March 28, 1994

Bruce S. Anderson, Ph.D.
Acting Director
Office of Environmental Quality Commission
220 South King Street, 4th Floor
Honolulu, Hawai‘i 96813

Attention: Betty Wood

SUBJECT: Final Environmental Assessment
Kalaoa View Estates
TMK: 3/7-3-03:12

This is a request that you publish the notice of the Final Environmental Assessment (EA) and negative declaration of impact for the Kalaoa View Estates project, North Kona, Hawai‘i Island.

The four (4) copies of the final EA and OEQC Bulletin Publication form were forwarded to you under separate cover.

We have not, nor do we expect to receive, any comments on the draft EA. Accordingly, this is to formally notify you that the County of Hawai‘i has determined that the project will not have any significant impacts on the environment and that a Negative Declaration of Impact be published.

We appreciate your cooperation. Please call us at 961-8379 if you have any questions, or need more information.

[Signature]
Edwin S. Talra
Assistant Housing Administrator

xc: Mayor Stephen K. Yamashiro
Jon A. Gomes & Associates
KALAOA VIEW ESTATE HOUSING PROJECT

FINAL ENVIRONMENTAL ASSESSMENT

NEGATIVE DECLARATION OF IMPACT

GENERAL INFORMATION

Name of Project: Kalaoa View Estate Housing Project

Applicant: Kalaoa Partners
245 Nene Street
Hilo, Hawaii 96720

[Signature]
Jan Gomes, General Partner

Approving Agency: Office of the Mayor
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

[Signature]
Edwin S. Taira, Assistant Housing Administrator

Recommended Approval:

[Signature]
Virginia Goldstein, Director
Planning Department

[Signature]
Stephen K. Yamashiro, Mayor

Date: MAR 24 1994

Enviromental Assessment Prepared By:

William L. Moore and Ron Terry, Ph.D.
PART 1: ACTION DESCRIPTION

1.1. Project Description

Kalaoa Partners, in agreement with the County Office of Housing and Community Development (OHCD), is proposing to develop an affordable residential subdivision in Kalaoa, North Kona, Tax Map Key (3) 7-3-03: 12. The 16.9 acre Kalaoa View Estate Subdivision will include up to fifty-six (56) 10,000 square foot residential lots and one lot approximately 2.113 acres in area.

The project was originally proposed to create seventy two (72) lots. However, this was subsequently reduced to the presently proposed maximum density of fifty six (56) residential lots.

To enable this project to remain one hundred percent (100%) percent affordable, as defined by the Interim Affordable Housing Policy for the County, the OHCD proposed in 1991 to utilize Chapter 201E-201 and 210, Hawaii Revised Statutes, to exempt the project from certain zoning, subdivision and roadway codes and requirements. The Hawaii County Council authorized these exemptions in Resolutions 414-92 and 25-93 (included in this report as Appendix 1).

The County will be entering into an agreement with Kalaoa Partners to ensure the lots are affordable. This agreement will stipulate the terms for the sale of the lots, including the maximum prices as well as all other conditions that must be complied with by all parties.

There are not planned uses for the proposed 2.113 acre lot. Any future use will be consistent with the State Land Use Agricultural designation and the County’s Unplanned (U) zoning classification.

All necessary utilities and improvements will be provided including County water and roads meeting the standards of FmHA.

The primary access to the project site is by way of a proposed fifty (50) foot wide right-of-way which will abut the subdivision on the north side. The access to the project will incorporate an existing 20-foot wide government right-of-way. This right-of-way is in the process of being conveyed from the State to the County of Hawaii. The County has agreed that Kalaoa Partners will construct a roadway on this and adjacent lands. The entire roadway will then be dedicated to the County.
A portion of the Kalaoa View Estate Project will be sold to Hawaii Island Community Development Corporation (HICDC) for development as a mutual "self-help" housing project. The properties will be acquired with U. S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) and HOME project funds. In addition, Farmer’s Home Administration (FmHA) subsidized mortgage program will be used to further reduce the cost of housing.

Because county agreements, county-administered funds, state-administered funds, county preemptions and county land are involved, an environmental assessment pursuant to Chapter 343, HRS, is required for this project. In addition, the environmental review requirements under 24CFR Part 58 of HUD and FmHA must be complied with as well for this project.

1.2 Project Location

The proposed project is located on TMK: 7-3-03:12 in Kalaoa, in the North Kona District of the Island of Hawaii (Figure 1). The project site is a 16.8-acre parcel located approximately 400 feet makai of the Mamalahoa Highway, approximately one mile north of Ka’iminani Street (Kona Palisades).

1.3 Mutual Self Help Housing Project

Hawaii Island Community Development Corporation (HICDC) intends to utilize CDBG and HOME grant program funds to purchase twenty (20) finished lots within the project site for use with the FmHA’s "Self Help" loan and grant program. These lots will provide single-family dwellings to very low- and low-income families who qualify for an interest-subsidized mortgage (FmHA 502). Construction will be the mutual self-help method.

Of the twenty (20) lots, twelve (12) will be designated to assist families at or below 80% of the median income, and eight (8) of the units are for families at or below 50% of the median income. HICDC selects client families based on income, family size, credit and employment stability in accordance with government guidelines and regulations.

HICDC's involvement in the proposed project begins when they purchase finished lots from the developer. HICDC will assist the qualified participating families obtain FmHA 502 mortgages with a nominal down payment (less than $100). The mortgage provided is an interest-subsidized loan with the monthly payment depending on the family’s income and family size. Length of mortgages averages from 30-33 years.
HICDC also provides technical assistance to ensure the project is completed in an orderly and timely manner. Because of the expertise of HICDC in overseeing construction, families will tend to save significant amounts of money compared to the price they would pay for a contractor-built home.

For the HICDC component of the project, marketing and prequalifying are scheduled for early 1994; appraisal and acquisition of land, and qualifying of clients in mid-1994, phase 1 construction mid-1994 to mid-1995; further client qualifying in early 1995; and phase-two construction from mid-1995 to mid-1996.

1.4 Land Use Designation and Controls

The proposed fifty-six (56) residential lots are within the State Land Use Agricultural classification and are zoned Single Family Residential-7,500 square feet (RS-7.5). The 2.113 acre lot is within the State Land Use Agricultural District and is zoned Unplanned by the County. The entire project area is designed as Urban Expansion according to the County General Plan Land Use Pattern Allocation Guide Map. The project area is not situated within the County’s Special Management Area.

1.5 Consultation With Agencies and Organizations

The following agencies and organizations have been consulted during the planning process for the proposed development:

**County:**

- Planning Department
- Office of the Mayor
- Department of Water Supply
- Office of Housing and Community Development

**State:**

- Department of Health
- Housing Finance and Development Corporation

**Private:**

- Kona Highlands Community Association
Copies of correspondence from those agencies with substantive comments bearing on environmental issues are provided as Appendix 2 and discussed in the appropriate sections of the Environmental Assessment.

A Draft Environmental Assessment for the proposed project was published in the OEQC Bulletin of February 23, 1994. No comments were received in response to this draft and no new circumstances or information warranted revision to the original text.

PART 2: ENVIRONMENTAL SETTING

2.1 Physical Environment Characteristics

2.1.1 Geology, Climate, Soils and Hazards

The surface geology of the site is formed of prehistoric lava flows of pahoehoe and a‘a from Hualalai Volcano. (MacDonald et al 1983:350). Elevation on the site varies from 1450 to 1700 feet above mean sea level, with slopes varying from 5-20 percent and averaging 16 percent.

Rainfall on the project site is 40 to 50 inches per year and is concentrated in the summer (Giambelucca et al 1986). High temperatures are generally in the low 80’s and low temperatures in the high 60’s. Temperatures below 58 degrees or above 88 degrees are uncommon.

Soils on the site are classified as Kaimu extremely stony peat and Punaluu extremely stony peat by the U.S. Soil Conservation Service. Runoff is slow and erosion hazard is slight on these poorly-developed soils. (USCS 1973).

The project site, in common with all locations on the flanks of Hualalai Volcano, is considered Lava Flow Hazard Zone 4 on a descending scale of risk from 1 to 9. By comparison, Hilo resides in Zone 3 and is at slightly greater risk of lava inundation (Heilker 1990:23).

In sum, geologic conditions pose no constraints for the project.

2.1.2 Flora, Fauna and Ecosystems

A survey of flora and fauna on the site was conducted by biologist Grant Gerrish, Ph.D., in August of 1991. His report is included as Appendix 3 and is summarized below.
The vegetation of the site was quite uniform and consisted of a forest of the alien weed tree christmas berry (Schinus terebinthifolius) with a canopy of generally 25 feet. Another alien, silk oak (Grevillea robusta) occasionally rose above this canopy. A very few individuals of a native tree, lama (Diospyros ferrea), also formed part of the canopy. The understory was fairly open and included juvenile trees and a sparse covering of grasses, herbs and a few ferns. This layer was dominated by aliens, including juveniles of the canopy trees and guava (Psidium guajava), coffee (Coffeea arabica), wai‘awi (Psidium cattleianum) and lantana (Lantana camara). Natives included tree seedlings of lama and alahe‘e (Canthium odoratum), as well as the ferns laua‘e (Pleopeltis thunbergiana) and peahi (Polypodium scolopendrium), and the diminutive ‘ala‘ala wai nui (Piperomia cookiana).

No native birds were seen on or above the site. Several alien birds were seen on the parcel. The endangered native bat was not seen during this survey conducted in the middle of the day. Alien mammals such as mongooses, rats, feral pigs, and pet or feral cats and dogs are probably present on the site.

No listed, candidate or proposed endangered animal or plant species is found on the property. In terms of conservation value, no botanical or zoological resources requiring protection are present.

2.2 Social and Economic Setting

2.2.1 Socio-Economic Characteristics

The 1990 census counted 22,284 residents in the North Kona District, up 62.1% from the 13,784 residents in 1980. Caucasians make up 59% of the population and Hawaiians 16%. Other ethnic groups with significant representation include Japanese (10%) and Filipino (8%).

1990 census data also reveal that housing units increased from 7,540 in 1980 to 9,990 in 1990. Approximately 44% were renter-occupied units, and 79% were occupied. Of the 7,636 houses that were occupied, 55% were owner-occupied and 45% were being rented. The median rent was approximately $669 per month.

Single-family housing construction activity and subdivision activity in North Kona occurs extensively in the area between and including Kaloko and Holualoa. Despite the increase in both subdivision and housing activity in North Kona, housing for the low-moderate income groups is still a major problem.

There are many reasons for this problem. North Kona contains 5,737 parcels, of which 3,359 are vacant. It might thus appear that abundant parcels are
available for residential construction. However, many of these parcels are still in agricultural use or have agricultural zoning, which makes residential use problematic. Also, the market price of the land is so high that constructing low-moderate houses is seldom economic.

2.2.2 Existing Land Uses

The site currently is vacant of any land use, although it was formerly farmed in coffee.

The site is bounded by Keahole View Estates on the makai (west) side, by large-lot older homes on the mauka (east) side, by vacant lots on the north side, and by Kona Highlands Subdivision on the south side.

2.2.3 Public Facilities

Roads and Traffic

Roads within the subdivision will be constructed in compliance with requirements of the County of Hawaii and will be dedicated to the County for subsequent ownership and maintenance. Some small road segments at the end of cul-de-sacs will remain private.

Access to the subdivision will be via a new street running along the northern border of the subdivision up to the Mamalahoa Highway. The roadway will be dedicated to the County of Hawaii and will have a 50-foot right of way.

A traffic assessment report was prepared by Dennis Shigeoka, P.E., in accordance with a request from the State Department of Transportation. This report is included in full as Appendix 4. Although the data provided to Mr. Shigeoka included the original plan for 72 lots (which has subsequently been reduced to a maximum of 57 lots), he determined that the effect upon the overall traffic conditions of the Mamalahoa Highway would be minimal. No disruptions or excessive waits are to be anticipated. He also noted that upon enactment and implementation of the roadway system proposed in the "Keahole to Kailua Plan," a greatly expanded transportation system would be available to all residents of the region.

Electricity and Telephone

Electricity and telephone poles are present on-site. Provisions are also being made for the eventual installation of cable television lines.
Water

The area in which the subdivision is located is served by the County Water System. The developer will construct the water system infrastructure to serve the lots and will then dedicate the system to the county.

Wastewater Treatment

Wastewater treatment facilities shall be installed in accordance with all regulations of the State Department of Health and the County of Hawaii.

Drainage

The entire parcel is designated as Zone X, which is defined as areas of minimal or moderate flood hazard, outside the 100-year flood plain.

On-site drainage improvements will be necessary. As mandated in Storm Drainage Standards (Hawaii County Department of Public Work 1979), any increase in runoff determined to be due to development of a proposed site, including but not limited to buildings, paved roads and parking areas and more intensive use, must be disposed of by on-site drainage facilities. This will be accomplished by construction of a series of drywells and other drainage structures. All regulations of the State and County concerning drainage will be adhered to.

Police and Fire Protection

Fire and police protection are provided by the County of Hawaii. The Police Department is located within ten miles of the subdivision site. Fire hydrants will be installed in the subdivision pursuant to the requirements of the County of Hawaii.

Schools

Children from the housing project attending public schools would attend Kealakehe Elementary School, which is located approximately six miles from the site, and Konawaena High School, which is located approximately twenty miles from the site.

2.3 Archaeology and Historic Sites

A full archaeological inventory survey of the project site was conducted by Paul Rosendahl, Ph.D., Inc. The detailed report on this survey (Rosendahl 1992) is
on file at the offices of the State Historic Preservation Division (SHPD) in Honolulu and is summarized below.

Fieldwork was conducted between October 1 and October 11, 1991, with further testing conducted at four sites between November 11 and November 13. The overall objective of the survey was to provide information appropriate to and sufficient for satisfaction of all historic preservation regulatory review requirements of the Hawaii County Planning Department and SHPD.

Initial work consisted of a pedestrian sweep of the area to locate all features of archaeological significance. The sweep revealed numerous agricultural features in the project area. A representative sample of the terraces and rock piles associated with these sites was selected for detailed recording.

Four agricultural terraces were tested. In addition, eleven units were excavated in order to test each type of potentially non-agricultural feature at least once.

Seven sites consisting of 31 features were recorded, and they included terraces, rock mounds, cairns, C-shapes, platforms, enclosures, lava blisters, and complexes. The functional categories consisted of habitation, agricultural, boundary, trash pit, and indeterminate.

The seven sites identified within the project area were assessed as significant for information value. They are assessed as not significant for cultural value. All seven sites were recorded and mapped in detail during the inventory survey. The data collected from these sites during the survey is considered a sufficient recovery of significant information, and no further work was recommended for the area.

The State Historic Preservation Division reviewed the work and concurred with the determination (see Appendix 2).

PART 3: ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

3.1 Short Term Impacts

Construction Impacts: Short term impacts will result from land clearing and construction activities. The impacts will consist of temporary noise, dust and exhaust from machinery and heavy equipment. Also, traffic on the Mamalahoa Highway may be temporarily disrupted by the entry and exit of heavy equipment.
Mitigation: The distance of the project site from residences will help mitigate disturbance. The applicant will restrict construction activity in the easement to daylight hours to the greatest extent feasible. Professional traffic control shall be utilized in accordance with State and County regulations.

3.2 Long Term Impacts

No significant impacts are expected to result from the proposed project.

3.3 Permits, Approvals and Conditions

The proposed Kalaa View Estate Subdivision is consistent with the County General Plan, the State Land Use Urban designation and the County zoning. Before the project can be completed, project must comply with the requirements of the County Subdivision Code. In addition, the affordable housing agreement must be completed. Prior to construction of any single family dwellings on the project site, the Building permits must be obtained from the County and the requirements of the State Department of Health regarding wastewater disposal must be complied.

PART 4: ALTERNATIVES

4.1 No Action

The continuing shortage of affordable housing in North Kona will be exacerbated if the proposed project is not implemented. No other affordable housing projects done pursuant to Chapter 201-E are poised to help absorb some of this demand. In all likelihood, a large number of moderate and low-income families would continue to lack opportunities for home ownership.

4.2 Alternative Site Locations

For the purposes of the environmental review, no alternative site locations have been considered, since this proposal has taken several years to develop and would not easily adapt to a change in site. However, it can be generally stated that few alternative sites exist, and this is one of the many reasons why affordable housing projects are so few and so problematic to implement.
PART 5: DETERMINATION

The proposed project will not significantly alter the environment and impacts will be minimal. Therefore it has been determined that a negative declaration of impact will be filed and that the preparation of an Environmental Impact Statement is not warranted.

PART 6: FINDINGS AND REASONS

1. The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.

2. The proposed project will not curtail the range of beneficial uses of the environment.

3. The proposed project will not conflict with the State's long-term environmental policies.

4. The proposed project will not substantially affect the economic or social welfare of the community or State.

5. The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.

6. The proposed project will not involve a substantial degradation of environmental quality.

7. The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat. No endangered species of flora or fauna are known to exist on the project site.

8. The proposed project will not detrimentally affect air or water quality or ambient noise levels.

9. Although the proposed project is located in an zone exposed to some earthquake and volcanic hazard, there are no reasonable alternatives. The proposed action would not expose any person to unreasonable risks.

For the reasons above, the proposed project will not have any significant effect in the context of Chapter 343, Hawaii Revised Statues and section 11-200-12 of the State Administrative Rules.
REFERENCES


Environmental Assessment
Kalaoa View Estate Affordable Housing Project

Appendix No. 1
RESOLUTION OF THE COUNTY COUNCIL OF THE COUNTY OF HAWAII
AUTHORIZING THE EXEMPTION OF THE PROPOSED KALAOA VIEW ESTATE
PROJECT SITES FROM CERTAIN ZONING, SUBDIVISION, AND ROADWAY CODES
AND REQUIREMENTS, PURSUANT TO CHAPTERS 201E-201 AND 201E-210 OF
THE HAWAI'I REVISED STATUTES.

WHEREAS, the Kalaoa View Estate Housing Project will be
constructed in Kalaoa, North Kona, Hawaii; and

WHEREAS, Kalaoa Partners desire to provide affordable
housing for residents of the County of Hawaii; and

WHEREAS, the Kalaoa View Estate Housing Project will be
affordable to families earning below 80 percent (80%) and up to
140 percent (140%) of the County's median family income; and

WHEREAS, Kalaoa Partners and the County will be entering
into an Agreement to develop the Kalaoa View Estate Housing
Project; and

WHEREAS, the preliminary subdivision plans submitted for
said Kalaoa View Estate Housing Project are attached hereto as
"Exhibit A"; and

WHEREAS, the preliminary roadway plans submitted for said
Kalaoa View Estate Housing Project are attached hereto as
"Exhibit B"; and

WHEREAS, the legal description submitted for said Kalaoa
View Estate Housing Project is attached hereto as "Exhibit C"; and

WHEREAS, to enable this project to remain 100 percent (100%)
affordable, as defined by the Interim Affordable Housing Policy
for the County, the Office of Housing and Community Development
is proposing to utilize HRS 201E-210, which allows certain
housing projects to be exempt from certain laws and rules,
provided the County Council approve the Project; and

WHEREAS, the Kalaoa View Estate Housing Project will
promote the goals contained in HRS 201E, HRS 46-15.1, and in
Chapter 2, Article 13 of the Hawaii County Code.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE COUNTY
OF HAWAI'I that the preliminary subdivision plans for the Kalaoa
View Estate Housing Project site are hereby approved as attached hereto as "Exhibit A."

BE IT FURTHER RESOLVED, that the preliminary roadway plans for the Kalaoa View Estate Housing Project are hereby approved as attached hereto as "Exhibit B."

BE IT FURTHER RESOLVED, that upon compliance with Chapter 25, Article 30 of the Subdivision Code, and/or code requirements preempted pursuant to provisions of Chapter 201E-210, Hawaii Revised Statutes, the preliminary subdivision plans for the Kalaoa View Estate Housing Project site shall be granted final subdivision approval.

BE IT FURTHER RESOLVED, that pursuant to HRS 201E-210 (a)(3)(C), the Housing Administrator shall be the responsible County official who will certify maps and plans of lands connected with the Project as having complied with applicable laws and ordinances relating to the subdivision of lands.

BE IT FURTHER RESOLVED, that copies of this resolution be sent to Kalaoa Partners, the Administrator of the Office of Housing and Community Development, and the Planning Director for the County of Hawaii.

Dated at Kona, Hawaii this 19th day of February, 1992.

INTRODUCED BY:

[Signature]
COUNCIL MEMBER, COUNTY OF HAWAII

ROLL CALL VOTE

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Reference C-3310/Res. 415
RESOLUTION NO. 414 92

ATTEST:

[Signature]
COUNTY CLERK CHAIRMAN & PRESIDING OFFICER
RESOLUTION OF THE COUNTY COUNCIL OF THE COUNTY OF HAWAII
AUTHORIZING THE EXEMPTION OF THE PROPOSED KALOA VIEW ESTATE
PROJECT SITE FROM CERTAIN ZONING, SUBDIVISION, AND ROADWAY CODES
AND REQUIREMENTS, PURSUANT TO CHAPTERS 201E-101 AND 201E-210 OF
THE HAWAII REVISED STATUTES.

WHEREAS, the Kalaoa View Estate Housing Project will be
constructed in Kulaea, North Kona, Hawaii; and

WHEREAS, Kalaoa Partners desire to provide affordable
housing for residents of the County of Hawaii; and

WHEREAS, the Kalaoa View Estate Housing Project will be
affordable to families earning below 80 percent (80%) and up to
140 percent (140%) of the County's median family income; and

WHEREAS, Kalaoa Partners and the County will be entering
into an Agreement to develop the Kalaoa View Estate Housing
Project; and

WHEREAS, the preliminary subdivision plans submitted for
said Kalaoa View Estate Housing Project are attached hereto as
"Exhibit A"; and

WHEREAS, the preliminary roadway plans submitted for said
Kalaoa View Estate Housing Project are attached hereto as
"Exhibit B"; and

WHEREAS, the legal description submitted for said Kalaoa
View Estate Housing Project is attached hereto as "Exhibit C"; and

WHEREAS, to enable this project to remain 100 percent (100%)
affordable, as defined by the Interim Affordable Housing Policy
for the County, the Office of Housing and Community Development
is proposing to utilize HRS 201E-210, which allows certain
housing projects to be exempt from certain laws and rules,
provided the County Council approve the Project; and

WHEREAS, the Kalaoa View Estate Housing Project will
promote the goals contained in HRS 201E, HRS 46-15.1, and in
Chapter 2, Article 11 of the Hawaii County Code.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE COUNTY
OF HAWAII that the preliminary subdivision plans for the Kalaoa
View Estate Housing Project site are hereby approved as attached hereto as "Exhibit A."

BE IT FURTHER RESOLVED, that the preliminary roadway plans for the Kalaoa View Estate Housing Project are hereby approved as attached hereto as "Exhibit B."

BE IT FURTHER RESOLVED, that upon compliance with Chapter 25, Article 30 of the Subdivision Code, and/or code requirements preempted pursuant to provisions of Chapter 20E-210, Hawaii Revised Statutes, the preliminary subdivision plans for the Kalaoa View Estate Housing Project site shall be granted final subdivision approval.

BE IT FURTHER RESOLVED, that pursuant to HRS 20E-210 (a) (3) (C), the Housing Administrator shall be the responsible County official who will certify maps and plans of lands connected with the Project as having complied with applicable laws and ordinances relating to the subdivision of lands.

BE IT FURTHER RESOLVED, that copies of this resolution be sent to Kalaoa Partners, the Administrator of the Office of Housing and Community Development, and the Planning Director for the County of Hawaii.

Dated at Kona, Hawaii this 19th day of February, 1992.

INTRODUCED BY:

[Signature]
COUNCIL MEMBER, COUNTY OF HAWAII

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I hereby certify that the foregoing RESOLUTION was by the vote indicated to the right hereof adopted by the COUNTY COUNCIL of the County of Hawaii on February 19, 1992.

ATTEST:

[Signature]
COUNTY CLERK

[Signature]
CHAIRMAN & PRESIDING OFFICER

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Reference C-3310/Res. 415

RESOLUTION NO. 414 92
KALAOA VIEW ESTATES

typical section

2" Asphallic Concrete
4" Aggregate Base Course
6" Min. Select Borrow Subbase
or as required by the Engineer.

The invert shall not coincide with the utility pole location.

1-1/2" Asphallic Concrete
4" Min Aggregate Base
METES & BOUNDS
KALAOA VIEW ESTATES SUBDIVISION

A portion of that certain parcel of land, being Grant 3969
to Piimauna, situate at Hamanamana, North Kona, Island, County,
and State of Hawaii, being Lot 43, more particularly described as
follows:

Beginning at a pipe in concrete at the Northeast corner of
this lot, the same being the Northwest corner of Grant 4123 D. W.
Haina, and on the Southerly side of a 20-foot, road reserve, the
coordinates of said point of beginning referred to Government
Survey Triangulation Station "Hana" being 3137.12 feet
South and 11,772.03 feet West, thence 270° 20' 35" 254.24 feet to
the true point of beginning and running thence by azimuths
measured clockwise from true South:

1. 359° 01' 10" 416.10 feet along Grant 4123 D. W.
Haina to a pipe in concrete;

2. 359° 24' 30" 138.90 feet along same to a 3/4" pipe in concrete;

3. 88° 47' 08" 1130.85 feet along Lots A-31, A-32,
A-36 to A-42, inclusive, and
Lots A-44 to A-46, inclusive,
of File Plan 688 and Lots B-
73 to B-75, inclusive, of
File Plan 1143 to a new
boundary point;

4. 179° 00' 55" 555.76 feet to a new boundary point;

5. 270° 20' 35" 99.05 feet to a new boundary point;

6. 179° 01' 10" 30.01 feet to a new boundary point;

7. 270° 20' 35" 1033.08 feet along a 20-foot road
reserve to the point of
beginning and containing an
area of 14.75 acres.

Being a portion of the premises conveyed to the Grantor by
deed dated May 16, 1991, recorded in the Bureau of Conveyances of
the State of Hawaii as Document No. 91-070103.

EXHIBIT C
METES & BOUNDS
REMNANT 2.16 ACRES

A portion of that certain parcel of land, being Grant 3969 to Pilauma, situate at Hamanamana, North Kona, Island, County, and State of Hawaii, being Lot 43, more particularly described as follows:

Beginning at a 1/2" pipe in concrete at the Northwest corner of this lot, the same being the Northeast corner of Lot 2 of the Keohole View Subdivision, Increment 1, and on the Southerly side of a 20-foot, road reserve, the coordinates of said point of beginning referred to Government Survey Triangulation Station "Hoanalaha" being 3144.90 feet South and 10,494.73 feet West, and running thence by azimuths measured clockwise from true South:

1. 270° 20' 35" 254.24 feet along a 20-foot road reserve to a new boundary point;
2. 359° 01' 10" 30.01 feet to a new boundary point;
3. 90° 20' 35" 99.05 feet to a new boundary point;
4. 359° 00' 55" 555.76 feet to a new boundary point;
5. 88° 47' 08" 155.19 feet along Lots B-75 to B-77, inclusive, of File Plan 1143 to a 1/2" pipe in concrete;
6. 179° 00' 00" 590.00 feet along Lot 1 of the Keohole View Subdivision, Increment 1, the East end of Hamanamana Street and Lot 2 of the Keohole View Subdivision, Increment 1, to the point of beginning and containing an area of 2.16 acres.

Being a portion of the premises conveyed to the Grantee by deed dated May 15, 1991, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 91-070103.

V.B.1.-8
RESOLUTION No. 25-93

RESOLUTION OF THE COUNTY COUNCIL OF THE COUNTY OF HAWAII
AUTHORIZING THE EXEMPTION OF THE PROPOSED KALAOA VIEW ESTATE
PROJECT SITE FROM CERTAIN ZONING, SUBDIVISION, AND ROADWAY CODES
AND REQUIREMENTS, PURSUANT TO CHAPTERS 201E-201 AND 201E-210 OF
THE HAWAII REVISED STATUTES.

WHEREAS, the Kalaoa View Estate Project will be constructed
in Kalaoa, North Kona, Hawaii; and

WHEREAS, Kalaoa Partners desires to provide affordable
housing for residents of the County of Hawaii; and

WHEREAS, the Kalaoa View Estate Project will be affordable
to families earning below 80 percent (80%) and up to 140 percent
(140%) of the County's median family income; and

WHEREAS, Kalaoa Partners and the County will be entering
into an Agreement to develop the Kalaoa View Estate Project; and

WHEREAS, the preliminary subdivision plans submitted for
said Kalaoa View Estate Project are attached hereto as
"Exhibit A"; and

WHEREAS, pursuant to Chapter 201E-210, HRS, the items
requested for preemption are attached as "Exhibit B"; and

WHEREAS, on February 19, 1992, the County Council approved
Resolution No. 414-92, authorizing the exemption of the proposed
Kalaoa View Estate project site from certain zoning, subdivision,
and roadway codes and requirements, pursuant to Chapters 201E-201
and 201E-210 of the Hawaii Revised Statutes; and

WHEREAS, the Department of Health's (DOH) Administrative
Rules, Chapter 11-62, Wastewater Systems, were revised to
prohibit the use of individual wastewater systems for
subdivisions of 50 lots or more; and

WHEREAS, Kalaoa Partners' variance request for individual
wastewater systems was denied; and

WHEREAS, the DOH's Administrative Rules now require a Sewage
Treatment Plant (STP) for subdivisions of 50 lots or more; and

WHEREAS, additional constraints presented by unusual site
characteristics and required infrastructure improvements make it
impossible to comply with subdivision code requirements; and

WHEREAS, to enable this project to remain 100 percent (100%)
affordable, the Office of Housing and Community Development is
proposing to utilize HRS 201E-210, which allows certain housing projects to be exempt from certain laws and rules, provided the County Council approve the Project; and

WHEREAS, the Kaloa View Estate Project will promote the goals contained in HRS 201E, HRS 46-15.1, and in Chapter 2, Article 13, of the Hawaii County Code.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE COUNTY OF HAWAII that the Kaloa View Estate Project site is hereby approved according to the preliminary subdivision plans, as attached hereto as "Exhibit A."

BE IT FURTHER RESOLVED, that, pursuant to Chapter 201E-210, Hawaii Revised Statutes, the items requested for preemption, as attached hereto as "Exhibit B," are hereby approved.

BE IT FURTHER RESOLVED, that, upon compliance with Chapter 23, Article 6, Division 1, Section 23-80, of the Hawaii County Code, and/or code requirements preempted pursuant to provisions of Chapter 201E-210, Hawaii Revised Statutes, the preliminary subdivision plans for the Kaloa View Estate Project site shall be granted final subdivision approval.

BE IT FURTHER RESOLVED, that, pursuant to HRS 201E-210 (a)(3)(c), the Housing Administrator shall be the responsible County official who will certify maps and plans of lands connected with the Kaloa View Estate Project as having complied with applicable laws and ordinances relating to the subdivision of lands.

BE IT FURTHER RESOLVED, that copies of this resolution be sent to Kaloa Partners, the Administrator of the Office of Housing and Community Development, and the Planning Director for the County of Hawaii.

Dated at Hilo, Hawaii, this 10th day of February, 1993.

INTRODUCED BY:

COUNCIL MEMBER, COUNTY OF HAWAII

COUNTY COUNCIL
County of Hawaii
Hilo, Hawaii

I hereby certify that the foregoing RESOLUTION was by the vote indicated to the right herof adopted by the COUNCIL of the County of Hawaii on February 10, 1993.

ATTEST:

COUNTY CLERK
CHAIRMAN & PRESIDING OFFICER

<table>
<thead>
<tr>
<th>ROLL CALL VOTE</th>
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<tr>
<td>AYES</td>
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<td>ABAKU</td>
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<td>CHILDS</td>
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<tr>
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<td>DOMINCO</td>
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<td>HALE</td>
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<td>ROSEHILL</td>
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Reference C-136.01

RESOLUTION NO. 25 93
Pursuant to Chapter 201E-210, Hawaii Revised Statutes, the following exemptions from code requirements and standards, as established by Public Works, are requested as follows:

1. Standards as Established by Public Works: Extend Road "E" with improvements to the subdivision's west boundary.
   Preemption Requested: Extend Road "E" with improvements to the east boundary of Lot 72, where it will connect to Road "D," approximately 240 feet east of the subdivision's west boundary.

2. Standards as Established by Public Works: Provide an interconnecting through road (minimum 50-ft. right-of-way) from the extension of proposed Road "E" to the existing Ahulani Street.
   Preemption Requested: An emergency access roadway will be constructed to provide an interconnection from the west end of the extension of proposed Road "E" to Ahulani Street. The access road will be provided with emergency breakdown gates at each end to prevent through traffic but permit emergency vehicular access. The road will have a 12-ft. pavement width and slopes conforming to (or as close as possible to) Fire Department and Sewer Division standards.

3. Standards as Established by Public Works: For a minor street with a 50-ft. right-of-way, the County Public Works Department, Engineering Division, requires a typical paved road section consisting of two 10-ft. traffic lanes, two 6-ft. shoulders, and two 9-ft. roadside swales.
   Preemption Requested: A road section that is non-conforming to the standard as delineated in the subdivision code is proposed from the Pualalii Highway intersection west along Road "E" for approximately 250-ft. in lieu of a 23-ft. grading on adjacent property. The proposed section will provide the typical two 10-ft. traffic lanes with two 6-ft. combined paved shoulder and roadside swale sections. The remaining 9-ft. on either side of the 50-ft. right-of-way will contain a 1 1/2:1 sloped road embankment.

Exhibit B
4. Subdivision Code: A grade of a street shall be a reasonable minimum but in no case be less than one-half of 1 percent (1%) and shall not exceed 7 percent (7%) on major arterials, 8 percent (8%) on secondary arterials, 10 percent (10%) on collector streets, or 12 percent (12%) on any other streets. Vertical and horizontal curves shall be so designed as to give non-passing distance visibility in conformance with the minimum requirement for a minor street of 300 ft. and a design speed of 30 m.p.h.

Provisional Preemption Requested: Contingent upon approval from the DPH, [Proposed] proposed Road "E" will have grades that vary from 12 percent (12%) to [22] 12.7 percent ([22] 12.7%). The design speed shall be a minimum of 20 m.p.h., which equates to a minimum horizontal curve of 180 ft. All other roadways (A, B, C, and D) shall follow the standards of the "Hawaii Statewide Uniform Design Manual for Streets and Highways," including street grades and minimum curve radii.

5. Subdivision Code: The slope approaching (within 100-ft. of the intersection) Mamalahoa Highway, along Road "E," should not exceed 10 percent (10%).

Preemption Requested: The slope approaching (within 100-ft. of the intersection) Mamalahoa Highway along Road "E" is an average of 7.8 percent (7.8%). Sections within 100-ft. of the intersection exceed 10 percent (10%).

6. Subdivision Code: The slope at the intersection (a minimum of 2 to 3 car storage lengths) should be kept below 3 percent (3%).

Preemption Requested: The average slope for two car stacking (a minimum of 2 to 3 car storage lengths) is approximately 4 percent (4%).

Exhibit B
Environmental Assessment
Kalaoa View Estate Affordable Housing Project

Appendix No. 2
November 14, 1991

Ms. Cookie Kim
Abe Lee Development, Inc.
2907 Loomis Street
Honolulu, Hawaii 96822

Dear Ms. Kim:

SUBJECT: Review of Archaeological Inventory Survey -- Kalaa
Estates Development Project
Hamanamana, North Kona, Hawaii
THK: 7-3-3: 12

This is an extremely unusual case in which we are processing an archaeological inventory survey based on an interim report (O'Hare & Rosendahl 1991. PHRI ms 1164-101791) and several phone briefings -- with the understanding that an acceptable archaeological inventory survey report will be submitted in the near future.

Based on the interim report, we agree that the project area is likely to have been adequately surveyed, finding a total of 7 historic sites. Additionally, based on phone conversations with Mr. Alan Walker of PHRI, it appears that the entire project area is covered by remnants of the Kona Field System, so another site can be considered to be present. The prehistoric settlement pattern is one of 4 temporary habitation sites set amongst informal agricultural fields. In historic times, an additional habitation seems to have been built. The fields were modified into coffee fields, and an enclosing wall around the property was constructed. All sites were adequately mapped and described. 11 features in 6 of the sites had test excavations placed in them, including all the possible habitation features. Additional test excavations were placed in Feature B of 16,100 and Feature A of 16,102 after phone consultations with our office. These test excavations recovered small amounts of food remains, charcoal, and a few volcanic glass flakes. We understand that the archaeological inventory survey report will document these findings, laboratory analyses of the food remains, radiocarbon dating results (hopefully showing age of use of the project area), and appropriate background research on the settlement pattern of Hamanamana ahupua'a and the project area.
Ms. Cookie Kim  
November 14, 1991  
Page 2

Given the above, we agree that the sites were significant solely for their information content and that the survey did recover an adequate and reasonable amount of this information content, making the sites "no longer significant".

This means that proposed grubbing and grading of the parcel will have "no effect" on significant historic sites, with the condition that an acceptable archaeological inventory survey report will be submitted in the near future. Construction can proceed prior to our receipt of the report. You should show a copy of this letter to the County agency issuing the grubbing and grading permit.

Sincerely,

[Signature]

DOROTHY HINMAN, Administrator  
State Historic Preservation Division

RC: jle

cc: F. Rosendahl, PHRI  
N. Hayashi, Planning Department, County of Hawaii
November 30, 1993

DENNIS K SHIGEOKA PE INC
709 KUPULAU ROAD
HILO HI 96720-3433

SUBJECT: SUBDIVISION NO.: 93-63
Name of Subdivision: Kalesa View Estates
Subdivider: OICD/Jon Gomes & Associates
Location: Hamakua, North Kona, Hawaii
TMK: 7-3-3: 12
Folder No.: 73185

This is to inform you that the construction plans for the subject subdivisions have been approved by our department provided the following conditions are resolved or fulfilled:

1. The subject subdivision has been approved by DPW, provided that no other developments shall access onto Road "A".

2. Deed covenant shall disclose to potential lot owners that the individual lots have difficult or unusual accesses.

3. Resolve ownership of (DLNR) Homestead Road and the additional right-of-ways from private owners, required prior to dedication to the County.

4. Acquire roadway slope easements within TMK: 7-3-3: 9, 10, 11, and 20.

5. Drywell Nos. 10, 11, and 12 will be kept under private ownership. The UTC drywell permits shall reflect this separation of potential drywell ownerships.

Please be informed that after the construction plans have been approved, you are required to submit the following to our department in accordance with Sections 23-97 and 23-98 of Article 7, Chapter 23, of the Hawaii County Code:
Memo to Dennis K. Shigekawa, P.E., Inc.
Page 2
November 30, 1993

1. Inspection Fee: Two-tenths of one percent (0.2%) of the estimated cost of construction work, but not less than $25.00.

2. A written notice, at least one week prior to any construction work, stating date of project commencement, the name of the contractor, the contract price, and any other pertinent information.

3. Five (5) sets of prints of approved construction plans and specifications.

When the construction is completed and before dedication, please submit a set of as-built plans drawn in ink on Mylar or approved equal.

Please be informed that the Department of Public Works will not approve dedication of roadways including drywells prior to compliance with Chapter 23, Underground Injection Control (UIC-Drywell), Administrative Rules, Department of Health. The owner shall obtain the required permits from the Department of Health and submit copy of approved permit(s), including detailed operating records, to the Department of Public Works prior to dedication approval.

[Signature]

GALEN M. KUBA, Acting Division Chief
Engineering Division

CKY:bzf

Attachments (tracings - previously transmitted)

cc: Planning Department
OHD
Environmental Assessment
Kalaoa View Estate Affordable Housing Project

Appendix No. 3
July 22, 1993

Mr. Edwin S. Taira  
Assistant Housing Administrator  
County Office of Housing & Community Development  
50 Wailuku Drive  
Hilo, HI 96720

Dear Mr. Taira:

Subdividers: Abe Lee Development, Inc./County-OHCD  
"Kalaoa View Estates"  
Proposed subdivision of Grant 3969  
Beings Lot 48, into Lots 1 through 68 and  
Roadway Lots A, B, C, D and E  
Hamanamana, North Kona, Hawaii  
TMR: 7-3-03:12 (23-63)

Please be informed that tentative approval of the preliminary plat is hereby granted with modifications and conditions.

The subdivider is now authorized to prepare detailed drawings of the plan in accordance with Chapter 23, Subdivision Control Code, County of Hawaii, as modified. Before final approval can be granted, the following conditions must be met:

1. Provide a water system meeting with the approval of the Department of Water Supply.

2. Submit water system construction plans for approval by affected agencies.

3. Pay installation and facilities charges as required by the Department of Water Supply.

4. Final plat map shall contain all of the requirements of Chapter 23, Subdivision Control Code, Sections 23-63 thru 23-69.
5. Identify the location and direction of all watercourses or any areas subjected to inundation by a 100-year storm. Identify all such areas by drainage easements.

6. No additional storm runoff to adjacent properties or roadways due to subdivision development will be allowed. All generated storm flow shall be disposed of within the subdivision.

7. Provide street lights as required by the Traffic Division.

8. Construction plans along with necessary drainage reports and studies shall be submitted for review and comments.

9. Prior to or along with the submission of construction plans, the subdivider shall clearly identify all roadways which will be retained under private ownership. A deed covenant in perpetuity which reflects the private ownership of the roadways shall be provided as part of the final subdivision approval.

10. Provide 10-ft. wide "no vehicular access" planting screen easement along all lots fronting Road "E".

11. All vehicular access shall be limited to interior roads.

12. In accordance with Chapter 21 of the Hawaii County Code, the subdivision is located in an area where a sewer system is required. Questions regarding sewer requirements shall be referred to the Wastewater Division at 961-8338.
12. Provide road channelization improvements at the intersection of Mamalahoa Highway and Road "E", meeting with the approval of State Department of Transportation (DOT).

13. Subdivision shall meet with the requirements and conditions as set-forth in Resolution Nos. 414-92, 415-92, and 25-93.

14. Roadway improvements shall meet with the requirements and conditions as set-forth in Resolution No. 25-93.

15. The 20-ft. Road Reserve (Road "E") is not owned or maintained by the County. The road reserve is under the jurisdiction of either a private or State Department of Land and Natural Resources (DLNR) owner. The subdivider shall provide proof of legal access from the private owner or consult DLNR for use and provisions of all necessary or required improvements, prior to subdivision approval.

16. The Road "E" connection at the subdivision's eastern boundary shall be coordinated with DOT, owners of the 20-ft. Road Reserve, and TMK: 7-3-03:11 and 20.

17. Due to the steep grades proposed for Road "E" and the provisional preemption, contingent upon approval from Department of Public Works (DPW); the subdivider will be allowed to design the subject road as noted, provided the following conditions are met:

   a. Road "E" shall be properly terminated with a conforming circular turnaround in the vicinity of proposed Lot 73.

   b. The proposed emergency access road from Ahulani Street to Road "E" shall be provided.

   c. Coordinate all proposed and future roadway improvements, including grade slope easements, with the owners of the 20-ft. Road Reserve and TMK: 7-3-03:9, 10, 11, and 20.

18. The subdivider shall be informed that should roadway dedication to the County be anticipated, all roadway improvements particularly Road "E", shall be subdivided out into road lots.
19. Subdivider (developer) shall execute the "development agreement" with the County of Hawaii prior to final subdivision approval.

20. Place property markers in accordance with the final plat map. Surveyor shall submit certification upon completion.

21. Submit nine (9) copies of the final plat map within one year from the date of tentative approval. If not, tentative approval to the preliminary map shall be deemed null and void. Only upon written request from the applicant and for a good cause can a time extension be granted, provided it is submitted forty-five (45) days before the expiration of said period of one year.

22. Subdivider shall complete all requirements specified as conditions for approval of the preliminary plat (tentative approval) within three years of said approval. An extension of not more than two years may be granted by the director upon timely written request of the subdivider.

Subdivider shall be informed that if drywells are included in the subject subdivision improvements, Chapter 23, Underground Injection Control (UIC), Administrative Rules, Department of Health, prohibit any person from operating, constructing or modifying an injection well (drywell) unless authorized by a permit issued by the Director of Health, State of Hawaii. Furthermore, should dedication of roadways including drywells be contemplated, the Department of Public Works will not approve dedication roadways prior to compliance with Chapter 23, UIC, Administrative Rules.

You should be aware that if at any time during the fulfillment of the foregoing conditions that environmental problems emerge—problems which were earlier overlooked or not anticipated/accounted for in data/reports available to date—this should be sufficient cause to immediately cease and desist from further activities on the proposed subdivision, pending resolution of the problem(s). The Planning Director shall confer with members of the Subdivision Technical Review Committee or other concerned agencies to resolve the problem and notify you accordingly.
Mr. Edwin S. Taira  
July 22, 1993  
Page 5  

No final approval for recordation shall be granted until all the above conditions have been met.  

Land shall not be offered for sale, lease or rent until final approval for recordation of the subdivision.  

Should you have any questions, please feel free to contact Ed Cheplic of this office.  

Sincerely,  

[Signature]  

VIRGINIA GOLDSTEIN  
Planning Director  

EC: lm  
0057D  

Attach.  

xc: 4 engineers  
West Hawaii Office  
Abe Lee Development, Inc.  
The Keith Companies-Hawaii, Inc.  
Jon Gomes & Associates
Environmental Assessment
FLORA AND FAUNA REPORT
for
PROPOSED RESIDENTIAL SUBDIVISION:
TMK 7-3-03:12

By
Grant Gerrish, Ph.D

Natural Sciences Division
University of Hawaii at Hilo
523 W. Lanikaula St.
Hilo, Hawaii 96720

September 1, 1991

PREPARED FOR
The Keith Companies
400 Hualani St.
Hilo, Hawaii 96720
Environmental Assessment
FLORA AND FAUNA REPORT
for
PROPOSED RESIDENTIAL SUBDIVISION:
THK 7-3-03:12
Grant Gerrish, Ph.D

INTRODUCTION AND METHODS

A study of the flora and fauna of parcel 7-3-03:12 was made between 11:00 AM and 3:00 PM on August 31, 1991. The objective of this study was to assess and describe the biological resources presently on this site. Special attention was given to identifying native plants and animals and searching for rare plants and plants listed as endangered by the US Fish and Wildlife Service.

The site was located and the survey was planned with the aid of the appropriate tax map, aerial photograph and USGS topographic map. Major access was from Ahulani St., which leads to the makai (west) end of the parcel. An unused, rock wall-lined road gives access to the entire north side of the parcel. An electrical transmission line also parallels this boundary. The mauka (east) end is demarcated by a rock wall that separates
the parcel from the orchards and homes above. The south side of
the parcel joins the Kona Highlands subdivision; access to this
side was gained near the water tank on Mahilani St.

The on-site study included a transect parallel to and 100
feet above the makai boundary, a transect along the north
boundary with perpendicular spurs into the parcel at each of the
four power poles along the boundary, a transect across the mauka
boundary and a transect through the center of the parcel from
mauka to makai. A check of the vegetation on the south side of
the parcel was made from the vicinity of the water tank on
Mahilani St.

FINDINGS

VEGETATION

The vegetation throughout the parcel is quite uniform,
making a vegetation map of the parcel unnecessary. The
vegetation of the site is dominated by a forest of
christmasberry (Schinus terebinthifolius). This alien tree
species forms a complete canopy about 25 ft. high. In a few
places another alien tree, silk oak (Grevillea robusta) emerges
above the canopy to heights of 50 feet. In a very few places,
the native tree, lama (Diospyros ferrea), reaches into the
canopy.
The understory beneath the christmasberry canopy is relatively open allowing fairly easy passage. The trees and shrubs of the understory include both native and alien plants. The common native species are seedlings, saplings and young trees of lama and alahe'e (Canthium odoratum). A few individuals of another small native tree, papala (Pisonia sandwicensis), were also found. In some parts of the parcel the former two species dominate and form moderately dense thickets. In other areas, the understory is dominated by naturalized coffee trees (Coffea arabica) or alien guava (Psidium guajava), strawberry guava (Psidium cattleianum) and an occasional thicket of lantana (Lantana camara).

The ground is sparsely covered by grasses, herbs and a few ferns. Alien basketgrass (Oplismenus hirtellus) and airplant (Kalanchoe pinnata) are the most common groundcover plants. Native plants in this layer include 'ala'ala wai nui (Peperomia cf. cookiana) and the ferns laua'e (Pleopeltis thunbergiana) and peahi (Polypodium acropolium).

**VEGETATION PATTERN AND DYNAMICS**

At the present, the forest is dominated by christmasberry trees about 25 feet tall and up to 10 inch diameter. Few young christmasberry trees were seen, indicating that when the mature trees die they will be replaced by the understory trees which
are of different species. The two most common native tree species on the parcel, lama and alaehe'e, have many young trees of all sizes, indicating that their populations are increasing and that these two species might be dominant in the future. The alaehe'e are currently producing seed, contributing to the spread of that species. In other parts of the parcel, the two species of guava may achieve dominance. The population structures of lama and alaehe'e and the presence of six other species of native plants show that native plant species are maintaining themselves on the site and capable of increasing in dominance in the future.

RARE AND ENDANGERED PLANTS

No plants listed as endangered or proposed for listing as endangered by the US Fish and Wildlife Service were found on the site, nor are any of the native plants found on the site considered rare.

Listed endangered plants do occur in North Kona within seven miles of the parcel on habitats at the same elevation with similar rainfall. However, it is unlikely that any of these endangered species have survived the heavy past human usage on this site. The survey of the parcel was of sufficient intensity that the probability is very low that any endangered plants are now growing on this site.
FAUNA

No native birds were seen on or above the site. The endangered native bat was not seen during this survey conducted in the middle of the day. No attempt was made to identify or describe native invertebrate animals during this survey.

Alien birds seen on the parcel were American cardinals (Cardinalis cardinalis), Japanese white-eyes (Zosterops japonica), spotted doves (Streptopelia chinensis) and barred doves (Geopelia striata).

CONCLUSION

The vegetation and bird-life of this parcel are dominated by alien species. Eight native plant species grow here, several are vigorous and appear to be increasing in cover and dominance. These native plant species are relatively common or common elsewhere in the region on sites that are not disturbed by human use. None of these native plant species are considered rare or endangered. It is unlikely that this parcel is habitat for native birds.
## LIST OF PLANT SPECIES

A = Alien, not native  
E = Endemic, native only to Hawaii  
I = Indigenous, native to Hawaii and elsewhere  
P = Polynesian introduction, alien

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<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>STATUS</th>
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<tbody>
<tr>
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<td>Aleurites moluccana (L.) Wild.</td>
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<td>Canthium odoratum (Forst. f.) Seem</td>
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<td>Coffea arabica L.</td>
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<td>Diospyros kaki (Wild.) Bakh.</td>
<td>lama</td>
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<td>Eriobotrya japonica (Thunb.) Lindl.</td>
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<td>Persea americana Hill</td>
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<td>Ricinus communis L.</td>
<td>castor bean</td>
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<tr>
<td>Schinus terebinthifolius Raddi</td>
<td>christmasberry</td>
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| **SHRUBS**                                          |                   |        |
| Cordyline terminalis (L.) Kunth.                    | ti                | P      |
| Hedychium flavescens Carey in Roscoe               | yellow ginger     | A      |
| Hyptis poecilata (L.) Poelt.                       | comb hyptis       | A      |
| Lantana camara L.                                   | lantana           | A      |
| Pluchea odorata (L.) Cass                           | sourbush          | A      |

<p>| <strong>GRASSES AND HERBS</strong>                                |                   |        |
| Brachiaria mutica (Forsk.) Stapf                    | california grass  | A      |
| Impatiens nianthus Hook. f.                         | impatians         | A      |
| Kalanchoe pinnata (Lam.) Pers.                      | airplant          | A      |
| Melinis minutiflora Beauv.                          | molassesgrass     | A      |
| Oplismenus hirtellus (L.) Beauv.                    | basketgrass       | A      |
| Pобрeromia cf. cockiana C. DC                      | 'ala'ala wai nui   | E      |
| Salvia coccinea Juss ex Murr.                       | scarlet sage      | A      |</p>
<table>
<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VINES</strong></td>
<td></td>
<td></td>
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<tr>
<td>Cocculus ferrandianus Gaud.</td>
<td>huehue</td>
<td>E</td>
</tr>
<tr>
<td>Dioscorea bulbifera</td>
<td>common yam</td>
<td>A</td>
</tr>
<tr>
<td>Momordica charantia L.</td>
<td>balsam pear</td>
<td>A</td>
</tr>
<tr>
<td>Passiflora edulis Sims</td>
<td>liliko'ī</td>
<td>A</td>
</tr>
<tr>
<td><strong>Ferns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nephrolepis cordifolia (L.) Presl</td>
<td>swordfern</td>
<td>A</td>
</tr>
<tr>
<td>Nephrolepis hirsutula (Forst.) Presl</td>
<td>swordfern</td>
<td>A</td>
</tr>
<tr>
<td>Pleopeltis thunbergiana Kauf.</td>
<td>laua'e</td>
<td>I</td>
</tr>
<tr>
<td>Polypodium scolopendrium Burm. f.</td>
<td>peahi</td>
<td>E</td>
</tr>
<tr>
<td>Psilotum nudum (L.) Griseb.</td>
<td>moa</td>
<td>I</td>
</tr>
</tbody>
</table>
Environmental Assessment
Kalaoa View Estate Affordable Housing Project

Appendix No. 4
TRAFFIC ASSESSMENT REPORT
FOR KALAOA VIEW SUBDIVISION

KANAMANA, KALAOA, NORTH KONA
COUNTY OF HAWAII, STATE OF HAWAII
TKK: 7-3-03112

PREPARED FOR:

JON GOMES & ASSOCIATES
245 NEHE STREET, HILO HAWAII 96720

PREPARED BY:

DENNIS K. SHIGEDOKA, P.E., INC.
709 KUPULAU ROAD
HILO, HI 96720-3433

OCTOBER 1993
INTRODUCTION & PURPOSE

This report is prepared to provide a cursory assessment of the traffic conditions affecting the proposed residential development located in the North Kona District.

The area is predominantly comprised of older grants and large parcels that have been subdivided for families of heirs. Several subdivisions to the South of the site that have been created into residential lots. The adjacent Kona Highlands Subdivision was created during the mid-60's and has many lots that are about 7,500 square feet in size. Roadways through these subdivision ultimately connect onto Hawaii Belt Road (State Route 190). Kalacoa View's primary access is off Hawaii Belt Road.

This report is being prepared for use by the State Highways Division to assess the overall traffic conditions in the area surrounding Kalacoa View Subdivision.

DESCRIPTION OF DEVELOPMENT

This project is a "Section 201-E" type project that has been reviewed and accepted by the County administration as an affordable housing development. There are 72 residential lots of minimum 7,500 square feet size and about 1 mile of County dedicable roads and about one-half miles of private (20' wide roads). The County Council has enacted several resolutions (#414-92 and 415-92 passed in 1992, #25-93 Effective February 10th 1993 - affecting the roadways) which dictated the development agreement and density.

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These agreement documents stipulated that only one house shall be allowed per lot and thus, are not eligible for "Ohana-Dwellings".

Known to this project is the proposed "University Heights" project about 1000 feet to the north of the site. Also proposed are developments within about 2 miles to the southwest by the State for the University of Hawai‘i’s West Campus, Villages of Lai’opua, and the Kealakehe developments.

For the local roadway network, reference is made to the attached roadway plan from the "K to K" Plan, which was approved by the County Council as Resolution #296-91, Effective April 1991.

The proposed development cannot connect with a roadway system into the adjacent Kona Highlands and Keahole View Subdivisions due to the County Council agreement to abide by the wishes of the residents. Only an emergency road shall be provided that connects with Ahulani Street shall be provided.

Generally, the 72 residential lots proposed by this project shall have a minimal effect to the overall traffic conditions to the roadway system. Upon enactment and implementation of the roadway system proposed in the "K to K Plan", a system of roadways shall be available to residents in the area.