). For example, we note the existence of an Old Government Road leading to the popular Nanahale Lighthouse fishing spot. It is a partially paved, presently used, and is designated on Old Government Road on a 1999-1211 map (Appendix C, figure B-3). The road bisects the maka`a portion of this project and runs seaward along the eastern boundary and into the site at places (Appendix d, exhibits 3, 9a, and 10). This road is not mentioned in the draft text. The EIS should disclose the government ownership and whether a quitclaim will be sought. Does the developer intend to restrict the public's use of this road?

2) Lateral Access

A jeep road traverses the top of the clifftline and could provide lateral access. But the draft EIS dismisses this road by saying the Hanakaa Sugar Company restricted access along it (page 89). The draft also suggests that lateral access is available at the cliff base along a foot trail. But a Waipio resident tells us that trail is interrupted by ocean water. It can only be accessed from Waipio Valley itself, or on the eastward end on a steep switchback west of the lighthouse. Elsewhere nearby, in the lighthouse area, jeep trails along the cliff line provide lateral access and are used by fishermen. Apparently the developer does not plan to permit public access on this cliff line. The final

EIS should disclose this fact and discuss its relation to county policies concerning lateral shoreline access: CMA policies; and traditional use.

3) A Private Community?

We ask that the EIS also disclose whether the project will be "gated" like many new developments in West Maui. Some Ananresorts are "private," according to brochures. Since both the ag-1 lots and the resort-zoned lots are to be offered for sale, can the applicant make a commitment about whether the project will be gated? We believe that a gated community brings certain sociological impacts with it. Thus, if this community is to be gated, these impacts should be explored in the final EIS.

4) "Overflow" Resort Zoning

On pages v, x and 13 (in a map), the draft indicates that 31 contiguous acres of resort zoning are being requested inland, primarily to provide for overflow (or overbooking) from the Ananresort proper, and to provide for four suites at the plantation manager's house. This appears to be zoning overkill. The four suites could be handled by a special-use permit application. As previously, again, we ask that the EIS disclose the maximum potential buildout permitted on this acreage by this zoning. This potential buildout should definitely be reflected in population and traffic impact projections, economic projections, etc.

Specifically, the final EIS needs to discuss the long-term impacts of the seven one-acre, resort-zoned lots which we read are to be sold (page v). What could come about on these seven parcels needs to be developed and disclosed at this time when the zoning is being sought. Otherwise, the final document will not be an adequate disclosure of the impacts of the zoning which is being requested.

5) Undisclosed Golf Courses

The project is surrounded by three planned, approved golf courses not mentioned in the draft (see attached maps). The golf courses, granted recently by the County Planning Commission, weren't affected by litigation regarding Hanakaa Sugar. So, the final EIS should disclose the golf courses and include their impacts, cumulatively with this project, when discussing traffic impacts, de facto population and impacts on Waipio Valley.

The applicant should disclose what relation the 31 "overflow" acres of resort zoning might have in future to the
golf courses. For example, might this acres become the site of lodges, restaurants and transient accommodations? The EIS should disclose if there exist written or verbal commitments (as some claim) between the golf course landowner and the Amanresort applicant, and if there is an interrelationship between these applicants.

The EIS should evaluate a possible change in population patterns or growth patterns for the area once it has been definitely committed to a retreat resort and three golf courses. What implications does this have for a commitment of the region to resort-style development?

6) Impacts on Waipio Valley

The impacts on Waipio Valley seem greater than acknowledged by the EIS. For example, the draft says that the project will generate only one van trip per day carrying visitors into Waipio Valley (page 65). This is unrealistic. The EIS should identify the source of its reasoning.

Waipio Valley is a rare and unique resource of the region. The draft should discuss the cumulative impact of the three golf courses, estate lots, Amanresort and additional 21 acres of resort zoning on the valley.

We believe the Visual Impact Analysis (Appendix D) is in error and needs to be redone. Our representative was at "pole location 2" (see page 50) from where such of the beach at Waipio Valley was clearly visible. This means that the resort structures built here will also be visible from the valley. The draft claims that project structures will not be seen from Waipio Valley (page 50).

The final EIS should disclose these visual impacts in light of CMA policies. It should also discuss the visual impact of 45-foot structures as permitted by the resort zoning. The EIS may not assume that the county government will set a one-story height limit (cf. page 50).

Thank you for your attention to our concerns.

Sincerely,

Judith Graham
Treasurer

cc: Mr. Roy Takeo,'o, Planning Consultant
Enclosure
Roy R. Takemoto  
Land Use Planning & Law Consultant  
P.O. Box 111, Wailuku, HI 96793  
Phone/Fax (808) 879-0159

February 4, 1994

Ms. Judith Graham, Treasurer  
E Melia Ha Ali Hele  
P.O. Box 9384  
Kamehame, HI 96743

RE: Draft Environmental Impact Statement for Amanso Resort, Hana, Hawaii

Dear Ms. Graham:

The following respond to your comments dated January 3, 1994:

1. Old Government Road. The Final EIS will correct the emissions regarding the Government Road status of the roads within the Project Site. A 1909 map does clearly identify the road on the Hana side of the Project Site as a Government Road. Although the plantation blocked this road years ago and is therefore not presently used to access Kualibanke Landing, the applicant will allow public access to the portion of this road within the Project Site.

2. Lateral Access. The only other Government Road in the vicinity of the Project Site (other than Old Route 540) is the mauka-makai road passing next to the County cemetery. According to the 1909 map, this Government Road terminates at the intersection with Old Route 540. A dirt road extends makai from this intersection leading to the County's chlorine station. The County Department of Water Supply has an easement to use this dirt road. Although the dirt road was never a Government Road, the applicant will allow public access to the chlorine station. However, there is no access to the shoreline from the chlorine station. The jeep trail shown on the USGS map that follows the cliff edge does not provide access to the shoreline—there are no trails from the top of the cliff to the shoreline within the Project Site due to the steep terrain. For this reason, the Final EIS will clarify that the applicant does not intend to provide lateral public access along this jeep trail. This restriction is not contrary to the CZM policy since the project is providing access to the shoreline through the only known historical mauka-makai shoreline public access through the Project Site (i.e., the Government Road on the Hana side of the Project Site) and will not impede or interfere with lateral access along the only known lateral shoreline access provided by the historical trail at the base of the cliff. The jeep trail at the top of the cliff is a distance of approximately 50' (the closest point) to 90' (at the furthest point) inland from the surveyed shoreline fronting the Site; it is not a lateral shoreline access.

3. Gated Community. The impact of a gated community would be the potential for social stratification—these impacts were discussed in the Draft EIS (p. 61). The Final EIS will clarify the applicability of the discussion in this section to the worst case possibility should the applicant decide upon gated communities.

E Melia Na Ali Hele  
February 4, 1994  
Page 5

4. Overflow Pumping. The Zoning Code does not permit resort units through a Use Permit. Although the Zoning Code does allow "bed and breakfast establishments" through a Use Permit, the definition of a bed and breakfast (i.e., owner-occupied, overnight only) is too restrictive for a hotel operation. Therefore, resort zoning is the only option to permit the intended uses. Easements will be conditioned by requiring the 1-acre resort lots and the 14.4-acre Plantation lots in V-43 (no more than 1 unit per 43,000 sq. ft.). The Final EIS will clarify the specific resort zoning designation as a means to ensure that density is controlled in this manner.

5. Golf Courses. Your comments refer to three golf courses proposed as part of the Kualihanke Land Use Plan prepared for Hamakua Sugar Company—Hamakua Makai, Hamakua Makai, and Lakeside Village. According to the County Planning Department, the permits issued for the golf courses were issued in 1988-1991. According to Hawaii County Code §25-10, a Use Permit "not otherwise conditioned has not been utilized within a period of two years from the date of final approval, then without any further action such... use permit... shall become void and ownership may not be used. There are no plans by the previous developer nor any other developer to comply for golf course permits.

6. Waihau Valley. The Final EIS will clarify that the 1 wheel trip is based on the hotel operator's experience at their other resorts located in similar conditions where the only beach access required is wheel transportation from the hotel to the beach. The number of trips by hotel guests is totally within the control of the hotel operator, unlike the trips to the Valley by residents and U-drive visitors. The impact on the Valley is an existing problem that requires immediate solution regardless whether the project is approved.

7. Visual Impact. The Final EIS will clarify that much of the existing cliff vegetation would remain. Therefore, the proposed structures would need to project above the trees to be visible from Waihau Valley. The fact that the Waihau Valley beach is visible from the site looking through the trees does not mean that the structure would be clearly visible from the distant beach. The terrain slopes down inland from the cliff edge as shown in the DHEE (Fig. 29 on p. S2). The Final EIS will clarify that structures are located closer to the cliff edge (i.e., closer than 500'), then the importance of maintaining the cliff vegetation becomes more critical to screen the structures. The Final EIS will also clarify that the maximum heights limits of 50' will have a visual impact. However, this impact is mitigated by the limitation to one-story. The Final EIS will discuss legally enforceable measures to limit building heights.

Thank you for your comments.

Yours truly,  
Roy R. Takemoto  
Planning Department, County of Hawaii  
Kualihanke Development Company
The Waipi'o/Kukuiula Community Association (W/KCA) will be used throughout the text.

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The Waipi'o/Kukuiula Community Association (W/KCA) will be used throughout the text.
In appendix 2 No. 2 4 7 5 3 Social impact of property tax/property value increases, paragraph 6. Another negative impact is that higher values created with speculation tend to drive the prices of nearby agricultural land. Existing farmers may find the values burdensome, and new farming ventures are discouraged by higher prices, taxes, and the community as a whole may suffer because of the gradual loss of agricultural land. Could this mean the end of the sugar industry in Japan? Of the present farmers live in Japan. What is the pattern proposed by expensive farms' and expensive homes' value effect on the community? Appendix 2 No. 2 4 7 5 Operational, better occupancy. Given the argument that the residents are high-income individuals and families. Doesn't this pattern mean that small farmers live in Japan? We present the pattern by qualified farms, and these who don't qualify for the program by the average of highest incomes. In the community needs a third of our population. In the property tax trust fund it states that the fund will be created by the sale of 30 lots. What if the land use change have the same effect on property values in tax? Will the land be taxed off our land, out of our hands? The development will go on in opposition to the project. This document does not refer to the effects of the development will have on taxpayers' views. What if the tax base to raise revenue in the construction phase will lack community support? Or demand or reduce that to the Draft S R.S I is affected by this project. It appears that the Draft S R.S I is affected by this project. In the community as a whole may suffer because of the gradual loss of agricultural land. The community needs a third of our population. In the property tax trust fund it states that the fund will be created by the sale of 30 lots.
families move into the center of a village with a solid middle class group of residents? The Draft E.I.S. should include more studies.

1. The operational phase it states that there will be 101 permanent jobs created, which will be any actual numbers number of jobs created for Hukauloa residents! Page 60, line 11. "It is estimated that 125 of these jobs will be classified as management/salary class. All of these people come from Kailua-Kona. All the applicants will be trained.

2. Potential job classification, a social impact assessment conducted for Kailua Company." Page 71 paragraph 1. "For potential employees currently working in the area, the most preferred type of family is single.

3. The proposed Wastewater Disposal. The applicant states that there will be no impact on ground water because of the location of the disposal fields. Page 240. The spring source was equally impacted. The applicant states that there will be no impact on ground water because of the location of the disposal fields.

4. The Draft E.I.S. does not address the issue of whether the proposed facility will be dedicated to the community. The applicant states that the proposed facility will be dedicated to the community.

5. The applicant is applying for a permit to change 25 acres of land to create a suite inn. Is there not then the potential for a new construction and land use change? Is this not the potential for a new construction and land use change?

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20. The applicant is applying for a permit to change 25 acres of land to create a suite inn. Is there not then the potential for a new construction and land use change? Is this not the potential for a new construction and land use change?
Should not the entire document be printed in a consistent legible form? As stated on page 50, 20.2% of the Kuukahale residents are over 65 years of age. Should they be excluded fra all reading any part of the draft E.I.A.? This is over half the text. The Kuukahale Land Use Plan was an environmental assessment prepared for the consultants of the Kuukahale residents are only legible with a magnifying glass. We the KUKAHALE want a printing of the draft E.I.A. with another 65 days to respond because we feel many people are being left out of the process because the Appendix is not legible.

Draft E.I.A. is a tool for the decision making process. Page 10, No.1, Purpose of this Document. Paragraphs 10 of this document, paragraph 2. The purpose of this document is to provide decision makers and the general public with information regarding the significant environmental effects of the proposed project. Paragraph 3, Technical studies conducted specifically for this project are included as appendices in this EIS. Again a good 3rd of our population cannot participate in the decision process because of the illegible PRINT in the Appendix.

XII. Hawaiian Honey Eats and Hawaiian Cats. Hawaiian Honey Eats and Hawaiian Cats are federally listed as endangered species. Page 14, paragraph 3. The survey made a special effort to find Hawaiian honey bees and Hawaiian cats. Figure 3 shows those areas where records were taken during crepuscular hours. No bees were detected during the course of this survey, however it is highly probable that this species utilizes the site upon occasion. Other observers have seen this species in the Hawaiian area. (K.K.) But pers. obs. (K.K.) The survey should be further studies conducted to determine whether the Hawaiian honey bee is frequent in the area. What effects will the development have on this endangered species? Shouldn't it be documented and included in the draft E.I.A.? Federally endangered species.

XII. In conclusion we the people of Kuukahale would like to request the Planning Board to include in the EIS as an addition to our surface to the draft E.I.A. For the purposes proposed development in Kuukahale. Because of the timing of the draft E.I.A. during the Christmas season we are sure we will have additions. This is a busy time (perhaps the most busy) of the year for our families and friends. We hope you will honor our request.

Aloha for allowing this time to respond to a very important issue that will have an effect on everyone that calls Kuukahale and Waipi'o home.

The Waipi'o/Kuukahale Ohana Hana Like Community Association.

Aloha----President
Larry Miller----V. President
Jim Cain----Treasurer
Chris Bateman----Secretary
Uncle Joe Bateman----Senior Advisor

February 4, 1994

The Waipi'o/Hana Like Community Association
P.O. Box 5800
Kuukahale, HI 96727

RE: Draft Environmental Impact Statement for Amarender, Hana, Maui, Hawaii

Dear Community Association members:

The following responds to your comments dated January 7, 1994:

I. Background on Amarender. Amarender are located in Australia, France, Polynesia, Indonesia, New Zealand, United States, and other areas. A spectrum of cultures, tax systems, and economic conditions. The diversity of services in which Amarender are located access to their ability to adapt as necessary to the unique conditions of their countries. It is difficult to understand your specific concerns expressed in your letter.

II. Members of Advisory Committee. The applicant will register as a Hawaii general partnership. This partnership will hold title to the land. The officers and members will be public record in the registration documents. Amarender is wholly owned by Silverlink, Silverlink is the holding ('parent') company for the several Amarender entities established to develop, own, and operate the various Amarender hotels. Royal Coast Resorts Corporation is a Hawaii corporation. Neither Silverlink nor Royal Coast has developed a hotel in Hawaii. Silverlink has developed many resorts in other parts of the world as described in the paragraph above. The EIS does not require any description of the applicant.

III. Conflicts. Amarender wear several hats - they are the developer/owner and the operator. In each role, they have separate corporate identities although in reality they are one and the same.

As the developer/owner, Amarender go by 'Silverlink' and is a party to a partnership called Kuukahale Development Company along with Royal Coast. A partnership agreement governs that relationship. The operator, Amarender go by its name. A management agreement governs the relationship between Kuukahale Development Company and Amarender. These agreements are often done later in the process once the project has obtained the land use approvals. A letter of intent often outlines the basic commitments among the various partners.

IV. Name of Community Association. The Final EIS will correct the name of your organization to reflect the correct name of the organization.

V. Public Hearing. The purpose of the public hearing held on 1/16/93 was to identify community concerns for the purposes of the EIS. The input from the meeting was extensively discussed in Appendix B (pp. 24-32) and referenced extensively throughout the report. The Draft EIS
attempted to synthesize and identify the concerns. The EIS then attempted to analyze whether the adverse concerns were mitigable or unavoidable. Your comments do not indicate that we failed to identify any particular concern. The reason to focus on concerns, as compared to positions (i.e., ‘for’ or ‘against’), is that people often are not clear whether they are absolutely opposed to the project as a whole or have concerns about only a certain aspect. If this concern can be mitigated, then their opinion could change. Even your letter expressed: “The WIOHCLA has never come out in opposition to this project. We do however have concerns.” (p. 5). The social impact assessments utilized accepted methods that have been employed on other projects (e.g., Hānele Bay resort on Oahu)—public meetings, past surveys using valid sociodemoic methodology, and interviews. Eight of the twelve interviewees were either native or long-term residents of Kukuihaele (see three as noted in your letter). It is not the function of an EIS to gauge public opinion; that is left for the politicians who must weigh the opinions of multiple interest groups at multiple levels of geographic interest ranging from local to regional to international. The EIS Rules do not require surveys.

VI. Property Tax Trust Fund and Impact on Long-Term Renters. The Final EIS will clarify that 64% of the housing units in Kukuihaele are owner-occupied (1990 Census) and would initially qualify for the proposed Property Tax Trust Fund. Rents are indirectly affected by property tax increases—i.e., a landlord may or may not raise the rent depending on the landlord’s carrying costs and the market rent in the area. The Final EIS will mention that renter’s may be impacted by property tax decreases.

VII. Impact on Resort during Construction. The contractor is responsible for finding housing, if necessary, for its workers. Such housing arrangements are usually group arrangements (e.g., boarding houses, hotels) since it is more available, cost-effective, easier for the contractor to make arrangements, and reservations can be made in advance for variable short-term periods. As noted in the EIS (p. 58), construction of the Hanaea hospital did not require construction housing.

VIII. Compatibility of Neighbors/Guests vs. Locals. The Final EIS will discuss the experience in Kukuihaele itself where an influx of short-term residents has already begun with the recent large homes along Highway 406, on the Waipio Valley side of Kukuihaele town, and in the vicinity of Waipio Valley lookout. No conflicts are evident. The Local situation was considered in the DEIS because it is somewhat analogous to what could occur in Kukuihaele. There are significant differences as well, particularly in the scale of the project. The DEIS provides the references to the Local studies—these studies are included in the “Manzur Golf Course and Residential Project, Hauini, Hawaii, Final Environmental Impact Statement” by Jardine Cooper and is available at public libraries.

IX. Jobs. The State Department of Labor and Industrial Relations, Employment Services Division, will coordinate the initial job training that will begin about a year before the hotel opens. The properties of the job that will go to Kukuihaele and other local residents depend on qualifications of the individuals—the more individuals that meet the qualification standards, the more jobs will be filled by the local residents. It would be setting Hamakua residents short to say that they are only qualified for or interested in housekeeping, landscaping, laundry, and security jobs. These categories are simply the categories that best match the skills of the displaced Hamakua Sugar workers. In fact, many Hamakua residents currently hold the full spectrum of occupations, including professional, managerial, and technical. Many residents already work in the tourism industry and hold management positions.

X. Impact of the Proposed Access. The applicant changed the proposed access in response to comments received during the EIS Consultation Period. The previous proposal was to use the Old Route 240; the current proposal is to construct a new access road as described in the Draft EIS. The reason for the change was to divert project-related traffic off of the Old Route 240. The traffic increase along the Old Route 240 would be caused more by the increased visitor traffic to Waipio Valley lookout rather than the proposed project. The impact of the proposed access road at the intersection of Old Route 240 was discussed in the Draft EIS (p. 76 and Fig. 33). Stop signs would be required at the intersection of the access road and the Old Route 240. The traffic study (Appendix F) determined that the Level of Service (i.e., waiting time at the stop sign) would be Level A (minimal waiting time) for stop signs located in any configuration—i.e., 2-way stop along the Old Route 240, 2-way stop along the access road, or 4-way stop.

XI. Resort Designation for the Plantation Inn. Although the Zoning Code allows “bed and breakfast establishments” through a Use Permit, the definition of a bed and breakfast (i.e., owner-occupied, serve breakfast only) is too restrictive for a hotel operation. Therefore, resort zoning is the only option to permit the intended uses (the property is already used State Land Use District Urban). Dormily will be controlled by requiring the 1-acre resort lots and the 14.4-acre Plantation Inn to V-43 (no more than 1 remodeled unit for each 4,000 s.f.). The Final EIS will clarify the specific resort zoning designation as a means to ensure that density is controlled in this manner. A golf course clubhouse is not feasible since such clubs houses must be located on the premises of a golf course.

XII. Social Hall. The Final EIS will include a mitigation measure to require the applicant to enter into a bidding agreement with the community to ensure the long-term use of the Social Hall facility for the benefit of the community (e.g., management agreement with a nonprofit corporation established by the community where the use and maintenance of the facility would be governed by a Board of Directors selected by the community). The details of such an agreement would need to be negotiated at some time in the future. Dedication of the facility to the County may not be in the best interest of the community since the facility would then be open to anyone in the public rather than the exclusive privilege of Kukuihaele residents; the residents will not have direct control over the maintenance and operation of the facility.

XIII. Electrical/Telephone. The applicant is working with HIECO to determine the specific improvements required to service the project. There was never any proposal to use diesel. The alternative systems identified in the EIS were renewable sources such as photovoltaic (DBES, p. 83).

XIV. Wastewater Treatment System. The exact location of the wastewater treatment plant cannot be determined until more detailed site planning is complete. This detailed planning will occur after
The Waipio/Kokuahe Ohana Hana Like Community Association
February 4, 1994
Page 4

land use approvals have been received. The Department of Health reviews the location and
design of the wastewater treatment system to ensure that there is no impact to the groundwater
or coastal waters.

XV. Seabed from Coast Edge. The seabed distance for the proposed one-story structures will be
based on soil engineering analysis. The Final EIS will identify the extent of the setback as an
unresolved issue to be confirmed by the Planning Department through Plan Approval.

XVI. Ownership. The applicants intend to exercise its option to purchase once land use approvals and
financing have been secured.

XVII. Visual Impact from Waikele Beach. The visual impact from the far site (Waimea Valley
Beach) of the Waipio Valley Beach is covered by the view plane analysis in Figure 20 of the DEIS
(p. 32).

XVIII. Legibility of the Appendices. Many EIS's reduce the appendices to save paper. Our copy of the
Kokuahe Land Use Plan had the same reduced format for the appendices. A separate full-size
volume for the Appendices will be made available at the Hawaii Library.

XIX. Hawaiian History. The historical study concludes, "Since the area has been under
invasive sugarcane cultivation for the past part of this century, coupled with the fact that there
is a small town at the edge of the development site, it is unlikely that the proposed development
will change the make-up of the area in any meaningful way." (DEIS, Appendix B, p. 15).

The site is not a pristine native ecosystem; although hau may occasionally fly through the area,
the past land disturbance by sugarcane cultivation and the development of Kokuahe town would
have destroyed any habitat for the birds.

XX. Additional Comments. The public will have additional opportunities to make comments on this
project at public hearings required to be held for the General Plan Amendment/Keeaumoku/State
Land Use District Boundary Amendment petitions.

Thank you for your comments.

Yours truly,

[Signature]
Ray R. Takemoto

cc: Planning Department, County of Hawaii
Kokuahe Development Company
I oppose the proposed Anahresort development in Kukuihaele by Royal Coast Resorts Corporation and Silverlink Holdings Limited dba Kukuihaele Development Company.

Comments:

[Signature]

Address: P.O. Box 5622
Kukuihaele, HI 96727

Ray R. Takemoto
Land Use Planning & Law Consultant
P.O. Box 1371, Hilo, HI 96721

February 4, 1994

Mr. Rudolph Angulo
P.O. Box 5612
Kukuihaele, HI 96727

RE: Draft Environmental Impact Statement for Anahresort, Hamakua, Hawaii

Dear Mr. Angulo:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, John, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is not meant to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you will have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Ray R. Takemoto
JANUARY 6, 1994

COUNTY OF HAWAII
PLANNING DEPT.
15 AUPUNI STREET
HILO, HAWAII 96720

SUBJECT: PROPOSED AMHRESORT DEVELOPMENT IN KUKUIHEALE

I AM THE THIRD GENERATION TO LIVE ON THIS THK HERE IN KUKUIHEALE. MY BORN WILL THE FORTH HOPEFULLY. THIS IS WHERE WE PUT OUR HEAD DOWN ON THE PILLOW EACH NIGHT. THERE IS NO OTHER PLACE ON EARTH THAT WE RATHER BE. NOT KAMUELA, NOT KOHALA (WHERE MY HUSBAND IS FROM), NOT HIL; NOR KOA. WE GROW UP AND DISCUSS THIS AN WHERE WE WILL GO FROM HERE. OUR HEARTS ARE SO HEAVY. THERE IS NO OTHER PLACE TO GO TO.

MY FAMILY ARE VERY MUCH AGAINST THE AMHRESORT DEVELOPMENT TO BE BUILT IN OUR BACK YARD. A FAIR PERSON WILL COME TO THE COMMUNITY AND ASK INPUT BEFORE EVER STARTING ANYTHING IN SOMEONE ELSE’S COMMUNITY. NONE OF THIS EVER HAPPEN. EVERYTHING OUT IN THE OPEN WHEN IT WAS ALL PLANNED AND THE PROCESS OF LAW MAKES THE REVEAL ALL. IF NOT FOR THIS THINGS WOULD BE UNDERMINED. WE WILL NOT BE ABLE TO AFFORD TO LIVE HERE DUE TO HIGH REAL ESTATE PRICES. WE ARE NOT PAYING FOR A DEVELOPMENT OF A FIGHT. MANY OF OUR NEIGHBORS RENT THEIR HOME AND THEM WOULD BECAUSE THE LANDLORD IN ORDER TO KEEP UP WITH THE REAL ESTATE TAKES WOULD NEED TO RAISE THE RENT WHICH THEY CAN NOT AFFORD. WE UNDERSTAND THAT A TAX KITTY WILL BE MADE BUT SO MANY OF US DO NOT QUALIFY. THEREFORE THIS WILL BE DEATH OF KUKUIHEALE.

THERE ARE PEOPLE IN THIS COMMUNITY THAT IS ALL FOR THIS PROJECT BECAUSE THEY WANT TO MAKE A FAST BUCK. THEY ALREADY LET BE AWARE ALL THEY WANT IS TO SELL AND LEAVE. SOME ARE OFFERED A SMALL PIECE OF LAND BUT DOES NOT REALIZE THAT THE OFFER IS NOT A REAL OFFER. OTHERS ARE OFFERED工業 YOU HAVE THE MORE YOU PAY. OR HUNDRED JOBS ARE OFFERED BUT DOES EVERYONE KNOW THAT THEY WILL BE GROUND HEN AND TOILET NOT DUE TO THE GUARANTEE THAT ALL OF THE OFFERS WILL BE CLOSED. WHAT IF HE REGIONS ARE NOT MAINTAINED AND SELL IN MID STREAM ON THE NEXT BUYER UNRECEIVED THE OFFERS GIVEN BY HIM? THESE QUESTION ARE FOR REAL AND IS SCARY PART. THE DEVELOPER DO NOT HAVE A VERY GOOD REPUTATION IN THIS ISLAND. PEOPLE THAT I KNEW IN KOHALA AND HONA HAVEN'T A GOOD WORD FOR HIM.

THANK-YOU FOR HEARING ME OUT. PLEASE FEEL FREE TO CONTACT ME.

SO YOU SEE THERE IS NOT A GOOD TASTE LEFT FROM THIS DEVELOPER TO THE COMMUNITY AND WE HOPED ALL COULD SEE THAT THE COMMUNITY WE LIVE IN WILL NO LONGER EXIST WHICH THEY AND US CALL HOME WILL NO LONGER EXIST. AS FAR AS THE TAX FUND THAT IS CREATED BY THEM WILL NOT BE AID TO THE PEOPLE WHO LIVES HERE. ONLY THOSE WHO WANT AND WHO WILL DEEDICATE THE LAND. THE REST OF US WHO CAN NOT THAT MONIES WILL NOT HELP US AT ALL. ALSO THOSE OF RETIRED AGE WHO WILL PASS THE LAND ON TO THE ONE AFTER THEM. WILL NOT BE ABLE TO AFFORD THE TAXES THEREFORE HAVE NO OTHER REVERSE BUT SELL.

THANK-YOU

KULOE BASHAM

cc: BRIAN CHOI
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
230 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813

TARISI DOMINGO
CHAIRMAN
PLANNING COMMITTEE
COUNTY COUNCIL
February 4, 1994

Ms. Hazel Hata
P.O. Box 3109
Koalakea, HI 96727

RE: Draft Environmental Impact Statement for Ana‘anui, Hamakua, Hawaii

Dear Ms. Hata:

The following responds to your comments dated January 6, 1994:

1. **Property Taxes.** The purpose of the proposed property tax trust fund was to minimize the impact of the project on the local residents in Koalakea. If there are weaknesses in the proposal where observed residents are left out, then the details of the trust fund can be changed to include these people. The developer will be holding meetings in the community at which time these concerns should be aired and specific solutions suggested.

2. **Developer’s Commitments.** The decisionmakers (i.e., County Councilmembers) could bind the commitments through permit conditions so that any subsequent owner would have to honor the same commitments.

Yours truly,

[Signature]

Roy R. Takemoto

cc: Planning Department, County of Hawaii
Koalakea Development Company
I oppose the proposed Anahotep development in KukuiHele by Royal Coast Resorts Corporation and Silverlink Holdings Limited in KukuiHele Development Company.

Comments:  Please let me know what you think.  We are all set to lose our home.  Can you imagine living in a house on the beach!  I think that's what happened to me.  What would happen if the development comes to us?

Comments to be offered at hearing.

[Signature]

Address: 5200 E Kukui Iwaiaina

February 4, 1994

Ms. Lynd Blomfield
P.O. Box 3666
Hoonua, HI 96727

RE: Draft Environmental Impact Statement for Anahotep, Hamakua, Hawaii

Dear Ms. Blomfield:

Thank you for taking the time to comment on the EIS.  The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle.  The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with lots of landscaping to maintain the rural character.  To make sure these concerns are not just empty promises, the remedies can be incorporated as permit conditions in the enabling ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is not the end of the story.  The information presented in the EIS is incomplete, and the study should be corrected.  If the proposed solution does not satisfy you, then you still have the opportunity to express your concerns at public hearings and public meetings to be held by the developer and the County.  With your input, the project can possibly be modified to address your concerns in order to shape the project in one that you can accept.

Yours truly,

[Signature]

Roy H. Takimoto
To: Hawaii County Planning Dept.
25 Anahulu Street, Hilo, HI 96720
Attention: Virginia Goldstein

From: Jim Cain

PO Box 684 Hanalei HI 96714

Jun. 7, 1994

RE: DEIS

PLANNED DEIS

This letter is in response to the DEIS prepared for the proposed Anan resort in Habalale. As a concerned resident and land owner in Waipio Valley, I feel that there are many issues surrounding the proposed resort which are either inadequately or incorrectly covered by the DEIS or are completely ignored altogether.

Of great concern to me is the impact a resort project with its accompanied million dollar homes will have on the very rural tight-knit community of Kukuihi/Naaleho Beach. A vast majority of the residents are very much against having their town overrun by a resort project. At the public hearing/information gathering meeting held in Kukuihi/Naaleho in August of 1993, 50-60 community people spoke against this project while only 2 spoke in favor of it. Also several local surveys have shown a vast majority against such a project. Yet in the DEIS it falsely states that most local people are generally for it. Councilman Donoho has repeatedly stated that if our community is not in favor of this project then it will not happen.

The point to remember is this is an issue for Kukuihi/Naaleho to decide, not the business development leaders of Hanalei or elsewhere.

Another great concern is the issue of increased taxes due to resort development.

I am also very much concerned with the impact such a project will have on my home, Waipio Valley. Anyone familiar with Waipio knows that commercial tourism has already been an overuse in Waipio Valley, and adding a resort at the top of the hill will only create more strife. The developer has agreed to abide by the recommendations of the Waipio Task Force on tourism. The Task Force is not a regulatory board and has no jurisdiction over the activities of the tour companies. So this is a useless statement. It is obvious that the developer is not going to follow the recommendations of the Waipio Task Force.

The DEIS does not address the problem of increased traffic on the already dangerous Waipio Access Road. The county is ultimately liable for the road and this issue must be addressed, now and not later.

Kukuihi/Naaleho has always been a low-density, agriculturally based community. By allowing a resort "in the door", that focus will be changed forever. At a Dec. 93 public meeting with Rodney Nakano in Kukuihi, a question was posed, "If this general plan amendment change is enacted, what will it bring in more resort development to the area?" His answer was a most definite, "Yes". In the DEIS it is stated that future development can be kept out by State and County laws. How can you allow one resort and say no to others? This is a ludicrous statement. Keep the focus on agriculture.

Enough now with all this negative focus. No in the community would rather focus on a positive future. The DEIS states that the only alternative to resort development in Kukuihi is complete depression for the area. I say nonsense! If resort jobs are wanted, what about the opportunities being created by the new hotels at Keanae Beach and Kualana, not to mention the existing resorts along the south Kohala coast, all within easy commuting distance of Hanalei?

It is very foolish to put all our economic eggs in one basket. It has been repeatedly shown that the Big Island's main draw is open spaces and the ongoing practice of local culture (i.e. agriculture).
On the agricultural side many possibilities exist and should be encouraged. At a recent symposium held on reforestation in Hanaus, representatives of C. Brewer announced that recent work with the processing of eucalyptus for fiber board have been very successful. They spoke of a project that will soon cover 15-20,000 acres along the Hanaus coast. It is important that we keep our ag lands available for ag projects, they will provide sustainable employment.

Another ag project being explored by members of the Napio Taro Farmers Assoc. is establishing a poi factory in Kukulbole or Hanaus. A poi factory would give the taro farmers another meter of their crops, provide employment and again keep the focus on ag. With the recent signing of long term leases of Bishop Museum land in Napio, more taro fields will be opening up. This type of endeavor should be encouraged.

Another idea that is gaining a lot of support is the establishment of a reforested zone along the rim of Napio, above Kukulbole town. The proposed reforestation project with a connected interpretive center and Napio Valley lookout would provide many benefits including:

1) Provide a new visitor destination while helping alleviate overuse of the Napio Access Road.
2) Help ease flooding problems in Napio.
3) Provide trails and open areas for recreation.
4) Provide an area for scientific research into how we can work to save our many endangered native plants, birds, and insects.
5) Provide access to native forest products for cultural practitioners.
6) Provide jobs that are sustainable.

These are but a few of the many alternatives available that are community-based (the money will not be going to a foreign corporation) that the DEIS does not address.

In conclusion, it is obvious that the future direction of Kukulbole/Napio as a solid agriculturally based community is being threatened by the proposed Ana resort. I feel that it is vital to keep moving forward in this direction and to keep the focus...
February 4, 1994

Mr. Jim Cain
P.O. Box 834
Hilo, HI 96727

RE: Draft Environmental Impact Statement for Anaehoomalu, Hamakua, Hawaii

Dear Mr. Cain

The following responds to your comments dated January 7, 1994:

1. Public Opinion. The social impact assessment (DEIS, Appendix B) used several sources to discover community attitudes towards the project: 1993 Statewide Tourism Impact and Core Survey, social impact assessment for the Kukuihaele Land Use Plan (1991), testimony before the Planning Commission concerning the Hamakua rezoning, informal interviews, and input from the public meeting held in August 1993. The purpose of the public meeting held on August 5, 1993, was to identify community concerns. The input from the meeting was exhaustively discussed in Appendix B (pp. 24-32) and referenced repeatedly throughout the report. The Draft EIS attempted to synthesize and identify the concerns. The EIS then attempted to analyze whether the adverse effects were mitigable or unavoidable. Your comments do not indicate that we failed to identify any particular concern. The reason to focus on concerns as expressed in positions (i.e., "for" or "against"), is that people often are not clear whether they are absolutely opposed to the project or have concerns only about a certain impact. If this concern can be mitigated, then their position could change. It is not the function of an EIS to gauge public opinion; that is left for the politicians who must weigh the opinions of multiple interest groups at multiple levels of geographic interest ranging from local to regional to statewide.

2. Property Taxes. The Final EIS will clarify that 64% of the households in Kukuihaele would initially qualify for the Property Tax Relief Fund as proposed by the applicant based on the 1990 Census data of owner-occupants. The concept can be refined to address loopholes with constructive input from the community. The decisionmakers can bind this commitment through permit conditions or other means.

3. Waipio Valley. The applicant committed to abide by the recommendations of the County who will receive input from the Waipo Task Force and other interested organizations. Again, decisionmakers can bind this commitment through permit conditions or other means.

4. Precedent for Future Resort Development. Future resort development can occur only if the community/polliticians allow additional rezoning. The County General Plan provides the means to limit future resorts by establishing five levels of resort development: destination resort community, major resort area, intermediate resort area, minor resort, and resort resort. The proposed project falls under the resort resort classification, the most restrictive resort classification. The General Plan policies do not support large-scale resort destination areas anywhere in Hamakua; instead, the General Plan encourages small-family operated hotels and small-scale resort resort development (DEIS, p. 117). To avoid the proposed resort resort to "open the door" to uncontrolled resort development would be contrary to the General Plan.

5. Alternatives. The EIS analyzed reasonable alternatives to reduce unavoidable impacts and meet the project's objectives. The many alternatives you mention (e.g., entertainment, pet factory, interpretive center) have sites proposed that do not include the Project Site. The project will not conflict with these alternatives and would in fact complement them.

Thank you for your comments.

Yours truly,

Roy R. Takemoto

cc: Planning Department, County of Hawaii
Kukuihaele Development Company
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

January 6, 1994

RE: Draft EIS for Anaheo Resort, Hamakua District, dated Nov 3, 1993

The proposed development is not in the best interest of the Kukuihaele/Walipo Valley area. The following comments and concerns are typical of the problems that will arise from the conversion of our rural agricultural home to a developed resort area. While these comments refer specifically to the Draft EIS, they are not to be taken as a summary of all issues concerning the proposed development. Answering these few comments will not settle all of the objections to proposed development.

1. EIS page 5 notes "about 60 homes" in Kukuihaele area and page 12 Table 1 Land Use Plan shows "45 units" are proposed. Therefore the proposed development is larger than the existing community. This will have a devastating negative effect on our rural community.

2. Page 20 proposes a Property Tax Trust Fund for "residentially zoned property" only. Why not for all noncommercial property. This is our home, so why should area residents carry the added tax burden of commercial development that will be of no benefit to them?

3. Page 21 shows a "growing number of Walipo Valley visitors" due to the proposed development. This will only add to the county's well known safety problems with access to the valley as well exacerbate the problem of preserving this historical area.

4. Pages 20/21 address:
   - Roads - the entire area past Honokaa is served only by one dead-end two-lane road. This does not bode well for future development in spite of the Draft EIS low traffic projections. Consider the time it is taking to repair the broken bridge (culvert) that splits Kukuihaele.
   - Water - "existing CIT system has capacity," but APPENDIX G states "the source has no flow records and is reported to be susceptible to dry weather conditions."
   - Electrical - "existing electrical system does not have adequate capacity." HELCO has already raised the rates several times with additional proposed rate hikes in process. Will we get even more additional rate hikes to pay for the required system upgrades?
   - Telephone - not addressed in the Draft EIS. The existing system does not have adequate capacity and is technically obsolete. More rate hikes?

5. Pages 61/63 state this is a "minimal impact" "one-time only" development. The proposed development will set the precedent and open the door for further future development. Kukuihaele/Walipo will either be an agricultural rural area or it will be a resort area. Like being dead, either you are or you are not.

6. Pages 66/67 Police protection. Kukuihaele/Walipo is now an out-of-the-way primarily rural area with some day visitors. The proposed development will more than double the Kukuihaele population with new staff and overnight visitors. With the increased population and the area image changed from rural neighborhood to resort area the crime rate will go up. In short, after the proposed development is in operation there will be something to rip off.

7. Jobs. The Draft EIS is overly optimistic in stating that the proposed development will rejuvenate Hamakua's economy. The salt sugar harvest will be completed and those workers otherwise employed long before the proposed development is ready to hire staff. Therefore, the new jobs will not benefit Kukuihaele/Walipo. The resort will bring in staff from other areas and Kukuihaele will no longer exist as it is now known.

8. Page 99 The proposed resort will contain "city-like" concentrations of people and structures. This is at odds with the stated objectives of having a "hide-away" resort in a local setting.

9. Page 100 "The basic services that serve Kukuihaele would serve the project.
   Given that the current level of basic services is marginal at best, the proposed development can only raise the rates and otherwise negatively impact the area.

Dan Costes
P.O. Box 5099
Kukuihaele, HI 96727

Dee Costes
Copy to: OSS
Kukuihaele DevCo
Cost & Legal
February 4, 1994

Dan & Dee Costs
P.O. Box 3099
Kulukale, HI 96727

RE: Draft Environmental Impact Statement for Amaremart, Hamakua, Hawaii

Dear Mr. & Mrs. Costs:

The following responds to your comments dated January 4, 1994:

1. Future Development. The proposed project would add 85 units (40 hotel units and 45 1-acre lots) to the area over an area of approximately 133 acres. Even if this project is denied, the existing zoning would allow 81 15,000 s.f. lots on approximately 24 acres in the heart of town (DEIS, Fig. 4). Growth is already provided for with the existing zoning. The growth proposed by the project is comparable in number to the units allowed under the existing zoning, with the difference that the proposed project has a lower density than that allowed under the existing zoning.

2. Property Tax Trend Fund. Agricultural lots are assessed at lower rates than residential lots. The majority of the lots that could be affected by increased property taxes as a result of the resort are zoned residential.

3. Waipio Valley. The "growing number of Waipio Valley visitors" refers to the existing trend even without the project. The impact of the proposed hotel is projected to be less than 5% of just the existing tour trips and would be considerably less when compared to the non-tour component (i.e., residents and U-drive) (DEIS, p. 65). The project will comply with whatever solutions are adopted to resolve the existing problems.

4. Infrastructure.
   a. Roads. Highway 240 is designed to handle a certain traffic volume. The traffic impact assessment considered this design capacity relative to the existing and projected traffic volumes to conclude that the project will not have a significant impact on this roadway (DEIS, pp. 74-79; Appendix F).
   b. Water. The estimated capacity of the Kuiluahe Spring source is based on pumping tests. The projected demand allowed a contingency for low flows in concluding that the existing system had the capacity to accommodate the project (DEIS, pp. 79-80; Appendix G).
   c. Electrical. Under regulations enforced by the Public Utilities Commission, HELCO cannot pass on costs directly resulting from a particular project to the general consumer. The applicant is in the process of determining the nature and extent of improvement to be funded by the applicant.

Dan & Dee Costs
February 4, 1994

Page 2

5. Prospects for Future Development. As discussed in the first paragraph above, the existing zoning already allows for future development. Future resort development can occur only if the community/petitioners allow additional resorting. The proposed project attempts to allow an inconspicuous resort in an agricultural setting—a model that has become popular, "ecotourism". Simplicity "easier" beliefs close the door to creative, innovative possibilities.

6. Police Protection. The police department reviewed the proposed project and determined that the project will not significantly alter their operations (DEIS, p. 87).

7. Jobs. There are no other major job-producers that are projected to offer jobs in the Hamakua area before Amaremart's proposed timetable. The operator has committed to participate in job training so that the local population meet the qualifications for the positions to be offered (Draft EIS, Appendix II).

8. Project Design. The "cliff-like" phrase is the language used by the Land Use Commission Rules to distinguish certain uses from agricultural or conservation uses. The project design as described in the draft EIS (pp. 10-21) shows the project as a very low-density bungalow development in keeping with the "cliffside" objective.

9. Public Services. It seems quite implausible that a 24-unit hotel and 45 lots would directly impact the utility and County service provided and paid for on an island-wide basis such that users would increase because of this one project. The project will generate tax revenues and pay utility fees to carry its fair share of costs (DEIS, Fiscal Impact analysis, pp. 73-74, Appendix E).

Thank you for your comments.

Yours truly,

Roy R. Takemoto

cc: Planning Department, County of Hawaii
    Kubuhalo Development Company
I OPPOSE THE PROPOSED ANAHRESORT DEVELOPMENT IN KUKUIHALE 
BY ROYAL COAST RESORTS CORPORATION AND SILVERLINK HOLDINGS 
LIMITED THE KUKUIHALE DEVELOPMENT COMPANY.

COMMENTS: PROPOSED DEVELOPMENT SHOULD PROGRESS 
IN AGRICULTURAL AREAS, INSTEAD OF 
AREAS.

COMMENTS TO BE OFFERED AT HEARING.

[Signature]

ADDRESS: P.O. Box 397

[Address]

[Date]

[Certify]

[Resident/Landowner/Former Resident]

[Concerned Taxpayer]

[Other]

Ray R. Takemoto
Land Use Planning & Law Consultant
P.O. Box 131, Hilo, H. 96720

February 4, 1991

Mr. Darren De Luz
P.O. Box 397
Fonote, HI 96776

RE: Draft Environmental Impact Statement for Anahresort, Hamakua, Hawaii

Dear Mr. De Luz:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts, such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with lots of landscaping to maintain the rural character. To make sure there are commitments that are not just empty promises, the constraints can be incorporated as permit conditions in the zoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project so that you can accept.

Yours truly,

[Signature]

Ray R. Takemoto
December 31, 1993

County of Maui
Planning Department
26 Aupuni Street
Hilo, HI 96720

Attn: Virginia Goldstein

Dear Mrs. Goldstein

This letter is a response to the Amanseot Environmental Impact Statement dated October 18, 1993 and submitted by Roy H. Takekoto.

Except for the following quote, I found this material to be pro-Amanseot throughout its entirety.

"TO THE COMMUNITY, THE RURAL VALUES MOST MENTIONED AND CHERISHED WERE PEACE, LITTLE TRAFFIC, GREENERY, LOW POPULATION DENSITIES, COMMUNITY IDENTITY, ACQUAINTANCE WITH NEIGHBORS, WIDE OPEN SPACES AND AGRICULTURE."

The following are some questions in response to this EIS:

1. Selected Socioeconomic Characteristics of Study Area
Percent whose home was built after 1980 - Kukuihaele - 0

"mark Kukuihaele as a somewhat disadvantaged community". (pg. 56)

I have counted at least 11 new homes in Kukuihaele village built since 1980. And many of these were completed within the last 2 years. This makes me wonder if other "characteristics" are also wrong.

I have lived in Kukuihaele for 15 years and see this community as definitely not disadvantaged. In fact, it is growing more advantaged every year. We do not have the "disadvantaged" characteristics of homeless people sleeping in the streets, street gangs, crime, or unemployment.

QUESTION: What is the definition of a "somewhat disadvantaged community"? Are your "facts" updated? Does Kukuihaele really seem disadvantaged or is it really a paradise found?

2. "The proposed residential-agricultural lots will be 'rural style' residential-agricultural developments as an extension of the existing rural community in Kukuihaele". (pgs. 112-113)

Who is fooling whom? These will be million dollar homes. "80% of the homes will be second or vacation homes". (pg. 58) In order to buy the one acre parcel, you must also purchase the house from the developer. (a package deal) These million dollar homes will have the same amenities as other high-class resorts (e.g. Mauna Lani, Mauna Kea), such as room service, maid service and charge privileges. (pg. 19) These homes will be sitting right in the middle of the Kukuihaele village.

..."containing the resort to the 15 acre portion for the hotel with significant buffer between the resort and the town". (pg. 124)

QUESTION: Why is there no mention of the impact of a high class resort in the center of the village? What will the impact be on the very narrow village road - our main street?

3. "The Public was not permitted In the area when it was used for sugar cane cultivation. With the project, the public will be able to enjoy the vistas from the site since the hotel is a public area." "...The project will enable the public to enjoy spectacular views of the coast that were previously not open to the public". (pg. 104)

The "spectacular views of the coast" are the same views that the "public" can enjoy at the Waipio lookout.

QUESTION: Is the "public", they are referring to, the local families? Will the local families be allowed to walk around the hotel grounds at leisure, with the guests who are spending probably $400/night to be there also?

00:05
4. Property tax Trust Fund, "to compensate existing Kukuihaele residents". (pg. 63)

I am an existing Kukuihaele resident and have been for 15 years. But I will not be compensated. To qualify for compensation you must have residenially zoned property - mine is agriculturally zoned. Also, you must dedicate your property under County Ordinance 91-122, which freezes the property taxes for 10 years. But you cannot get the dedication if you conduct any "commercial activities" on your property. I have a vacation rental unit and therefore cannot qualify for this dedication. And there is another catch to this "compensation" they are promising - you must "continue to retain ownership" of your property. So if an owner should die within this 10 year period and their son or daughter takes ownership, they could not be compensated.

Living among million dollar homes, the property tax increase will most probably cause us to have to sell our wonderful home, because we will not be able to afford our property taxes.

There are many others in the community who will not qualify for the property tax trust fund compensation. There are 4 other families who have vacation rentals and many who rent out their houses or land on a long term basis. Some others have ag zoning.

Properties in Kukuihaele that are for sale will become much less marketable, if the property taxes are a hot issue. Many people would like to retire or settle down here and raise families. But living in Hawi is expensive. The property taxes are a very scary issue, because we have no control over them, and because we can lose our home if we can't pay them.

I don't want to lose my home just so a few developers can get richer.

QUESTION: What are the potential impacts of a property tax increase for owner-residents and owners who do not qualify for this Property Tax Trust Fund?

5. "The only potential unavoidable adverse impact is the change in Kukuihaele's rural character. However, this change could happen even without the project since the existing zoning designations could result in a greater population impact than the proposed project." (pg.124) "Population characteristics of these newcomers (with no project) would probably be more similar to the existing population than the visitors that the proposed project would attract." (pg.125)

Kukuihaele is a very desirable place to live. Its population has been increasing and will continue to do so, as land becomes available for sale. The people, that buy property here, want to live here. They love its weather and its friendly character. They want to be apart of this community - this family of neighbors.

If the high-class resort lifestyle is allowed to infiltrate this community, all this will be lost.

QUESTION: How can the EIS dismiss the impact of the Anaresort on our "rural lifestyle" by saying that the population density could potentially be greater without the resort?

6. The land is "marginal agricultural land" (pg.113)

On the contrary, Kukuihaele has great weather for agriculture - not as much rain as higher elevations but just enough to keep everything lush; not as much wind as the Kohala coast side; not as cold as Waimea. All kinds of agricultural products thrive here. And, although I live on the cliff, I have never noticed any salt spray from the ocean. (as stated on pg. 105)

QUESTION: Where did the EIS get the idea that we have "marginal agricultural land"? What is the proof?

7. "Lost opportunity to residents from boundary adjustment (eg. Tiger Camp)" (pg. 121)
it is my understanding that the Sugar Co. allowed the use of these lands without rent or release. This was a common practice elsewhere also, and when the Kohala Sugar Co. closed, these extra plots of land space were given to the hoa owners. This land is not suitable to anyone but the existing homeowners, many of whom could probably file for “Adverse Possession”.

This and the other threats of demolition of the Social Hall and the Plantation Manager’s House (pg.124) are plots being used by the developers to get what they want.

**QUESTION:** Is the EIS stating that these residents in Tiger Camp will lose the use of this dead space land if the project developers don’t get what they want?

8. Land Use Goals - General Plan (pg 112) “The County shall designate and allocate future resort area in appropriate proportions and in keeping with the social, economic and physical environments of the County.”

The Kona and Kohala Coast has been “designated” for the resort areas. But a resort in our little village is NOT in keeping with the social, economic and physical environment.

Land Use (Resort) Courses of Action for Hamakua - General Plan (pg. 112) “Encourage the development of small family operated hotels. Consider the small-scale resort development. Encourage resort development which enhances the natural beauty of the area.”

There are presently 5 small family-operated vacation rentals in Kukuihale, each with only 1-2 rental units. Two more families are planning such activities. These enterprises were initiated for survival in Hawaii reasons. All of us do not qualify for the “property tax trust fund”, because we cannot dedicate our land. Are we to be driven off our land because we cannot pay the high property taxes that will ensue? We came to the Big Island to make a living for our families. Are we to be punished for trying to get some of our income from our own land that we have worked hard for?

**QUESTION:** How can this Amanresort project be considered a “small-scale retreat resort development which enhances the natural beauty of the area”, when it will have 45 million dollar homes right in the center of the village and when it may cause 5-7 “small family-operated hotels” to fold because of property tax increases?

9. “...A job at the Amanresort is likely to be prized.” (pg. 71)

Although a projected 100 jobs will supposedly available, there will be only 14 jobs in the maintenance department - 2 groundskeepers, 2 truckdrivers, 1 plumber, 1 electrician, 1 engineer, 4 in the carpenter, painter, mechanic division and 3 in the laundry.

There have been large cutbacks in employees seen in the hotels recently due to decreased tourism on the Big Island. When it is pouring rain in Hamakua, what guest wouldn’t rather go to the Nauna Ka’u hotel or the Kona Village Resort for sun.

**QUESTION:** Does the EIS truly weigh the advantages of economic benefits generated by the resort (jobs and market for agricultural products) with an increase in property taxes for many and the loss of the important reasons why we are living here - a loss of community identity?

The Amanresort will NOT harmonize with the physical and social environment. Anyone who thinks otherwise, is being deceived by a snake.

Sincerely,

[Signature]

Kristan Hunt
P.O. Box 5104
Kukuihale, Hl. 96727
Ph: 775-7425
February 4, 1994

Ms. Kristan Hana
P.O. Box 5104
Kailua-Kona, HI 96740

Re: Draft Environmental Impact Statement for Anuenue, Hamakua, Hawaii

Dear Ms. Hana:

The following responds to your comments dated December 31, 1993:

1. Socioeconomic Characteristics. The Final EIS will correct the figure for the houses built after 1880. The source of information is the 1989 Census which is based on a sample of those who filled out the long-form questionnaire. Obviously, the Census is not foolproof, but it is the best source of information available. The Final EIS will clarify the term “disadvantaged” to refer to workers and below-median income.

2. Residential-Agriculture Mix. The larger lots (minimum 1-acre) and landscaping will promote the rural character. The plantation lots in the center of town will be the same physical structure as the existing plantation houses, only restored. The new access road has been proposed to minimize the town’s use of Old Route 32. The traffic impact study concluded that the impact on the Old Route 324 would be insignificant (DEIS, p. 76).

3. Public Access to Hotel Grounds. According to the Applicant, the public will be welcomed on the hotel grounds.

4. Property Tax Trust Fund. The fund was intended to offset the incremental property tax increase that could arise as a result of the project. For those with commercial activities on their property, it is difficult to determine if any increase in value results from the proposed project or the value of your business. The real estate tax transfers to the individual family members.

5. Population Density Without the Project. The proposed project would add 85 units (all hotel units and 45 1-acre lots) to the area, spread over an area of approximately 113 acres. Even if this project is denied, the existing zoning would allow 81,500 s.f. on approximately 24 acres in the heart of town (DEIS, p. 41).

6. Agricultural Suitability. The suitability of the soils for agriculture was scientifically rated by the Soil Conservation Service and Land Use Bureau relative to the soils found throughout this island. The soil within the project site may be good, but it is not better soil along the Hamakua Coast, which are used prime according to these classification systems. The maps showing the classifications for the soils in the EIS (DEIS, Figures 17 and 18).

Ms. Kristan Hana
February 4, 1994

7. Tiger Camp Boundary Adjustment. The applicant owns the land behind Tiger Camp. Since the prior owner (the plantation) knowingly permitted the residents to use the land, it is highly unlikely that a claim of adverse possession will prevail. The EIS cannot speculate on the disposition of this land if the project is not approved; the applicant has all the rights as a simple owner. The EIS does state that the applicant has committed to offer an opportunity for the Tiger Camp residents to incorporate this area into their boundaries, to own it free and clear (Appendix H). There may be other opportunities for the Tiger Camp residents to obtain this land, perhaps on different terms. The EIS states that this particular opportunity to obtain the land without any payment would be lost.

8. General Plan and the Good. The General Plan supports a resort in the Hamakua area (DEIS, p. 112); the project site is within Hamakua. The General Plan’s standard for a resort is a maximum of 100 units.

9. Jobs. There are no other major job-producers that are projected to offer jobs in the Hamakua area before Anuenue’s proposed timetable. The operator has committed to participate in job training so that the local population meet the qualifications for the positions to be offered (Draft EIS, Appendix H). It would be selling Hamakua residents short to say that they are only qualified for or interested in housekeeping, landscaping, laundry, and security jobs. These categories are simply the categories that best match the skills of the displaced Hamakua Sugar workers. In fact, many Hamakua residents currently hold full spectrum of occupations, including professional, managerial, and technical. Many residents already work in the tourism industry and hold management positions. Anuenue is located in other parts of the world with comparable rainfall, and these reasons are very successful.

Thank you for your comments.

Yours truly,

[Signature]

Ray R. Takemoto

Cc: Planning Department, County of Hawaii
Kukuihale Development Company
January 7, 1994

Ms. Sandra Pechter Schutte
101 Apouli Street
Suite 124
Hilo, HI 96720

Re: Proposed Aman Resort at Kukuihaele

Dear Ms. Schutte:

The developer has made commitments to the village of Kukuihaele that satisfy the conditions which I have previously indicated my support. It is now up to the residents to ensure that these commitments are incorporated as conditions in the rezoning ordinance—along with the strongest of statements that Kukuihaele is not sympathetic to any further development.

We would urge the County Administration to seek the means to establish a preservation buffer of our remaining coastal bluffs, and the Waipio Valley rim, perhaps obtaining commitments from some of the Trails organizations and local businesses to maintain the buffer zone. Any other structures would be inappropriate for these areas.

An argument to preserve Kukuihaele is emotionally argued, and rightly so. A difficulty in defining exactly which Kukuihaele is to be preserved. Many of the long-time residents remember a more vibrant community that included 2 schools, a theatre, 2 churches, a limo service to Hilo, a dry cleaner, several stores and restaurants, a jail, 2 saloons and a barber.

Ironically, the defeat of this development may result in that type of development, because the land area for most of the proposal is already zoned 15,000 feet residential—excluding the 10 acres the developer is giving to the community for an additional park. The inescapable fact is that the community is growing, and that the County is unable to provide some of the infrastructure which is needed, i.e., road improvement, park improvement and maintenance, and a new social hall.

The tax impact on residents would likely be more extreme with 81 newly built houses in the center of town, and on lots that are similar to those that now exist. There would be no tax fund to offset these tax increases.

The impact on Waipio Valley is another concern. This is a much larger problem than a retreat resort with a 72 people at maximum occupancy.

Preservation of Waipio is a necessity, and the Waipio Task Force is addressing this problem. The developer has agreed to abide by the Task Force determinations, and this should be written into the Ordinance of Rezoning.

An opponent of the project (who does not live in Kukuihaele) has written that development has "destroyed communities, culturally, socially, and economically." I cannot think of a more precise description of what happens to communities when there are no jobs. Ancestral homes have to be abandoned, and families are broken apart. You have to look no farther than Hilo. They are progressing now, but the children have already gone.

Sincerely,

R. L. Impson
Kukuihaele
February 4, 1994

Mr. Robert Imson
P.O. Box 5016
Kahului, HI 96737

RE: Draft Environmental Impact Statement for Amusement, Hanauma, Hawaii

Dear Mr. Imson:

Thank you for your supportive comments dated January 7, 1994. You have correctly perceived that the role of the EIS is only to identify the issues and possible mitigation measures. It is up to the community to lobby the County Council to ensure that commitments to appropriate mitigation measures are enforced through permit conditions or other arenas. The community must also voice its views, as you suggest, to protect the areas that deserve protection—e.g., Waipio Valley and a buffer around the rim, which of course, is one-half mile from the Project Site.

The applicant and the County will be holding public meetings and public hearings in the near future at which time your continued input is encouraged.

Yours truly,

[Signature]

Roy H. Takemoto

cc: Planning Department, County of Hawaii
Kukuihaele Development Company
December 21, 1993

Mr. Rodney Nakano
25 Apani Street
Hilo, HI 96720
(808) 961-8288

Dear Mr. Nakano,

I have reviewed the Draft E.I.S. and most of it seems self-explanatory, although there are some terms and the like which are not completely clear to me. Notwithstanding that, I still have some concerns about the project as it relates to my property.

Under Paragraph 9(b) "UNRESOLVED ISSUES", the question of easement still remains. This paragraph implies that the issue will be definitely or readily resolved. Such is not the case. The Roman Catholic Church and Mr. McCain have constructively refused to give me, i.e., define, an easement to my property. Each of them has told me it is the others "responsibility". I have spent countless time with letters and telephone calls (not to mention attorney fees) in an effort to suggest a fair easement---even offering to make it "flexible" to accommodate their future developments; if and when they may materialize. Both of them have "stonewalled" me, and "ping-ponged" me back and forth. TM 1/4-8-86:9 has no less than six (6) cane roads which lead to it, and have become its access over the past decades of cane growing. Two (2) of those lead to my property. Although I have not yet asked for one of them to be designated as my easement, I am sure a court might see it that way. My suggested easement to them (McCain and the Church) was for a 500 foot road from the County "Chlorinator Road". The cane road is 1,000 feet distance from Hwy 240, and would basically cut across the entire section of land. Please be advised, that this issue is far from being resolved. Additionally, to date neither of us, McCain and I, has clear title yet. I am waiting on his attorney to facilitate this matter.

In Paragraph 2.4, page 11, the last sentence refers to FIT customers. Exactly what does "free and independent traveler" mean? Are not most travelers soon as such? Is it a euphemism for the very wealthy---Financially Independent Traveler?

I think I understand what the residential-agricultural lots are to be. But exactly what are the residential-resort lots, and where are they located? Also, I would like to know what the projected estimated sale price of each type of lot is to be (assuming they will be 1-acre lots and sold as sites only, and not built upon---which is implied in the EIS draft). Is this a correct assumption?

In Paragraph 2.5, page 11, there is discussion of various types of lots. TM 1/4-8-86:9 has been zoned Ag-40. I assume McCain plans to re-zone it, i.e., his portion. Will my lot remain Ag-40, and be taxed accordingly?

Tied to the above is my main concern, as it is with many of the residents of the area---PROPERTY TAXES. I don’t believe the Property Tax Trust Fund resolves all the issues here. Firstly, will this Fund have enough monies to pay the tax increases? Secondly, it seems only to protect taxes for ten (10) years. This means that after that period the owners of their heirs may not be able to afford the taxes, and could lose their land because of this. Thirdly, it does not address people like myself, who are absentee land owners, but may want to become a resident in the future. The EIS in Paragraph 2.5.1, page 20, states "...existing owner-occupant residents within Nuihalea". This clearly discriminates against us who have leased cane land to the sugar companies all these years. This is not fair. It also excludes those who may be renting or leasing land/homes to other current residents. This also is unfair.

The road access to the project remains another concern of mine, as well as others. It seems that only one entrance/exit will create two immediate problems: 1) a "bottleneck" effect at certain times and 2) a safety hazard if for any reason (e.g., a fire) the exit is blocked. Two entrances/exits would supply a more advantageous traffic flow in general; lessening congestion, noise, dust and visual distractions.

Although I reviewed Paragraph 3.1.6, pages 44-49, much of it was unclear to me. Site No. 14087 appears to be in the vicinity of my property. The maps were not detailed enough to demonstrate the exact location, configuration, composition, and the like of Site No. 14087. Additionally, Appendix C does not show a photograph of this Site.

These are a few of my concerns. Obviously, it is difficult for me to have a complete and accurate picture of the Project and its potential (both positive and negative) from such a distance, with only limited knowledge. I hope to visit soon.

I have read several articles on Hawaiian resorts in other parts of the world in various publications. The concept seems to be a "good idea", but it is difficult to know exactly how well it really works. With any project of this nature and size, there is always a "price" to pay. The people who are affected most should know what that price is.

Thank you for your time and consideration in this matter.

Sincerely,

Jack K. Kaua
February 4, 1994

Mr. Jack Kaua
P.O. Box 852
Caldwell, CA 95603

RE: Draft Environmental Impact Statement for Amorose Resort, Hamakua, Hawaii

Dear Mr. Kaua:

The following responds to your comments dated December 21, 1993:

1. **Exemption.** The EIS identifies the location of your estate as an unresolved issue to be resolved at some point in the future contingent on whether the project is approved. This issue does not have to be resolved prior to decision-making on the Land Use Permit.

2. **FIT.** The term “free and independent traveler” issued by the tourist industry to distinguish this type of guest who makes their own travel arrangements from the group tours. Whether a hotel caters to groups or FIT has a bearing on the types of facilities (e.g., size of meeting room), types of guests, occupancy pattern, and transportation modes (e.g., taxis)

3. **Residential Resort Lots.** The residential resort lots would be similar to the 1-acre residential-agricultural lots with the exception that these houses could be used by the hotels for overflow hotel guests. All 1-acre lots would be sold as improved lots; the price does not include the building. Each owner would have to build their own dwelling. The price of the lots have not been determined.

4. **Recreation.** This lot will not be affected by any proposed recreation—i.e., it will remain Ag-10a and taxed accordingly.

5. **Proximity Fears.** The proposed resort hotel was intended to assist existing residents. If you have constructive suggestions to improve the concept, it is too late to send them in to the Planning Department for consideration during the rezoning process.

6. **Road Access.** We do not understand your concern. The proposed access is in addition to the access provided by existing roads (e.g., Old Route 201 and the road passing next to the County cemetery). The proposed access road would be designed as an evacuation route in case of emergency and would therefore add to contiguous lots should any of the existing roads be blocked for any reason.

7. **Archaeological Resources.** The archaeologists visited your property to conduct an inventory survey prior to the subdivision approval of your parcel. Site No. 1932 may in fact be located on your property. We will have the archaeologists determine the location with respect to your property boundaries and send you a map.

Thank you for your comments.

Yours truly,

Roy R. Takemoto

Cc: Planning Department, County of Hawaii
Kukuihaele Development Company
Ray R. Takenoto
Land Use Planning & Law Consultant
P.O. Box 131, Hilo, HI 96724

February 4, 1994
Ms. Cynthia Kaneko
P.O. Box 5122
Kailua-Kona, HI 96740

RE: Draft Environmental Impact Statement for Amore Resort, Hamakua, Hawaii

Dear Ms. Kaneko:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce those impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low-density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misrepresentations. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you will have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Ray R. Takenoto
I oppose the proposed Akahaike Development in Kukuihaele of Royal Coast Resorts Corporation and Silverlink Holdings Limited dba Kukuihaele Development Company.

Comments:

— Comments to be offered at hearing.

Ray R. Takemoto
Land Use Planning & Law Consultant
P.O. Box 7710
Hilo, HI 96721
Phone/Fax (808) 959-0183

February 4, 1994
Mr. Kusunoki
P.O. Box 6190
Kukuihaele, HI 96727

RE: Draft Environmental Impact Statement for Akahaike, Hamakua, Hawaii

Dear Mr. Kusunoki:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort. Job-training, and counsel to keep the project low density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one avenue to present information to the public and clarify misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you will have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project so that you can accept.

Yours truly,

Ray R. Takemoto
I oppose the proposed AhaResort development in Kukuhaele by Royal Coast Resorts Corporation and Silverlink Holdings Limited in Kukuhaele Development Company.

Comments:

Comments to be offered at hearing.

[Signatures]

ADDRESS: P.O. Box 180
Hana, HI 96713

I oppose the proposed AhaResort development in Kukuhaele by Royal Coast Resorts Corporation and Silverlink Holdings Limited in Kukuhaele Development Company.

Comments: [Handwritten text]

Relocate this place (Kukuhaele) should be left in its natural beautiful peaceful environment.

Comments to be offered at hearing.

[Signatures]

ADDRESS: P.O. Box 180
Hana, HI 96713

[Checkbox options]

- Resident/Landowner/Former Resident
- Concerned Taxpayer
- Other

[Checkbox options]

- Resident/Landowner/Former Resident
- Concerned Taxpayer
- Other
February 4, 1994

Mr. Koki Kurashige
Ms. Elizabeth Kurashige
P.O. Box 780
Honokaa, HI 96727

RE: Draft Environmental Impact Statement for Amunaca, Hamakua, Hawaii

Dear Mr. Kurashige:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owners of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Ray R. Tokunaga
Land Use Planning & Law Consultant

P.O. Box 131, Hilo, HI 96721
Phone/Fax: (808) 935-0199
Roy R. Takemoto
Land Use Planning & Law Consultant
P.O. Box 1231, Hilo, HI 96721

February 4, 1994

Mr. and Mrs. Juyon Mock Chew
P.O. Box 637
Hilo, HI 96727

RE: Draft Environmental Impact Statement for Amakanz, Hamakua, Hawaii

Dear Mr. and Mrs. Mock Chew:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with less of landscaping to maintain the rural character. To make sure that commitments are not just empty promises, the commitments can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is incorrect, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Roy R. Takemoto
I oppose the proposed Amaran Resort Development in Kukuihaele by Royal Coast Resorts Corporation and Sugarlink Holdings Limited aka Kukuihale Development Company Inc.

Comments:

Comments to be offered at hearing.

Signature

Address: Kukuihaele, Hawaii

P.O. Box 5129-9829

February 4, 1994

Mr. Samuel Mock Chew
Mrs. Hazel Mock Chew
P.O. Box 5129
Kukuihaele, HI 96717

Re: Draft Environmental Impact Statement for Amaran Resort, Hamakua, Hawaii

Dear Mr. and Mrs. Mock Chew:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with less of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the zoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project in one that you can accept.

Yours truly,

Roy R. Takemoto

[Signature]
I oppose the proposed Amahresort development in Kukuihaele and Royal Coast Resorts Corporation and Silverline Holdings Limited due to Kukuihaele Development Company.

COMMENTS:

COMMENTS TO BE OFFERED AT HEARING.

[Signature]

ADDRESS: [Address]

[Resident/Landowner/Former Resident]

[Concerned Taxpayer]

[Other]

Roy R. Takehito
Land Use Planning & Law Consultant
P.O. Box 137, Han, HI 96721
Phone/Fax (808) 935-0185

February 4, 1994

Ms. Linda Phillips
P.O. Box 5068
Kukuihaele, HI 96727

RE: Draft Environmental Impact Statement for Amahresort, Hanalei, Hawaii

Dear Ms. Phillips:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the project, job training, and controls to keep the project low density and in line with the rural character. To make sure the concerns are not just empty promises, the commitments are incorporated into permit conditions in the environmental impact statement that would bind the developer and any future owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings which will be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project in one that you can accept.

Yours truly,

Roy R. Takehito
I OPPOSE THE PROPOSED AMARESORT DEVELOPMENT IN KUKUIHALE BY KOHALA COAST RESORTS CORPORATION AND SIEVERLING HOLDINGS LIMITED D/B/A KUKUIHALE DEVELOPMENT COMPANY.

COMMENTS:

__ COMMENTS TO BE OFFERED AT HEARING.

Mrs. Sophie Revilla
SIGNATURE
ADDRESS: P.O. BOX 5068
Kukuihaele, HI 96737

FRIEND OF KUKUIHALE/WAIPIO

__ RESIDENT/LANDOWNER/FORMER RESIDENT

__ CONCERNED TAXPAYER

__ OTHER

Roy R. Takemoto
Land Use Planning & Law Consultant
P.O. Box 153, Hilo, HI 96721

February 4, 1991

Mrs. Sophie Revilla
P.O. Box 5068
Kukuihaele, HI 96737

RE: Draft Environmental Impact Statement for Amaresort, Hamakua, Hawaii

Dear Mrs. Revilla:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job creation, and controls to keep the project low density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the resulting ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to prevent information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Roy R. Takemoto
To: Hawaii County Planning Department  
25 Anapoani Street, Hilo HI - 96720
Attn: Virginia Goldstein & Rodney Nakano

From: Henry A. Ross, PO Box 99, Pahoa 96775

Re: Draft Environmental Impact Statement  
Asan Resort - Kukuluahe, Hamakua

29 December 1993

I have studied the above DEIS and I have some very serious problems with it. I think you must be addressed in the final
EIS, lest we be faced with irreparable damage later.

The most important one is that structures are planned to go
more right on the cliff edge. I know this area intimately
because over the years I have spent considerable time along
the Hamakua coast and in Naupio Valley.

Apart from the fact that the viewpoint is in danger, which
is perfunctorily dismissed as the project may not be noticeable
from certain oblique angles, there is the great danger that
anything within 2,000 feet of the cliff edge will ultimately
end up on the rubble below. The ground is extremely unstable
(as superficially mentioned in the EIS with regard to plans
for building foundations and that is exactly why the rubble
is there at the foot of the cliff. There have been sev
will be
numerous landslides where the cliff further erodes into more
rubble but now with building debris added if this project is
allowed as planned. The rubble area at the foot of the cliff
is the widest along the Hamakua coast which is why the SH
t line is below the cliffs. I have seen and heard numerous
rockslides in this area and the county would be held
liable in the future for not having not assessed the danger.
This project calls for an in-depth study (literally) on
the geology and soil engineers of the coterie of Dames & Moore
only people
qualified to do such a study (literally) on the EIS will not
be complete. I do not know of local engineers that can
address or have the equipment and know-how to perform this.
Without it the EIS may absolutely not be accepted.

As for agricultural impacts I fully agree with Chair of the
State Board of Agriculture Tuki Kitagawa in his letter to
Roy Takemoto of September 29, 1992. I think also that the
Alah system of land evaluation must still be used instead
of the alternative that give a skewed value of the lands in
question which are rated as prime agricultural lands rather
than some far-fetched inappropriate other descriptions. We
all know that these lands were in sugar for over 100 years
and the sugar companies did not exactly buy or use second
rate soils to boost their crop. They knew what they did.

There is an important error where the EIS states that no
roads are covered by the project. There is an old government
road on the Hilo side of this land from the cemeteries in
Kukuluahe running makalii that even on the diverse maps in
the EIS itself is shown to be partially covered by this project.
Somebody has to inform us what is proposed to be done to
reconstruct that road outside the area involved and what this
involves with adjacent landowners and the DLNR. This road is
used as an alternate route to the Kukuluahe lighthouse by the
Coast Guard and local fishermen, although it was recently
illegally blocked by bulldozing a dike of dirt across it. One
cannot make government roads disappear, even if the
government is dilupent in maintaining such roads.

I further have a problem with the ownership of the lands.
Who is Silverlink Holdings Ltd. I cannot find its address in
the EIS or in the General Plan amendment application in the
Planning Department files. I think it is important if a
company wants to do business in the State that we know where
to find its address and responsibility and of course also
to check on performance elsewhere. Taking some people in Bali
will not do, especially where I have heard criticism from one
such person about his findings there. And what about its
other resort? What about getting financial statements from
the two joint partners in their straw company Kukuluahe
Development Co. Where does the County of the State go in case
of catastrophes or non-compliance with imposed conditions?

In McCain's agreement with Hamakua Sugar Co and Western Farm
Credit Bank, when he obtained some 63 acres of this land
under the pressure of bankrupcy proceedings, there is a
provision that he gets use for his future occupants and hotel
guests of any golf course that might be built on the adjacent
lands and there are still valid use permits from the Planning
Commission essential that will soon be expired by the above
line in the courts. What will this project involve in this respect. Not a slight about this and a possible
conglomeration of similar or complementary projects in the
area. What will a possible connection with Toppena Orchards
in the same area seen that was also developed by McCain and
in which he is still involved? The EIS should address this
project in the light of the total of developments in the
district and their combined impacts and not as a fragmented
approach to greater plans, moro so because this involves a
General Plan amendment, that can only be treated in the
overall context of the future for the entire area.

Henry A. Ross

CC: Roy Takemoto and Sandra Pechter Schutte
County Council and Corporation Council
Takalii Decima, DLNR, DOA, OEDC, GSP
Mayor Yawashita, other interested parties
February 4, 1994

Mr. Henry A. Ross
P.O. Box 99
Kapaa, HI 96756

RE: Draft Environmental Impact Statement for Anahoomalu, Hamakua, Hawaii

Dear Mr. Ross:

Thank you for your comments dated December 29, 1993. We respond as follows:

1. **Proximity to Cliff Edge.** In consultation with Dames & Moore, the proximity to the cliff and the soil characteristics in the area are valid concerns. However, the Final EIS will clarify that these concerns are mitigated by other setting the structures back from the cliff edge at a distance to be determined by geotechnical investigations, or to allow building closer to the cliff edge using structural slabs that are anchored with piers to solid rock and structurally tied from front to back. The proper geotechnical studies are costly and justified only if the project is approved. Projects in similar conditions closer to a cliff edge have been allowed as covered with the proper structural mitigation measures (e.g., Princeville on Kauai). The setback area can be used for landscaping and recreational uses (including swimming pools). Once the project is approved, the geotechnical study is done almost immediately. The Final EIS will identify the cause of the setback as an unresolved issue to be confirmed by the Planning Department through Plan Approval. If the required setback happens to undermine the feasibility of the project, the zoning approval can be conditioned as to allow the project to proceed with setback as submitted within two years of the zoning approval.

2. **Agricultural Suitability.** There are alternative soil classification systems that rate the soils on a scientific basis for agricultural suitability. The Land Study Bureau and Soil Conservation Service both rate the soil as “fair” for agriculture. The overall policy objective is not to preserve all land that was used for sugarcane or other agricultural use, but rather to preserve as much as possible the best or “prime” soils. The fact that the project site was previously used for sugarcane is only one of many factors to be considered in the overall rating of the soils. The ALISH system is not detailed in its evaluation as the Land Study Bureau or the Soil Conservation Service. Furthermore, the soils within the project site do not even meet the ALISH criteria as noted in footnote 8 in the Draft EIS. The State Land Use Law (Hawaii Revised Statutes Chapter 205) uses the Land Study Bureau classification instead of the ALISH system.

3. **Government Roads.** The Final EIS will correct the omission regarding the Government Road status of the roads within the Project Site. A 1990 map does clearly identify the road on the Hamakua side of the Project Site as a Government Road. The applicant will allow public access on the portion of this road within the Project Site.

4. **Identity of Applicant.** The applicant will register as a Hawaii general partnership. This partnership will hold title to the land. The officers and directors will be public records in the registration documents. Anahoomalu is wholly owned by Silverlink; Silverlink is the holding (“parent”) company for the several of Anahoomalu entities established to develop, own, and operate the various Anahoomalu hotels.

5. **Golf Courses.** According to the County Planning Department, the permits issued for the golf courses were issued in 1986-1991. According to Hawaii County Code 25-10, a Use Permit "not otherwise conditioned has not been utilized within a period of two years from the date of final approval, then without any further action such . . . use permit . . . shall become void and thereafter may not be used." There are no plans by the previous developer nor any other developer to reapply for golf course permits.

6. **Kupena Orchards.** Kupena Orchards is a completed project involving 1740-acre agricultural lands. The A-40A lots are used to grow macadamia nuts. There is no relationship between this project and the proposed resort project located over three miles away.

Yours truly,

Roy R. Takesuto

cc: Planning Department, County of Hawaii

Kukuihula Development Company
I OPPOSE THE PROPOSED AHANA RESORT DEVELOPMENT IN KUKUIHALE BY ROYAL COAST RESORTS CORPORATION AND SILVERLINK HOLDINGS LIMITED AKA KUKUIHALE DEVELOPMENT COMPANY.

COMMENTS:

COMMENTS TO BE OFFERED AT HEARING.

________________________________________
Signature

________________________________________
Address: P.O. Box 721
Hana, HI 96713

FRIEND OF KUKUIHALE/WAIPIO

V RESIDENT/LANDOWNER/FORMER RESIDENT

V CONCERNED TAXPAYER

V OTHER

Roy R. Takehara
Lead Planning & Land Consultant
P.O. Box 131, Paia, HI 96771

February 4, 1994

Mr. Alfred Soares
P.O. Box 721
Hana, HI 96713

RE: Draft Environmental Impact Statement for Ahanaest, Hamakua, Hawaii

Dear Mr. Soares:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and subsidies to keep the project low density with less of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the zoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project so that you can accept.

Yours truly,

Roy R. Takehara

Roy R. Takehara
I oppose the proposed Anahe'ulelu development by Royal Pacific Resorts Corporation and Silverlink Holdings Limited to the Kukui'ula Development Company.

COMMENTS:

☑ COMMENTS TO BE OFFERED AT HEARING.

[Signature]

ADDRESS: P.O. BOX 5796
Kauai, HI 96737

☑ FRIEND OF KUKUI'ULA/WAIPIO
☑ RESIDENT/LANDOWNER/FORMER RESIDENT
☑ CONCERNED TAXPAYER
☑ OTHER

Roy H. Takemoto
Land Use Planning & Law Consultants
P.O. Box 727, Han, HI 96721

February 4, 1994

Mr. Solim
P.O. Box 2496
Kauai, HI 96727

RE: Draft Environmental Impact Statement for Anahe'ulelu, Kauai, Hawaii

Dear Mr. Solim:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and conduct that would keep the project low density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the concerns can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

[Signature]

Roy H. Takemoto
My name is Delbert T.header, and for the record I'm representing the Waipio Village Farmers Association. I have no need of this letter, but I must state in no uncertain terms that we are opposed to this project, and we are not in support of what you have been proposing.

Ron Turner
Can you get a little closer to the point?

Ernie Tendra
We have been in this process for many years now, and we have notified and consulted our stakeholders and county council when we were originally notified. However, it is in the best interest of all concerned stakeholders what our concerns are for and we will be submitting the statements of interest that we have in this project. And so far we've been very active in this community. And I don't know if you are aware of this, but we do have a Waipio Task Force which we are trying to deal with these matters relating to Waipio. And in going over your proposed Amaranth draft, I notice that there is no list of Waipio. And Waipio is one of the communities in our list.

We are taking the view that the developers need to be aware of the concerns of these communities. And the issues that are brought about, especially regarding the impact on the community, the impact on the community and the impact on the developer. We are trying to ensure that these issues are addressed. And we are working on it, and we are working closely with the communities.

I'm very concerned about the future of the community, and the future of the community, and the future of the Waipio. And the Waipio Task Force is very concerned about the impact on the community, the impact on the developer, and the impact on the developer.

There's a lot of development in this community, and it seems right here in the future. And I would like to refer to you as the concern of the community, and the future of the community, and the future of the community.

And you are right to raise these concerns, and these concerns are valid. And we are working on it, and we are working closely with the communities.

A sense of community exists, and it's very important. A sense of community means sharing and caring for one another, and for what I am at this moment, you have not addressed the issue too much. You very lightly mentioned the need for improvements, and we have been dealing with the existing issues, and the existing issues are the ones that are the most pressing.

So, I would like to refer you as the concern of the community, and the future of the community, and the future of the community.
Ray R. Takemoto
Land Use Planning & Law Consultants
611 Kapiolani Blvd., Ste. 331, Honolulu, HI 96814
Phone: 808/955-0185
Fax: 808/955-0189

February 4, 1994

Ms. Debra Teixeira
P.O. Box 819
Hawii, HI 96727

RE: Draft Environmental Impact Statement for Amarento, Hanalei, Hawaii

Dear Ms. Teixeira:

Thank you for your comments. The EIS is only one means to present information to the public and clear misunderstandings. The County will hold public hearings, and the developer plans to also hold public meetings.

The EIS attempted to identify your concerns, such as the impact on Waioli Valley and the feasibility of using the Wailua River for development. The County is considering the 90,000 acres of land that will become available with the closing of Hanalei Sugar Company. The agriculture assessment you referred to was adopted by the Council as a means of preserving the viability of the area for agriculture. If the Council issues new definitive controls, they would have adopted an ordinance rather than a resolution. The Council members commented during the deliberations that they recognized the need for one case by case consideration of non-agricultural proposals.

The proposed project would add a negligible increase of visitors to Waioli Valley compared to the number that already exists. The applicant consulted with the representatives of the County who will receive input from the Waioli Community and other interested organizations. This information can be enforced by incorporating it as a permit condition in the ensuing ordinance.

The project will create a new access road to service the project, thereby minimizing the project's use of the Old Road. This means that 3 miles of old road will be used by the developer to access the property. The new road will be parallel to the existing access road.

The proposed resort is significantly smaller and different in concept from the 200-unit hotel with condominiums and golf course that you were willing to sacrifice to save Hanalei Sugar Company. The loss of jobs will be a reality when the plantation closes. In this case, the sacrifice will not be a typical resort, but a low key resort with a high key interest in developing and preserving the area for the benefit of the community.

The Luahaua Kai and Waioli community have the opportunity for self-determination. The developer will make funds available for the improvement/creation of the Social Hall and for the property tax relief fund. The community must organize to ensure that the details of these programs are taken into account in the final development of the project. A sense of community, as you mentioned, can be heightened as the community organizes to position itself with respect to the hotel and the benefits being offered.

Please understand that you will have the opportunity to express your concerns at public hearings and public meetings to be held by the developer, County Planning Commission, and County Council.

Yours truly,

Ray R. Takemoto

cc: Planning Department, County of Hawaii
Kauai Hale Development Company
I oppose the proposed Anahinahina Resort Development in Kukuihaele by Royal Coast Resorts Corporation and Silverlink Holdings Limited, the Kukuihaele Development Company.

Comments: I was born and raised here. I have three children. I want this place to be this way as long as possible. As my children grow, I would rather drive 40-50 miles to the other side of the island to work than to walk down the road to a resort right here in Kukuihaele.

Friends of Kukuihaele/Hawaii

Resident/Owner/Former Resident

Concerned Taxpayer

Other

Roy R. Takeno
Lease Use Planning & Law Consultant
P.O. Box 131, Hilo, HI 96721

February 4, 1994

Mr. and Mrs. Toba
P.O. Box 5069
Kukuihaele, Hi 96727

RE: Draft Environmental Impact Statement for Anahinahina, Hamakua, Hawaii

Dear Mr. and Mrs. Toba:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with lots of landscaping to maintain the rural character. To make sure these recommendations are not just empty promises, the recommendations can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Roy R. Takeno
I OPPOSE THE PROPOSED AHAN RESORT DEVELOPMENT IN KUKUIHELE BY ROYAL COAST RESORTS CORPORATION AND SILVERLINE HOLDINGS LIMITED dba KUKUIHELE DEVELOPMENT COMPANY.

COMMENTS:

☑ COMMENTS TO BE OFFERED AT HEARING.

[Signature]

ADDRESS: P.O. Box 51
Honaunau, HI 96727

☑ RESIDENT/LANDOWNER/FORMER RESIDENT
☑ CONCERNED TAXPAYER
☑ OTHER

Ray H. Takemoto
Land Use Planning & Law Consultants
P.O. Box 121, Hilo, HI 96721
Phone/Fax (808) 956-0180

February 4, 1994

Ms. Debra Toledo
P.O. Box 51
Honaunau, HI 96727

RE: Draft Environmental Impact Statement for Ahahualoa, Hunauna, Hawaii

Dear Ms. Toledo:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property values, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with lots of landscaping to maintain the rural character. To ensure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to ensure information is clear and understandable. If the information presented in the EIS is unclear, then it should be corrected. If the suggested solutions do not satisfy you, then you still have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project so that you can accept.

Yours truly,

[Signature]

Ray H. Takemoto
I Oppose the Proposed Amanresort Development in Kukuihaele by Royal Coast Resorts Corporation and Silverlink Holdings Limited dba Kukuihaele Development Company.

Comments:

Morgan Toledo:

My name is Morgan Toledo, I'm a new farmer in Waipio Valley and also a resident of Kukuihaele. I'm really against this project. I hope to see the land stay on the upland so I can grow more corn. That's all, thank you.

Comments to be offered at hearing.

Morgan Toledo

Address: P.O. Box 430
Hawaii, HI 96727

Yes, I wish to be a Friend of Kukuihaele/Haripio

Resident, Landowner, former Resident

Concerned Taxpayer

Other

Ray H. Takemoto
Land Use Planning & Law Consultant
P.O. Box 131, Hilo, HI 96721

February 4, 1994

Mr. Morgan Toledo
P.O. Box 430
Hawaii, HI 96727

RE: Draft Environmental Impact Statement for Amanresort, Hamakua, Hawaii

Dear Mr. Toledo:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce those impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the retention ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is one means to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, it should be corrected. If the suggested solutions do not satisfy you, then you will have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Ray H. Takemoto

Ray H. Takemoto
I oppose the proposed Anahinesuma Development in Kukui'ula.

By ROYAL COAST RESORTS CORPORATION AND SILVERLINK HOLDINGS LIMITED dba KUUKI'ALE DEVELOPMENT COMPANY.

COMMENDS:

See attached.

COMMENDS TO BE OFFERED AT HEARING:

[Signature]

ADDRESS: P.O. Box 929
Kauai, HI 96719

Friend of Kukui'ula/HAIIPIO

Resident/Landowner/Former Resident

Concerned Taxpayer

Other

Sylvia Tumakolei
My name is Sylvia Tumakolei.

But

I think it would be a good idea, maybe you should talk to the people.

Sylvia Tumakolei

Okay, yes. Actually, I'm not a public speaker. However, I am there and I thought if I didn't come up and say what I feel, then you know, I would go home and be frustrated. I know there's a lot of people here that are in the audience, Mr. Ainge and my dad, for instance. They would like to express themselves, too, but it's hard for them. It's hard for me, so it would be fair for them. However, thinking about Kukui'ula and you know, we just had a crisis over here and that's not the case people here in our group that have grown up here and would gladly come here and rally that they would be against this in their town where their parents live. And seeing that our parents are all retired and all the talk of taxes, for sure that would happen. The county cannot guarantee that their taxes will not be solicited or the hotel people would pay in the future, whatever. It's truly this fact that would - there is a problem. I would think the first thing would be no this would be the objective would be to profit. These people wouldn't just come in to do all these things, for sure. We have all these things. How could we maintain a few key properties? How could you not notice any new development or new in Kukui'ula? This truly would be entertained. Designed to blend with the natural surroundings. Okay, fine. But how about us trying to blend in with them? I can't see us changing all our lives to blend in with a resort. Employment - about 100 plus. Would it be done by the plantation workers or the residents? And also, it says here about employee housing under rentals. I don't see that anybody here in Kukui'ula doesn't have a roof over their heads, so this housing would be provided for probably people coming from the outside being employees here. So that I couldn't see it, not in substance, nobody makes police protection. And that is what people have said. An example would be the police here that has been fixed for some time now. Normally, the police here has been satisfied that it was enough, but now they do what other than come from the government, I'd rather pay my money to the government because we are part of it. Okay, so we don't have a plan to say anything once it's done. And you're the only saying that all these things that are going to be made and done and done. So, along with my family, the Blackshears, I know that we are against this resort.
February 4, 1994

Ms. Sylvia Templeton
P.O. Box 929
Kaneohe, HI 96744

RE: Draft Environmental Impact Statement for Aina Resort, Kaneohe, Hawaii

Dear Ms. Templeton:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could avoid or reduce these impacts—such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low-density with lots of landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the commitments can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is designed to present information to the public and clear misunderstandings. If the information presented in the EIS is inadequate, then it should be corrected. If the suggested solutions do not satisfy you, then you will have the opportunity to express your concerns at public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

Roy T. Takemoto
Roy T. Takemoto

Land Use Planning & Law Consultant
P.O. Box 131, Kaneohe, HI 96744
Phone/Fax (808) 255-0188
I OPPOSE THE PROPOSED ANAHIORT DEVELOPMENT IN KUKUIHALE
BY ROYAL COAST RESORT CORPORATION AND SILVERLINE HOLDINGS
LIMITED FOR KUKUIHALE DEVELOPMENT COMPANY.

COMMENTS:

COMMENTS TO BE OFFERED AT HEARING.

[Signature]

[Address: P.O. Box 815]

[Name: John Doe]

[Association: Resident/Landowner/Former Resident]

[Other: Concerned Taxpayer]

February 4, 1994

Participant
P.O. Box 1395
Honoakua, HI 96727

RE: Draft Environmental Impact Statement for Anahoi, Honoakua, Hawaii

Dear Participant:

Thank you for taking the time to comment on the EIS. The EIS attempted to identify your concerns, such as the impact on property taxes, jobs, and the impact on the rural lifestyle. The EIS also attempted to suggest solutions that could assist in reducing these impacts, such as establishing a trust fund to compensate for increased property taxes that may be caused by the resort, job training, and controls to keep the project low density with less landscaping to maintain the rural character. To make sure these commitments are not just empty promises, the requirements can be incorporated as permit conditions in the rezoning ordinance that would bind the developer and any other subsequent owner of the property.

The EIS is now meant to present information to the public and clear misunderstandings. If the information presented in the EIS is inaccurate, then it should be corrected. If the suggested solutions do not satisfy you, you can still participate in the public meetings and public hearings to be held by the developer and the County. With your input, the project can possibly be modified to address your concerns in order to shape the project to one that you can accept.

Yours truly,

[Signature]

Roy R. Takemoto
Rodney Nakano  
Darryl Arau  
Department of Planning  
County of Hawaii  
25 Aupuni St.  
Hilo HI 96720  
January 6, 1994

RE: Comments on DEIS for Amari Resort

Dear Sirs:

I submit the following comments on the Draft Environmental Impact Statement for the Amari Resort proposed for Kukuihele by the Kukuihele Development Company.

Soil Suitability: As mentioned on pages 27 following, the soil in the area proposed for development possesses hydric properties. On page 36, the DEIS states that a soil engineering study would need to investigate the need, if any, for special conditions to ensure the stability of structures in proximity to the cliff edge.

This soil engineering study is anticipated but has not yet been undertaken, so far as one can tell from the DEIS.

I would suggest that until a soil engineering study is done and mitigation measures have been agreed upon, the county require a setback from the cliff sufficient to ensure the safety of resort guests and the integrity of resort structures in the event of an earthquake or other occurrence. The distance from the cliff to the structures is not given in the DEIS.

In light of the soil properties and, more generally, in light of the fact that cliffs are inherently unstable for purposes of construction, I would ask that setbacks of at least 100 feet be required for all resort structures.

Cesspools: As described on page 37, the developers appear to believe it possible to use cesspools for the one-acre lots. I question this. If the cesspool possibility remains in the final EIS, it should be accompanied by a discussion of SHRI rules, if such exist, that would justify cesspools in this situation.

But in any case, I do not believe it is prudent to allow wastewater systems to be installed that preclude the future use of groundwater resources. (See the discussion on page 9.)

Instead of individual wastewater treatment systems (cesspools or septic tanks) for the one-acre lots, I would suggest that the developers install a sewer system for the lots that would feed into the wastewater system to be built for the resort.

Water Use: The DEIS considers (but does not commit the developer to) installing water conserving features at the Amari Resort. Yet the proposed water demand seems high: 600 gallons per day per unit (not including water used for landscaping). Inasmuch as one of the developers are considering the use of county water for the remaining capacity of the county system, I believe installation of water conserving features should be made mandatory if any county water is to be used.

Solid Waste: The DEIS raises the possibility of -- but again does not commit the developers to -- developing a solid waste reduction plan. This should be mandatory.

Land Classification Issues: As I understand it, the developers are proposing that the County Council approve the land classification of land needed to conform with the state's land use law. The reason the county is asked to approve this, rather than the state Land Use Commission, has to do with the project area being less than 15 acres (see discussion on page 93).

On page 112, however, the DEIS states that the proposal conforms with the county General Plan definition of a resort since it is not approved to have a minimum of 15 acres.

The DEIS itself does not contain maps of sufficient detail to allow one to calculate the precise area that is proposed for land classification. Nor does the DEIS contain tables or even a narrative listing of the sizes of the parcels involved that would allow anyone to arrive at the total figures.

I believe that before this proposal is acted upon by the county, there should be included in the DEIS some clarification of this point. Maps should indicate the precise square footage or acreage of the parcels and areas proposed for reclassification. If the total is under 15 acres, then there should be some explanation of how the development complies with the standards of the county's resort definitions.

Thank you for your attention to my concerns.

Sincerely,

Patricia Tsuno

Patricia Tsuno

66.256
February 4, 1994

Ms. Patricia Tummono
187-C Hinkelti Street
Hilo, HI 96720

RE: Draft Environmental Impact Statement for Anuenue, Hamakua, Hawaii

Dear Ms. Tummono:

The following responses to your comments dated January 6, 1994:

1. **Soil Stability**: In consultation with DSM, the stability of the cliff and the soil characteristics in the area are valid concerns. However, the final EIS will clarify that these concerns are mitigable by either moving the structure back from the cliff edge or stabilizing the cliff edge by reinforcing the cliff edge using structural walls that are integrated with piers to solid rock and structurally tied from front to back. The proposed solution has been carefully and scientifically analyzed, and any project in similar conditions close to a cliff edge has been allowed to proceed with the proper structural mitigation measures (e.g., Princeville on Kauai). The setback area can be used for landscaping and recreational uses (excluding swimming pools). Once the project is approved, the geotechnical study is done almost immediately. The final EIS will identify the extent of the setback as an unresolved issue to be continued by the Planning Department through Plan Approval.

2. **Crossovers**: The DEIS included DOW's map that shows where crossovers are permitted (DEIS, Fig. 21). The DOW's map is the one used on the map, provided the development contains less than 50 units (Hawaii Administrative Rules 11-60-31.1). The purpose of the DOW's wastewater rules is to protect the groundwaters resource, one can expect that compliance with these rules should not preclude future use of the groundwater resource.

3. **Water Use**: The 600 gpd is the County DWRS standard used to calculate water needs. Since the standard is conservative, the actual needs would probably be less. The requirement for water conservation measures is a policy decision that must weigh several factors. The EIS only identifies the mitigation measures; the decisionmakers have the power to commit the applicant to the suggested mitigation measures through permit conditions or other means.

4. **Solid Waste**: The role of the EIS is not to commit anyone. Again, if the decisionmakers feel that the proposed mitigation measure is valid, then it is their prerogative to commit the applicant. The EIS provides an outline for identifying the impact and possible mitigation measures.

5. **Land Redevelopment**: The final EIS will include maps that show accurate surveyed boundaries and precise areas for the areas proposed for redeveloping. The final EIS will also correct the proposed area for the future redeveloping it will be precisely 15 acres.

Ms. Patricia Tummono
February 4, 1994

Page 2

Thank you for your comments.

Yours truly,

R.R. Takemoto

cc: Planning Department, County of Hawaii
Kukuihaele Development Company