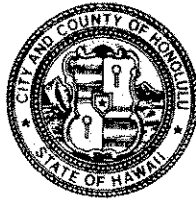


DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU

715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 527-5311 • FAX: 527-5498

MUFI HANNEMANN
MAYOR



DEBORAH K. MORIKAWA
ACTING DIRECTOR

JOHN R. SABAS
DEPUTY DIRECTOR

January 20, 2005

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

RECEIVED
JAN 26 11:48
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

Dear Ms. Salmonson:

Chapter 343, HRS and NEPA
Final Environmental Assessment (FEA)
Piikoi Vista

Applicant: Hawaii Housing Development Corporation
Landowner: Hawaii Housing Development Corporation
Agent: Kusao & Kurahashi
Location: 1326 Piikoi Street
Honolulu, Hawaii 96814
Tax Map Key: (1) 2-4-12: 026
Request: Use of federal and county funds (HOME Investment Partnerships)
Proposal: Development of 47 affordable rental units for senior citizens.

Enclosed, please find four (4) copies of the above-referenced Final Environmental Assessment, which is prepared pursuant to Chapter 343, HRS and NEPA (24 CFR 58 for U. S. Housing and Urban Development – funded proposals). We accept the Final EA as adequate documentation for a Finding of No Significant Impact (FONSI). Also enclosed are a completed OEQC Bulletin Publication Form for the document, and its related project summary on both disk (WORD) and hard copy.

We request publication of a notice of this document in The Environmental Notice.

Questions regarding this matter may be directed to Mr. Keith Ishida at 527-5092.

Sincerely,

Handwritten signature of Deborah K. Morikawa in cursive.

DEBORAH K. MORIKAWA
Acting Director

Attachments

2005-02-08 FONSI
PIIKOI VISTA AFFORDABLE ELDERLY APARTMENTS

FEB - 8 2005

FILE COPY

FINAL ENVIRONMENTAL ASSESSMENT

**PIIKOI VISTA
AFFORDABLE ELDERLY RENTAL APARTMENT DEVELOPMENT
1326 Piikoi Street, Honolulu, Hawaii 96814**

TAX MAP KEY: 2-4-12: 026

**by its General Partner PIIKOI VISTA L.P.
HAWAII HOUSING DEVELOPMENT CORPORATION**

**Randolph G. Moore, Board Chair
Gary S. Furuta, Project Manager
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813**

APPLICANT/GRANT RECIPIENT

**City and County of Honolulu
Department of Community Services
715 S. King Street, Suite 408
Honolulu, Hawaii 96813**

Accepting Agency/Responsible Entity

**Deborah K. Morikawa, Acting Director
Certifying Officer**

**Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822**

Keith H. Kurahashi, Agent/Preparer

JANUARY 2005

FINAL ENVIRONMENTAL ASSESSMENT

**PIIKOI VISTA
AFFORDABLE ELDERLY RENTAL APARTMENT DEVELOPMENT
1326 Piikoi Street, Honolulu, Hawaii 96814**

TAX MAP KEY: 2-4-12: 026

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Keith H. Kurahashi, Agent/Preparer

JANUARY 2005

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CORRECTION

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FINAL ENVIRONMENTAL ASSESSMENT

**PIIKOI VISTA
AFFORDABLE ELDERLY RENTAL
APARTMENT DEVELOPMENT
Oahu, Hawaii
TAX MAP KEY: 2-4-12: 26**

I. INTRODUCTION

The applicant/grant recipient, Hawaii Housing Development Corporation, proposes to develop an eight-story affordable elderly rental apartment building, known as Piikoi Vista on a 10,809 square foot lot, immediately adjacent to Kinau Vista, an affordable elderly rental apartment building now under construction. Piikoi Vista will be developed in accordance with the requirements of Chapter 201G of the Hawaii Revised Statutes (HRS), as amended. The eight-story building will provide 47 one-bedroom affordable rental units, 20 at grade parking stalls, two of which will be accessible stalls. Five of the parking stalls will be marked as visitor stalls. In addition to the 20 parking stalls a loading stall will be available. The proposed Piikoi Vista and adjacent Kinau Vista, now under construction, will share driveways with ingress and egress via Kinau Street as indicated in the plans provided in Appendix I. Three of the apartment units (two for mobility impaired and one for vision/hearing impaired) will be accessible to persons with disabilities. All other units will be adaptable. Amenities will include the availability of a multi-purpose room, laundry facilities, approximately 2,500 square feet of open space, part of which is planned as a Victory Garden for the enjoyment of the residents. The resident manager of the adjoining Kinau Vista Apartments will also manage

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

and service the needs of residents in the proposed Piikoi Vista Apartments. The developer intends to provide a limited assisted living component that will be offered on an as needed basis to minimize the cost for these services to individual residents of the complex. The proposed elderly affordable rental apartment building is for elderly residents' (i.e., 62 and older) who earn at or below 50% and 60% of the area median income (AMI).

The Final Environmental Assessment Report for the development of this multi-story affordable elderly rental apartment building is prepared pursuant to and in accordance with the requirements of Chapter 343 HRS and Chapter 200 of Title 11, Administrative Rules - Environmental Impact Statement Rules and 24 CFR 58.36. The action that triggers this assessment is the proposed use of Federal, State and City funds for the development at 1326 Piikoi Street, Honolulu, Hawaii. All adjoining property owners were notified by letter dated February 11, 2004 of the proposed project and of the developer's presentation before the Makiki/Lower Punchbowl/Tantalus Neighborhood Board No.10 on the evening of February 19, 2004. Keith Kurahashi presented the project detailing the physical facility, financial qualifications, the proposed services to be offered to Piikoi Vista residents, along with information on funding. The Board Chair thanked him for his presentation. No vote was taken by the Board. Please refer to Appendix II.

The proposed affordable elderly apartment use is a permitted use in the A-2 Medium Density Apartment District of Honolulu under the Land

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

Use Ordinance (Section 7.80-4) as shown on Exhibit 1, Location and Zoning Map.

II. GENERAL INFORMATION

- A. Project Name : Piikoi Vista
- B. Developer/Applicant/
Grant Recipient : Hawaii Housing Development Corp.
725 Kapiolani Blvd., Suite C-103
Honolulu, Hawaii 96813
Randolph G. Moore, Board Chair
- C. Project Representative : Mr. Gary S. Furuta, Project Manager
Phone: 429-7815
- D. Recorded Fee Owner : Hawaii Housing Development Corp.
725 Kapiolani Blvd., Suite C-103
Honolulu, Hawaii 96813
- E. Accepting Agency/
Responsible Entity : Department of Community Services
City and County of Honolulu
715 S. King Street, Suite 311
Honolulu, Hawaii 96813
- F. Certifying Officer : Deborah K. Morikawa, Acting
Director
- G. Tax Map Key : 2-4-12: 026
- H. Agent/Preparer : Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

- I. Location : Phone: (808) 988-2231
1326 Piikoi Street
Honolulu, Hawaii 96814
- J. Estimated Total Project Cost : \$8,295,000.00
- K. Lot Area : 10,809 square feet
- L. Zoning : A-2 Medium Density Apartment District (Exhibit 1)
- M. State Land Use : Urban
- N. Development Plan
- Land Use Map : Medium Density Apartment, (Exhibit 2)
 - Public Facilities Map : No improvements affecting the development site (Exhibit 3)
- O. Special District : Not in Special District
- P. Existing Use : Vacant
- Q. List of Agencies Consulted (Pre-Draft EA) :

During the pre-consultation phase prior to development of the Draft EA meetings were held with the Department of Planning and Permitting (DPP) and the City Administration. In addition, the architect contacted the Board of Water Supply (BWS) and the contractor contacted the Wastewater Branch of DPP. Contacts were

CORRECTION

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Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

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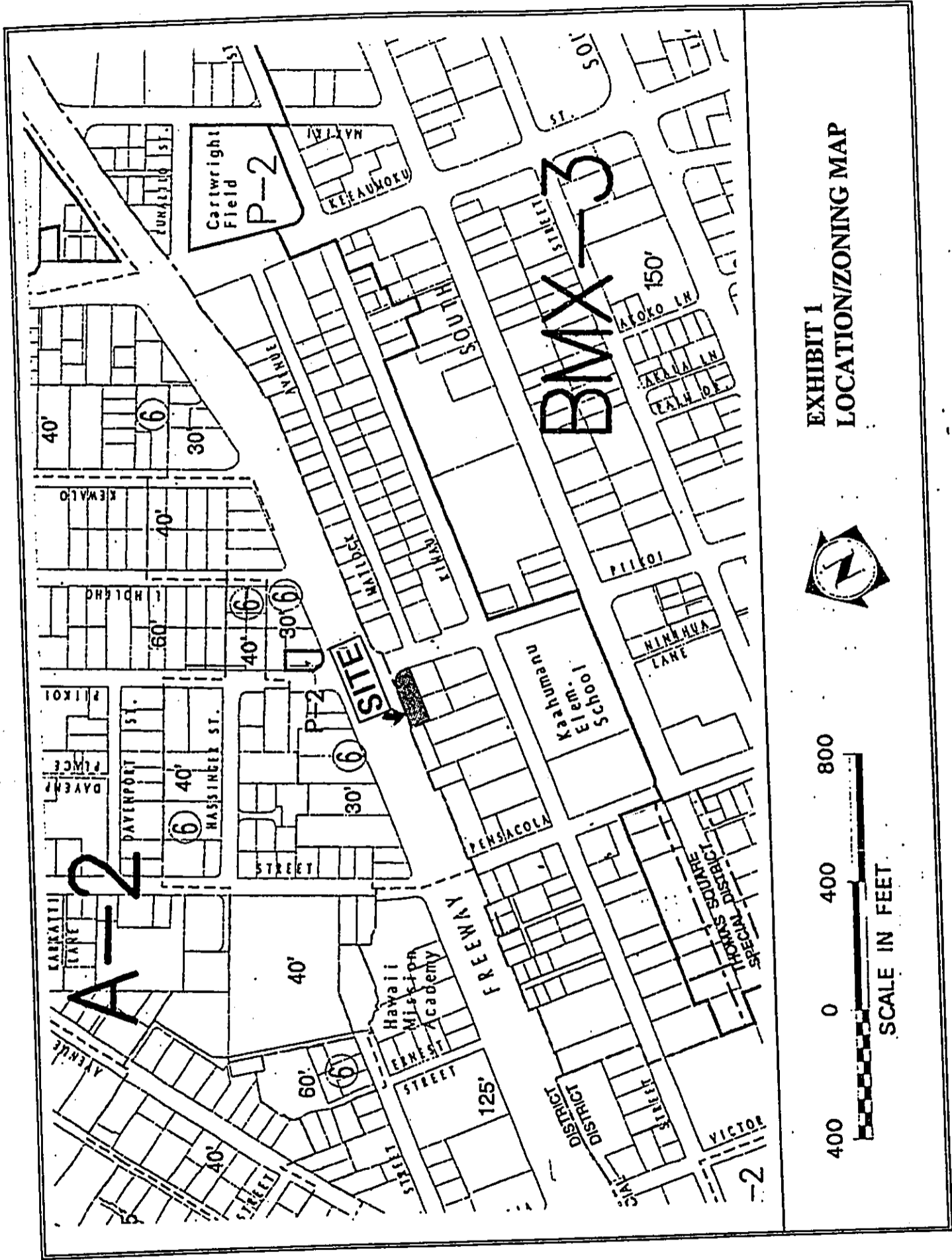


EXHIBIT 1
LOCATION/ZONING MAP



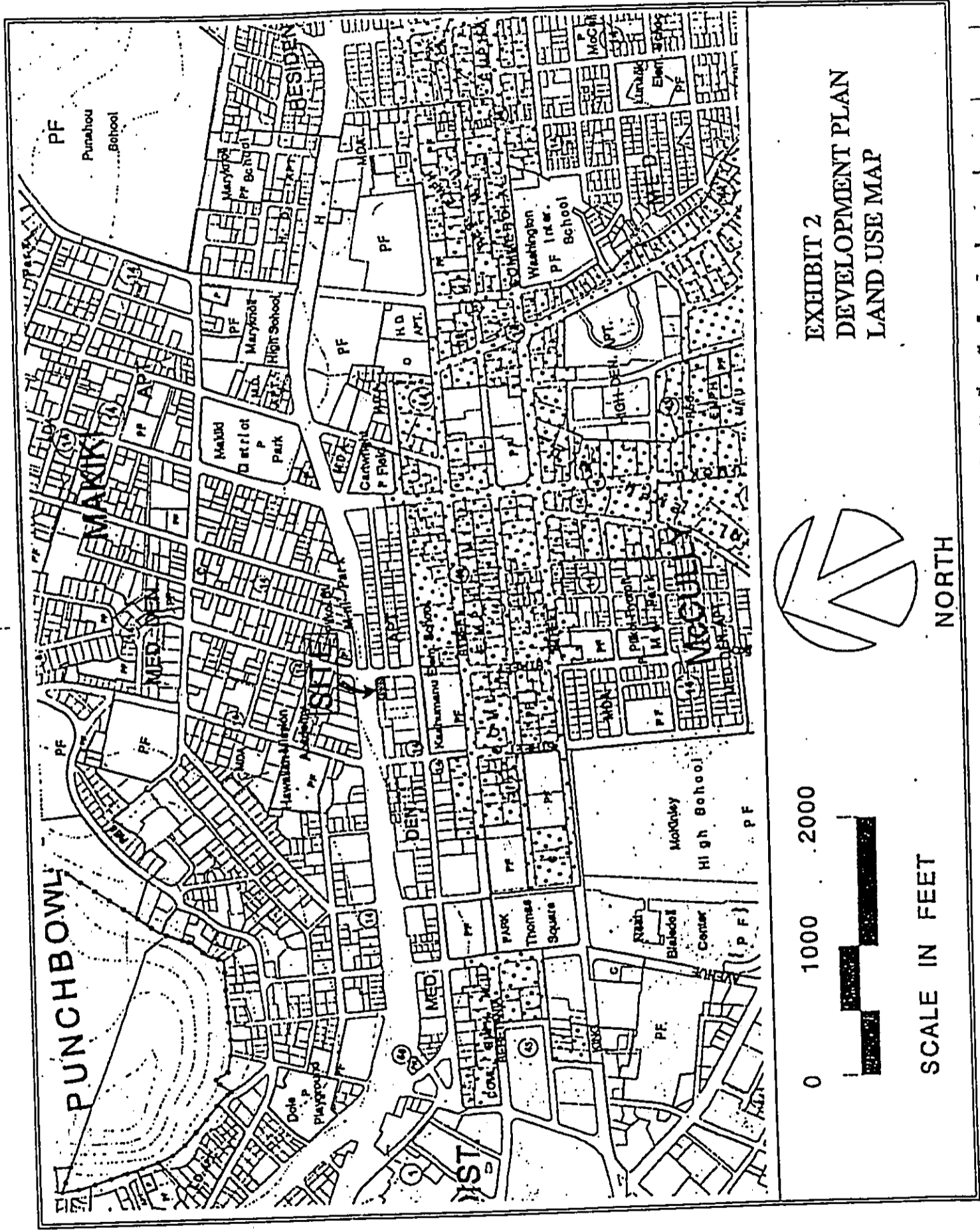
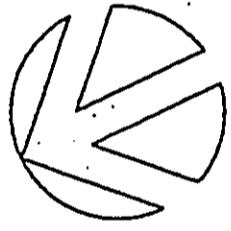


EXHIBIT 2
DEVELOPMENT PLAN
LAND USE MAP



NORTH

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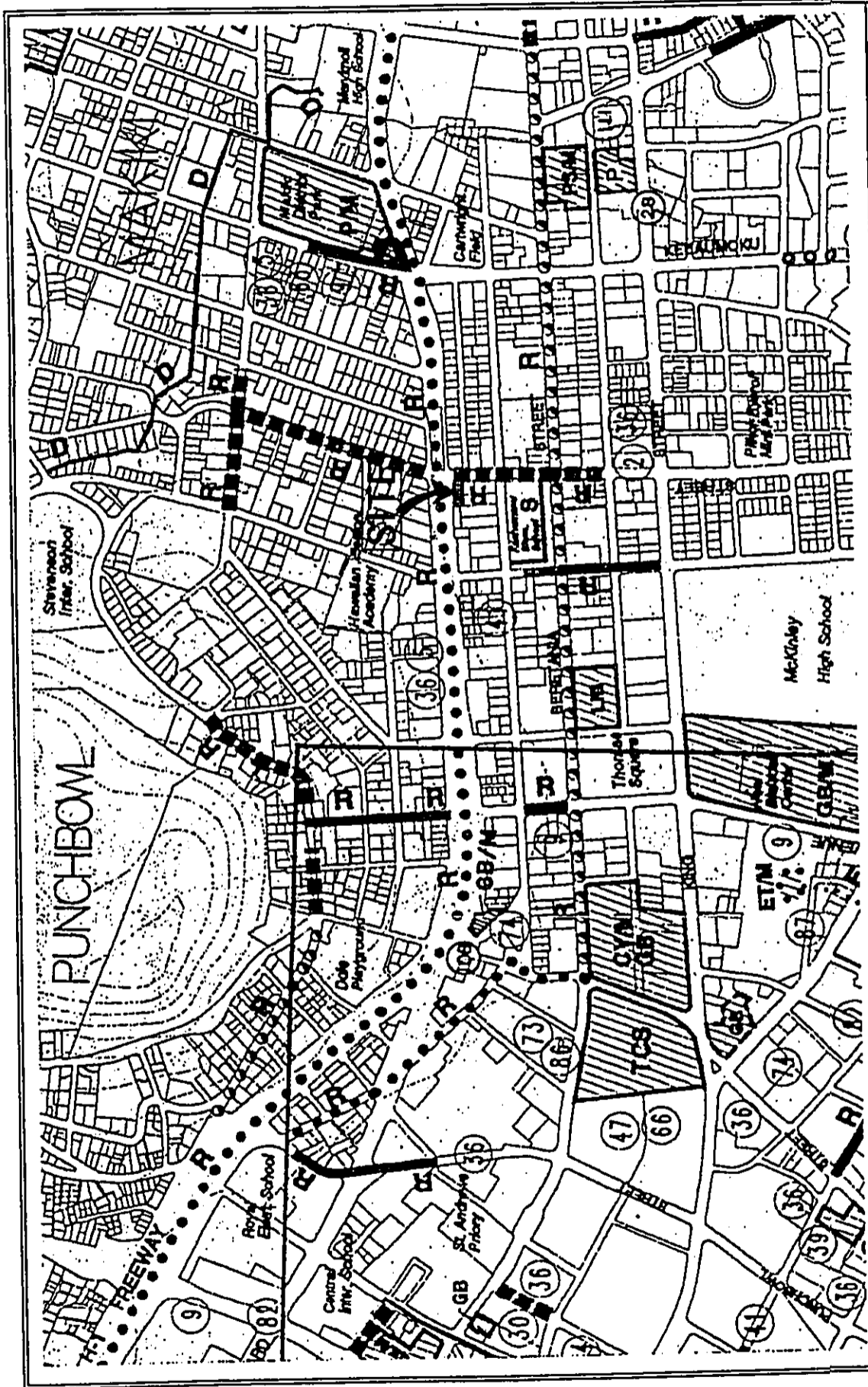
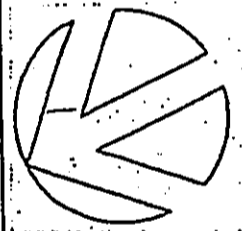


EXHIBIT 3
DEVELOPMENT PLAN
PUBLIC FACILITIES MAP



NORTH

0 1000 2000



SCALE IN FEET

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

made with the State Water Resource Management Office, the Federal Environmental Protection Agency (EPA) and the Federal Commission on Water Resources.

- R. List of Community Groups Consulted (Pre-Draft EA): Makiki/Lower Punchbowl/Tantalus Neighborhood Board No. 10
Hawaii Community Reinvestment Corporation

- S. List of Agencies Commenting on Draft EA
(Please refer to Appendix XII for Comments and Responses)

City	:	Department of Facility Maintenance Department of Parks and Recreation Board of Water Supply Department of Planning and Permitting -Land Use Permits
Division;		Traffic Review Branch; Site Development Division
State	:	Office of Environmental Quality Control Department of Business, Economic Development & Tourism, Land Use Commission Department of Land and Natural Resources, Land Division - Engineering Division; Oahu District Land Office; State Parks Division; Division of Forestry and Wildlife. Department of Land and Natural Resources - Historic Preservation Division. Senator Carol Fukunaga, 11 th District

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

Federal : Department of the Army, Regulatory Branch.

III. DESCRIPTION OF PROPOSED ACTION

A. STATEMENT OF PURPOSE AND NEED FOR THE PROPOSAL

1. Purpose

Data@Work, Inc. a market research firm that specializes in analyzing residential real estate markets for developers, has been retained by the Hawaii Housing Development Corporation, General Partner of Piikoi Vista L.P., to perform a study analyzing the market for affordable senior rentals in Honolulu. The market study dated March 1, 2004, and titled, "Piikoi Vista - Affordable Senior Housing Market Study", focuses on the historical, current, and projected rental market conditions and trends to help forecast the absorption for the proposed project.

".....Given the magnitude of the potential demand, we foresee that this project will receive a sufficient number of rental applications to be able to achieve 100% occupancy within the first six months of availability. We support this forecast with further evidence that the demand side of the market is strong and will continue strong for the next 1-2 years

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

(barring any external shocks to the market, and/or the economy). The global economy is poised to grow at a much higher rate in the next 1-2 years than it has over the last 1-2 years. Furthermore, those economies that are the key to Hawaii's economy (Hawaii's major markets for recreational, national security and other goods and services) are also looking to experience strong growth (Japan and the US).

On the supply side, we see continued tightening in the market rate rental market. We also see no new construction targeting this market segment, the affordable rental market for senior citizens looking for a residence suitable for aging-in-place. Finally, we point to the zero vacancies and the long waiting lists at the existing comparable projects that subsidize the rents for low-income elderly households.

Thus, we see a level of current demand (26,068 households in 2003, potential demand) that is above and beyond the supply (4,509 rental units serving elderly renters at affordable rent levels). If there is a growth in the population due to better elderly services and lifestyles on Oahu, that immigration from both the neighbor islands and the Pacific Basin could place an additional burden on the supply of affordable senior rentals.

Summary & Projections: In sum, the combination of the

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

new and existing rental demand was estimated as being well over the quantity needed to achieve full occupancy for the project. Given that, we predicted that the project should be able to achieve similar rental rates of other affordable rental projects and be able to reach final occupancy within a six to twelve month period after the project has been completed.”

2. Need

The proposed affordable elderly rental apartment building will service the needs of elderly residents’ (i.e., 62 and older) who earn at or below 50% and 60% of the area medium income (AMI). Income limits for one and two person households earning 50% and 60% of median income are shown below:

Household Size	50% AMI	60% AMI
1	\$23,000	\$27,600
2	\$26,300	\$31,550

The development also hopes to provide a service similar to an assisted living component that will be offered on an “as needed basis” to minimize the maintenance cost for our senior residents who fall within the low income category of 50% and 60% of the AMI. The purpose of providing these services is to foster the “aging in place” concept and help the individuals manage living in their own apartments and community

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

environment for as long as possible and as independently as possible. More details on the purpose and need for this project are listed in the following chapter.

B. GENERAL DESCRIPTION

1. Proposed Development

The proposed development will provide rental units affordable to elderly residents (i.e., 62 and older) who earn at or below 50% and 60% of the area median income (AMI). The concept of aging in place will be promoted by this development and seniors will be able to enjoy the company of friends and neighbors until age and/or illness place them in a position of requiring 24-hour care that is provided by long term care facilities. The development also hopes to provide a service similar to an assisted living component that will be offered on an "as needed basis" to minimize the maintenance cost for individual residents of the complex. The development planned for seniors in the low income category will try to minimize maintenance cost by developing individual programs of assistance for the seniors as they need it. The applicant has a Memorandum of Understanding with the Catholic Charities of the Diocese of Honolulu and more specifically with its Elderly Services group to come to an agreement on the services that they will provide. The Catholic Charities Elderly Services

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

group is expected to make available the following services:

- i. Case Management - which is the comprehensive, holistic approach to the planning delivery of services to meet the client's needs.
- ii. Set up classes for social, educational, and/or health needs - to prevent the social isolation of the residents and to foster preventive measures for health related areas.
- iii. Provide chore services, such as light housekeeping.
- iv. Provide transportation - to doctors, other medical, entitlement, or financial appointments.
- v. Provide a shopping service - assist clients by doing their marketing (food shopping) or other shopping for them.
- vi. Money management - help with direct deposits, check writing and bill paying.
- vii. Arrange for personal care or health related needs - including bath assistance, assistance with other daily hygiene requirements, nurse monitoring and other daily activities that a resident requires assistance with. This may also include having doctors, nurses and other health practitioners come to the site to speak or to provide health related services, including blood pressure and cholesterol screening, and podiatry services.
- viii. Establish linkages with all agencies and service providers in the community.
- ix. Develop a directory of providers for use by project staff

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

- and residents and referring and linking residents to service providers in the community.
- x. Educate residents on service availability, application procedures (including food stamps, rent rebates, Supplemental Security Income, Medicare, prescription assistance, energy assistance, etc.) client rights, and other relevant issues.
 - xi. Develop case plans in coordination with assessment services.
 - xii. Monitor the ongoing provision of services from community agencies.
 - xiii. Set up volunteer support programs with service organizations.
 - xiv. Help the resident build informal support networks with other residents, family and friends.
 - xv. Educate project staff on issues related to aging in place and service coordination.
 - xvi. Assess residents' functional abilities so that the appropriate case plans can be development.
 - xvii. Increase social interactions among residents and decrease isolation by some through the promotion of social activities and encouraging greater participation by all residents.

The multi-purpose room will serve as the focal point for the classes and services being offered and will provide a gathering place for the residents to socialize, enjoy

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

classes, and participate in other activities.

The multi-purpose room will also be available as a congregate dining room and meal service may be offered and provided by an agency network provider as requested, or the many neighboring restaurants located near Piikoi/Young Street, including Wisteria and Zippy's among many others. If there is enough demand, a daily meal delivery service from the surrounding restaurants may be operated.

The purpose of providing these services, on a non-denominational basis, is to foster the "aging in place" concept and help the individuals manage living in their own apartments and community environment for as long as possible and as independently as possible.

The proposed eight story Piikoi Vista development will consist of 47 one-bedroom units. The building will be approximately 78 feet tall, whereas 150 feet is the allowable height in this A-2 Medium Density Apartment District. Three of the apartment units (two for mobility impaired and one for vision/hearing impaired) will be accessible to persons with disabilities. All other units will be adaptable. There will be 20 at-grade parking stalls, two of which will be accessible stalls. Five of the parking stalls will be marked as visitor stalls. In addition to the 20 parking stalls one loading stall will be

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

available, please refer to plans provided in Appendix I. The apartment units will each measure approximately 420 square feet in size. The applicant will provide all 47 of the apartment units, (100%), as affordable units for rent to households at or below 50% and 60% of the AMI. In addition to the apartment units, the development will include an Entry Lobby, along with the Mechanical and Electrical Rooms on the ground floor. A Multi-Purpose Recreational Room and Kitchen of approximately 430 square feet will be located on the 8th floor, along with an adjoining Managers Office, Case Worker's Office, Restroom, and Laundry Room.

In addition to the indoor common areas, the exterior open space area of approximately 2,070 square feet will include a Victory Garden and a Private Park area. The concept of a victory garden has been used successfully in similar elderly rental projects built by this developer. The well-being of the elderly residents can be greatly enhanced by offering them the amenities of such a garden. Benches and picnic tables will also be provided within the private park and victory garden areas to allow the residents a place to relax and socialize with their fellow residents and nearby neighbors.

The building will have a landscape front yard setback of 10 feet along Piikoi Street, except for a corner of the access

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

aisle behind parking stall No. 6. The building will be setback 10 feet from Papaku Place. However, the handicap parking (stalls 4 and 5) and center access aisle and parking stalls Nos. 1 through 3 will encroach into the 10-foot front yard by approximately 7.5 feet. The Mechanical Room will encroach into the 10-foot front yard by approximately 7.5 feet in order to accommodate telephone and cable vision connections. The west side of the property will meet the 10-foot setback except for the Piikoi Vista loading stall, located on the Kinau Vista parcel, that will encroach approximately 5 feet into the side yard. Parking stalls No. 6 through 18 will encroach approximately 4 feet 8 inches into the required 10-foot side yard. Please refer to Appendix VIII - Major Exemptions Being Requested Through the 201G Application.

The landscape treatment for Piikoi Vista development will consist of six medium canopy trees in the planting areas along Papaku Place and Piikoi Street to minimize the visual impact of the structure. Ten additional medium canopy trees will be located within the parking area, near the west and south side of the property, with ground cover and lawn in appropriate locations within the open space of the property. A minimum 2-foot hedge is planned along the property line on Piikoi Street and Papaku Place to help screen surface parking and to give

Final Environmental Assessment
Piikoi Vista An Affordable Elderly Rental Development

privacy to residents resting or socializing within the open areas. The irrigation system will be connected to an existing water line that is designed to provide adequate water coverage to all planting areas. Reclaimed water will not be used for landscaping. The new automatic irrigation system will consist of spray heads and drip emitters. The landscape sprinkler system will be divided into zones, meaning, separate watering schedules in order to conserve and better manage our water supply.

2. Location

The development site is located at 1326 Piikoi Street in the Primary Urban Center of Honolulu. It is further located within the Makiki/Lower Punchbowl/Tantalus Neighborhood Board District, No. 10.

It is adjacent, on its south side to Kinau Vista, an affordable elderly rental development recently approved by the Honolulu City Council and presently under construction. It is the intent of the developer to jointly manage both the Kinau Vista Apartments and the proposed Piikoi Vista Apartments and both apartment buildings will share ingress and egress via Kinau Street. Immediately north of the project site is Papaku Place, a short street serving as ingress and egress to 1139 Papaku Place. The east property line fronts Piikoi Street at the Piikoi Street Papaku Place intersection. The west property line

adjoins 1139 Papaku Place, a residential parcel with two homes located on the property.

3. **Surrounding Area/Existing Conditions and Trends**

The site is situated at the Piikoi Street and Papaku Place intersection on the south west corner of the intersection. Lunalilo Street and the overhead H1 Freeway (with a postal vehicle parking lot below) run parallel to Papaku Place that is adjacent to the subject site on its north side. Kinau Vista Apartments is under construction immediately south of the subject property along with an existing two-story duplex building and an existing two-story single family home. The east side of the property fronts Piikoi Street at the Piikoi Street/Papaku Place intersection. Its west side adjoins a private residence. The greater surrounding area is developed with a mix of commercial, residential and apartment uses. Also, in the greater surrounding area are public uses, industrial uses, churches and parks. Numerous small businesses are in the area, as well as supermarkets and affordable residential apartments. Kaahumanu School is located south of the subject property on Kinau Street. The Makiki District Post Office is located within walking distance on the corner of Pensacola and Lunalilo Street, west of the subject property. First Hawaiian Bank and Safeway are located two to three short blocks away,

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immediately south of the development site. Wisteria and Zippy's Restaurants are located two to three blocks away near Piikoi/Young Street. Kaiser Permanente Honolulu Clinic is about three to four blocks away at Pensacola/Young Street. Times Super Market is located about one and a half-blocks east of the development site. A Seven/Eleven store is located just across the intersection of Kinau Street and Piikoi Street.

The proposed rental apartment use of the site is a permitted use that is compatible with the surrounding uses.

Should the proposed affordable elderly rental apartment not be developed, the project site will probably be developed with a "for sale" condominium.

4. Land Use Approvals

a. State Land Use

The development site is designated Urban under state land use and the proposed affordable rental apartment development is consistent with this designation.

b. Development Plan

The affordable elderly apartment development site is designated medium density apartment on the existing Primary Urban Center (PUC) Development Plan Land Use Map. The affordable elderly apartment is consistent

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with this medium density apartment designation.

No improvements affecting this site appear on the Development Plan Public Facilities map. However, there is a plan for additional right of way on Piikoi Street in the “beyond six year category”.

The proposed affordable elderly rental apartment development is also consistent with the proposed Primary Urban Center (PUC) Development Plan for the following reasons:

- i. The property is designated High-Density Residential Mixed Use on the proposed PUC Development Plan.
- ii. Section 3.3.2, “Policies” recognizes the need to support development of affordable housing in the policy to “Provide incentives and cost savings for affordable housing. Provide exemptions from zoning and building codes for housing projects that meet established standards of affordability, on a case-by-case basis.”

The affordable elderly rental apartment development is following this policy through the processing of a 201G permit application. Although the project is well below the existing

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height limit (150 feet) for the site, it will exceed the 60-foot height limit proposed by the proposed PUC Development Plan. The height of the proposed apartment, however, is in keeping with the heights of three of the four lots located west of the project site and two lots east of the project site on Kinau Street. It is also in keeping with the height of Kinau Vista Apartments located adjacent to the subject property.

c. Zoning

The development site is zoned A-2 Medium Density Apartment District. The proposed affordable rental apartment use is consistent with this zoning designation. It is located in a concentrated urban area where public services are centrally located and infrastructure capacities are adequate. In order to accommodate the provision of 100% of the rental units at affordable rates, Piikoi Vista will remain affordable for 61 years and the applicant will be requesting exemptions from certain design standards of the A-2 Medium Density Apartment District in the processing of the Chapter 201G, HRS, permit application. Please refer to Appendix VIII.

C. TECHNICAL CHARACTERISTICS

1. Use Characteristics

The applicant will provide all 47 rental apartment units (100%), to those residents (i.e., 62 and older) who fall within 50% and 60% of the area median income (AMI).

The proposed rental rates are as follows: Thirty-eight units within the proposed development will be rented at the 50% and below AMI levels. The initial gross rent for these apartments will be \$611.00 per month, compared to HUD's maximum of \$616.00 per month. Nine units within the proposed development will be rented at the 60% and below AMI levels, with an initial gross rent of \$733.00 per month, compared to HUD's current maximum gross of \$739.00 per month for this income level.

2. Physical Characteristics

The proposed development will include a new 8-story concrete building consisting of 47 one-bedroom units and 20 at grade parking stalls that includes two van accessible stalls plus one loading stall. Five of the parking stalls will be marked as visitor stalls. A rendering, site plan, floor plans and elevation plans of the 8-story elderly affordable rental apartment building are provided in Appendix I.

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All of the rental units will be affordable to elderly residents (i.e., 62 and older). In addition to the apartment units, the development will include a Private Park, Victory Garden, and the Mechanical and Electrical Rooms on the ground floor. A Multi-Purpose Room of approximately 430 square feet with a full kitchen and an adjoining restroom will be located on the 8st floor. A full service laundry room will also be located on the 8th floor.

The apartment building will be designed to incorporate energy saving light fixtures, energy efficient window air conditioning (optional), energy efficient hot water heaters, and low flow plumbing fixtures.

The elderly affordable rental apartment building, with a finished height of approximately 78 feet will be well below the maximum height limit of 150 feet for this A-2 Medium Density Apartment District.

Access to Piikoi Vista will be via Kinau Street through the Kinau Vista parking lot with the driveway facilitating easy access to and from both buildings and parking spaces. Access to Piikoi Vista loading space will be via Kinau Street for vehicles with clearance of 7 feet-8 inches or less. Vehicles that exceed a vertical clearance of 7 feet-8 inches will access the loading space via the Piikoi Street access easement. This is

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necessitated due to the 7 feet-8 inch height clearance under the building beam at the mauka end of Kinau Vista. The Piikoi Street access easement will remain chained at all times at the Kinau Vista property lines, and will be opened by the resident manager only when needed. Entrance to the Lobby/Elevator will be directly from the parking lot. The at-grade parking will contain 20 parking spaces, 2 of which will be van accessible stalls.

A total of approximately 2,500 square feet of open/recreational space area will be provided on the development site, to include a private park of approximately 1,110 square feet and a victory garden of approximately 1,028 square feet, for use by the residents. The concept of a victory garden has been used most successfully in similar elderly rental developments built by this developer. The well-being of the elderly residents can be greatly enhanced by offering them the amenities of such a garden. A multi-purpose room of approximately 430 square feet that includes a full kitchen, will also be provided on the 8th floor for socialization and recreational activities, in addition to other uses.

The landscape treatment for Piikoi Vista Apartments will consist of six medium canopy trees in the planting areas along Papaku Place and Piikoi Street to minimize the visual impact

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of the structure. Ten additional medium canopy trees will be located within the parking area, near the west and south side of the property. Lawn and ground cover will be located in appropriate locations within the open areas. Please refer to Appendix 1 - Site Plans and Landscape Plan. A minimum 2-foot hedge is planned along the property line on Piikoi Street and Papaku Place to help screen surface parking and the loading area and also to give privacy to tenants socializing in the nearby open lawn area. Within the Victory Garden, garden plots will be set up as needed to allow the elderly residents to enjoy gardening and the growing of various types of vegetables, fruit and/or ornamental plants. The well being of the elderly residents will be greatly enhanced in this effort, through their physical effort in caring for the growing plants and the social interaction that would take place with their neighboring gardeners.

The total floor area for the development will be approximately 29,029 square feet, with each one-bedroom unit consisting of approximately 420 square feet. The ground floor lobby, electrical room and mechanical room will consist of approximately 800 square feet. The multi-purpose room on the 8th floor will measure approximately 430 square feet including a full kitchen with an adjoining restroom.

3. Construction Characteristics.

The development will be constructed over a nine month to one-year period. Construction will begin as soon as the applicant is able to receive approval of the development by the City, including building permit approvals.

The development will be built at or near existing grade. Excavation for the development should be limited to the footings and foundation of the structure.

Dust control measures appropriate to the situation will be employed by the contractor, including where appropriate, the use of water wagons, erection of dust barriers and other methods for minimizing dust.

IV. IMPACTS

A. DEMOGRAPHIC IMPACTS

1. Residential Population

The development will provide 47 one-bedroom affordable elderly rental apartment units. These units could support a resident population of 47 or more.

The General Plan Population Guidelines establish a population range for the Primary Urban Center Development Plan Area for the Year 2010 of between 450,800 and 497,800

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persons. In 2000 the actual population for the Primary Urban Center was 419,338. The additional population supported by this development will help the Primary Urban Center in reaching the population range planned in the Year 2010.

Data@Work, Inc. a market research firm that specializes in analyzing residential real estate markets for developers, has been retained by the Hawaii Housing Development Corporation, General Partner of Piikoi Vista L.P., to perform a study analyzing the market for affordable senior rentals in Honolulu. The market study dated March 1, 2004, and titled, "Piikoi Vista - Affordable Senior Housing Market Study", focuses on the historical, current, and projected rental market conditions and trends to help forecast the absorption for the proposed project.

".....Given the magnitude of the potential demand, we foresee that this project will receive a sufficient number of rental applications to be able to achieve 100% occupancy within the first six months of availability. We support this forecast with further evidence that the demand side of the market is strong and will continue strong for the next 1-2 years (barring any external shocks to the market, and/or the economy). The global economy is poised to grow at a much higher rate in the next 1-2 years than it has over the last 1-2

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years. Furthermore, those economies that are the key to Hawaii's economy (Hawaii's major markets for recreational, national security and other goods and services) are also looking to experience strong growth (Japan and the US).

On the supply side, we see continued tightening in the market rate rental market. We also see no new construction targeting this market segment, the affordable rental market for senior citizens looking for a residence suitable for aging-in-place. Finally, we point to the zero vacancies and the long waiting lists at the existing comparable projects that subsidize the rents for low-income elderly households.

Thus, we see a level of current demand (26,068 households in 2003, potential demand) that is above and beyond the supply (4,509 rental units serving elderly renters at affordable rent levels). If there is a growth in the population due to better elderly services and lifestyles on Oahu, that in-migration from both the neighbor islands and the Pacific Basin could place an additional burden on the supply of affordable senior rentals.

Summary & Projections: In sum, the combination of the new and existing rental demand was estimated as being well over the quantity needed to achieve full occupancy for the project. Given that, we predicted that the project should be

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able to achieve similar rental rates of other affordable rental projects and be able to reach final occupancy within a six to twelve month period after the project has been completed.”

2. Visitor Population

The development will have no impact on the visitor population.

3. Character or Culture of the Neighborhood

The vacant property is located in an urban setting. The site is surrounded by condominiums, apartment structures, single family homes, Kaahumanu School, numerous small commercial buildings, and right next door construction is underway on the Kinau Vista Apartments, an affordable elderly apartment development.

The proposed rental apartment use of the site is in keeping with the existing character of this neighborhood and is compatible with the surrounding condominium and apartment uses.

4. Displacement

The subject property has been a vacant lot for a number of years, therefore, there will be no displacement of dwelling units due to the proposed development.

B. ECONOMIC IMPACTS

1. Economic Growth

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As a rental apartment development Piikoi Vista development will have primarily a secondary effect on economic growth by providing short-term construction jobs. The development will also provide a limited amount of long-term, full time employment for a resident manager (shared with Kinau Vista Apartments, next door), security guard and maintenance personnel.

2. Employment

As mentioned earlier the development will provide short-term construction jobs and a few long-term jobs in the form of a resident manager (shared with Kinau Vista Apartments, next door), security guard and a maintenance person. The development will also benefit existing service contractors, e.g. elevator maintenance companies, security companies, alarm companies, appliance companies etc., as well as businesses in the area.

3. Government Revenues/Taxes

Tax revenues will be generated by the short-term construction work and also modest revenues by the long-term employment.

The fee exemptions requested in the 201G application to the City and County of Honolulu are as follows:

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	<u>Approximately</u>
a. Building Permit Fee	- \$25,115.00
b. Real Property Tax	- \$20,000/yr.
c. GE project development	- \$336,000.00
d. GE operation expense	- \$11,000/yr.
e. DPP Filing Fee for CUP for Joint Development of Kinau Vista and Piikoi Vista	- \$ 300.00

C. HOUSING IMPACTS

1. Increase Supply

Forty-seven affordable rental apartment units are planned for this development and they will increase the number of affordable rental units available to elderly residents in the Makiki/Lower Punchbowl/Tantalus neighborhoods of Honolulu.

2. Affordable Units

The applicant proposes that 100% of the rental apartment units will be affordable to those (i.e., 62 and older), who fall within the category, at or below 50% and 60% of the area median income (AMI).

D. PUBLIC SERVICES

1. Access and Transportation

Access to the development site will be via Kinau Street

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through the Kinau Vista driveway allowing for easy access to the parking spaces and lobby entrance.

Access to Piikoi Vista loading space will be via Kinau Street for vehicles with clearance of 7 feet-8 inches or less. Vehicles that exceed a vertical clearance of 7 feet-8 inch will access the loading space via the Piikoi Street access easement. This is necessitated due to the 7 feet-8 inch height clearance under the building beam at the mauka end of Kinau Vista. The Piikoi Street access easement will remain chained at all times at the Kinau Vista property line, and will be opened by the resident manager only when needed.

Prior to submittal of the construction plans and/or building permits, the applicant will obtain approval from the State Department of Transportation - Highways Division with regard to the proposed access onto Piikoi Street.

The proposed development may involve some short term construction disruption of traffic for transportation of construction equipment to and from the site and delivery of building materials to the site. The delays are normally of short duration and will end when the construction is completed.

There will be three times during which the developer anticipates traffic being impacted by this project: the initial site work, the eight separate days of slab pours spaced

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approximately two weeks apart, and final utility and driveway connections. During all three periods, the necessary warning signs and flag-men to control traffic will be utilized to ensure the public's safety. The contractor will coordinate any traffic issues with Captain Edward Nishi of District 1, phone number 529-3386.

All construction activity will be within the fenced project site and the only work outside of the site will be limited to utility and driveway construction near the end of the project. The construction site will be fenced on all four sides to prevent theft and vandalism. During non-working hours, the project site will be locked down to prevent entry onto the property.

A traffic management plan will be prepared prior to occupancy of the units to identify a "move in" schedule when tenants will be allowed to physically move furniture and other large items into the housing units, in order to minimize the number of larger vehicles on this section of Kinau and Piikoi Streets. The plan will identify the hours when the tenants will be permitted to move in, which will be scheduled outside the normal peak traffic periods.

Julian Ng, Incorporated has prepared a traffic assessment for the elderly affordable rental apartment development. The traffic assessment is titled "Traffic Assessment for Piikoi Vista

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(TMK: 1-2-4-12: 026) and Joint Development with Kinau Vista (TMK: 1-2-4-12: 09 & 26)" and dated January 29, 2004.

Please refer to Appendix III - Traffic Assessment.

The Traffic Assessment section "Summary" states as follows:

"The proposed Piikoi Vista development will have minimal impact to traffic conditions on Piikoi Street, Kinau Street, and the surrounding area. Estimated total daily impact is less than 200 vehicle trips (total of entering and exiting) on a typical weekday. Highest hourly volume in one direction (entering or exiting) is estimated to be less than 10 vehicles per hour, compared with the guideline suggested by the Institute of Transportation Engineers that 'a traffic access/impact study be conducted whenever a proposed development will generate 100 or more added (new) peak direction trips to or from the site during the adjacent roadway' peak hours or the development's peak hour.' "

"If jointly developed with the adjacent Kinau Vista site, the proposed developments are estimated to have a total daily impact of about 400 vehicle trips (total of entering and exiting) on a typical weekday. Highest hourly volume in one direction (entering or exiting) is estimated

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to be less than 20 vehicles per hour. Piikoi Vista and Kinau Vista are on adjacent parcels on a block surrounded by one-way streets; joint development of the two projects will provide alternatives for vehicular access, thereby mitigating circuitous routing for vehicular movements to and from the project site, as well as providing alternative routing to accomplish otherwise difficult movements out of the site driveway to Piikoi Street during certain hours of the day.”

Under Existing Traffic Conditions the Traffic Study further stated:

“The development sites are located near the signalized intersection of Kinau Street and Piikoi Street in Honolulu, Hawaii. Kinau Street is a four-lane minor arterial carrying one-way eastbound (kokohead bound) traffic. Apartment buildings and single family dwellings are the predominant uses along the street, and the Queen Kaahumanu Elementary School is located opposite the Kinau Vista development site on the south (makai) side of the street. The curb lanes are available for parallel parking, reducing Kinau Street to two lanes of traffic except during the PM Peak Period (3:30 PM to 5:30 PM on weekdays), when tow-away zones are in effect and all lanes are open to traffic.”

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“The Kinau Street approach to the intersection consists of four lanes. The first lane (left curb lane) is used for left turns to Piikoi Street only. The second lane is an option lane for left turns and through traffic remaining on Kinau Street. The third and fourth lanes carry through traffic only; the fourth lane, however, is normally a parking lane away from the intersection and is used to carry traffic only in the PM Peak Period. Drivers turning left use the curb lane if they are destined for Lunalilo Street. Drivers wishing to enter the H-1 Freeway eastbound or to continue mauka on Piikoi Street would use the second lane.”

“Piikoi Street near the project site varies in width from four to five lanes and curbside parking is not permitted at any time. Four lanes are provided for northbound (mauka bound) traffic across Kinau Street; a fifth lane is provided at this approach for right turns only to Kinau Street. North of Kinau Street, the pavement is wider and lanes are striped to transition the through lanes to the left, maximizing use of the pavement at the next intersection (Lunalilo Street), where two lanes are provided for left turn traffic only, a third left turn lane is used by left turns and through traffic, and two additional

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lanes are available for through traffic continuing mauka on Piikoi Street.”

“Existing traffic conditions at the intersection of Kinau Street and Piikoi Street are best described as congested during peak traffic hours and not much better at other times. The congestion, which occurs primarily on Piikoi Street, is caused by high traffic demand wishing to enter the H-1 Freeway westbound and the resulting traffic congestion along Lunalilo Street (one block away).”

“Due to the congestion in the area, most drivers on Piikoi Street select their lane according to their destination a block to two away. Drivers wishing to access the Makiki Post Office or other destinations south of Lunalilo Street use the first (left) lane of the approach to the Kinau Street intersection. The second lane leads directly into the lane that provides access to the westbound on-ramp to the freeway and carries the most traffic. The third lane leads to an option lane at the Lunalilo Street intersection one block away or to a through only lane; from the option lane, drivers can turn left onto Lunalilo Street or continue straight ahead on Piikoi Street. Traffic on Piikoi Street wishing to enter the freeway eastbound use the fourth lane.”

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“On Piikoi Street at its approach to Kinau Street, the highest hourly volume counted on a weekday in 1999 was over 2,100 vehicles per hour, between 4:30 PM and 5:30 PM. From 7:00 AM to 10:15 PM northbound traffic volume on Piikoi Street at Kinau Street was continuously at least 1,350 vehicles per hour. Peak hourly volume on Kinau Street at its approach to Piikoi Street also occurred in the hour ending 5:30 PM, when 968 vehicles per hour were counted. Hourly volumes on Kinau Street were at least 600 vehicles per hour from 6:45 AM to 7:15 PM (count data from City and County of Honolulu, Department of Transportation Services, count taken October 11-12, 1999).”

“Peak period traffic counts taken in the spring of 1999 at the intersection of Kinau Street and Piikoi Street as part of a study for the State Highways Division indicate that the first (left) lane on both streets is not heavily used. On Piikoi Street, 40 vehicles used the first (left) lane during the AM Peak Hour, compared to a total volume of 1,360 vehicles per hour across the five-lane Piikoi Street approach. In the PM Peak Hour, 135 vehicles were counted in the left lane, compared to a total approach volume of 2,105. On Kinau Street, 85 vehicles

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used the first (left) lane, out of a total volume of 960 vehicles at the approach during the AM Peak Hour. During the PM Peak Hour, 145 vehicles per hour out of a total approach volume of 1,350 vehicles used the first lane.”

Under Development Impact to Traffic, the Traffic Study further stated, in part:

“Driveway volumes generated by the proposed development were computed with factors from the widely-used Trip Generation report published by the Institute of Transportation Engineers. The factors and the traffic estimates for the proposed development are as follows:

Project Traffic Estimates				
	<u>from Trip Generation</u>		<u>Driveway volume</u>	
	<u>factor</u>	<u>% enter</u>	<u>Enter</u>	<u>Exit</u>
Average Weekday Traffic				
Kinau Vista				
elderly housing-attached,	3.48	50%	108	108
63 unit apartment, 1 unit	6.63	50%	3	3
Piikoi Vista				
elderly housing -attached 47	3.48	50%	82	82
units offices, 0.8 thousand sq.	11.57	50%	5	5
			198	198
Total development, Average Weekday				

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AM Peak Hour

Kinau Vista

elderly housing-attached,	0.07	63%	3	1
63, units apts. 1 unit	0.51	16%	0	1

<u>from Trip Generation</u>	<u>Driveway volume</u>
<u>factor</u> <u>% enter</u>	<u>Enter</u> <u>Exit</u>

Piikoi Vista

elderly housing-attached,	0.07	63%	2	1
47 units offices, 0.8	1.78	89%	1	0
thousand sq.				

Total development, AM Peak Hour	6	3
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PM Peak Hour

Kinau Vista

elderly housing-attached,	0.10	59%	4	2
63 units apts, 1 unit	0.62	67%	0	1

Piikoi Vista

elderly housing-attached,	0.10	59%	2	1
47 units offices, 0.8	1.72	15%	0	1
thousand sq.				

Total development, PM Peak Hour	6	5
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“The combined site peak hour volume (highest volume in one hour) would be about 9% of the daily volume, or 18 vehicles per hour. This volume is less than one-fifth of the volume usually associated with the increase needed in one lane to change an intersection’s level of service by one level. This maximum impact of 18

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vehicles per hour in one direction is substantially less than the "100 or more added (new) peak direction trips to or from the site during the adjacent roadways' peak hours or the development's peak hour" that is recommended by the Institute of Transportation Engineers for conducting a traffic study (from Traffic Access and Impact Studies for Site Development, A Recommended Practice, 1991)....."

".....In the case where vehicular access to the site were provided only through the Kinau Vista project, impacts to Piikoi Street would be eliminated. Project traffic, which are less than 10 vehicles per hour during peak hours and less than 20 vehicles per hour during non-peak hours, would have minimal impact to Kinau Street....."

Under Pedestrian Access the Traffic Study further stated:

"Pedestrian Access: Pedestrian access will be provided from Kinau Street and Piikoi Street, approximately one-half block from the intersection of the two streets. Concrete sidewalks exist or are being constructed along both streets, as well as on other streets in the area. Marked crosswalks are provided at signalized intersections (except that pedestrian crossing is prohibited across the mauka leg of Piikoi Street at Kinau street, due to conflicts with the two lanes of left turns).

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All permitted pedestrian crossing in the area are in marked crosswalks at intersections controlled by traffic signals.”

“The nearest bus stop is located on Beretania Street, approximately one and one-half blocks from the intersection of Kinau and Piikoi Streets. Other bus stops located within one-quarter mile of the sites are located on King Street and Pensacola Street.”

Under On-Site Parking Provisions the Traffic Study further states:

“The proposed Piikoi Vista will provide off-street parking at an approximate rate of 0.43 parking spaces per apartment. Taken together with Kinau Vista, the rate would be 0.45 parking spaces per apartment. The 1987 report *Parking Generation* by the Institute of Transportation Engineers shows an average rate of 0.27 peak parking spaces occupied per dwelling unit for Senior Citizen Multi-Family Residential use (range of rates 0.11 to 0.48). Locally, on-site parking ratios for other similar developments in urban Honolulu are shown in Table 2.”

The applicant is requesting an exemption from the number of parking stalls required by the Land Use Ordinance,

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based on an analysis of the projected parking generation provided by our traffic consultant, Julian Ng, Incorporated. This analysis has determined 0.43 parking spaces per dwelling unit, or 20 parking spaces, should be adequate for the use proposed rental apartments for the elderly. The Land Use Ordinance states that 1 parking space per unit (600 square feet or less) is required plus 1 guest parking space per 10 units.

The development may enjoy an even lower parking demand when developed because the senior affordable income group that this development will support is the group earning 50% and 60% below area median income (AMI). For a single senior at or below 50% AMI, the income limit is \$23,000 and for a family of two seniors it is \$26,300. For one senior at or below 60% AMI, the income limit is \$27,600, and for a family of two seniors it is \$31,550. The typical senior household is a single elderly female. With the advanced age of each resident and the limited income, the cost of maintaining and up-keeping a car, in addition to other living expenses, such as rent, food and clothing may be cost prohibitive.

Other factors which, in this development, will minimize the need for vehicles for elderly residents are its convenient location to major bus lines on Beretania Street and King Street; the many restaurants, small stores, banks and doctor's offices

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(Kaiser Permanente Honolulu Clinic) located near by; and the short walk to Times Super Market and Safeway Super Market located on Kinau and Beretania Streets, respectively.

In summary, it is projected that the proposed 47-unit rental apartment development will have minimal impact on traffic since it is anticipated that the majority of the elderly residents will not be driving. The 20 parking stalls being provided should be more than adequate to support the proposed apartment units.

As a note of interest, the Kalakaua Vista Affordable Elderly Rental Apartment building presently has 7 vacant stalls out of 29 tenant stalls, Wisteria Vista has 9 vacant stalls out of 32 tenant stalls, Birch Street Apartments has 9 vacant stalls out of 53 tenant stalls, and Artesian Vista has 1 vacant stall out of 12 tenant stalls. Guest stalls at the above four locations are over and above those figures listed above.

Bus transportation servicing the development site travels along Beretania Street and King Street. Pedestrian access will be provided from Kinau Street and Piikoi Street. Concrete sidewalks exist on both sides of Kinau Street and Piikoi Street, as well as on other streets in the area. Marked crosswalks are provided at signalized intersections (except that pedestrian crossing is prohibited across the north leg of Piikoi Street at

Kinau Street, due to potential conflict with left turns).

In addition to two van accessible stalls within the parking lot, a loading stall will be provided. Please refer to Site and Ground Floor Plans in Appendix I.

2. Water

The Honolulu Board of Water Supply (BWS) currently provides potable water for the development site. No off-site water improvements are needed to service the proposed development.

The design of the development will incorporate water efficient toilet fixtures, low flow shower heads and sink faucets, for water conservation.

The existing water system is adequate to accommodate the proposed apartment building, according to a BWS letter (Appendix IV, Agency Comments) dated February 19, 2004.

The average daily water consumption (demand) per day for the 47-unit apartment building will be approximately 4,700 gallons per day, based on an assumption of 2 persons per unit (although our experience is that most units will be single occupancy) and an average of 50 gallons per day per person of domestic water consumption. Additional water used for irrigation of landscaping and ground maintenance will be minimal.

3. Wastewater

The average daily wastewater flow expected to be discharged by the proposed development is estimated to be approximately 3,760 gallons per day based on the proposed rental apartment use. Wastewater calculations assumes 47 units, 2 persons per unit with an average of 40 gallons per day per person of wastewater flow. Please refer to Appendix IV for Sewer Connection Approval dated January 21, 2004.

Municipal wastewater service for the area is provided by an 8" wastewater transmission line on Kinau Street, and an 8" wastewater transmission line on Piikoi Street through an existing easement.

4. Drainage

The property is relatively flat and covered with rock, ground cover and shrubs. The proposed development will have street frontage on Piikoi Street and the required 10-foot front, side and rear yard setback has been incorporated into the plans. Kinau Street and Piikoi Street, at this location, are improved with curbs and gutters that connect into the City's system. The developer will maintain the existing drainage pattern (which flows toward Kinau Street) on the site. The proposed development may reduce runoff from the development site since the proposed development will

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introduce landscaping that is presently non-existent.

Design of onsite drainage systems will comply with "Rules Relating to Storm Drainage Standards, Department of Planning and Permitting, City and County of Honolulu, 2000". The applicant will also employ best management practices (BMP's) to control and reduce the discharge of pollutants during the construction of Piikoi Vista apartments.

On site drainage systems will be designed to accommodate a storm with a 10-year recurrence interval. Storm water runoff from a 10-year storm will be approximately 2 cubic feet per second for the existing and with development conditions.

The development site is in Zone X, an area determined to be outside the 500 year flood plain based on the Flood Insurance Rate Map, Panel 365 of 395, dated November 20, 2000.

5. Solid Waste Disposal

The solid waste generated by the proposed expansion will be collected by a private refuse firm and will not impact municipal refuse services.

6. Schools

The proposed elderly affordable rental development will not impact the local school system as this development is for those 62 years and older.

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7. Parks

Kaahumanu Elementary School and playground is located on Kinau Street and provides recreational areas in close proximity to the development. Cartwright Park is approximately 1,600 feet away in an easterly direction. Makiki District Park is located approximately 1,700 feet away on Keeaumoku Street, in a north easterly direction, and Sheridan District Park is approximately 1,500 feet away on Piikoi Street in a southerly direction.

8. Police

The development site will be serviced by patrol officers from District #7, stationed at the Alapai Headquarter's Building.

9. Fire

The Wilder Avenue Fire Station #3 is located approximately 2,000 feet from the development site and will provide primary response in case of an emergency. A fire protection system, as required by the Fire Department, will be provided per the Board of Water Supply standards. Civil drawings will be submitted to the Honolulu Fire Department for review and approval prior to the Building Permit being issued.

10. Utilities

a. Electric

The Hawaiian Electric Company has existing power lines serving this area and the applicant will coordinate development of Piikoi Vista to ensure that the power lines will be adequate to support the proposed rental apartment development.

In addition, the design of the project incorporates energy efficient light fixtures in the common areas for energy conservation.

A backup power source will provide lights in the stairwell in case of a power outage. A backup generator is not statutorily required for this type of project and in light of the fact that extended power outages are infrequent, the applicant will not be providing a backup generator. None of the applicant's other affordable housing project have generators for this purpose. Over the past seven years the applicant has not experienced any situation where a generator was found to be necessary.

Should the situation arise where the building needs to be evacuated, those residents who are in need of assistance have been instructed to stay in their

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apartments until fire department officials arrive to assist them down the stairs. Each apartment unit has a sprinkler system and each system has sufficient water pressure to operate, regardless of electrical supply. In addition, each fire engine vehicle has its own independent pump that can pump and supply whatever water pressure is required for the operation.

b. Telephone

Verizon, formerly GTE Hawaiian Telephone Company, has existing utility service lines in the area. It is expected that these existing lines will be used to service this proposed apartment development. Development of Piikoi Vista will be coordinated with Verizon to determine if new lines will be required. No off-site work is expected.

c. Others

Cable television presently services other buildings in the surrounding area and arrangements will be made with the appropriate firms to provide cable service to this rental apartment as well.

E. ENVIRONMENTAL IMPACTS

1. Historical and Archaeological Resources

The development site is not on the State or Federal Register of Historic Places.

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The Department of Land and Natural Resources, Historic Preservation Division in their comment letter dated December 7, 2004 stated that, "there are no known archaeological sites at this location and significant historic sites have not been identified during the many development projects surrounding the area in the past decades." "Thus, we believe that this project will have 'no effect' on significant historic sites." Their letter noted that a historic home is located adjacent to Piikoi Vista site and although it is not listed on the Register for Historic Places they requested landscape buffering be provided. Please refer to Appendix XIII - Comments and Responses to Draft EA.

The State Office of Environmental Quality Control in their comment letter dated September 23, 2004 requested the preparation of a Cultural Impact Assessment. An Archaeological Literature Review, Field Inspection and Cultural Impact Evaluation of the proposed Piikoi Vista site was completed by Cultural Surveys Hawaii, Inc. on November, 2004. Their summary and conclusions states, in part, as follows:

"Traditional native Hawaiian cultural practices declined with the extensive land modification and urbanization of the greater Honolulu and Waikiki areas. As the wetlands were

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drained and ponds were filled to accommodate the continuing expansion of urban Honolulu, the traditional way of life for native Hawaiians was no longer possible in Kewalo or Kulaokahu'a. There are therefore no on-going traditional cultural practices in the vicinity of the current project area".

".....In summary, although it is possible that a few pre-contact artifacts and some historic trash deposits are present within the subsurface soil of the project area, it is unlikely that intact cultural deposits or human bones would be found in the study area." Please refer to Appendix XII - Archaeological Literature Review, Field Inspection and Cultural Impact Evaluation.

Although it does not appear that the development will impact on any historic sites, the applicant will instruct his contractor (earthwork) to immediately stop work and contact the State Historic Preservation Division (SHPD) for review and approval of proposed mitigation measures should any previously unidentified historic sites (including but not limited to artifacts, shell, bone, or charcoal deposits, human burials, rock or coral alignments, pavings or walls) be encountered during the development of Piikoi Vista. Work in the immediate area shall be stopped until SHPD is able to assess impacts and make further recommendations for appropriate mitigation measures.

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2. Natural Resources

a. Water Resources

The Pacific Ocean (Ala Moana Beach Park) is located approximately 5,600 linear feet south of the subject lot. The development will have no significant effect on this body of water.

b. Flood Plain Management

The development site is in Zone X, area determined to be outside the 500-year flood plain based on the Flood Insurance Rate Map, Panel 365 of 395, dated November 20, 2000.

c. Wetlands Protection

The development site is an urbanized lot that contains no wetlands.

d. Coastal Zone Management

The development site is not within the coastal zone management area or within the City's Special Management Area.

e. Unique Natural Features

The development site is level with soil suitable to support urban development as can be seen from other high rise structures on nearby lots. There are no unique features such as sand dunes or sloped areas where erosion would be a concern.

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f. **Sole Source Aquifers**

There is no designated "sole source aquifer" within the vicinity of the proposed Piikoi Vista Apartments. The location of the development falls within the Nuuanu aquifer system that has a resource of 15 million gallons per day. The Board of Water Supply provides potable water for the development site and the existing water system is adequate to accommodate the proposed apartment building according to a BWS letter dated February 19, 2004, see Appendix IV, Agency Comments Prior to Draft EA.

g. **Flora and Fauna**

This urbanized site does not contain any wildlife habitats or rare or endangered flora or fauna.

h. **Wild and Scenic Rivers Act - Federal**

According to a discussion with staff at the Federal Commission on Water Resources there are no wild or scenic rivers designated in the State of Hawaii. Please refer to Appendix IV for a reference on designated Wild and Scenic Rivers by State throughout the United States.

i. **Agricultural Lands and the Federal Farmland Protection Policy**

The development site is in an urban area where its use will not impact agricultural lands or lands with the

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potential for agricultural use. It is zoned A-2 Medium Density Apartment District.

j. Environmental Justice

The Environmental Protection Agency (EPA) defines Environmental Justice (EJ) as the "fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations and policies." The applicant will adhere to all the required City, State and Federal environmental laws in the development of Piikoi Vista, an affordable elderly rental apartment building. Furthermore, the development of this project is intended to improve the living standards and quality of life for those elderly residents who fall at or below 50% and 60% of the area medium income (AMI).

k. Open Space

The vacant development site is zoned A-2 Medium Density Apartment District. The proposed development is situated in an urbanized and developed area and development of this site will not affect any important open space features in the area.

F. TOPOGRAPHY

The subject site is relatively flat and is located in an urban setting.

G. SOILS

The U.S. Department of Agriculture Soil Conservation Service Soil Survey Report for the Island of Oahu classifies the soils for this area as Makiki Series (MkA). This series consists of well-drained soils on alluvial fans and terraces in the city of Honolulu. Elevations range from 20 to 200 feet. The annual rainfall amounts to 30 to 60 inches. Most of it falls between November and April. The mean annual soil temperature is 73 degrees F. Makiki soils are geographically associated with Kaena and Tantalus soils. These soils are used almost entirely for urban purposes.

Makiki clay loam, 0 to 2 percent slopes (MkA) - This soil is on smooth fans and terraces. Included in mapping were small, stony areas and small areas of Kaena soils.

In a representative profile the surface layer is dark-brown clay loam about 20 inches thick. The subsoil, about 10 inches thick, is dark-brown clay loam that has a sub-angular blocky structure. It contains cinders and rock fragments. The subsoil is underlain by similar material, about 24 inches thick, that is massive. Below this are volcanic cinders. The soil is strongly acid to medium acid.

Permeability is moderately rapid. Runoff is slow, and the

erosion hazard is no more than slight. The available water capacity is about 1.7 inches per foot of soil. In places roots penetrate to a depth of 5 feet or more.

H. PHASE I ENVIRONMENTAL SITE ASSESSMENT

Global Environmental Services Group, LLC completed a Phase I Environmental Site Assessment of the proposed Piikoi Vista development site on February 27, 2004. A copy of the Phase I Environmental Site Assessment is on file at the Department of Community Services.

The Phase I Environmental Site Assessment is summarized as follows:

During the site reconnaissance, nothing was noted on the site that appeared to be of an adverse environmental nature. The EDR Environmental database report did not identify any sites immediately adjacent to the subject site or in the immediate vicinity of the subject site that may have recognized environmental conditions which may affect the site. There are no outstanding issues with the Department of Health or Environmental Protection Agency for this site.

I. NOISE

D.L. Adams Associates, Ltd. has completed a Noise Assessment and Acoustical Recommendations for Piikoi Vista, dated August 4, 2004. The Noise Assessment for Piikoi Vista is included

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in its entirety in Appendix XI.

The Noise Assessment and Acoustical Recommendations for Piikoi Vista is summarized as follows:

The H-I Freeway does impact the Piikoi Vista project, based on site acceptability standards of Section 51-104 of HUD CFR 51. Minimum interior noise standards for the proposed project can be achieved through certain construction and acoustical measures that can be taken in the design of the project.

The noise measured as the site exceeds the acceptable limit of 75 dBA (Ldn) requiring a focus on obtaining an indoor noise level at or below 45 dBA, which HUD has established as a design goal.

The acoustical consultant recommends the use of acoustically-rated doors and windows on the mauka, ewa, and Diamond Head exterior walls of the building combined with the use of air conditioners for the units to provide the required reduction in the interior noise level.

On November 5, 2004 the applicant, team members, staff from the City's Department of Budget and Finance, and staff from the City's Department of Community Services met with Mr. Richard Knight of the local U.S. Housing and Urban Development (HUD) office. Mr. Knight informed those present that a Waiver from the

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Federal Environmental Impact Statement (EIS) requirement, that is triggered by the excess noise levels, can be requested since noise is the only Federal environmental issue involving this development. D.L. Adams Associates, Ltd. conducted an updated Noise Study, dated December 7, 2004, detailing the noise mitigation methods being proposed for Piikoi Vista Apartments. These mitigation methods will allow the interior noise levels of the apartment units to fall within the HUD guidelines of 45 dBA or less.

A Waiver was requested from the Director of Budget and Finance and on December 30, 2004 the Director signed a Noise Abatement Waiver. Please refer to Appendix XI - Noise Assessment.

Short term noise impacts at construction sites are a normal result of construction activity. The State Department of Health administers rules and regulations relating to the hours during which construction is permitted and the noise levels permitted during those hours. The contractor will be required to apply for a permit from the State Department of Health should noise from construction activities exceed regulatory limits. The contractor will abide by the noise regulations incorporated into the permit.

Long term noise impact from the proposed development are expected to be minimal due to the nature of the proposed elderly rental apartment. As mentioned earlier, the increase in traffic is not expected to have a significant impact on the surrounding area.

J. AIR QUALITY

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor, including where appropriate, the use of water wagons, erection of dust barriers and other methods for minimizing dust.

Due to the minimal impact from traffic projected for the development as discussed in the previous section on Noise, vehicular emissions will have minimal impact on the surrounding area.

K. VISUAL IMPACT

The proposed structure will have a finished height of about 78 feet which is well below the 150-foot height limit of this A-2 Medium Density Apartment District. The proposed development will not affect any important view planes in this area of Makiki/Lower Punchbowl. The visual impact of this particular structure will be an in filling of an A-2 Medium Density Apartment Use lot currently underutilized and surrounded by a mixture of commercial, residential and mid to high-rise apartments. As this and other underutilized A-2 Medium Density Apartment District lots are developed, the primary visual impact will be to existing nearby structures. However, since many of the existing nearby structures are high-rise apartment

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buildings, the proposed development will fall in the profile of these existing high rises. Looking at the enclosed photographs of the proposed location for Piikoi Vista one can see the many high-rise apartment buildings throughout the surrounding area.

L. HAZARDS

The development site does not contain any nuisances, airport clear zones, or other features which would jeopardize its development.

V. MAJOR IMPACTS AND ALTERNATIVES CONSIDERED

As mentioned throughout this report the proposed elderly affordable rental apartment will not have a significant impact on the surrounding area in terms of public services and the environment.

Positive socio-economic impacts are projected with the provision of affordable housing, and increases in employment both short term and long term.

A. NO ACTION

This alternative was considered and rejected due to the continuing negative cash flow that would result from payment of property taxes, maintenance cost and liability expenses for the vacant land.

B. MARKET RENTAL PROJECT

This alternative was considered but would result in greater impacts to the surrounding neighborhood, primarily related to traffic.

The cost of construction and the cost of land make it unfeasible to develop a market rental development because market rental income will not be able to provide a reasonable return on the investment, and it could not be financed.

C. MARKET CONDOMINIUM PROJECT

This alternative was considered but would result in greater impacts to the surrounding neighborhood, primarily related to traffic.

Although the market condominium project in today's market would provide greater profitability, this developer is a non-profit organization dedicated to the provision of affordable rental developments for seniors and families.

D. AFFORDABLE ELDERLY RENTAL DEVELOPMENT

This, the preferred alternative, was selected to meet the need for affordable elderly rental units in the Makiki area. The applicant through the use of tax credits has been able to develop affordable rentals for the elderly that have been well received by the elder population and the surrounding communities. The impacts related to elderly rentals is minimal and traffic impacts are very light.

VI. MITIGATION MEASURES

Since impacts from the proposed development are not expected to be significant, no extraordinary mitigation measures are planned. However, in order to minimize construction impacts of the development, the applicant's contractor will employ dust control measures where appropriate, including the use of water wagons, erection of barriers, and other methods for minimizing dust. The contractor will also be required to apply for a permit from the State Department of Health should noise from construction activities exceed regulatory limits. The contractor will abide by the noise regulations incorporated into the permit.

The applicant applied for a Noise Waiver from the Federal Environmental Impact Statement (EIS) requirement, that is triggered by the excess noise levels, since this is the only environmental issue involving this development. A Noise Abatement Waiver was approved by the Department of Budget and Finance on December 30, 2004. The applicant intends to mitigate the noise levels by incorporating into the design of the building, the following measures such as:

- a. The mauka side of the building facing the freeway where the corridors leading to the apartments are located, as well as the sides of the building, will be solid grouted concrete block, and painted. Fixed laminated windows along the corridors exterior wall will be used as architectural features and day lighting.

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The exterior corridor wall, air space, and apartment unit walls will help to insulate the apartment units from the exterior noise.

- b. The corridor will be mechanically vented to the roof.
- c. The mauka side walls of the apartment units will not have windows. Apartment doors will be insulated metal doors with perimeter magnetic gaskets. The makai side of the apartment units, facing away from the freeway, will have laminated ventilation windows and all units will be air-conditioned.

Please refer to Appendix XI - Noise Assessment.

VII. GOVERNMENT PERMITS AND APPROVALS REQUIRED

The development will require the following governmental permits or approvals:

- 201G Permit Approval from the Honolulu City Council.
- Conditional Use Permit for Joint Development of two or more lots. The applicant plans to apply for a joint development for the Kinau Vista Apartments and the Piikoi Vista Apartments to allow joint use of the Kinau Street access and the Piikoi Street access ways.
- Building Permits from the Department of Planning and Permitting, City and County of Honolulu.

VIII. SIGNIFICANCE CRITERIA

The following review of the significance criteria indicates that the development will not have a significant impact on the environment.

- **No irrevocable commitment to loss or destruction of any natural or cultural resource would result.**

The vacant development site is an urbanized lot that is mostly rock ground cover with overgrown shrubs and was previously developed.

The property is not listed on either the State or Federal Registers of Historic Places. With no previous record of historic or archaeological discoveries, the proposed development is not expected to have an impact on archaeological resources.

During the construction of the development, should any previously unidentified archaeological resources such as artifacts, shell, bone, or charcoal deposits, human burial, rock or coral alignments, pavings or walls be encountered, the applicant will stop work and contact the Historic Preservation Office for review and approval of mitigation measures.

- **The action would not curtail the range of beneficial uses of the environment.**

The proposed development will not curtail, but will

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instead enhance the range of beneficial uses of the environment. The present vacant property partially covered in asphalt is void of all natural landscaping, offering no beneficial use of the possible uses associated with the environment. With the development of the proposed Piikoi Vista, landscaping and an irrigation system will be installed where none exist at the present time. The development site will provide much needed affordable elderly rental units to meet the growing housing demands of the elderly.

- **The proposed action does not conflict with the state's long-term environmental policies or goals and guidelines.**

The State's environmental policies and guidelines are set forth in Chapter 343, Hawaii Revised Statutes, "State Environmental Policy". The broad policies set forth include conservation of natural resources and enhancement of the quality of life. As discussed earlier, the development does not adversely affect significant natural resources. With the proposed development, the existing vacant property will be developed to provide our seniors with affordable rental units. This will enhance the quality of life for senior residents of Piikoi Vista.

- **The economic or social welfare of the community or state would not be substantially affected.**

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The development will give a temporary boost to the State's economy with the provision of short-term construction employment and related tax impacts, and a few long-term jobs in the form of a resident manager and a maintenance person.

The social welfare of the community would be positively affected by the development of this affordable elderly rental apartment building, to those in most need in the community. The Piikoi Vista Affordable Elderly Rental Apartment Development will offer an attractive living environment to the elderly and in addition will offer lush landscaping and open spaces, including a victory garden, all for the benefit of the elderly residents.

Residents in Piikoi Vista Apartments will have a long term positive economic affect on businesses in the area, as a source of new customers.

- **The proposed action does not substantially affect public health.**

The proposed action will not affect public health. The proposed land use is compatible with the surrounding residential and commercial developments.

- **No substantial secondary impacts, such as population changes or effects on public facilities, are anticipated.**
As mentioned earlier under "Residential Population" of

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this Final EA the General Plan Population Guidelines establish a population range for the Primary Urban Center Development Plan Area for the Year 2010 of between 450,800 and 497,800 persons. In 2000 the actual population for the Primary Urban Center was 419,339. The additional population supported by this development will help the Primary Urban Center in reaching the population range planned in the Year 2010.

The existing water system is adequate to accommodate the proposed apartment building, according to a BWS letter dated February 19, 2004. (Appendix IV, Agency Comments).

A sewer connection application was approved for this development by the Department of Planning and Permitting and dated January 21, 2004. (Appendix IV, Agency Comments).

Julian Ng, Incorporated has prepared a traffic assessment report for the development, dated January 29, 2004, and titled Piikoi Vista (TMK: 1-2-4-12: 026 and Joint Development with Kinau Vista (TMK: 1-2-4-12: 09 & 26). His conclusion - "The proposed development would have minimal impact to traffic and adequate access and parking can be provided."

- **No substantial degradation of environmental quality is anticipated.**

The development will not result in a substantial

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degradation of the environment. Only minimal impact is projected during the construction phase. Excavation for the development should be limited to the footings and foundation of the structure. Dust control measures appropriate to the situation will be employed by the contractor, including where appropriate, the use of water wagons, erection of dust barriers and other methods for minimizing dust. Only minimal impact is projected during the construction phase of the proposed development.

- **The proposed action does not involve a commitment to larger actions, nor would cumulative impacts result in considerable effect on the environment.**

The proposed development does not involve a commitment to larger actions nor will it result in cumulative impacts to the environment. The proposed Piikoi Vista Affordable Elderly Rental Apartment will not generate future developments, creating a cumulative impact.

- **No rare, threatened or endangered species or their habitats would be affected.**

No rare, threatened, or endangered species or their habitats would be affected in the proposed development.

- **Air quality, water quality or ambient noise levels would not be detrimentally affected.**

Short term impacts on air quality are expected to be

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primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor, including where appropriate, the use of water wagons, erection of dust barriers and other methods for minimizing dust.

Short term noise impacts at construction sites are a normal result of construction activity. The State Department of Health administers rules and regulations relating to the hours during which construction is permitted and the noise levels permitted during those hours. The contractor will be required to apply for a permit from the State Department of Health should noise from construction activities exceed regulatory limits. The contractor will abide by the noise regulations incorporated into the permit.

Long term noise impact from the proposed development are expected to be minimal due to the nature of the proposed elderly rental apartment and the minimal increase in traffic projected.

Water quality would not be detrimentally affected by the proposed development. The Honolulu Board of Water Supply (BWS) currently provides potable water for the development site via an 12" line on Kinau Street or an 8" line on Piikoi

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Street. No new off-site water improvements are needed to service the proposed development.

- **The project would not affect environmentally sensitive areas, such as flood plains, tsunami zones, erosion-prone areas, geologically hazardous lands, estuaries, fresh waters or coastal waters.**

The development site is in Zone X, an area determined to be outside the 500 year flood plain.

The development will not affect tsunami zones, erosion-prone areas, geologically hazardous land, estuaries, fresh water nor coastal waters.

- **The action will not substantially affect scenic vistas and view planes identified in county or state plans or studies.**

The proposed development will not impact on important coastal views, since the eight story, approximately 78 feet high building is well below the 150-foot height limit of this A-2 Medium Density Apartment District. Visual impact of this particular structure will be an in filling of an A-2 Medium Density Apartment District surrounded by a mixture of commercial, residential and mid to high-rise apartments.

- **The action will not require substantial energy consumption.**

The Hawaiian Electric Company has existing power lines serving this area and the applicant will coordinate development of Piikoi Vista to ensure that the power lines will be adequate

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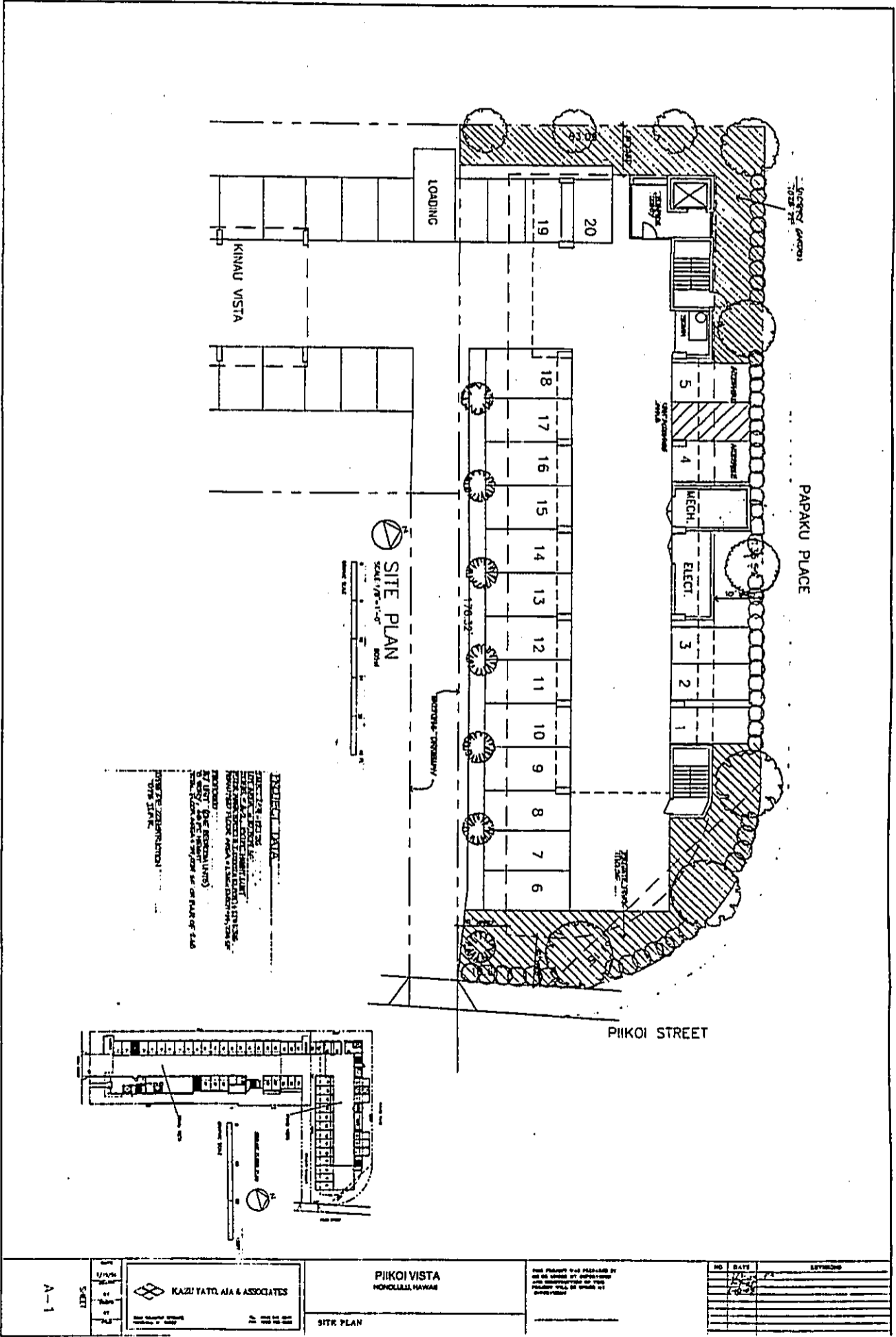
to support the proposed rental apartment development. Normal energy consumption for an eight story building of this nature is anticipated. The apartment building will be designed to incorporate energy saving light fixtures, energy efficient split system air conditioning and energy efficient hot water heaters.

IX. RECOMMENDATION

Based on this Final Environmental Assessment, a Finding of No Significant Impact (FONSI) for the proposed Piikoi Vista Affordable Elderly Rental Apartment Development is anticipated.

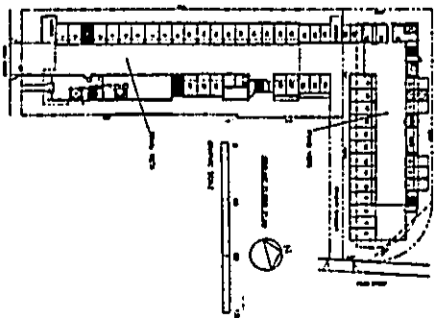
APPENDIX I

**RENDERING, SITE PLAN, FLOOR PLAN,
ELEVATIONS AND LANDSCAPING**

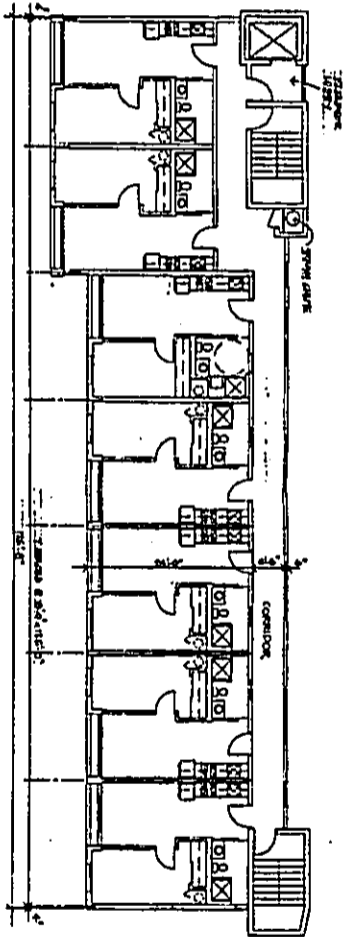


PROJECT DATA

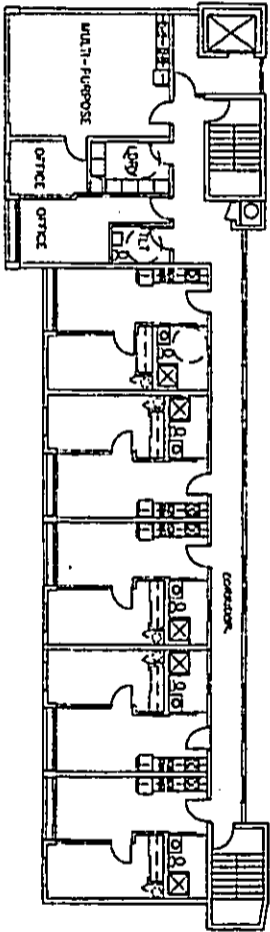
OWNER: PIIHIKI VISTA
 ARCHITECT: KAZU YATQ, AIA & ASSOCIATES
 ENGINEER: [REDACTED]
 CONTRACTOR: [REDACTED]
 DATE: [REDACTED]



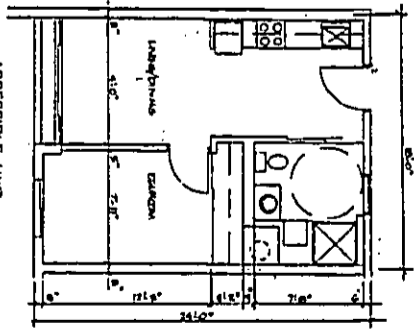
A-1	SHEET	 KAZU YATQ, AIA & ASSOCIATES ARCHITECTS 1001 KALANANAKU AVENUE, SUITE 1000 HONOLULU, HAWAII 96813 TEL: (808) 551-1111 FAX: (808) 551-1112 WWW.KAZUYATQ.COM	PIIHIKI VISTA HONOLULU, HAWAII SITE PLAN	THIS PROJECT IS TO BE PREPARED BY AN ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF HAWAII AND SHALL BE IN ACCORDANCE WITH THE HAWAIIAN ARCHITECTURE AND ENGINEERING ACT.	NO.	DATE	REVISION
					1	12/15/11	



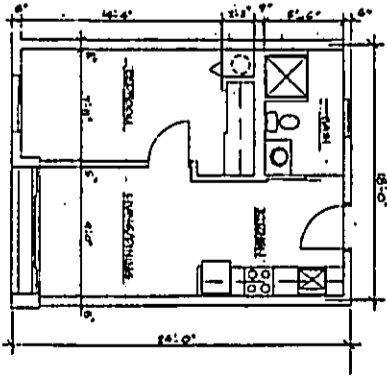
TYPICAL FLOOR PLAN - FLOORS 2, 3, 4, 5, 6 & 7
SCALE: 1/8" = 1'-0"
40325f



8TH FLOOR PLAN
40325f



ACCESSIBLE UNIT



TYPICAL UNIT

NO.	DATE	REVISION

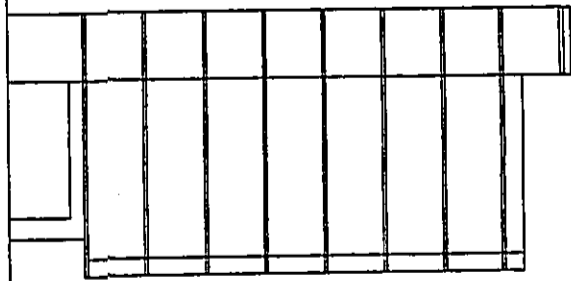
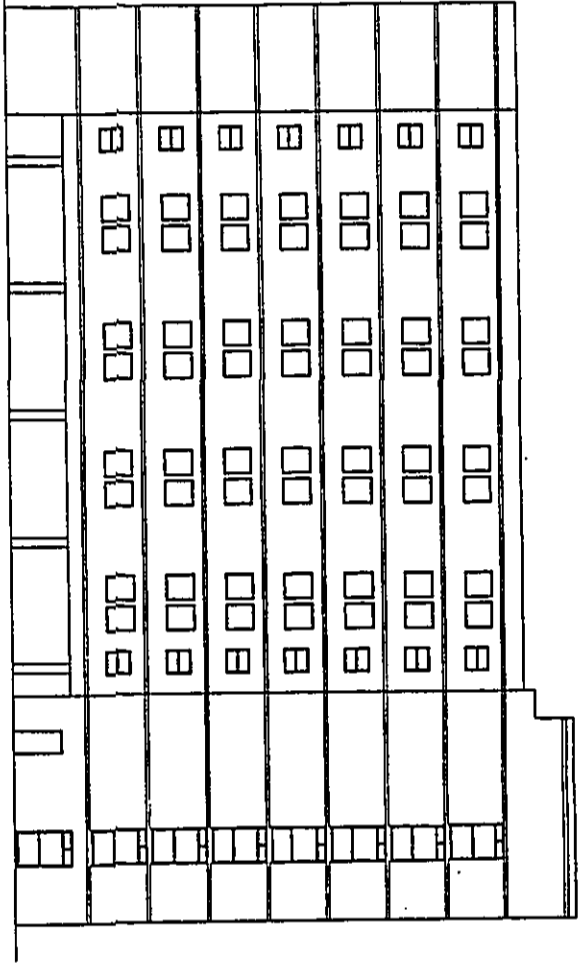
This document has been prepared by KAZU YATO, AIA & ASSOCIATES and is the property of KAZU YATO, AIA & ASSOCIATES. It is to be used only for the project and site of which it is prepared.

PIIKOI VISTA
HOWLAND, MAINE

FLOOR PLANS

KAZU YATO, AIA & ASSOCIATES

A-2



4	SHEET	 KAZU YATO, AIA & ASSOCIATES ARCHITECTS 1001 KALANANĪ'ŪI DRIVE, SUITE 100 HONOLULU, HAWAII 96813	PROJECT	PĪIKOI VISTA 1326 PĪIKOI STREET HONOLULU, HAWAII	NO.	DATE	REVISIONS

APPENDIX II

NOTIFICATION OF ADJOINING PROPERTY OWNERS'

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.mn.com

February 11, 2004

Dear Adjoining Property Owner:

**Subject: Proposed Piikoi Vista Affordable Elderly Rental Development
TMK: 2-4-12: 026**

On behalf of the applicant, Hawaii Housing Development Corporation, and in accordance with the requirements of the Department of Planning and Permitting (DPP) of the City and County of Honolulu, we are providing you as an adjoining property owner, notification of our upcoming presentation before the Makiki/Lower Punchbowl/Tantalus Neighborhood Board No. 10. On the evening of February 19, 2004 we will be presenting information regarding the proposed Piikoi Vista Affordable Elderly Rental Development described in the enclosed summary sheet. We will describe the 201G permit process and Environmental Assessment process and respond to your questions and/or concerns.

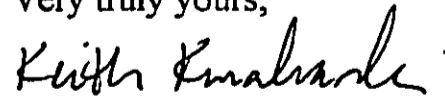
Date: Thursday, February 19, 2004

Time: 7:15 P.M.

Location: Makiki District Park
1527 Keeaumoku Street
Honolulu, Hawaii

Should you have questions, please do not hesitate to call me at 988-2231.

Very truly yours,



Keith Kurahashi

cc: Hawaii Housing Development Corporation

SUMMARY

PIIKOI VISTA AFFORDABLE ELDERLY RENTAL APARTMENT DEVELOPMENT TMK: 2-4-12: 26

The applicant, Hawaii Housing Development Corporation, proposes to develop an eight-story, approximately 72 feet high, affordable elderly rental apartment building located at 1326 Piikoi Street in Honolulu, Hawaii. The eight-story building will provide 47 1-bedroom affordable rental units, 20 at grade parking stalls, two of which will be accessible stalls. Five (5) of the parking stalls will be marked as visitor stalls. In addition to the 20 parking stalls a loading stall will be available with ingress and egress via Kinau and Piikoi Streets. One (1) of the apartment units will be accessible to persons with disabilities. All other units will be adaptable. Amenities will include the availability of a multipurpose room, laundry facilities, approximately 2,500 square feet of open space, part of which is planned as a Victory Garden for the enjoyment of the residents. The resident manager of the adjoining Kinau Vista Apartments, now under construction, will also manage and services the needs of residents in the proposed Piikoi Vista Apartments. The developer intends to provide a limited assisted living component that will be offered on an as needed basis to minimize the cost for these services to individual residents of the complex. The proposed elderly affordable rental apartment building is for elderly residents' (i.e., 62 and older) who earn at or below 50% and 60% of the area median income (AMI).

GENERAL INFORMATION

- | | | | |
|----|---------------------|---|---|
| A. | Developer/Applicant | : | Hawaii Housing Development Corp.
725 Kapiolani Blvd., Suite C-103
Honolulu, Hawaii 96813
Randolph G. Moore, Board Chair
Gary S. Furuta, Project Manager |
| B. | Recorded Fee Owner | : | Minoru and Toshiko Oda, Trust
1508 Keolu Drive
Kailua, Hawaii 96734 |
| C. | Tax Map Key | : | 2-4-12: 026 |

- D. Agent : Kusao & Kurahashi, Inc.
 Planning and Zoning Consultants
 2752 Woodlawn Drive, Suite 5-202
 Honolulu, Hawaii 96822
- E. Location : 1326 Piikoi Street in Honolulu, Hawaii (Exhibit 1)
- F. Lot Area : 10,809 square feet
- G. Zoning : A-2 Medium Density Apartment District
 (Exhibit 1)
- H. State Land Use : Urban
- I. Development Plan : Medium Density Apartment
 Land Use Map : (Exhibit 2)
 Public Facilities : No improvements affecting the
 Map : development site (Exhibit 3)
- J. Special District : Not in Special District
- K. Existing Use : Vacant Parcel
- L. Agencies Consulted : Board of Water Supply
 (Pre-Draft EA) : Dept. Of Planning & Permitting
- M. Community Groups : Makiki/Lower Punchbowl/Tantalus
 Neighborhood Board No. 10
 Hawaii Community Reinvestment Corporation

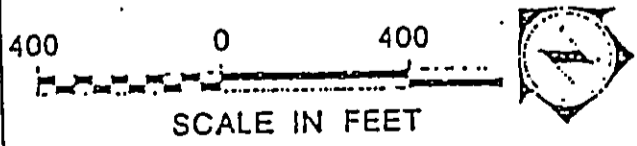
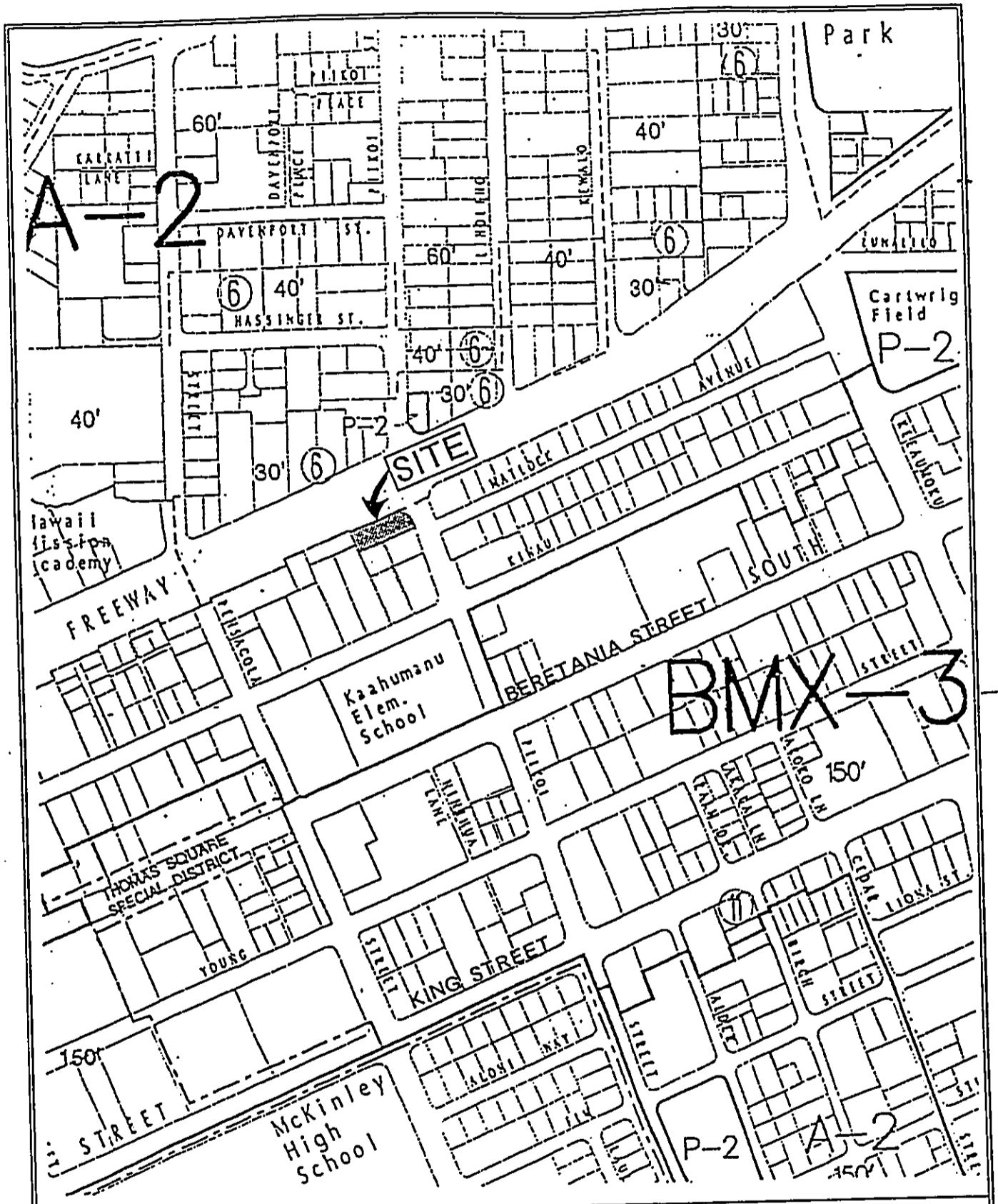
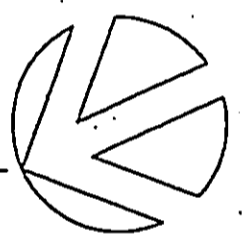
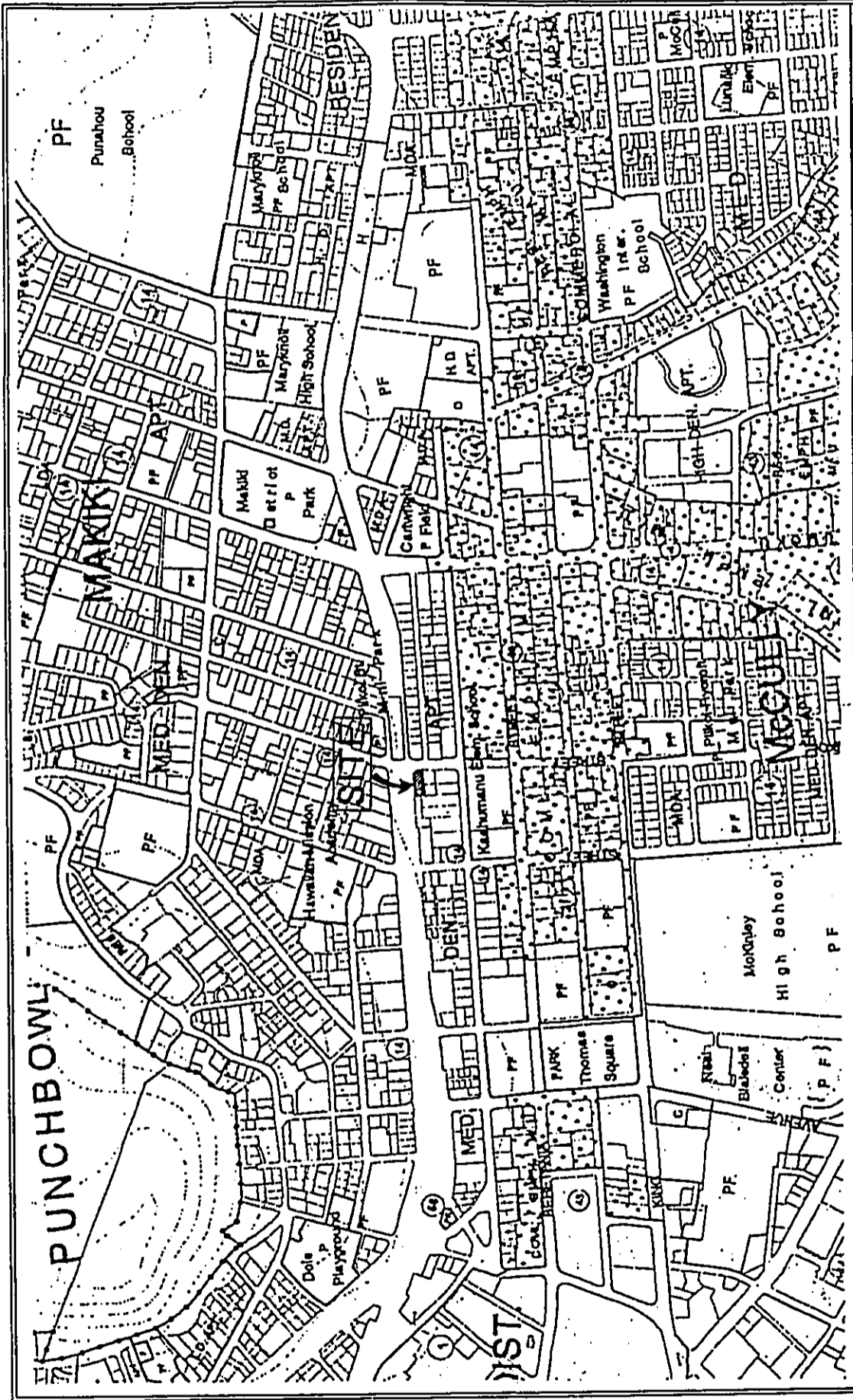
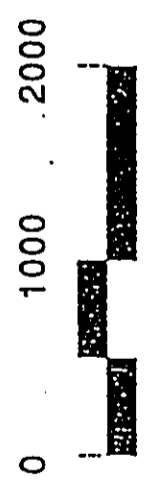


EXHIBIT 1
LOCATION/ZONING MAP



NORTH



SCALE IN FEET

EXHIBIT 2
DEVELOPMENT PLAN
LAND USE MAP

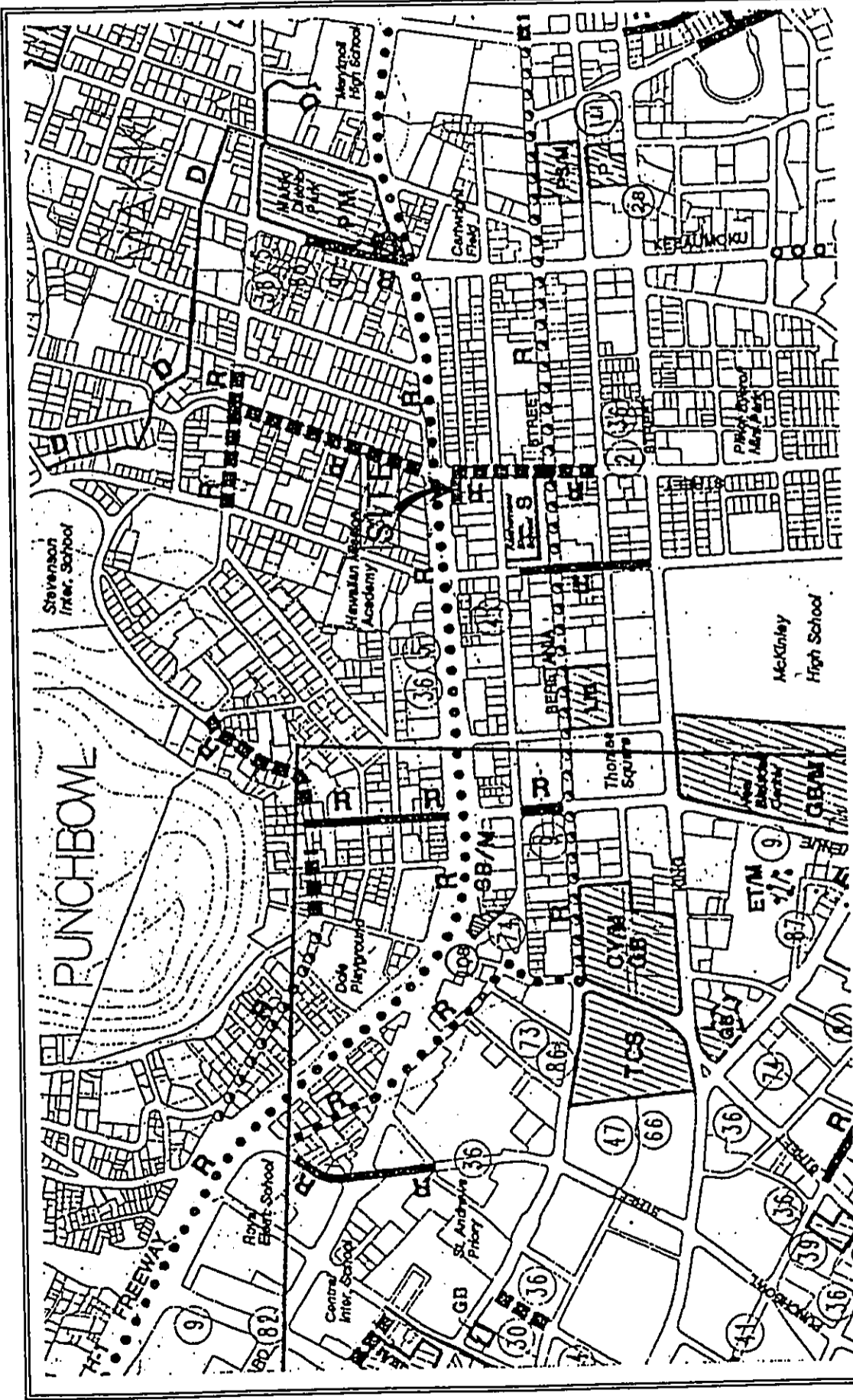


EXHIBIT 3
 DEVELOPMENT PLAN
 PUBLIC FACILITIES MAP



NORTH



SCALE IN FEET

[Government](#) | [Kama'aina](#) | [Business](#) | [Visitors](#) | [Kids World](#) | [Seniors World](#) | [On-Line Services](#) | [Economic Development](#)

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MAKIKI/LOWER PUNCHBOWL/TANTALUS NEIGHBORHOOD BOARD

REGULAR MEETING MINUTES
THURSDAY, FEBRUARY 19, 2004
MAKIKI DISTRICT PARK
ARTS AND CRAFTS BUILDING

CALL TO ORDER: In the absent of Chair John Steelquist, Vice Chair Charles Carole called the meeting to order at 7:15 p.m. with a present quorum.

MEMBERS PRESENT: Richard Soo, John Bigay, Charles Carole, Tracy Ryan, Philip Hauret, Henry McCullough V, Sam Mitchell, Martin Schiller, Richard Kawano, Norma Nicholl, and Susan Lai-Young.

MEMBERS ABSENT: John Steelquist (excused), Joseph Zuiker (excused), Mario Macagba, Craig Thistleton, and David Lusk.

GUESTS: Bob Laguers, Tracy Okubo, Elisa W. Johnston, Son Smith, Sandra Pratt, Captain Tim Turgeon (Honolulu Fire Department-Makiki Station), Dana Harvey (State Department of Transportation), Fran Klema, Arloa Ridder, Victor Auyong, Senator Gordon Trimble, Greg Schlais (Representative Sylvia Like's Office Staff), Frank and Linda Fargo (Senator Gordon Trimble's Office Staff), Lt. Green, Sgt. Lai, and Officer Oakes (Honolulu Police Department), Caroline Sawai (Board of Water Supply), Marvin Link, Collin Wong, Keith Kurahashi, Peter Radulovic (Mayor's Representative), Kathleen Watanabe (Governor's Representative), and Kimberly Kaupu (Neighborhood Commission Office Staff).

APPROVAL OF REGULAR MEETING MINUTES FOR JANUARY 15, 2004: With no objections the minutes were approved.

TREASURER'S REPORT: A report was not available at this time.

COMMUNITY CONCERNS:

Honolulu Fire Department (HFD): Captain Turgeon, from the Makiki Fire Station, reported the following: 1. Statistics for January 2004. There were 7 structure, 1 rubbish and 2 vehicle fires, 61 medical emergencies, and 18 miscellaneous alarms. There was 1 major incident with a building fire at 1013 Prospect Street with no recorded injuries.

2. Fire Safety Tip: Every home should have a smoke detector installed in each bedroom and on every level. On floors without bedrooms, detectors should be located in or near living areas, such as family rooms, living rooms, or dens. As cooking vapors and steam may set off a smoke detector, locate the detector away from the kitchen or bathroom.

Position wall-mounted detectors 4 to 12 inches below the ceiling and away from air vents. Detectors should be test once a month to ensure that they are operational and cleaned regularly, according to the manufacturer's instructions.

Questions, answers, and concerns:

Schiller expressed concern on how often are the sprinklers in the high raise apartments tested. Captain Turgeon replied about there tested every five years and it's called a flow test that's done by the building maintenance staff.

Honolulu Police Department (HPD): Lt. Green gave the statistics for the month of January 2004. There were 37 burglaries, 37 unauthorized entry into motor vehicles, 26 auto thefts, 1 aggravated assault, 3 simple assaults, 88 motor vehicle collisions, 8 D.U.I., 7 family offenses and 3 drug offenses. He mentioned that District Seven made the highest number of arrest for DUI in the month of January. The department is stepping up enforcement of speeding and racing in the community and on the freeways. It was stressed that the public on help out in calling 911 when they see speeding or racing occurring.

Questions, answers, and concerns:

1. Mitchell had mentioned some kids had broken into the Arts and Crafts Room and the Makiki District Library and almost stole a computer. He would like to know how the kids could be kept away from the park. It was mentioned if there are type of orders that could be put into effect for which if not followed the kids are held in violation.
2. Lai-Young expressed concern when she called the police department to check on an elderly person she had gotten a bit of the run around. Officer Trucker replied the department is always responding to those "welfare calls".
3. A resident manager expressed concern about the parking situation in front of the apartment building on Dominis and Poki Streets. She mentioned on the curbs there was red paint marking a no parking area. Now that the red is painted over people are parking really close to the intersection and by the ingress and egress to the apartment building. There was an accident today and it could have been worse then it was. So something needs to done.

Lt. Green pointed out that the complaint should go to 911 and when the police are there they can evaluate the situation. The parked cars need to be at least twenty-five feet from the intersections. The resident manager also mentioned across the street from the on the makai side the markings for the no parking are all faded away. Peter Radulovic, the Mayor's Representative will follow up.

Residents' Concerns: None.

Department of Parks and Recreations: None.

Board of Water Supply (BWS): Caroline Sawai reported the following: 1. No main breaks were reported for the month of January 2004. 2. The General Water Announcement is as follows: 1. Island wide water use is down thanks in large to a rainy January. However, water levels at key pumping station continue to be lower than they were a year ago. The BWS encourages people to use water wisely. Manager and Chief Engineer Clifford Jamile says summer time mandatory water restrictions cannot be ruled out if water levels continue to drop as consumption increases.

3. The BWS is accepting student entries for the 2004 Water Conservation Poster Contest. Deadline is Wednesday, March 10. Oahu school children from kindergarten through grade 6 are eligible. Winning posters will be displayed at City Hall in May. For more information, call the BWS Community Relations Office at 748-5041. 4. Detect-A-Leak-Week is coming up. This annual effort to identify and stop water waste runs from March 7th through the 13th. Leak detecting dye tablets for toilet tanks will be available at all satellite city halls and at the BWS building on South Beretania Street. 4. The Halawa Xeriscape Garden is now open on Wednesdays and Saturdays from 10 a.m. to 2 p.m. It was closed in late December in response the Department of Homeland Security's declaration of an orange, or high, threat level.

Board of Education: The Board has agreed to delete this item from the agenda.

Networking of Neighborhood Boards:

Makiki Stream- No report.

Sidewalk Improvements- It was mentioned the improvement projects are still pending.

Pawaa Park- No report.
Makiki Master Plan – Consultant still is working on the plans.
Handicap Walkway at Makiki Park – No report.
Other Neighborhood Board Networking Information – No report.
Makiki District Library – It was mentioned that the Mayor is aware the monies lapsed for the library; the plan is to use the funds from the Vision Team.

LEGISLATIVE ELECTED OFFICIALS:

Senator Carol Fukunaga: No representative was present.

Senator Gordon Trimble: Senator Trimble distributed a handout and highlighted Senate Bill 2074 – Campaign Spending Reform, this bill prohibits corporations, labor organizations, and banks from making campaign contributions directly from corporate, labor organizations, or bank treasuries; requires establishment of separate segregated fund through which employees can make contributions; provides that intentional and knowing violations of the campaign spending law shall be a class C felony. On January 26, 2004, SB 2074 was referred to the committee on Judiciary and Hawaiian Affairs and scheduled a public hearing on February 20, 2004 at 9:00 a.m. in conference room 229.

Representative Brian Schatz: Representative Schatz distributed a handout and stay for any questions.

Representative Sylvia Luke: Greg Schlais distributed handouts of on behalf of Representative Luke.

Governor's Representative: Kathleen Watanabe distributed the Governor's weekly highlights and stayed for any questions. Watanabe introduced Dana Harvey from the State Department of Transportation. Harvey mentioned the second week of March 2004; for a public meeting to inform everyone of what will exactly happen. The Department will be closing the H-1 Lunalilo on ramp for four hours from 5:30 a.m. to 9:30 a.m. to reach the goal of safety so cars aren't weaving to get on and off the freeway. .

Questions, answers, and concerns:

1. Schiller expressed concern on where cars will go. Harvey replied there would be other routes instead of taking the Lunalilo on ramp.
2. Mitchell mentioned this matter had been addressed many times and the department should start looking at the Board for solutions before moving forward. It seems that everyone moves on with out coming before the Board. Lai-Young agrees and pointed out a similar was done before.
3. Carole asked if the trail period could be shorted from 90 days to 30 days. Harvey replied all of those aspects would be discussed at the community meeting.

Councilmember Rod Tam: No representative was present, but a written handout was distributed.

Mayor's Representative: Peter Radulovic distributed the Mayor's State of The City Address and updated on the following. 1. The administration's legislative package includes: (a) Unadjudicated fines – that would give the City money from traffic tickets that are issued by the Honolulu Police Department. (b) Transient accommodation tax – The City would like a bigger share of the money received from hotel room tax. (c) Taxation authority – Which would give all counties the authority to levy an excise tax.

UNFINISHED BUSINESS:

Makiki/Tantalus Recreation Area: No report.

Primary Urban Center Development Plan: Peter Radulovic mentioned they would be holding community meetings for inform everyone about the next twenty-five years to come.

Project to Improve Young Street (bike path): It was mentioned the residents and businesses in the area are upset and have said there needs to be a couple of other options that can be chosen for the improvements.

NEW BUSINESS:

Update on Piikoi Vista: Keith Kurahashi gave the following report. The applicant, Hawaii Housing Development Corporation, proposes to develop an eight-story, approximately 72 foot high, affordable elderly rental apartment building located at 1326 Piikoi Street. The eight-story building will provide 47 1-bedroom affordable rental units, 20 at grade parking stalls, two of which will be ADA accessible stalls. Five of the parking stalls will be marked as visitor stalls. In addition to the 20 parking stalls, a loading stall will be available with ingress and egress via Kinau and Piikoi Streets. One of the apartments units will be accessible to person with disabilities. All other units will be adaptable. Amenities will include the availability of a multipurpose room, laundry facilities, approximately 2, 500 square feet of open space, part of which is planned as a victory garden for the enjoyments of the residents. The resident manager of the adjoining Kinau Vista Apartments, now under construction, will also manage and services the needs of the residents in the proposed Piikoi Vista Apartments. The developer intends to provide a limited assisted living component that will be offered on an as needed basis to minimize the cost for these services to individual residents of the complex. The proposed elderly affordable rental apartment building is for elderly residents' (i.e., 62 and older) who are at or below 50% and 60% of the area median income.

Requesting Support in Amending the Land Use Ordinance: Item has been deferred.

Proposed Charter Amendment to Increase the Number of Neighborhood Commission Members with Neighborhood Board Experience to Five of the Nine Appointees: Item has been deferred.

Presentation to Change the Recycling Law: Item has been deferred.

Parking Problem: Item has been deferred.

Bulky item Problem: Item has been deferred.

Motion to Remove Donald Yeatman from the Board: Ryan moved and Schiller second Donald Yeatman seat be declared vacant in subdistrict 2 on the grounds he has not showed up at any meeting. The motion passed with a vote of 9-2-0. Ayes: Bigay, Carole, Ryan, Hauret, McCullough V, Mitchell, Schiller, Kawano, and Lai-Young. Nays: Soo and Nicholl.

COMMITTEE REPORTS:

Planning and Zoning: No report.

Transportation: Ryan moved and Mitchell seconds that Neighborhood Board No. 10 request the City and County of Honolulu to determine what needs to be done on Dominis and Poki Streets. The motion passed unanimously.

Health, Welfare and Public Safety: McCullough V asked that everyone support Tracy Okubo to be a part of the committee as a community member. It was mentioned to McCullough V the committee is open to anyone in the public.

ADJOURNMENT: Vice Chair Carole adjourned the meeting at 9:10 p.m. with out any objects.

Submitted by,
Kimberly Kaupu
Neighborhood Assistant.

Thursday, March 11, 2004

APPENDIX III

TRAFFIC IMPACT ASSESSMENT REPORT

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Kaneohe, Hawaii 96744-0816

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email: jng@hawaii.rr.com

January 29, 2004

Mr. Gary S. Furuta, Project Manager
Piikoi Vista L. P.
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813

Subject: Traffic Assessment – Piikoi Vista (TMK: 1-2-4-12: 026)
and Joint Development with Kinau Vista (TMK: 1-2-4-12: 09 & 26)

Dear Gary:

Summary: The proposed Piikoi Vista development will have minimal impact to traffic conditions on Piikoi Street, Kinau Street, and the surrounding area. Estimated total daily impact is less than 200 vehicle trips (total of entering and exiting) on a typical weekday. Highest hourly volume in one direction (entering or exiting) is estimated to be less than 10 vehicles per hour, compared with the guideline suggested by the Institute of Transportation Engineers that "a traffic access/impact study be conducted whenever a proposed development will generate 100 or more *added* (new) peak direction trips to or from the site during the adjacent roadways' peak hours or the development's peak hour."

If jointly developed with the adjacent Kinau Vista site, the proposed developments are estimated to have a total daily impact of about 400 vehicle trips (total of entering and exiting) on a typical weekday. Highest hourly volume in one direction (entering or exiting) is estimated to be less than 20 vehicles per hour. Piikoi Vista and Kinau Vista are on adjacent parcels on a block surrounded by one-way streets; joint development of the two projects will provide alternatives for vehicular access, thereby mitigating circuitous routing for vehicular movements to and from the project site, as well as providing alternative routing to accomplish otherwise difficult movements out of the site driveway to Piikoi Street during certain hours of the day.

Introduction: The remainder of this letter details the findings of a traffic assessment of the development. Piikoi Vista will be in a mid-rise building with 47 rental apartments (one-bedroom) for senior citizens and two offices for elderly services case managers. At ground level, 20 parking stalls and one loading zone will be provided with vehicular access from Piikoi Street.

Considered together, Piikoi Vista and the similar Kinau Vista (under construction) would consist of two buildings containing 109 rental apartments (one-bedroom) for senior citizens. The combined project also includes a two-bedroom apartment for a resident manager. An integrated parking lot with a total of 50 parking stalls and an off-street loading zone would be provided at ground level. Single driveways to Kinau Street and to Piikoi Street will be used for vehicular ingress and egress.

Existing Traffic Conditions: The development sites are located near the signalized intersection of Kinau Street and Piikoi Street in Honolulu, Hawaii. Kinau Street is a four-lane minor arterial carrying one-way eastbound (kokoheadbound) traffic. Apartment buildings and single family dwellings are the predominate uses along the street, and the Queen Kaahumanu Elementary School is located opposite the Kinau Vista development site on the south (makai) side of the street. The curb lanes are available for parallel parking, reducing Kinau Street to two lanes of traffic except during the PM Peak Period (3:30 PM to 5:30 PM on weekdays), when tow-away zones are in effect and all lanes are open to traffic.

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Mr. Gary S. Furuta
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The Kinau Street approach to the intersection consists of four lanes. The first lane (left curb lane) is used for left turns to Piikoi Street only. The second lane is an option lane for left turns and through traffic remaining on Kinau Street. The third and fourth lanes carry through traffic only; the fourth lane, however, is normally a parking lane away from the intersection and is used to carry traffic only in the PM Peak Period. Drivers turning left use the curb lane if they are destined for Lunalilo Street. Drivers wishing to enter the H-1 Freeway eastbound or to continue mauka on Piikoi Street would use the second lane.

Piikoi Street near the project sites varies in width from four to five lanes and curbside parking is not permitted at any time. Four lanes are provided for northbound (maukabound) traffic across Kinau Street; a fifth lane is provided at this approach for right turns only to Kinau Street. North of Kinau Street, the pavement is wider and lanes are striped to transition the through lanes to the left, maximizing use of the pavement at the next intersection (Lunalilo Street), where two lanes are provided for left turn traffic only, a third left turn lane is used by left turns and through traffic, and two additional lanes are available for through traffic continuing mauka on Piikoi Street.

Existing traffic conditions at the intersection of Kinau Street and Piikoi Street are best described as congested during peak traffic hours and not much better at other times. The congestion, which occurs primarily on Piikoi Street, is caused by high traffic demand wishing to enter the H-1 Freeway westbound and the resulting traffic congestion along Lunalilo Street (one block away).

Due to the congestion in the area, most drivers on Piikoi Street select their lane according to their destination a block or two away. Drivers wishing to access the Makiki Post Office or other destinations south of Lunalilo Street use the first (left) lane of the approach to the Kinau Street intersection. The second lane leads directly into the lane that provides access to the westbound on-ramp to the freeway and carries the most traffic. The third lane leads to an option lane at the Lunalilo Street intersection one block away or to a through only lane; from the option lane, drivers can turn left onto Lunalilo Street or continue straight ahead on Piikoi Street. Traffic on Piikoi Street wishing to enter the freeway eastbound uses the fourth lane.

On Piikoi Street at its approach to Kinau Street, the highest hourly volume counted on a weekday in 1999 was over 2,100 vehicles per hour, between 4:30 PM and 5:30 PM. From 7:00 AM to 10:15 PM, northbound traffic volume on Piikoi Street at Kinau Street was continuously at least 1,350 vehicles per hour. Peak hourly volume on Kinau Street at its approach to Piikoi Street also occurred in the hour ending 5:30 PM, when 968 vehicles per hour were counted. Hourly volumes on Kinau Street were at least 600 vehicles per hour from 6:45 AM to 7:15 PM. (count data from City and County of Honolulu, Department of Transportation Services, count taken October 11-12, 1999).

Peak period traffic counts taken in the spring of 1999 at the intersection of Kinau Street and Piikoi Street as part of a study for the State Highways Division indicate that the first (left) lane on both streets is not heavily used. On Piikoi Street, 40 vehicles used the first (left) lane during the AM Peak Hour, compared to a total volume of 1,360 vehicles per hour across the five-lane Piikoi Street approach. In the PM Peak Hour, 135 vehicles were counted in the left lane, compared to a total approach volume of 2,105. On Kinau Street, 85 vehicles used the first (left) lane, out of a total volume of 960 vehicles at the approach during the AM Peak Hour. During the PM Peak Hour, 145 vehicles per hour out of a total approach volume of 1,350 vehicles used the first lane.

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Development Impact to Traffic: Driveway volumes generated by the proposed development were computed with factors from the widely-used *Trip Generation* (6th Edition) report published by the Institute of Transportation Engineers. The factors and the traffic estimates for the proposed development are shown in Table 1.

Table 1 – Project Traffic Estimates

	Trip factors from <i>Trip Generation</i>		Driveway volume	
	rate	% enter	Enter	Exit
Average Weekday Traffic				
Kinau Vista, elderly housing-attached, 63 units	3.48	50%	108	108
manager's apartment, 1 unit	6.63	50%	3	3
Piikoi Vista, elderly housing-attached, 47 units	3.48	50%	82	82
offices, 0.8 thousand square feet	11.57	50%	5	5
			198	198
Total development, Average Weekday				
	-	-		
AM Peak Hour				
Kinau Vista, elderly housing-attached, 63 units	0.07	63%	3	1
manager's apartment, 1 unit	0.51	16%	0	1
Piikoi Vista, elderly housing-attached, 47 units	0.07	63%	2	1
offices, 0.8 thousand square feet	1.78	89%	1	0
			6	3
Total development, AM Peak Hour				
	-	-		
PM Peak Hour				
Kinau Vista, elderly housing-attached, 63 units	0.10	59%	4	2
manager's apartment, 1 unit	0.62	67%	0	1
Piikoi Vista, elderly housing-attached, 47 units	0.10	59%	2	1
offices, 0.8 thousand square feet	1.72	15%	0	1
			6	5
Total development, PM Peak Hour-				
	-	-		

The combined site peak hour volume (highest volume in one hour) would be about 9% of the daily volume, or 18 vehicles per hour. This volume is less than one-fifth of the volume usually associated with the increase needed in one lane to change an intersection's level of service by one level. This maximum impact of 18 vehicles per hour in one direction is substantially less than the "100 or more added (new) peak direction trips to or from the site during the adjacent roadways' peak hours or the development's peak hour" that is recommended by the Institute of Transportation Engineers for conducting a traffic study (from *Traffic Access and Impact Studies for Site Development, A Recommended Practice*, 1991).

The site peak hour would not be coincident with the normal peak period, but would occur sometime between 9:00 AM and 3:00 PM or between 6:00 PM and 8:00 PM. During these times, total approach traffic at the intersection of Kinau Street and Piikoi Street is at least 2,100 vehicles per hour (based on the DTS October, 1999 count). Project impact, therefore, would be less than 1% of existing traffic (18 vehicles per hour/2,100 vehicles per hour).

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Project impact during peak traffic hours will be even smaller. Traffic entering either project site, whether from Kinau Street or from Piikoi Street, would use the first (left) lane, which has been shown above to carry much less traffic than the adjacent lanes.

Traffic leaving the project site would tend to turn to the lane that will lead to the desired destination. Traffic leaving the site on Kinau Street should be able to enter either the first or second lane, since traffic flow on Kinau Street is affected by existing traffic signals at the Pensacola Street intersection upstream and at Piikoi Street downstream. Project traffic turning from the site onto Piikoi Street may have difficulty turning into all but the nearest lane; the shared parking lot will mitigate this condition, providing an alternative (via the Kinau Street driveway) for vehicles wishing to proceed mauka on Piikoi Street or in the easterly (kokoheadbound) direction.

In the case where vehicular access to the site were provided only through the Kinau Vista project, impacts to Piikoi Street would be eliminated. Project traffic, which are less than 10 vehicles per hour during peak hours and less than 20 vehicles per hour during non-peak hours, would have minimal impact to Kinau Street.

Pedestrian Access: Pedestrian access will be provided from Kinau Street and Piikoi Street, approximately one-half block from the intersection of the two streets. Concrete sidewalks exist or are being constructed along both streets, as well as on other streets in the area. Marked crosswalks are provided at signalized intersections (except that pedestrian crossing is prohibited across the mauka leg of Piikoi Street at Kinau Street, due conflicts with the two lanes of left turns). All permitted pedestrian crossings in the area are in marked crosswalks at intersections controlled by traffic signals.

The nearest bus stop is located on Beretania Street, approximately one and one-half blocks from the intersection of Kinau and Piikoi Streets. Other bus stops located within one-quarter mile of the sites are located on King Street and Pensacola Street.

On-Site Parking Provision: The proposed Piikoi Vista will provide off-street parking at an approximate rate of 0.43 parking spaces per apartment. Taken together with Kinau Vista, the rate would be 0.45 parking spaces per apartment. The 1987 report *Parking Generation* by the Institute of Transportation Engineers shows an average rate of 0.27 peak parking spaces occupied per dwelling unit for Senior Citizen Multi-Family Residential use (range of rates 0.11 to 0.48). Locally, on-site parking ratios for other similar developments in urban Honolulu are shown in Table 2.

Table 2- On-Site Parking at Various Honolulu Elderly Housing developments

<u>Development & Location</u>	<u>Total Units</u>	<u>Parking Provided</u>	<u>Ratio (spaces/unit)</u>
Kalunihua, Aala Park	151	42	0.28
Makamae, Nuuanu	124	27	0.22
Paoakalani, Kalakaua	150	28	0.19
Midrise, Kalakaua	123	40	0.33
Kapunai, Liliha	162	57	0.35
Manoa Gardens, Manoa	80	40	0.50
Kalakaua Vista, Pawaa	81	37	0.46
Wisteria Vista, Makiki	91	42	0.46
Artesian Vista, McCully	54	17	0.31

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Mr. Gary S. Furuta
Page 5 of 5
January 29, 2004

We note that the property management company (Prudential Locations) for the Kalakaua Vista and the Wisteria Vista sites reports that each site has seven vacant parking stalls that are unused by tenants. The parking provided at Piikoi Vista will exceed the average, will compare favorably with similar developments as shown in Table 2, and should be adequate for the proposed use (rental apartments for the elderly).

Conclusion: The proposed development would have minimal impact to traffic and adequate access and parking can be provided. Should you have any questions, please contact me.

Sincerely,

JULIAN NG, INCORPORATED



Julian Ng, P.E., P.T.O.E.
President

PIIKOIVISTAE.DOC

APPENDIX IV

**AGENCY COMMENTS PRIOR TO DRAFT EA
AND AGENCY RESEARCH**

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU

715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813
TELEPHONE: (808) 527-5311 • FAX: (808) 527-5498 • INTERNET: www.co.honolulu.hi.us



JEREMY HARRIS
MAYOR

MICHAEL T. AMII
DIRECTOR

JOHN R. SABAS
DEPUTY DIRECTOR

March 1, 2004

Mr. Gary Furuta, Project Manager
Hawaii Housing Development Corporation, General Partner
Piikoi Vista L.P.
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813

Dear Mr. Furuta:

Subject: Piikoi Vista

We are very pleased to provide this letter of support for the development of the Piikoi Vista affordable rental housing project.

We understand that the Piikoi Vista project will provide approximately 47 affordable rental units to senior citizens earning less than 60 percent of Honolulu's median income. As you know, the majority of senior citizens live on fixed incomes, and are particularly vulnerable to escalating housing costs. Honolulu's rental housing market is presently experiencing a period of low vacancy rates and rapidly increasing rents that are adversely impacting lower income households.

The Piikoi Vista project will provide long-term affordable rental housing opportunities to senior citizens in Honolulu's urban core. For its residents, Piikoi Vista will be a place where they can affordably reside in a safe and secure dwelling, in close proximity to public transportation, shopping, and the services they need to live as independently as possible. We are in strong support of Piikoi Vista, and by this letter we confirm the City's commitment of \$600,000 in Community Development Block Grant funds to Piikoi Vista L.P. to assist with the acquisition of the Piikoi Vista project site.

The City and County of Honolulu wishes you success in your application to the Housing and Community Development Corporation of Hawaii for the financial resources necessary to develop this much needed project. Questions regarding this matter may be directed to Keith Ishida at 527-5092.

Sincerely,

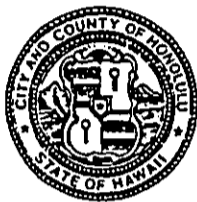
A handwritten signature in black ink, appearing to read "John R. Sabas" or similar, written over the printed name of Michael T. Amii.

MICHAEL T. AMII
Director

MTA:dk

OFFICE OF THE MAYOR
CITY AND COUNTY OF HONOLULU

530 SOUTH KING STREET, ROOM 300 • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4141 • FAX: (808) 527-5552 • INTERNET: www.co.honolulu.hi.us



JEREMY HARRIS
MAYOR

March 10, 2004

Mr. Gary Furuta
Hawaii Housing Development Corporation
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813

Dear Mr. Furuta:

Thank you for your project proposal requesting Home Investment Partnerships (HOME) funds for the Piikoi Vista project. We are pleased to inform you that \$1,100,000 for your project is included in the Executive Capital Budget Ordinance for Fiscal Year 2005, currently before the City Council.

We appreciate your interest in the HOME program. If you have any questions regarding this matter, please contact Jean Tanji, Federal Grants Coordinator, at 527-5067.

Sincerely,


JEREMY HARRIS
Mayor

JH/JT:tb

FROM : ARSOA/YATO

PHONE NO. : 9550052

MAR. 15 2004 09:42AM P2

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



February 19, 2004

JEREMY HARRIS, Mayor

EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice-Chairman
JAN M.L.Y. AMII
HERBERT S.K. KAOPUA, SR.
DAROLYN H. LENDIO

RODNEY K. HARAGA, Ex-Officio
LARRY J. LEOPARDI, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

DONNA FAY K. KIYOSAKI
Deputy Manager and Chief Engineer

Mr. Kazutoshi Yato
Kazu Yato, AIA & Associates
2033 Round Top Terrace
Honolulu, Hawaii 96822

Dear Mr. Yato:

Subject: Your Letter Requesting Water Availability for Rental Units
for Low Income Seniors, TMK: 2-4-012: 26 and 2-6-024: 70 and 71

Thank you for your letter regarding water service for the proposed rental units for low income seniors.

The existing water system is presently adequate to accommodate the proposed development.

The development plan may require approval by the Department of Planning and Permitting before the Board of Water Supply processes the building permit on the proposed development. The availability of water will be confirmed when the building permit is approved. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

If you have any questions, please contact Joseph Kaakua at 748-5442.

Very truly yours,

for CLIFFORD S. JAMILE
Manager and Chief Engineer



DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
 650 SOUTH KING STREET * HONOLULU, HAWAII 96813
 Phone: (808) 527-5827 * Fax: (808) 547-7316

SEWER CONNECTION APPLICATION

APPLICATION NO.: 2004/SCA-0034 STATUS: Approved
 DATE RECEIVED: 01/13/2004 IWDP APP. NO.:
 PROJECT NAME: Proposed Housing Project for Elderly / Dwelling Unit

\$142,942.80
Wastewater System Facility Charge

LOCATION:

Zone	Section	Plat	Parcel		
2	4	012	026	1326 - PIIKOI ST	10,809 Sq. Ft.

SPECIFIC LOCATION: 1326 Piikoi St

APPLICANT: YOSHIKAWA WESLEY M
 535 Ward Avenue #209
 HONOLULU, HI 96814

DEVELOPMENT TYPE: Dwelling, Multi-family SEWER CONNECTION WORK DESIRED: Existing

OTHER USES:

NON-RESIDENTIAL AREA: s.f.

APPROXIMATE DATE OF CONNECTION: 01/13/2007

PROPOSED UNITS		EXISTING UNITS		UNITS TO BE DEMOLISHED	
No. of New Units: 47		No. of Existing Units: 3		No. of Units to be Demolished: 3	
Studios:		Studios:		Studios:	
1-Bedroom:	47	1-Bedroom:		1-Bedroom:	
2-Bedroom:		2-Bedroom:		2-Bedroom:	
3-Bedroom:		3-Bedroom:		3-Bedroom:	
4-Bedroom:		4-Bedroom:		4-Bedroom:	
5-Bedroom:		5-Bedroom:		5-Bedroom:	
6-Bedroom:		6-Bedroom:		6-Bedroom:	

REMARKS

APPROVAL DATE: 01/21/2004

EXPIRATION DATE: 01/20/2008

Valid 2-years after approval date. Construction plans shall be completed and approved within this 2-year period. Construction shall commence within 1-year after approval of plans.

REVIEWED BY: Arturo Saavedra Jr.

Arturo Saavedra Jr.
 Site Development Division, Wastewater Branch



Wild & Scenic Rivers By State

*"... the time has also come to identify and preserve free-flowing stretches of our rivers before growth and development make the beauty of the unspoiled waterways a memory."
- President Lyndon Johnson*

- Designated WSRs
- River Information
- Rivers & Trails
- WSR Council
- Publications
- Study Rivers
- About WSRs
- Guidelines
- Site Index
- Agencies
- WSR Act
- NRI

Questions?

- [Alabama](#)
- [Alaska](#)
- [Arizona](#)
- [Arkansas](#)
- [California](#)
- [Colorado](#)
- [Connecticut](#)
- [Delaware / Pennsylvania](#)
- [Florida](#)
- [Georgia / Carolinas](#)
- [Idaho](#)
- [Idaho / Oregon](#)
- [Illinois](#)
- [Kentucky](#)
- [Louisiana](#)
- [Maine](#)
- [Massachusetts](#)
- [Michigan](#)
- [Minnesota / Wisconsin](#)
- [Mississippi](#)
- [Missouri](#)
- [Montana](#)
- [Nebraska](#)
- [Nebraska / S Dakota](#)
- [New Hampshire](#)
- [New Jersey](#)
- [New Jersey / Pennsylvania](#)
- [New Mexico](#)
- [New York / Pennsylvania](#)
- [North Carolina](#)
- [Ohio](#)
- [Oregon](#)
- [Pennsylvania](#)
- [Puerto Rico](#)
- [Tennessee](#)
- [Texas](#)
- [Washington](#)
- [West Virginia](#)
- [Wisconsin](#)
- [Wyoming](#)

- [Printable table of the National Wild & Scenic Rivers System.](#)
- [Instructions for National Atlas Wild & Scenic Rivers Site \(PDF\)](#)
- [GIS shape files \(270 KB Self-Extracting Zipped File\).](#)

Managing Agencies

- ACOE = [Army Corps of Engineers](#)
- BLM = [Bureau of Land Management](#) -- [BLM Rivers](#)
- NPS = [National Park Service](#)
- USFS = [U.S. Forest Service](#)
- USFWS = [U.S. Fish & Wildlife Service](#)
- Various states

Multiple listings of some rivers indicate more than one segment of the river is designated. Some rivers also have tributaries designated.

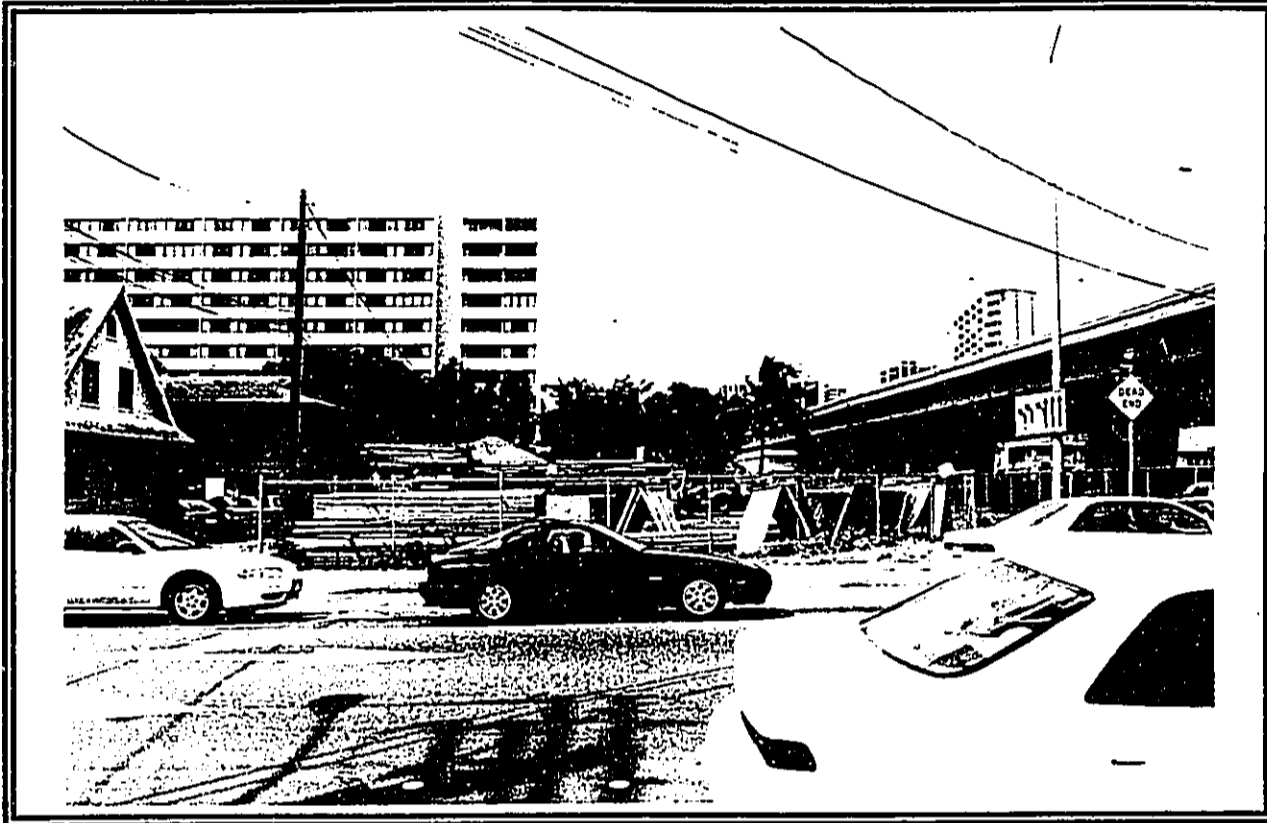
Alabama

- [Sipsey Fork of the Black Warrior, USFS](#)

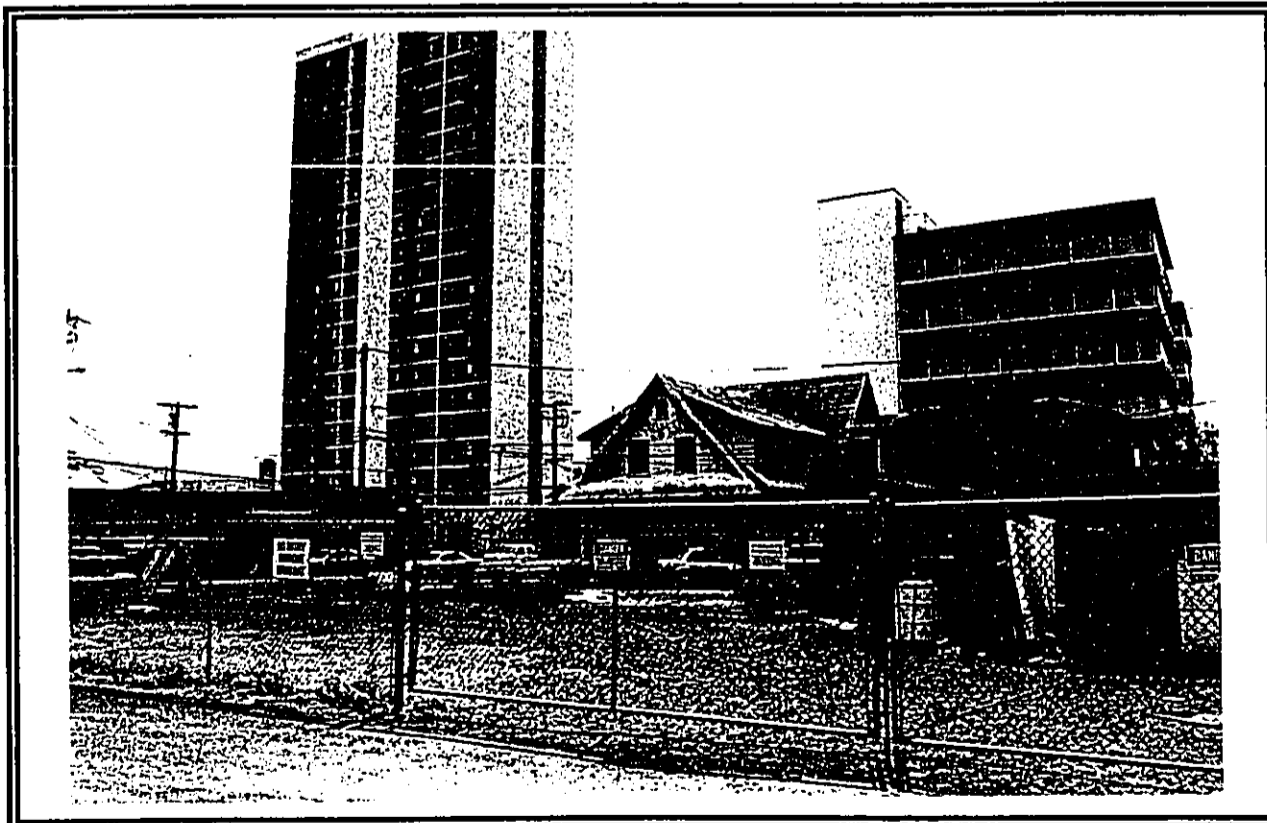
APPENDIX V

PHOTOGRAPHS OF SITE

RECEIVED AS FOLLOWS

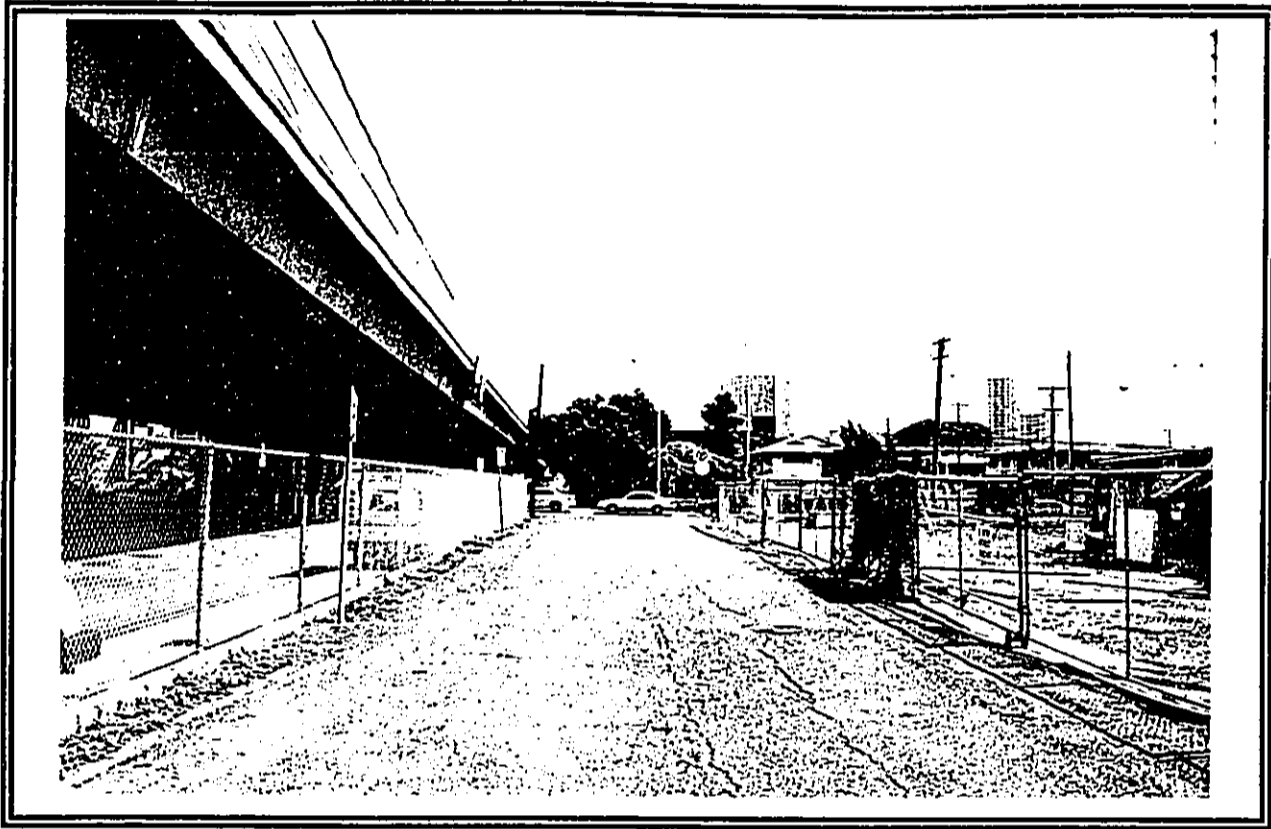


Photograph No. 1 View of project site from Piikoi Street looking west.



Photograph No. 2 View of project site taken from Papaku Place looking south.

RECEIVED AS FOLLOWS

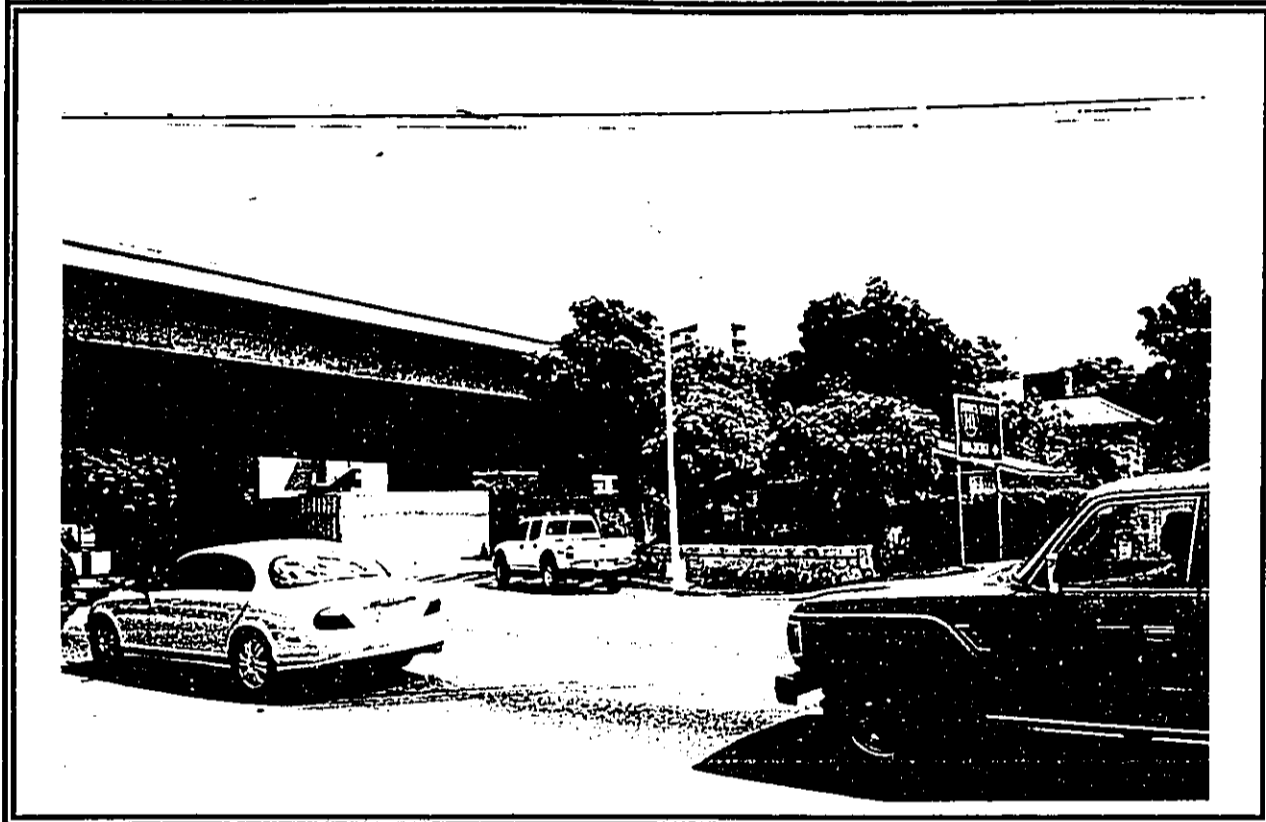


Photograph No. 3 View from Papaku Place looking east with project site on the right.



Photograph No. 4 View of Piikoi Street looking north, from corner of project site.

RECEIVED AS FOLLOWS



Photograph No. 5 View of Piikoi Street from project site looking east at the H-1 Freeway.



Photograph No. 6 View fronting project looking south on Piikoi Street.

APPENDIX VI

CONSTRUCTION TIME FRAME

PIIKOI VISTA**PRO FORMA DEVELOPMENT SCHEDULE**

<u>Activity</u>	<u>Target Date</u>
Due diligence, architectural and engineering design	December 2003 – March 2004
Coordinate design and financing with governmental agencies, e.g., possible joint development of a senior affordable rental project with adjacent Kinau Vista, access via Kapaku Street, process design under Chapter 201G, HRS, availability of RHTF-PA taxable bond gap financing.	December 2003 – January 2004
Obtain financing and support letters from financial institutions (interim and permanent), tax credit syndication, elected and government officials, brief neighborhood board, etc.	December 2003 – January 2004
Apply for federal and state LIHTC, DURF (possibly RHTF-PA), city funds, etc.	December 2003 – January 2004
Apply to Seattle FHLB for Affordable Housing Program (“AHP”) grant.	February 2004
Obtain and close City Bank pre-development and interim financing commitments.	February 2004
Obtain state LIHTC.	October 2004
Close on property.	May 2004
Obtain building permit and commence construction.	March 2005
Complete construction	May 2006
Rent-up project	July 2006

APPENDIX VII

MARKET STUDY

***Affordable Elderly Rental Housing
Market Study***

“PIIKOI VISTA”

PREPARED BY

***DATA@WORK INC.
RESEARCH & CONSULTING***

FOR

HAWAII HOUSING DEVELOPMENT CORPORATION

MARCH 1, 2004

EXECUTIVE SUMMARY

The overall and specific real estate and rental market was analyzed for affordable units suitable for Oahu households whose incomes were at or below 50% of the median income for the area. Strong indications of a market imbalance -- with the demand for one bedroom units affordable rentals outweighing the supply -- were found, not only for the present, but also especially for the future.

ECONOMY: The economic trends appear quite robust, and their existence over the last three years has created such a momentum that it is hard to expect any dramatic lessening of activity in the near term. Given that, we expect the economy will continue to generate sufficient numbers of jobs and higher incomes, which will, in turn, act to increase the level of housing demand in the near and mid-term future. This then should affect rental market conditions -- in particular, putting upward pressure on rental rates.

REAL ESTATE MARKET: The overall residential real estate market was described as being a sellers market. On the resale market side, current good market conditions lead us to expect an increase in residential closings and median prices in the near future. This allowed us to conclude that this would lead the rental market to experience tightness, with falling available units and rising rents.

RENTAL MARKET: We examined the historical rental market on Oahu and found a number of recent trends indicating we are entering a period of tighter rental market conditions: There is a fall in the number advertisements in the classified section of the papers for apartment rentals. There is a rise in rental rates being charged in most of the markets on Oahu.

In light of these trends, the conditions in the current open-market rental market were examined and many signs of a tightening market were noted: firstly, a fall off in the supply of one and two bedroom units both for the island-wide and the community area sub-market, and, secondly, a trend in rising rents, island and area wide.

AFFORDABLE RENTAL MARKET: In terms of the specific market, we found conditions indicating strong demand for affordable rental units, not the least of which was a very low vacancy rate amongst the rental projects presently supplying such units. There was also the long wait lists, both at the projects and with the responsible state agencies, for such units. Anecdotally, this demand has ratcheted upwards over the last nine months, as manifested by longer wait lists and shorter vacancy periods. And, there was the dearth of comparable units on the open market, as well as a number of indicators showing that the rental market is tightening.

Finally, we examined the demand for these units, identifying a number of different sources of demand. The first was just the general aging of the population, and that showed a level of demand (26,068 households in 2003, potential demand) that is above and beyond the supply (4,509 rental units serving elderly renters at affordable rent levels). Second, we noted the growth of population due to better employment conditions (and better quality of life) in Hawaii, and concluded that Oahu could experience in-migration from both the neighbor islands and the Pacific Basis. This in-migration could place an additional burden on the supply of affordable senior rentals.

SUMMARY & PROJECTIONS: In sum, the combination of the new and existing rental demand was estimated as being well over the quantity needed to achieve full occupancy for the project. Given that, we predicted that the project should be able to achieve similar rental rates of other affordable rental projects and be able to reach final occupancy within a six to twelve month period after the project has been completed.

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II. IDENTIFICATION OF THE PROJECT	Page 1
III. GEOGRAPHIC DEFINITION AND ANALYSIS OF THE MARKET AREA	Page 2
IV. ANALYSIS OF HOUSEHOLD SIZES AND TYPES IN THE MARKET	Page 3
V OAHU RENTAL MARKET OVERALL	Page 5
VI. TARGET RENTAL MARKET	Page 13
VII. DEMOGRAPHIC ANALYSIS OF TARGET MARKET	Page 13
VIII. DESCRIPTION OF COMPARABLE UNITS IN THE MARKET AREA	Page 17
IX. ANALYSIS OF PRACTICALLY AVAILABLE RENTS, VACANCY RATES, OPERATING EXPENSES AND TURNOVER RATES OF COMPARABLE PROPERTIES IN THE AREA	Page 18
X. ANALYSIS OF PRACTICALLY AVAILABLE RENTS, VACANCY RATES, OPERATING EXPENSES AND TURNOVER RATES OF MARKET RATE PROPERTIES IN AREA	Page 19
XI. IDENTIFICATION AND COMMENTARY OF PROPOSED PROJECTS IN THE AREA	Page 21
XII. MARKET ACCEPTANCE COMMENTARY & ABSORBTION FORECAST	Page 22

I. INTRODUCTION & IDENTIFICATION OF STUDY AND RESEARCHER

The Data@Work, a market research firm that specializes in analyzing residential real estate markets for developers, has been retained by the Hawaii Housing Development Corporation, General Partner of Piikoi Vista L.P., to perform a study analyzing the market for affordable housing rentals in Honolulu. This study focuses on the historical, current, and projected rental market conditions and trends to help forecast the absorption for the proposed project, named "Piikoi Vista."

The study entailed collecting, comparing and analyzing information that has a bearing on the numerous aspects of market demand for the proposed project, including but not limited to publicly available real property, economic and commercial data. Rental information was collected from rental agencies, condominium resident managers, and the classified ads in the *Sunday Honolulu Advertiser*. Income and demographic information was obtained from the State of Hawaii, City and County of Honolulu, Bureau of the Census, Applied Geographic Systems and National Decision Systems.

The data and statements herein are based on independent research by Data@Work and are in no way contingent upon outside findings or recommendations. By way of background, Data@Work focuses exclusively on residential market research in the state of Hawaii. It services the developer, lending and landowning community with regular reports on the housing markets. In addition, it conducts numerous feasibility studies, including Hokuai Tower, The Windsor and Ko'olani, three of the largest condominium high-rise projects on the market today. It also has done six studies on the affordable housing market – four on Oahu, and one on Maui and Kauai -- since 1999 for three different developers.

II. IDENTIFICATION OF THE PROJECT

The subject property is located at 1326 Piikoi Street, in the Kapiclanani section of Honolulu, an approximately 10,809 square foot flat parcel, zoned for A-2 Medium Density Apartment. It sits near the intersection of Piikoi Street and Kinau Street.

The project concept is to build an eight-story concrete block mid-rise building containing affordable rental one-bedroom, one bathroom units intended for elderly individuals or families (over the age of 61) earning 50% of the AMI (\$600) or lower. There will be a total of 47 one-bedroom rental units. The second through seventh floors will have seven one-bedroom units and the eighth floor will have 5 units. Each unit will be 432 square feet in size. The parking will consist of 17 at-grade parking stalls.

The ground and first floor common areas and amenities will include:

- An entry lobby,
- Elevator,
- Mail room,
- Multi-purpose room with kitchen,
- Public bathroom,
- Patio and Barbeque area
- Laundry room
- Private park, and
- Victory garden.

Summary table:

Unit Count	Approximate Monthly Rent	Unit Type & Household Income, As % of AMI	Household Qualifying Income
47	\$600	1 Bed, @ 50% AMI	> \$23,000

Target Market: In order to qualify, the rental candidates will have to demonstrate that they are over the age of 61 and that their annual incomes fall within the limits established by the affordable housing policy guidelines. The cost of personal electrical power usage will be included in the gross rent.

III. GEOGRAPHIC DEFINITION AND ANALYSIS OF THE MARKET AREA

We define the market area geographically as being island-wide. We are comfortable with this definition as being neither overly liberal or overly conservative.

On the liberal side, some may say that the target market for condominium rental units should be located in a closer proximity to the actual site. This may be so, but only for very few households.

The facts that support this definition of market area are:

- That the entire island's population is within a 30-mile radius (and over 90% is within a 15 mile one).
- That the location of the proposed project itself is arguably the most desirable of all the affordable senior rental projects on the island.

Thus, we posit that the need for a well-located unit at a very advantageous rental price is so great as to overwhelm the objections of moving 25 miles (maximum) for 99% of the qualifying households.

On the conservative side, we ignore those households outside the island or the state who could readily move to Oahu in order to rent such a unit. Indeed, there are significant housing shortages on Maui and Kauai, and a senior household there could well decide to move to Oahu, where the cost of living is 10%-20% lower and the medical (and other) facilities are more extensive and available.

IV. ANALYSIS OF HOUSEHOLD SIZES AND TYPES IN THE MARKET

The study guidelines call for an analysis of household sizes and types in the market. The following tables describe the housing stock and their various characteristics in Honolulu.

Zone	Single Family	Condos	Percent of Condo. Owner Occ.	Percent of Single Fam. Owner Occ.	Single Fam. Average Age	Condo. Average Age	Condo. Average Int. Area
1	14,414	8,774	45%	71%	38	19	812
2	11,610	42,816	29%	67%	44	22	714
3	28,054	5,626	44%	73%	35	23	1,192
4	25,851	5,701	49%	70%	31	18	1,125
5	4,178	974	17%	45%	30	23	845
6	2,609	534	19%	50%	38	21	824
7	4,760	622	30%	62%	38	23	782
8	8,489	2,507	15%	43%	29	24	654
9	44,883	24,949	50%	74%	22	13	878
Total	145,078	92,503	38%	69%	31	19	823

The table above describes the housing stock, single family and condominiums, for all of Oahu, as well as for each of the nine Tax Map Key zones. The relevant zone for this project is zone 2, as highlighted in yellow.

The table below describes the condominium housing stock on the island by number of bedrooms.

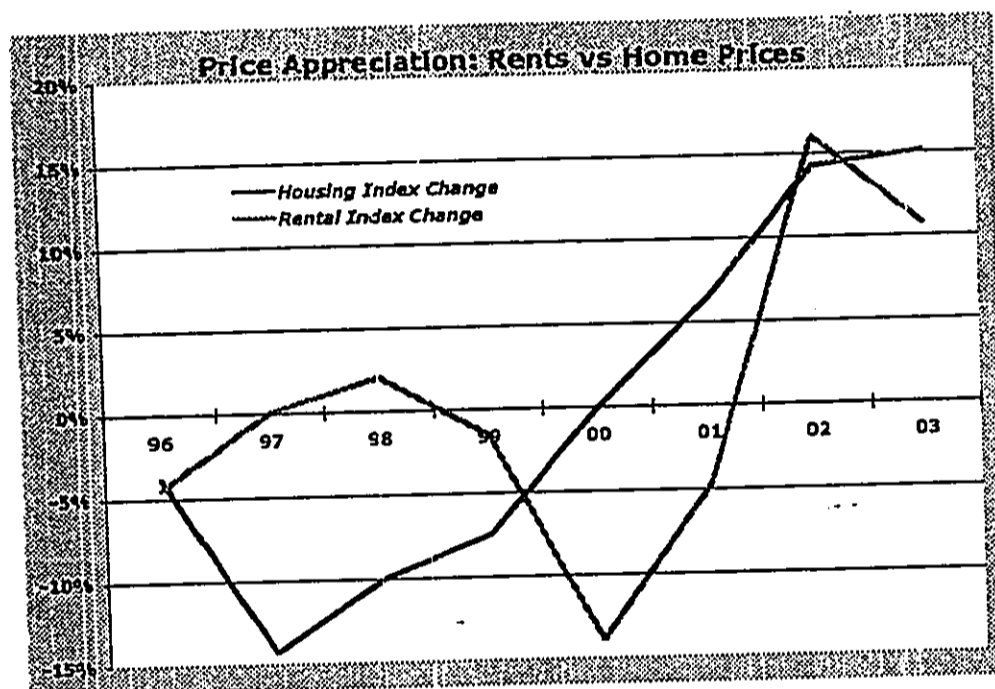
Zone	Studio	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	>4 Bedroom	Total
1	436	1,476	5,257	1,470	48	87	8,774
2	7,383	17,451	15,388	2,393	138	63	42,816
3	149	777	2,664	1,712	288	36	5,626
4	14	341	2,393	2,627	287	39	5,701
5	173	462	80	207	41	11	974
6	0	223	247	55	8	1	534
7	20	123	352	113	10	4	622
8	441	1,008	819	223	16	0	2,507
9	873	2,818	14,318	6,092	744	40	24,885
Total	9,489	24,679	41,518	14,892	1580	281	92,439

The table below describes the condominium housing stock by average size, or square footage, by the bedroom count of the units.

Zone	Studio	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	>4 Bedrm	Average
1	346	577	804	1,101	1,760	2,247	812
2	345	583	920	1,350	2,061	2,616	714
3	190	713	1,124	1,443	1,969	2,532	1,192
4	482	682	898	1,311	1,677	2,623	1,125
5	422	651	1,115	1,253	1,817	2,358	845
6	0	700	815	1,202	1,599	3,684	824
7	481	544	758	1,038	1,765	1,935	782
8	422	553	791	1,025	1,279	--	654
9	319	565	816	1,177	1,449	2,227	878
Ave.	136	619	893	1,211	1,708	2,528	870

V OAHU RENTAL MARKET OVERALL

The backdrop to this study is that Oahu's real estate market has been fueling Oahu's economy and vice versa. Given the prospect of global and US economic recovery over the next 2-3 years, Oahu's economy is poised to maintain its current strong growth. This, in turn, will feed further demand for housing on Oahu. The effect of this has been to raise the price for both for-sale and rental housing, over the last 3-4 years for the for-sale market and over the past 2 years in the rental market.

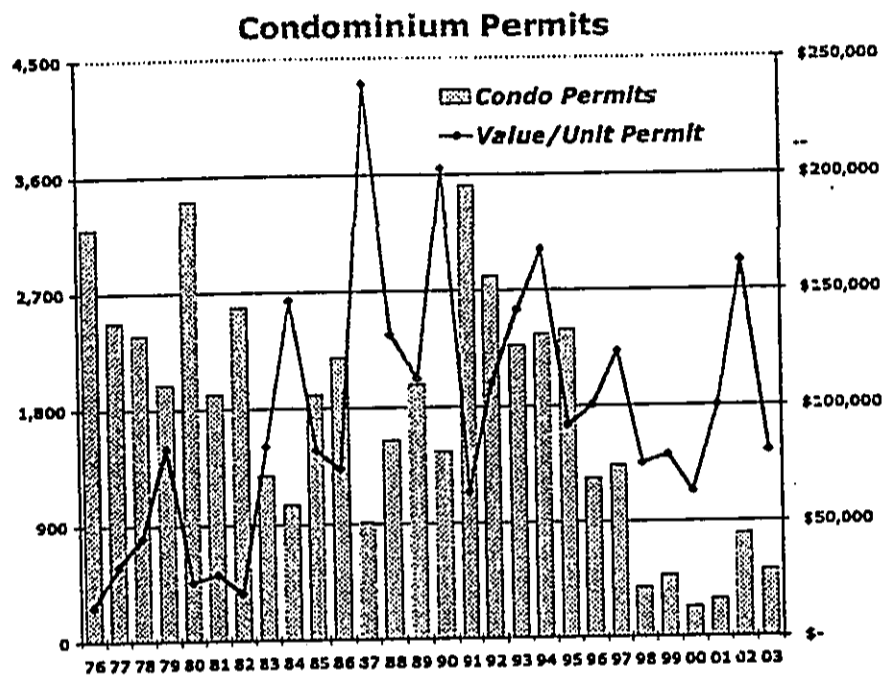


The present and future impact of this heating economy and strong housing market will be to drive rents up further, mainly due to:

1. The reduction of rental units on the market, as low interest rates allowed renters to become owners (lowering supply) and
2. The coming increase in interest rates, which will push the cost of housing up, and push the purchasing power of households down, thus making renting a more viable alternative, and
3. The increase in the population (hence, demand for housing), as the strong economy attracts individuals and households seeking jobs and higher incomes.

The strong housing demand will also stimulate the development of new homes, which to date has been confined to the higher ends of the price spectrum (and more profitable side of the market).

Interestingly, we have not seen a tremendous upsurge in permits taken out by condominium developers. The following table shows this lack of activity, which translates to a supply constrained market for the present and the near future.



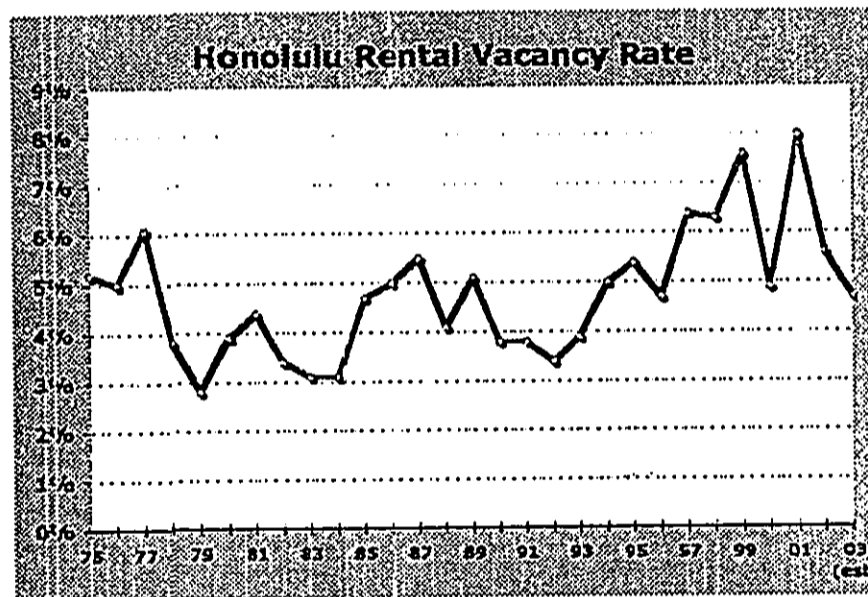
So, while economic and real estate market conditions are ripe for the production of new housing, not many have 'stuck their toes in the water.' Where there is future supply on the horizon, it will not arrive at least the next 2 years or so (ironically, the one project that targeted a low-to-middle income market has been stalled by the City administration, which is opposing it on aesthetic grounds).

RENTAL MARKET OVERVIEW: Apartment living has been an important part of Oahu's housing market since the late 1960's. With developable land both limited and expensive, multi-family units have been the most efficient way to provide affordable housing for a significant percentage of Honolulu residents. New renters and residents, such as those just moving out on their own, retired persons, and others who do not have the desire or the ability to purchase real estate rely on the supply of available rental units for their housing needs. This applies, even more so, to those who are living on a fixed income: apartment living offers security, convenience, community and (hopefully) affordability.

In reviewing conditions in the overall market for rental units on Oahu, one looks at a number of different indicators of supply and demand, including: Vacancies, Levels of Advertisements and Average Rental Rates.

A. VACANCY LEVELS

The chart below tracks the annual level of vacancies for the metropolitan area of Honolulu, thanks to data compiled each year by the U.S. Bureau of the Census.



Note that the 2003 figure is our estimate, as the US Census will not be publishing the 2003 number until later in the year.

We believe that the current vacancy rate (in the 5% area for 2002) is on the high side, given current conditions. In 2001, the trend was heading downward in a significant way, thanks to a very strong real estate market, a growing visitor industry, increasing federal outlays, etc., when the 9/11 incident intervened.

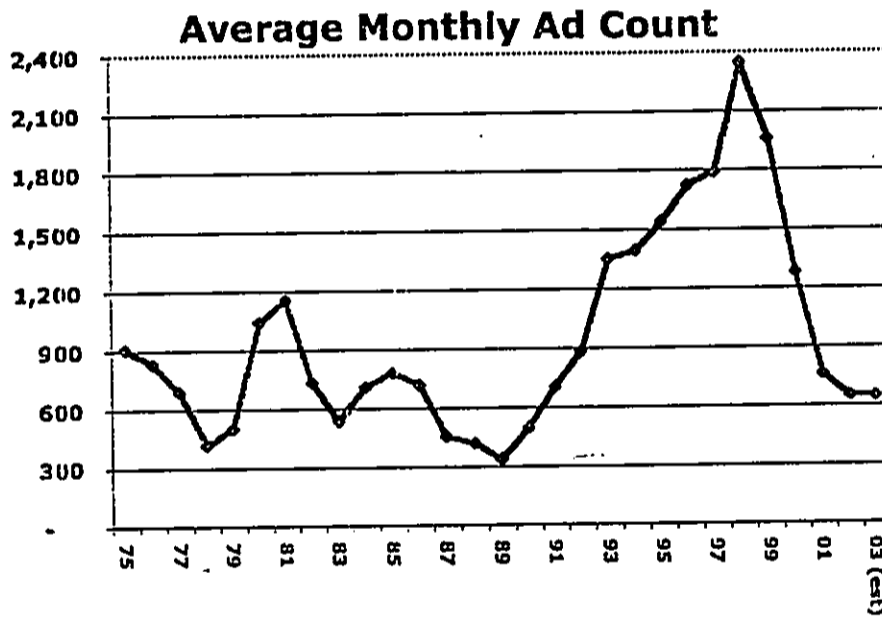
The subsequent slowdown in economic activity and the overall uncertainty wrecked havoc on the rental market, probably more than was merited by the event and the subsequent predictions of doom. In any event, renter's pulled back from renting and the vacancy rate headed back upwards as the local economy declined. By 2002, the clouds had begun to lift, and the economy improved significantly, which is why vacancies headed lower again.

Not only has this improvement continued through the present moment, it has picked up momentum. Therefore, it is for this reason that we estimate that there will be a lower vacancy rate in 2003 relative to 2002. We also believe that there will be an additional fall in the vacancy rate in 2004 (perhaps below 4%, and quite possibly another drop in 2005).

B. RENTAL ADVERTISING

An excellent indicator of rental market supply conditions is the number of apartments that are advertised for rent in the local newspaper. This will be called "Ad Counts" in the following tables and charts, and we use it here as an indicator of the supply of rental units available to the market.

In general, advertisement count is a counter-cyclical indicator: low numbers of advertisements are associated with strong (tight) rental market conditions while a high ad count number suggests there is excess supply relative to demand (a weak rental market: i.e., low rental prices).



Next, we looked at the two indicators together, but first taking just the apartment ads. The table below describes that:

THE VACANCY RATES RELATIVE TO RENTAL AD COUNTS

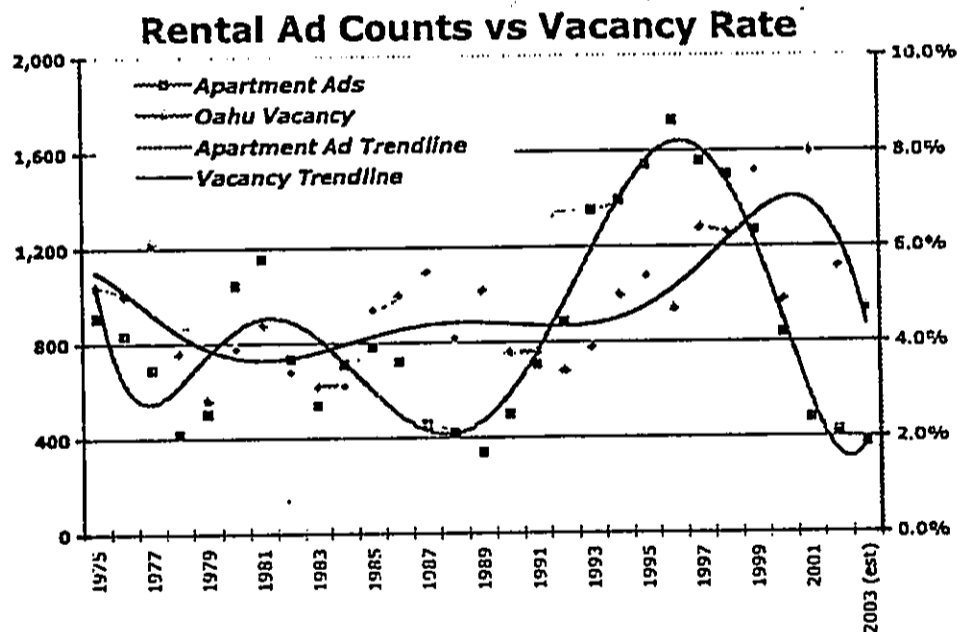
	Count of Apartment Ads	Oahu Vacancy Rate
1985	783	4.7%
1990	499	3.8%
1992	865	3.4%
1994	1,397	5.0%
1995	1,543	5.4%
1996	1,728	4.7%
1997	1,558	6.4%
1998	2,349	6.3%
1999	1,961	7.6%
2000	1,282	4.9%
2001	762	8.0%
2002	651	5.6%
2003	651	4.7%

It shows that changes in the number of ads foreshadow changes in the vacancy rates. When the ad counts begin to fall, then in short order following that the vacancy rates begin to fall. This lag time varies from one to three years, in the event of a peak in the market.

The counts of rental ads have been in a downward trend since the first half of 1998, lowering the supply of units onto the market. Given the strong economy, we believe this dwindling of supply trend will continue, at least for another two years. That said, it was interesting to see that 2003 had the same number of ads as 2002. At the same time, rental rates went higher, so the rising price trend probably neutralized the shrinking supply trend.

In general, the number of rental ads in the newspapers (ad counts) trend leads the vacancy rate. The trends show that ads started falling a couple years ago, and that then seems to affect negatively the percentage of vacancies.

Going forward, it looks like there will be at least two years of falling vacancies, which will be advantageous for all rental projects, including the subject property.



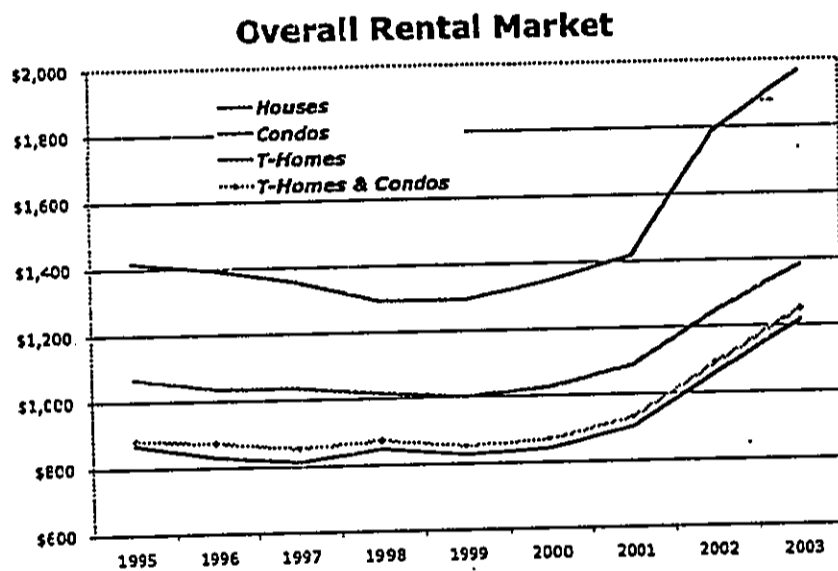
C. RENTAL RATES:

Another important relationship that helps to describe and forecast the rental market is trend in rates charged for rental units. The trend lately has been higher for each of the market segments, single family houses, condominium apartments and townhome apartments.

The biggest increase has been for single family rents, as those units are the most sensitive to an upswing in both the economy in general, and the rental market in particular. Condominium unit rents usually lag behind. For this reason, we think that this

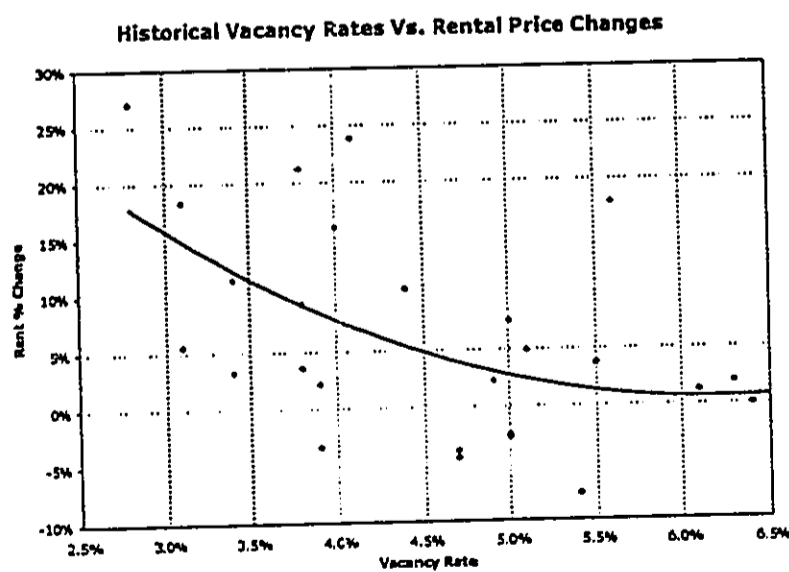
upward trend should still have 2-3 years left to run (and then begin to flatten and/or stabilize).

The chart below describes the trend over the last 8 years.



Going forward, we have said that the strong economy and rental demand will push down the vacancy rates. Our estimate for the 2003 rate is around 4.5%. The effect of this on rental rates will be to force them upwards.

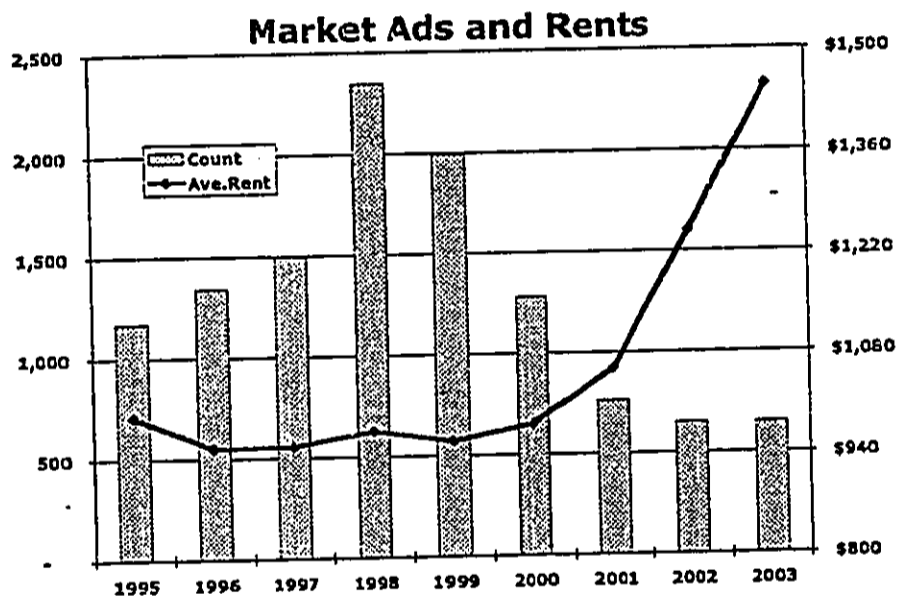
How much further up? Historically, a vacancy rate of 4.5% has equated to a 5% increase in rental rates, so we expect at least that. Depending on the strength of demand for rental housing, this might even go up more.



Finally, we looked at the relationship between the numbers of rental ads to the level of rents charged. This is seen in the chart below, which depicts the historical relationship between annual advertising counts and average rents for Metropolitan Honolulu.

In general, the two lines seem to be inversely related: a falling number of ads appears to be a precursor to a rise in rents. This seems to be the case when ad counts started to fall off, starting in 1999. The next year, 2000, rental levels started creeping upward.

Again, we think that this rise in rental rates will be moving upwards over the coming 2-3 years, and then possibly moderating after that. We say this because the concurrent fall in the inventory is nearing levels that, in the 1980s, precipitated double-digit increases in rental levels.



RENTAL MARKET, BY LOCATION AND BEDROOM TYPE

Next, we looked at the overall market for each of the bedroom types in the proposed project: studios, one-bedroom units and two-bedroom units.

This first table describes the market by the number of ads (Count) and by the average rents asked for one-bedroom units. It does it for Oahu, Honolulu and Kapiolani going from the largest to the smallest market segment.

ONE-BEDROOM UNITS

Oahu	Count	Ave.Rent	Honolulu	Ads	Ave.Rent	Kapiolani	Ads	Ave.Rent
1997	417	\$727	1997	340	\$744	1997	103	\$918
1998	610	\$763	1998	515	\$781	1998	137	\$901
1999	515	\$752	1999	427	\$770	1999	118	\$877
2000	335	\$766	2000	277	\$786	2000	69	\$895
2001	200	\$804	2001	167	\$823	2001	53	\$913
2002	164	\$930	2002	138	\$964	2002	31	\$1,056
2003	136	\$1,031	2003	115	\$1,072	2003	30	\$1,152

VI. TARGET RENTAL MARKET

MARKET OVERVIEW: In an article 12/9/03 about affordable rentals for the elderly by Andrew Gomes of the Honolulu Advertiser, he quoted Darlene Hein, executive director of the Affordable Housing and Homeless Alliance, as saying the need for low-cost housing is dire. The following is from that article: Before the home market took off, about 80 percent of government-assisted Section 8 renters could find an apartment within 90 days, she said. Today, the figure is only 50 percent to 60 percent. "We are in a rental crunch," she said.

PERTAINING TO THE ELDERLY: In a publication from the Long Term Care Policy Summit Proceedings, convened by Hawaii Institute on Public Affairs and sponsored by Department of Health, Executive Office on Aging held in Honolulu 10/5/03, they wrote: Hawaii will experience a rapid aging of its population. Hawaii enjoys the longest life expectancy in the US at 78.9 years and the 60+ population in Hawaii is growing two-and-a-half times faster than the national average. By 2020, Hawaii will have an estimated 400,000 residents over age 60, with this age group comprising 25% of the state's population.

PERTAINING TO AGING-IN-PLACE: In a publication from the Long Term Care Policy Summit Proceedings, convened by Hawaii Institute on Public Affairs and sponsored by Department of Health, Executive Office on Aging held in Honolulu 10/5/03, they wrote: Hawaii has roughly half the number of nursing home beds per 1000 residents over 65 than the national average.

VII. DEMOGRAPHIC ANALYSIS OF TARGET MARKET

The market area we define as the Island of Oahu, otherwise known as the City & County of Honolulu. We do this because, in general, people living on a small island identify themselves with the whole island. This is even more true when the island is very remote from all other major land areas.

Furthermore, we consider the whole island (within a 30 mile radius from the site) to be the target market because the particular product and/or service is both scarce and vital, from the point of view of this market: it is an affordable living situation that is tailored to their particular needs (that being aging in place).

According to CLARITAS, a demographic analysis firm of national stature, there are approximately 187,875 individuals over the age of 62 years living in the market area. This number has grown by 3% a year, since the 2000 census, which is the source data for these projections. Furthermore, this number is forecast to grow to 227,780 by 2008, or by 7% a year.

This is a very significant growth rate. In contrast, the forecasted annual growth rate for the entire island over the next five years is slightly under 1% (0.93%).

We used the CLARITAS data to estimate the number of households on Oahu aged 62 years or older who are living below the poverty level (\$10,200 annual income for one person, \$13,740 for two persons). The table below describes this:

Aged 62+	Totals 2003	2004	2005
Income Below Poverty Level	9,908	10,205	10,511
Married-Couple Families	3,032	3,123	3,217
In other Families	1,624	1,673	1,723
Male householder, no wife present	531	547	564
Female householder, no husband present	1,093	1,125	1,159
Unrelated individuals	5,252	5,409	5,572

To now proceed into the specifics of the target market, the table below defines the income levels for householders according to the number of people in the household:

Median Income	50% of AMI
1 Person	\$23,000
2 Person	\$26,300

For the purposes of this study, it appears that the minimum annual income level that a one-person household would have to have in order to qualify for a rental unit in the proposed project is \$23,000. For a two-person household, the qualifying annual income rises to \$27,300.

Using these income limitations as the filter, we can now quantify the potential target market for these units. The source data that we will filter is shown in the following table, which describes the size of the target market for the proposed project:

Household Income by Age	2000 Census	2003 Estimate	2008 Projection
Householder Age 62 - 64			
Income less than \$15,000	1,036	1,131	1,327
Income \$15,000 - \$24,999	797	844	955
Income \$25,000 - \$34,999	1,027	1,069	1,187
Householder Age 65 - 74			
Income less than \$15,000	4,392	4,248	4,336
Income \$15,000 - \$24,999	3,648	3,468	3,505
Income \$25,000 - \$34,999	3,659	3,559	3,724
Householder Age 75 and over			
Income less than \$15,000	5,977	6,087	6,381
Income \$15,000 - \$24,999	4,362	4,634	5,086
Income \$25,000 - \$34,999	3,828	4,075	4,546
TOTAL Households Age 62 +			
Income less than \$15,000	11,405	11,466	12,044
Income \$15,000 - \$24,999	8,807	8,946	9,546
Income \$25,000 - \$34,999	8,514	8,703	9,457
CUMULATIVE Households Age 62 +			
Income less than \$15,000	11,405	11,466	12,044
Income less than \$24,999	20,212	20,411	21,590
Income less than \$34,999	28,727	29,114	31,048

The table below shows the size of the potential market in 2003 and 2008, which we derived by extracting the number of qualified households there are the AMI segments for the 50% and under limitation.

Limitation	Unit & Target Market's Income	Market 2003	Market 2008
> \$23,000	1 Bed, @ 50%, 1 person	18,622	19,201
> \$27,600	1 Bed, @ 50%, 2 person	19,754	20,430

Next, we took the total for 2003 and increased it, in order to take into account the change in population when the proposed project would come to market, which is to say, 2005. This takes the 2003 number and increases it by two years. It is described in the table below:

Units Supplied	Qualifying Income	Unit Type & Target Market by Income	Total 2003	Total Market 2005
47	> \$23,000	1 Bed, @ 50%	18,622	18,854
47	> \$26,300	1 Bed, @ 50%	19,754	20,024

For simplicity's sake, we will take the 20,024 total market for 2005 as the proper figure to use for the potential market. Although it is the larger number, it has the virtue of encompassing the entire potential of the market. As each of those households can qualify, we will use this number.

Next, it is necessary to assign a market capture rate.

Although it is somewhat arbitrary, we think a one in ten capture rate is sufficiently conservative and is appropriate. It says that one out of ten households will decide to vacate their current residence to take a brand-new unit in the proposed project. We think this is justifiable, given the fact that the proposed project is well located for the recreational, social, spiritual, health and familial needs of senior citizens AND it is very advantageous in terms of providing housing at a very reasonable cost.

The following table describes the potential target market capturable at a 1 to 10 ratio, (or 10% share of market).

Units Supplied	Qualifying Income	Unit Type & Target Market by Income	Target Captured Market 2003	Captured Market 2005
47	> \$23,000	1 Bed, @ 50%	1,975	2,002

Another small, but integral, step to make in this analysis is to consider to recognize that the number in the captured market will be reduced by the number of units supplied by other new projects, particularly Tusitala Vista (as it is very comparable in being new, and having a good location). While this assumes that the other new project will proceed, we believe that the accurate number of the 'capturable' market for this project is 1,856, arrived at by 'withholding' the 146 units from Tusitala Vista (11 one bedrooms at 30% AMI, and 88 one bedrooms at 50% AMI).

To be sure, in the final analysis, this reduction in the level of 'capture-able demand' is very small in relation to the total potential demand.

SUMMARY: Given the number of households in the market area that are both age and income qualified for this project, we see ample demand for the proposed project. And, as seen in the subsequent section, supply conditions are such that only about 17% of the total demographic demand (26,068 household) is being serviced via affordable elderly rental projects (4,509 total units).

VIII. DESCRIPTION OF COMPARABLE UNITS IN THE MARKET AREA

Here, we turn from the demand side of the market in order to review the supply situation for units similar to those being contemplated by the proposed development.

INVENTORY: There are approximately 43 rental projects containing about 4,509 rental units on Oahu available to qualified senior households. Of those, 2,885 are one-bedroom units, and 117 are two-bedroom units.

The average minimum wait list time until a one-bedroom unit becomes available is 13 months, and the maximum is 29 months for all units, including studios, in the market area. (Note: this is an estimation made by the Catholic Charities Elderly Services housing assistance program).

The wait list time for just one-bedrooms is 13 months minimum and 30 months maximum. The wait list time for just the two-bedroom units is 10 months minimum and 27 months maximum.

If the market area is limited by location to just Honolulu (Kalihi to Hawaii Kai), there are 25 rental projects containing 2,913 total units, with 1,785 being one-bedrooms and 115 being two-bedrooms.

The wait list time for just one-bedrooms is 18 months minimum and 38 months maximum. The wait list time for just the two-bedroom units is 11 months minimum and 29 months maximum.

The long waiting list times indicates the market is very tight for these units.

The list below describes some of the more recently built projects in Honolulu.

HONOLULU AFFORDABLE ELDERLY RENTAL PROJECTS BUILT SINCE 1990

Project	Year Built	Units
Kulaokahua	1992	24
Pohulani	1992	263
Manoa Gardens	1992	80
Na Lei Hulu Kupuna	1992	76
Philip Street	1993	34
Honuakaha	1995	150
Kualana Hale	1997	175
Royal Kinau	1998	61
Artesian Vista	2000	53
Wisteria Vista	2000	91
Kalakaua Vista	2001	80
Kulana Hale, Phase II	2002	81
Kaulanui	2003	31
Totals		1,199

IX. ANALYSIS OF PRACTICALLY AVAILABLE RENTS, VACANCY RATES, OPERATING EXPENSES AND TURNOVER RATES OF COMPARABLE PROPERTIES IN THE AREA.

The following tables give a description of the comparable properties in the area.

COMPARABLE SENIOR AFFORDABLE PROJECTS WITH ONE BEDROOM UNITS

Projects	Units	Living Area	Rent Range	Vacancies	V Rate	Turnover/Yr
Chinatown Gateway	200	555	600-850	4	2.0%	24
Honuakaha	9	450	425	0	0.0%	0.5
Kamakee Vista	89	570	520-750	1	1.1%	4
Kauhale Kakaako	114	588	550-745	3	2.6%	6
Manoa Gardens	39	565	714-760	0	0.0%	2
Pohulani	134	550	466-716	3	2.2%	4
Kulana Hale	43	534	726	0	0.0%	8
Artesian Vista	53	420	313-551	0	0.0%	4
Royal Kinau	57	481	510	0	0.0%	9
Kalakaua Vista	80	435	556	0	0.0%	8
Wisteria Vista	91	384	503	1	2.2%	12
Makua All	200	400	369	5	2.5%	0
Piikoi Vista	47	432	600	proposed		

As seen, the proposed project is not the low-price rental, nor the high-price rental, competitor in the marketplace, but right in the middle. It is somewhat on the small side, but those with larger units are in much older buildings. This could be a relatively easy trade-off for a renting household to make: a smaller, but better designed and located location. Given that, this should allow it to match or overcome the other alternatives that are offered to senior households.

Note: the operating expenses for most of these projects were unavailable for publication. Those that we were able to obtain are attached in the appendix.

X. ANALYSIS OF PRACTICALLY AVAILABLE RENTS, VACANCY RATES, OPERATING EXPENSES AND TURNOVER RATES OF MARKET RATE PROPERTIES IN THE MARKET AREA.

The marketplace within which 'market rate properties' compete is comprised of very few large unit rental properties and a great many small unit properties. Relative to other US urban centers, this is unique and has to do with a number of things, including the visitor industry and the nature of the urbanization (or the lack thereof) on Oahu.

As short a while ago as 40 years, Oahu was primarily an agrarian economy, at least in terms of the dispersion of population near the plantation areas. As such, there was no real urban core around which people lived. Thus, there is no real core area with lots of large condominiums. The main area for that was in Waikiki, and that targeted short-term visitors. The rest of condominium development was small-scale, due to this dispersion, due to the rugged topography of the valleys and ridges on Oahu, due to the lack of capital for building large projects, and due to the lack of land for development (leasehold system).

As such, the rental marketplace for market rate properties is highly fragmented, and contains a great many 10-20 unit two-story 'walk-ups' (no elevator necessary, due to the limitation to two stories).

The import of this, relative to this study, is that there are no easily found comparable projects to examine. There are no large operators to call and survey for their rents, vacancy rates, operating expenses and turnover rates. Indeed, all those who were surveyed would not divulge anything more than the asking rent (most were agents, and a few were owners fearful I was a competitor).

As such, the analysis of this market segment is based on very thin information. It is our impression that there are very few comparables to what the proposed project is building. As such, we believe there will be little or no interference from the market-rate (non-subsidized) sector of the rental marketplace.

As a matter of interest, we did do an analysis of the rental market using advertised listings in the classified section of the major newspaper, The Honolulu Advertiser. This analysis follows.

The table below describes the number of ads for one-bedroom apartments on Oahu for the last nine years. It is split into three price brackets, \$500, \$600 and \$700, each color coded (blue, pink and green).

MARKET-RATE LISTED ONE BEDROOM RENTALS ON OAHU

	Count	Ave. Rent	Count	Ave. Rent	Count	Ave. Rent	
1995	23	\$558	104	\$648	87	\$739	1995
1996	47	\$558	120	\$641	86	\$742	1996
1997	73	\$556	121	\$639	78	\$741	1997
1998	103	\$552	140	\$639	114	\$740	1998
1999	98	\$548	123	\$639	100	\$737	1999
2000	70	\$553	80	\$637	54	\$741	2000
2001	27	\$556	44	\$636	41	\$739	2001
2002	10	\$552	29	\$636	31	\$758	2002
2003	3	\$576	9	\$672	20	\$773	2003

FYI, in 2003, there were no ads in the \$300 and \$400 rental price brackets. For the other brackets, there were only 3 ads a month for the \$500 bracket and 9 a month for the \$600 bracket.

Of those 9, their average was well above the \$600 asked for in the proposed project.

A closer examination of those particular listings showed that many were located outside of Honolulu, most were in low-income neighborhoods, and many were in walk-up buildings. As such, the comparison is between these and the proposed project: a well-located property, in a project specifically meeting the needs of senior citizens, and in a building under good management and with good security.

Finally, we looked at the listing data just for Kapiolani, and found no rentals in the \$500 rent bracket. There were some rentals offered, one a month in 2003, in the next two brackets higher (the \$500 rental price range listings are in the Yellow, and the \$600 range listings are in the light Blue). Most of these were in older 'walk-up' buildings, and thus do not really satisfy the livability and security needs of senior citizens.

MARKET-RATE ONE BEDROOM RENTALS IN KAPIOLANI, BY PRICE RANGE

Kapiolani	Ads	Ave. Rent	Ads	Ave. Rent
1997	3	\$557	3	\$637
1998	13	\$549	9	\$639
1999	11	\$536	4	\$542
2000	7	\$558	6	\$523
2001	5	\$552	4	\$529
2002	1	\$535	3	\$628
2003	1	\$557	1	\$630

XI. IDENTIFICATION & COMMENTARY OF PROPOSED PROJECTS IN THE MARKET AREAS

PROJECTED NEW INVENTORY: There are two new projects that are complete and in the process of being rented up. One is in Hawaii Kai, Kaulanui, and it has less than 4 units remaining out of the original 31 units offered. It is targeting half of its units for those in the 30% AMI range (\$363) and the other half in the 60% AMI range (\$726). The other is Kinau Vista, currently under construction and adjacent to this proposed project (being developed by the same general partner, HHDC, of the proposed project).

Within the Metropolitan Honolulu market area, currently there are two new affordable rental projects planned to be built. As shown in the table below, there are approximately 229 units planned.

PROJECTED METROPOLITAN HONOLULU AFFORDABLE RENTAL PROJECTS

New Projects	Units
Tusitala Vista (2005)	106
Kinau Vista (2004)	62
Kulana Hale, Phase II (2005)	120
Totals	288

The first is the Tusitala Vista, which is applying for credits this year and was noted in an earlier section. It consists of 106 units targeted on the 30%, 50% and 60% or less of AMI.

The second is Kulana Hale, Phase II, which is an assisted living project comprised of one and two bedroom units. This project has been "on the books" for some length of time... and, therefore, it is questionable whether it will keep to a deadline.

On the market rate side, there are several proposed market rate senior 'age-in-place' projects underway, the least expensive of which (and therefore, most comparable) is Luana Koa, out in Kapolei (where the developer's land cost is low, and therefore the price is low). Their basic package is for a monthly rental, plus a one time entrance fee.

Rough prices for the one-bedroom to three-bedroom units and services range from \$1,300 to \$2,300 a month for independent living. There is also a one-time entrance fee of \$195,000 to \$475,000, which is 100 percent refundable should a resident move out or die.

There may be other projects in the works that are not mentioned here – it is said there are a number of local and offshore investment entities researching the opportunities in the affordable rental market, both in terms of building new and in converting already constructed apartment buildings. That said, the process of applying and being accorded tax credits takes about 12 months, and is a competitive process. Add to that the 18-24 month period for build-out, and you have about a three-year timeline before occupancy.

SUMMARY: In sum, we do not foresee any interference to an expeditious rent-out of the project coming from a comparable project. However, more in-depth description of the project is provided in the Appendix.

XII. MARKET ACCEPTANCE COMMENTARY & ABSORBTION FORECAST

Given the magnitude of the potential demand, we foresee that this project will receive a sufficient number of rental applications to be able to achieve 100% occupancy within the first six months of availability. We support this forecast with further evidence that the demand side of the market is strong and will continue strong for the next 1-2 years (barring any external shocks to the market, and/or the economy). The global economy is poised to grow at a much higher rate in the next 1-2 years than it has over the last 1-2 years. Furthermore, those economies that are the key to Hawaii's economy (Hawaii's major markets for recreational, national security and other goods and services) are also looking to experience strong growth (Japan and the US).

On the supply side, we see continued tightening in the market rate rental market. We also see no new construction targeting this market segment, the affordable rental market for senior citizens looking for a residence suitable for aging-in-place. Finally, we point to the zero vacancies and the long waiting lists at the existing comparable projects that subsidize the rents for low-income elderly households.

Thus, we see a level of current demand (26,068 households in 2003, potential demand) that is above and beyond the supply (4,509 rental units serving elderly renters at affordable rent levels). If there is a growth in the population due to better elderly services and lifestyle on Oahu, that in-migration from both the neighbor islands and the Pacific Basis could place an additional burden on the supply of affordable senior rentals.

SUMMARY & PROJECTIONS: In sum, the combination of the new and existing rental demand was estimated as being well over the quantity needed to achieve full occupancy for the project. Given that, we predicted that the project should be able to achieve similar rental rates of other affordable rental projects and be able to reach final occupancy within a six to twelve month period after the project has been completed.

APPENDIX VIII

**MAJOR EXEMPTIONS BEING REQUESTED THROUGH THE
201G APPLICATION**

**PIIKOI VISTA MAJOR EXEMPTIONS REQUESTED
THROUGH THE 201G APPLICATION**

- A. Exemption from Chapter 21, Article 3, Section 21-3.90-1 (b), Land Use Ordinance, Ordinance No. 99-12, as amended, Table 21-3.3, relating to maximum density, to allow about 29,029 square feet of floor area, which exceeds the maximum allowable floor area by about 14,802 square feet. (Note: the maximum floor area ratio (FAR) is 1.316; whereas the FAR for the project will be about 2.685).
- B. Exemption from Chapter 21, Article 6, Section 21-6.20, Land Use Ordinance, Table 21-6.1, Ordinance No. 99-12, as amended, relating to off-street parking and loading to allow the provision of 20 parking stalls for the proposed 47-unit apartment development, instead of 52 required parking stalls (47 + 5 guest stalls).
- C. Exemption from Chapter 21, Article 6, Section 21-6.30(d), Land Use Ordinance, Ordinance No. 99-12, as amended, relating to off-street parking and loading, to allow the provision of 13 standard sized stalls and 7 compact sized stalls (total 20 stalls) in lieu of the required 26 standard sized stalls and 26 compact sized stalls (total of 52 stalls).
- D. Exemption from Chapter 21, Article 6, Section 21-6.120(b), Land Use Ordinance, Ordinance No. 99-12, as amended, relating to dimensions of loading space to allow the loading space to have a horizontal dimension of 19'- 0" x 8'- 5", rather than the required 35'- 0" x 12'- 0". The one loading space will meet the required vertical clearance of at least 14 feet.
- E. Exemption from Chapter 21, Article 4, Section 21-4.30(d), Land Use Ordinance, Ordinance No. 99-12, as amended, relating to required yard and off-street parking and loading, to allow:
- a) Loading space and maneuvering area to encroach into the required 10-foot side yard by about 5 feet.
 - b) Parking spaces #6 thru #18 to encroach into the required 10-foot side yard by about 4 feet 8 inches. Parking spaces #1 thru #5 to encroach into the required 10-foot front yard by 7 feet 6 inches. Wheel stops will be installed, where appropriate.

- c) The Mechanical Room to encroach into the required 10-foot front yard by about 7 feet 6 inches.

- F. Exemption from the Park Dedication requirements, Chapter 22, Article 7, ROH, including exemption from the Park Dedication permit process, to allow the provision of about 2,500 square feet for park dedication, portions of which encroach into the required side yard and rear yard for park dedication. The break-down is as follows, approximately 2,070 square feet for a private park and victory garden and approximately 430 square feet for the multi-purpose room that will provide space for socialization and recreational activities in addition to other uses. Park dedication requirements for the project would normally amount to 2,903 square feet. (Note: 10% of 29,029 floor area = 2,903 square feet or 47 units x 110 square feet = 5,170 square feet, which ever is less)

- G. Exemption from Chapter 21, Article 4, Section 21-4.30(a), Land Use Ordinance, Ordinance 99-12, as amended, relating to yards to allow picnic furniture (tables and chairs) to be placed within required side yard in private park area and victory garden area.

- H. Exemption from Chapter 21, Article 3, Section 21-3.80©)(1), Land Use Ordinance, Ordinance 99-12, as amended, relating to height setback, to allow a 3-foot encroachment on the Ewa side of the building and a 4-foot encroachment for the stairs and elevator on the Mauka side of the building, above 40 feet.

- I. Exemption from Chapter 18, Article 6, Section 18-6.2, ROH, Building Permit Fees, as amended, to allow exemption of the fees for building permits in the amount of \$25,115.00, approximately.

- J. Exemption from the payment of real property taxes, in accordance with Chapter 8, Article 10, Section 8-10.20, ROH, Real Property Tax Building Permit Fees - Exemption - Low-income and Moderate-income housing, as amended, in the amount of \$20,000 per year, approximately.

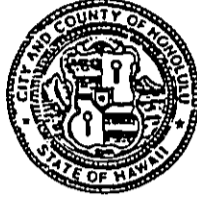
- K. Exemption from payment of the General Excise Tax on project development and construction costs related to the affordable rental apartment units in the amount of \$336,000.00, approximately.
- L. Exemption from payment of the General Excise Tax on rental income from the affordable rentals and operating costs related to the affordable rental units in the amount of \$11,000 per year, approximately.
- M. Exemption to reduce the Sewer Connection fee for the project from \$142,942.80 to \$38,000.00.
- N. Exemption for deferral of payment of Wastewater and Board of Water Supply connection fees until funding of Rental Housing Trust Fund Project Award loan is available. The sewer connection fee for the project is estimated to be \$38,000.00 and the Board of Water connection fee is estimated to be approximately \$72,000.00.
- O. Exemption from payment of the Department of Planning and Permitting filing fee of \$300.00 for the Conditional Use Permit, required for the Joint Development of Kinau Vista and Piikoi Vista Apartments.

APPENDIX IX

FUNDING SOURCES

OFFICE OF THE MAYOR
CITY AND COUNTY OF HONOLULU

550 SOUTH KING STREET, ROOM 300 • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4141 • FAX: (808) 527-5552 • INTERNET: www.co.honolulu.hi.us



JEREMY HARRIS
MAYOR

March 10, 2004

Mr. Gary Furuta
Hawaii Housing Development Corporation
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813

Dear Mr. Furuta:

Thank you for your project proposal requesting Home Investment Partnerships (HOME) funds for the Piikoi Vista project. We are pleased to inform you that \$1,100,000 for your project is included in the Executive Capital Budget Ordinance for Fiscal Year 2005, currently before the City Council.

We appreciate your interest in the HOME program. If you have any questions regarding this matter, please contact Jean Tanji, Federal Grants Coordinator, at 527-5067.

Sincerely,


JEREMY HARRIS
Mayor

JH/JT:tb

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU

715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813
TELEPHONE: (808) 527-5311 • FAX: (808) 527-5498 • INTERNET: www.co.honolulu.hi.us



JEREMY HARRIS
MAYOR

MICHAEL T. AMII
DIRECTOR

JOHN R. SABAS
DEPUTY DIRECTOR

March 1, 2004

Mr. Gary Furuta, Project Manager
Hawaii Housing Development Corporation, General Partner
Piikoi Vista L.P.
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813

Dear Mr. Furuta:

Subject: Piikoi Vista

We are very pleased to provide this letter of support for the development of the Piikoi Vista affordable rental housing project.

We understand that the Piikoi Vista project will provide approximately 47 affordable rental units to senior citizens earning less than 60 percent of Honolulu's median income. As you know, the majority of senior citizens live on fixed incomes, and are particularly vulnerable to escalating housing costs. Honolulu's rental housing market is presently experiencing a period of low vacancy rates and rapidly increasing rents that are adversely impacting lower income households.

The Piikoi Vista project will provide long-term affordable rental housing opportunities to senior citizens in Honolulu's urban core. For its residents, Piikoi Vista will be a place where they can affordably reside in a safe and secure dwelling, in close proximity to public transportation, shopping, and the services they need to live as independently as possible. We are in strong support of Piikoi Vista, and by this letter we confirm the City's commitment of \$600,000 in Community Development Block Grant funds to Piikoi Vista L.P. to assist with the acquisition of the Piikoi Vista project site.

The City and County of Honolulu wishes you success in your application to the Housing and Community Development Corporation of Hawaii for the financial resources necessary to develop this much needed project. Questions regarding this matter may be directed to Keith Ishida at 527-5092.

Sincerely,

Handwritten signature of Michael T. Amii in black ink.
MICHAEL T. AMII
Director

MTA:dk



CITYBANK

501 MERCHANT STREET
HONOLULU, HAWAII 96813

TELEPHONE: (808) 515-2500
FAX: (808) 515-2555

FED. RES. BANK
HONOLULU, HAWAII 96811

February 27, 2004

Piikoi Vista L.P.
c/o Gary Furuta
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813

Re: Loan for \$5,910,000.00

Gentlemen:

City Bank (the "Bank") is pleased to inform you that it has approved your request for a loan (the "Loan") to finance the construction of a 47-unit affordable elderly rental housing project to be known as Piikoi Vista Apartments on property located at 1326 Piikoi Street, Honolulu, Hawaii.

The Loan will be made to Piikoi Vista L.P., a Hawaii Limited Partnership whose general partner is Hawaii Housing Development Corporation, (the "Borrower"), subject to the following terms and conditions:

TERMS

- 1) Loan Amount: \$5,910,000.00
- 2) Interest: City Bank's Base Rate (currently at 4.00%) + 0.75%, floating.
- 3) Required Payments: Interest only monthly on amounts of principal disbursed until the Maturity Date. Proceeds from the initial loan disbursement will be used to payoff the balance of City Bank's interim land loan for Piikoi Vista L.P. of \$1,100,000.00.
- 4) Maturity Date: Two (2) years from the Closing Date.
- 5) Loan Fee: Payable at Closing 1.50% (\$ 88,650.00)
The loan fee of \$16,500.00 collected in conjunction with the interim land loan for Piikoi Vista L.P. will be credited towards payment of this Loan Fee.
- 6) Name of Project: Piikoi Vista Apartments
- 7) Property: Approximately 10,809 sq. ft. of A-2, Apartment Precinct zoned property located at 1326 Piikoi Street, Honolulu, Hawaii TMK: (1) 2-4-12-26.

Piikoi Vista L.P.
February 27, 2004
Page 2

- 8) Proposed Improvements: The proposed project will consist of an 8 story masonry mid-rise apartment structure containing 47 one bedroom/one bath units. The first floor will have a lobby, mail area, manager's office, 17 at-grade parking stalls. Floors two through seven will have seven units each; the eighth floor will have five units. Amenities for each unit include a range, disposal, refrigerator, air conditioning, and drapes.
- 9) Borrower's Estate: Fee Simple
- 10) Commitment Acceptance Date: March 12, 2004
- 11) Closing Date: December 30, 2004, or sooner

CONDITIONS

- 1) Closing Date. Time is of the essence in the Borrower's performance of this commitment. The borrower must accept this commitment by the Commitment Acceptance Date and all conditions must be satisfied on or before the Closing Date. If the conditions of this commitment are not satisfied on or before the Closing Date, the Bank may either extend the Closing Date or terminate this commitment without further obligation.
- 2) Security. The Loan shall be secured by:
 - a) A mortgage (the "Mortgage"), constituting (i) a first lien upon the Borrower's Estate in the Property and all buildings, fixtures, equipment and appurtenant improvements comprising the Improvements, (ii) a first security interest in all fixtures, furniture, furnishings, equipment, appliances and any other personal property now owned or hereafter acquired by the Borrower and situated on the Property and (iii) a first security interest in rentals;
 - b) A security agreement (the "Security Agreement"), granting to the Bank a first security interest in certain collateral (the "Collateral"), including, but not limited to, all assignments of interests, contracts, permits and authorizations, respecting the design, construction, management, and operation of the Improvements, all furniture, furnishings, equipment, appliances, and other personal property incorporated in the Improvements or located on the Property; and
 - c) A financing statement (the "Financing Statement"), to perfect the first security interest of the Bank in certain of the mortgaged property and in the Collateral.

Piikoi Vista L.P.
February 27, 2004
Page 3

- 3) Additional Closing Requirements. The Borrower shall furnish to the Bank on or before the Closing Date the following:
- a) Loan Agreement. The loan agreement (the "Loan Agreement"), containing warranties by the Borrower, conditions of the Bank's obligation, covenants relating to construction procedures and the method of Loan disbursements, requirements for payment of project costs in excess of Loan proceeds, requirements for attorneys' opinions, prohibition against secondary liens and security interests, rights of inspection, rights to employ an independent architect or engineer at the Borrower's expense, requirements for foundation and completion surveys, remedies on default and such other covenants and provisions as the Bank may require or as are customarily incorporated in similar agreements by prudent lenders.
 - b) Partnership Documents. (Piikoi Vista L.P.)
 - i) An executed copy of the joint venture agreement or partnership agreement for Borrower.
 - ii) A copy of the registration statement or partnership certificate certified by the state of organization for Borrower.
 - iii) A certificate of good standing from the State of Hawaii and the state of organization with respect to Borrower.
 - c) Corporate Documents. (Hawaii Housing Development Corporation)
 - i) A certificate of the secretary certifying (A) a copy of the Bylaws of the corporation; (B) resolutions of the Board of Directors of the corporation duly authorizing the execution and delivery of the documents required to be executed by the corporation and the consummation of the transactions contemplated thereby; (C) verification of the names and signatures of the officers authorized to execute such documents; (D) a resolution of the stockholders of the corporation, if required, authorizing the transaction, and (E) such other matters as the Bank may require.
 - ii) A copy of the Articles of Incorporation of the corporation certified by the state of incorporation.
 - iii) A certificate of good standing from the State of Hawaii, and the state of incorporation.

Piikoi Vista L.P.
February 27, 2004
Page 4

- d) Title Insurance; Chattel Lien Report.
 - i) A policy of title insurance together with such endorsements as the Bank may require, issued by any financially responsible and substantial title company authorized to do business in the State of Hawaii, in the amount of the Loan, insuring that the Mortgage is a valid first lien on the mortgaged property, free and clear of all defects, liens, encumbrances and exceptions to title whatsoever, except such as the Bank may approve in writing. Without limiting the foregoing, the title policy shall effect full coverage against losses arising out of encroachments against boundary or setback lines, against losses from existing or subsequent mechanics or materialmen's liens which may gain priority over the Mortgage, losses arising out of zoning ordinances and regulations and such other losses with respect to which the Bank may request coverage.
 - ii) A chattel lien report by a financially responsible and substantial searcher of titles, verifying that a search of the public records has not disclosed any security interest, liens or encumbrances against any personal property owned by the Borrower, except the Financing Statement.
- e) Survey; Certification.
 - i) A perimeter survey map, prepared and certified as correct by a registered surveyor, disclosing (a) the location of the perimeter of the Property; (b) all easements and rights-of-way, (c) the lines of the street abutting the Property and the width thereof, and (d) encroachments, if any.
 - ii) A certification by an architect or an engineer showing (a) that the proposed Improvements are located wholly within the perimeter of the Property, without encroachments or violation of any zoning ordinances, building codes or regulations or setback requirements, any (b) the relation of the proposed Improvements by distance to the perimeter of the Property, the established building lines and street lines.
- f) Appraisal Report. A report, by a recognized real estate appraiser, acceptable to the Bank, appraising the fair market value of the mortgaged property and its proposed improvements and related tax credit value. The loan to appraised value shall not exceed 75%.
- g) Insurance. Fire and extended coverage insurance for the full insurable value of the Improvements, fixtures and equipment, with satisfactory co-insurance, together with flood insurance (if the Improvements are required to be so insured by the Bank's Federal Regulators), and such other insurance customarily required by prudent lenders or required by the Bank.
- h) Project Budget. A detailed budget and cash flow projection of the total project costs.
- i) Plans and Specification. Final working plans and specifications (the "Plans and Specifications").

Piikoi Vista L.P.
February 27, 2004
Page 5

- j) Construction Contract; Performance and Payment Bond.
 - i) A construction contract executed by the Borrower and a construction company licensed to engage in the construction business in the State of Hawaii and acceptable to the Bank.
 - ii) A 100% Performance and Payment Bond, with dual obligee rider, in amount and with surety acceptable to the Bank.
 - iii) A letter from the general contractor for the Improvements, consenting to the assignment of the construction contract to the Bank and agreeing to continue performance of the construction contract for the benefit of the Bank in the event of any default by the Borrower.
- k) Architect's Agreement. An architect's agreement executed by the Borrower and an Architect licensed in the State of Hawaii and acceptable to the Bank, for the preparation of the Plans and Specifications and the supervision of the construction of the Improvements.
 - i) A letter from the Architect, consenting to the assignment of the architect's agreement to the Bank and agreeing to continue performance of the architect's agreement for the benefit of the Bank in the event of default by the Borrower.
- l) Financial Statements. Current financial statements on the Borrower. On an annual basis and until the loan is paid in full, Borrower shall provide its financial statement and rent roll on the Piikoi Vista Apartments to the Bank. These statements shall be due within 90 days from the annual closing of the borrowers books.
- m) Governmental Authorizations. Verification (including the opinion of Borrower's counsel and certificate of Borrower's Architect) that all permits, approvals, or authorizations of any governmental or regulatory authority necessary for the construction and use of Improvements, including, but not limited to, grading and building permits, have been obtained, and that the construction and the proposed use of Improvements fully comply with all federal, state, and county statutes, laws, ordinances, and regulations relating to land use classification, zoning, coastal zone management, set back, environmental, ecological, and pollution control, waste product and sewage disposal (or, if such compliance is not necessary, verification that such compliance is not necessary).
- n) Tax Clearance Certificate. Tax clearance certificate issued by the Department of Taxation, State of Hawaii on the Borrower and its general partner.

Piikoi Vista L.P.
February 27, 2004
Page 6

- o) Environmental Examination and Covenants. Prior to closing of the loan, the Bank will require an environmental examination or audit to be made of the Property, by an environmental engineer designated by the Bank, and may reevaluate the loan if such examination reveals the existence or prospect of environmentally hazardous materials in amounts or of a nature unacceptable to the Bank. Borrower will provide an indemnification to Bank against liability or expenses incurred by Bank relating to hazardous materials or substances.
- 5) Completion Certificate. Upon completion of construction, the Borrower shall provide the following:


 - a) A certification by the architect verifying that the Improvements have been completed in accordance with the Plans and Specifications; that direct connection has been made to abutting water, sewer, electrical and other necessary utility facilities, and that the Improvements are ready for occupancy;
 - b) A certified copy of the affidavit of publication of notice of completion filed in the Circuit Court of the State of Hawaii; and
 - c) Certificates or other evidence, satisfactory to the Bank, that the Borrower has obtained, all such consents, permits, licenses, approvals and franchises of any and all federal, state, county and municipal authorities as shall be required for the use of the Improvements as contemplated by the commitment and as completed, including certificates of occupancy, permits and licenses with respect to health regulations, environmental and pollution regulations, and waste product and sewage disposal regulations, and that the Borrower shall be in compliance with all such regulations and the laws which they implement.
- 6) Loan Closing Expenses. Whether or not the Loan is closed, the Borrower shall pay all expenses incurred in satisfying the conditions of this Loan commitment, including, but not limited to, premiums for the title report and title insurance, survey costs, recording fees, taxes, appraisal fees, attorneys' fees for preparation of the Loan documents, legal research or any other matters with respect to which the Bank seeks advice or legal services in connection with the matters provided for in this commitment.
- 7) Accuracy of Information, Etc. This commitment is subject to the accuracy as of the date hereof, of all information, data, representations, exhibits, and other material submitted in connection with the Borrower's application.
- 8) Approval of Bank and its Counsel. All documents, agreements, contracts, instruments, certificates, survey maps, appraisals, reports and opinions required by this commitment must be in form and substance satisfactory to the Bank and its counsel. Any insurance or title insurance policy must be in form and amount satisfactory to the Bank. The Bank reserves the right to review after the acceptance of this commitment all information and documents, previously furnished by the Borrower and this commitment is not an indication or agreement that such items have been approved by the Bank or its counsel.

Piikoi Vista L.P.
February 27, 2004
Page 7

- 9) Commencement of Construction. Except as may be otherwise first approved in writing by the Bank, construction of the Improvements shall not commence nor shall there be any "visible commencement of operations" as defined in Section 507-41, Hawaii Revised Statutes, as amended, prior to the Closing Date or the date of recordation of the Mortgage. If the Bank shall approve such commencement, or if such commencement has taken place prior to this commitment, Borrower shall provide to the title insurer such indemnities and subordination as the title insurer may require in order to issue the endorsement against mechanics' and materialmen's liens required by the Bank.
- 11) Amendment. Any amendment of this commitment letter must be in writing and acceptable by both the Borrower and the Bank.
- 12) Collective Project Loan Commitments. This loan commitment is issued in conjunction with a \$1.1 million loan commitment and a \$5.91 million loan commitment to Piikoi Vista L.P. of even date. Because all three of these loan commitments supplement the aggregate funding requirements to complete the proposed Piikoi Vista Apartments project, these commitments are issued collectively and, therefore, must be accepted collectively.
- 13) Other Conditions for Closing. Loan funding will also be subject to the receipt and satisfactory review of the following:
- a) HOME CHDO project award for \$600,000.00; and DURF award for \$1,500,000.00; and HFDC's LIHTC award for \$723,000.00; and Syndication Commitment Letter to purchase tax credits for \$5,661,000.00; and HCRC takeout loan commitment letter for \$695,000.00; or Documentation evidencing that a sufficient combination of project awards, grants, tax credits, commitments to purchase tax credits and takeout loan commitments have been committed to the project to ensure proper completion.
 - b) Payoff of the existing construction loans to Artesian Vista L.P. and Punahou Vista L.P.

If the above terms and conditions are acceptable, please execute the form of acceptance on the enclosed copy of this letter and return the same to us by the Commitment Acceptance Date.

Sincerely,
CITY BANK

By 
Its Vice President

Enclosure

Piikoi Vista L.P.
February 27, 2004
Page 8

ACCEPTED:
PIIKOI VISTA L.P.
a Hawaii Limited Partnership

By HAWAII HOUSING DEVELOPMENT
CORPORATION, a Hawaii non-profit
corporation, its General Partner

By Walter J. Lyles
Its Secretary

Date 2.27.04



	A	B	C	D	E	F	G	H	
1	TAX CREDITS AVAILABLE FOR PROJECT								
2	Tax Credit Program							9%	
3	Total Development Cost							8,455,042	
4	Less Non-Depreciable Costs (Syndication, reserves, permanent loan fees, land)							1,596,125	
5	Eligible Basis							6,858,917	
6	Difficult Development Area Increase							100%	
7	Eligible Basis							6,858,917	
8	Set-Aside Percentage							100%	
9	Qualified Basis							6,858,917	
10	Tax Credit Percentage							8.000%	
11	Annual Federal Tax Credit							548,713	
12	Annual State Tax Credit 30%							164,614	
13	Total Annual Tax Credit							713,327	
14	10 Year Tax Credit							7,133,274	
15	Syndication Rate							0.7900	
16	Maximum Tax Credit Equity							5,635,286	
17	TAX CREDITS REQUIRED FOR PROJECT								
18	Total Project Cost							8,455,042	
19	Less: Equity Funding							100,000	
20	DURF							2,000,000	
21	LIHTC							-	
22	HOME							-	
23	CHDO							-	
24	Permanent Loan Financing							722,247	
25	Total Tax Credit Equity Required for Project							5,632,795	
26	Percentage of Total Tax Credit Equity Required							99.956%	
27	Annual Federal Tax Credits Required for Project							548,471	
28	Annual Federal Tax Credits Required per Rental Apartment							11,670	
29	FUNDING SUMMARY								
30	Sources of Funding							Funding Phase	
31								Interim	Permanent
32	Equity							100,000	100,000
33								-	-
34	DURF							2,000,000	2,000,000
35	HOME							-	-
36	CHDO							-	-
37	Pre-Dev Loan							-	-
38	Interim Construction Loan 1.75% 6.25%							6,355,042	-
39	Tax Credit Equity							-	5,632,795
40	Takeout Loan 2.50% 7.00% 30							-	722,247
41	Total Project Funding							8,455,042	8,455,042

APPENDIX X

HUD ENVIRONMENTAL ASSESSMENT

Environmental Assessment

for HUD-funded Proposals

Recommended format per 24 CFR 58.36, revised February 2004
[Previously recommended EA formats are obsolete].

Project Identification: *Piikoi Vista Apartments*

Preparer: Kusao & Kurahashi, Inc.
Planning & Zoning Consultants

Responsible Entity: Department of Planning & Permitting
City and County of Honolulu

Month/Year: January, 2005

Environmental Assessment

Responsible Entity: City and County of Honolulu

[24 CFR 58.2(a)(7)]

Certifying Officer: Mufi Hannemann, Mayor

[24 CFR 58.2(a)(2)]

Project Name: Piikoi Vista Apartments

Project Location: 1326 Piikoi Street, Honolulu, Hawaii 96814

Estimated total project cost: \$8,285,000.00 _____

Grant Recipient: Hawaii Housing Development Corporation
[24 CFR 58.2(a)(5)]

Recipient Address: 725 Kapiolani Blvd., Suite C-103, Honolulu, Hawaii
96813

Project Representative: Mr. Gary Furuta, Project Manager

Telephone Number: 808-429-7815

Conditions for Approval: (List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts and other relevant documents as requirements). [24 CFR 58.40(d), 40 CFR 1505.2(c)]

FINDING: [58.40(g)]

Finding of No Significant Impact

(The project will not result in a significant impact on the quality of the human environment)

Finding of Significant Impact

(The project may significantly affect the quality of the human environment)

Preparer Signature:

Keith Kurahashi

Date: 1/11/05

Name/Title/Agency:

Keith Kurahashi, President
Kusao & Kurahashi, Inc.

RE Approving Official Signature:

Date: _____

Name/Title/
Agency: _____

Statement of Purpose and Need for the Proposal: [40 CFR 1508.9(b)]
 See Page 9 – Statement of Purpose and Need of the Final EA.

Description of the Proposal: Include all contemplated actions which logically are either geographically or functionally a composite part of the project, regardless of the source of funding. [24 CFR 58.32, 40 CFR 1508.25]
 See Page 12 – Proposed Development of the Final EA.

Existing Conditions and Trends: Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)]
 See Page 19 Existing Conditions and Trends of the Final EA.

Statutory Checklist

[24CFR §58.5]

Record the determinations made regarding each listed statute, executive order or regulation. Provide appropriate source documentation. [Note reviews or consultations completed as well as any applicable permits or approvals obtained or required. Note dates of contact or page references]. Provide compliance or consistency documentation. Attach additional material as appropriate. Note conditions, attenuation or mitigation measures required.

**Factors
 Documentation**

Determination and Compliance

Historic Preservation [36 CFR 800]	See Page 51 – Environmental Impacts, Subsection 1. Historical and Archaeological Resources of Final EA.
Floodplain Management [24 CFR 55, Executive Order 11988]	See Page 47 – Drainage, Subsection 4 Environmental Impact, Subsection 2 (b) of Final EA.
Wetlands Protection [Executive Order 11990]	See Page 54 – Environmental Impact, Subsection 2 (c) of Final EA.
Coastal Zone Management Act [Sections 307(c),(d)]	See Page 54 – Environmental Impact, Subsection 2 (d) of the Final EA.
Sole Source Aquifers [40 CFR 149]	See Page 55 – Environmental Impact, Subsection 2 (f) of the Final EA.
Endangered Species Act [50 CFR 402]	See Page 55 – Environmental Impact, Subsection 2 (g) of the Final EA.
Wild and Scenic Rivers Act [Sections 7 (b), (c)]	See Page 55 – Environmental Impact, Subsection 2 (h) of the Final EA.
Air Quality [Clean Air Act, Sections 176 (c) and (d), and 40 CFR 6, 51, 93]	See Page 61 – Air Quality of the Final EA.

Farmland Protection Policy Act [7 CFR 658]	See Page 55 – Environmental Impact, Subsection 2 (i) of the Final EA.
Environmental Justice [Executive Order 12898]	See Page 56 – Environmental Impact, Subsection 2 (j) of the Final EA.

HUD Environmental Standards Determination and Compliance Documentation

Noise Abatement and Control [24 CFR 51 B]	See Page 58 – Noise and Appendix XI for Noise Abatement Waiver Approval.
Toxic/Hazardous/Radioactive Materials, Contamination, Chemicals or Gases [24 CFR 58.5(i)(2)]	See Page 58 - H. Phase I Environmental Site Assessment and Page 62 – Hazards of the Final EA.
Siting of HUD-Assisted Projects near Hazardous Operations [24 CFR 51 C]	No hazardous operations nearby. Please refer to Page 58 - H. Phase I Environmental Site Assessment
Airport Clear Zones and Accident Potential Zones [24 CFR 51 D]	Not situated near an airport and not subject to airport clear zones and accident potential zones.

Environmental Assessment Checklist

[Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. **Impact Codes:** (1) - No impact anticipated; (2) - Potentially beneficial; (3) - Potentially adverse; (4) - Requires mitigation; (5) - Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Land Development	Code	Source or Documentation
Conformance with Comprehensive Plans and Zoning	2	Final EA – Consistent with Development Plan and State Plan.
Compatibility and Urban Impact	2	Final EA
Slope	1	Final EA
Erosion	1	Final EA
Soil Suitability	1	Final EA
Hazards and Nuisances including Site Safety	1	Final EA
Energy Consumption	1	Final EA

Noise - Contribution to Community Noise Levels	1 4	Code 1 - Contribution to Community Noise Levels Code 4 - Interior and exterior noise levels at Piikoi Vista upon completion. Refer to Page 58 and 64 of Final EA for mitigation measures and Appendix XI of Final EA for updated Noise Study and the Noise Abatement Waiver approval.
Air Quality Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels	1	Final EA.
Environmental Design Visual Quality - Coherence, Diversity, Compatible Use and Scale	2	Final EA

Socioeconomic	Code	Source or Documentation
Demographic Character Changes	2	Final EA
Displacement	1	Final EA
Employment and Income Patterns	1	Final EA

Community Facilities and Services	Code	Source or Documentation
Educational Facilities	1	Final EA
Commercial Facilities	1	Final EA
Health Care	2	Final EA

Social Services	2	Final EA
Solid Waste	1	Final EA
Waste Water	1	Final EA
Storm Water	1	Final EA
Water Supply	1	Final EA
Public Safety - Police	1	Final EA
- Fire	1	Final EA
- Emergency Medical	1	Final EA
Open Space and Recreation - Open Space	2	Final EA
- Recreation	2	Final EA
- Cultural Facilities	1	Final EA
Transportation	1	Final EA

Natural Features		Source or Documentation
Water Resources	1	Final EA
Surface Water	1	Final EA
Unique Natural Features and Agricultural Lands	1	Final EA
Vegetation and Wildlife	1	Final EA

Other Factors	1	Source or Documentation
Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]	1	Final EA
Coastal Barrier Resources Act/ Coastal Barrier Improvement Act [§58.6(c)]	1	Final EA
Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)]	1	Final EA
Other Factors		

Summary of Findings and Conclusions

See Page 66, Chapter VIII Significance Criteria of the Final EA.

ALTERNATIVES TO THE PROPOSED ACTION

Alternatives and Project Modifications Considered [24 CFR 58.40(e), Ref. 40 CFR 1508.9]
(Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

See Page 62, Major Impacts and Alternatives Considered of the Final EA.

No Action Alternative [24 CFR 58.40(e)]

(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

See Page 62, Major Impacts and Alternatives Considered, (A. No. Action).

Mitigation Measures Recommended [24 CFR 58.40(d), 40 CFR 1508.20]

(Recommend feasible ways in which the proposal or its external factors should be modified in order to minimize adverse environmental impacts and restore or enhance environmental quality.)

See Page 64, Mitigation Measures - Final EA.

Additional Studies Performed

(Attach studies or summaries)

Please refer to List of Appendices in the Final EA for Studies Performed.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]

See Page 8 for list of sources, agencies and persons consulted during the pre-Draft EA, and comments/responses on the Draft EA.

APPENDIX XI

NOISE ASSESSMENT

ARTMENT OF BUDGET AND FISCAL SERVICES
CITY AND COUNTY OF HONOLULU

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HONOLULU, HAWAII 96813
Phone: (808) 523-4616 Fax: (808) 527-4771 Internet: www.honolulu.gov

C-04-331
CI-04-1165
BFS-CDBG

JEREMY HARRIS
MAYOR



IVAN M. LUI-KWAN
DIRECTOR

CHRIS A. DIEBLING
DEPUTY DIRECTOR

December 30, 2004

MEMORANDUM

TO: MICHAEL T. AMII, DIRECTOR
DEPARTMENT OF COMMUNITY SERVICES

FROM: IVAN M. LUI-KWAN, DIRECTOR *I. M. Lui-Kwan*
DEPARTMENT OF BUDGET AND FISCAL SERVICES ✓

SUBJECT: PIIKOI VISTA
NOISE ABATEMENT WAIVER

This is in response to your memorandum dated December 20, 2004 recommending the Certifying Officer waive the requirement of an Environmental Impact Statement (EIS) for the subject project.

Noise measurements taken by the consultant D.L. Adams Associates, Ltd. determined that the noise level at the project site was 82 dBA, which falls within the unacceptable range based on the U.S. Department of Housing and Urban Development's (HUD's) guidelines. Title 24 of the Code of Federal Regulations, Part 51.104(b)(2) requires that an EIS be conducted, before projects with unacceptable noise exposure can be approved. The Certifying Officer however, can waive this requirement if noise is the only issue and outdoor noise sensitive activities are not expected to take place on the project site.

The Piikoi Vista project is a senior rental-housing complex and outdoor noise sensitive activities are not associated with the project. Mitigation measures recommended by the consultant, such as laminated windows, insulated metal exterior doors, enclosing the exterior corridors and solid grouting of the concrete block is anticipated to reduce the interior noise levels to an acceptable level of 28 dBA. Encapsulating the exterior corridors to address the noise, however, will diminish the natural airflow to the units. The consultant has recommended the installation of air conditioning, which should provide adequate mechanical ventilation.

MICHAEL T. AMII, DIRECTOR
December 30, 2004
Page Two

The corrective measures indicated above are expected to address the project's unacceptable noise exposure and ventilation problem. Your recommendation of Kusao & Kurahashi, Inc.'s request for a waiver from the EIS requirement is therefore approved.

Should you have any questions regarding the above, please contact Holly Kawano, Federal Grants Coordinator (X5062).

IMLK/CT:nf

cc: Cheryl Tanabe

121 120 119 118 117 116 115 114 113 112 111 110 109 108 107 106 105 104 103 102 101 100 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANDA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 888-2231

FAX. (808) 888-1140

E-Mail: kkurahashi@hawaii.m.com

December 14, 2004

Mr. Ivan Lui-Kwan, Director
Department of Budget and Fiscal Services
City and County of Honolulu
530 S. King Street, Room 208
Honolulu, Hawaii 96813

Subject: Piikoi Vista Apartments - Request for Waiver from the Federal Environmental Impact Requirement Due to Excessive Exterior Noise Levels -Tax Map Key: 2-4-12: 026

Dear Mr. Lui-Kwan:

Hawaii Housing Development Corporation, a non-profit corporation, is proposing to develop an eight-story affordable elderly rental apartment building at 1326 Piikoi Street in Honolulu, Hawaii. This is the fifth such affordable elderly rental development, by the applicant, in the Primary Urban Center of Honolulu. The other developments are: Wistera Vista on S. King Street; Kalakaua Vista on Kalakaua Avenue; Artesian Vista on the corner of Young and Artesian Street; and Kinau Vista, now under construction, on Kinau Street.

We have prepared a Draft Environmental Assessment (EA) for Piikoi Vista, that is currently being reviewed by the Department of Community Services and various government agencies, and a 201G application was submitted to the Department of Planning and Permitting (DPP) and will be processed by DPP should we receive a "Finding of No Significant Impact" (FONSI) for the Final EA.

The applicant has applied for Federal (CDBG) Funding for Piikoi Vista. Unfortunately, due to the developments location adjacent to the H-1 Freeway, the exterior noise levels at this location are above the Federal guidelines. At a recent meeting with staff at the local Housing and Urban Development (HUD) office, we were informed that we can request a Waiver from the Federal Environmental Impact Statement (EIS) requirement, that is triggered by the excess noise levels, since this is the only environmental issue involving this development. Chapter 24 CFR 51.104.B.2 Federal Regulations, amended 1996, allows for a Waiver from the EIS requirement, that may be granted by the Chief Executive Officer (CEO) of the City and County of Honolulu.

The applicant intends to mitigate the noise levels by incorporating into the design of the building, the following measures such as:

- The mauka side of the building facing the freeway where the corridors leading to the apartments are located, as well as the sides of the building, will be solid grouted concrete block, and painted. Fixed laminated windows along the corridors exterior wall will be used as architectural features and day lighting. The exterior corridor wall, air space, and apartment unit wall will help to insulate the apartment units from the exterior noise.
- The corridor will be mechanically vented to the roof.
- The mauka side walls of the apartment units will not have windows. Apartment doors will be insulated metal doors with perimeter magnetic gaskets. The makai side of the apartment units, facing away from the freeway, will have laminated ventilation windows and all units will be air-conditioned.

Attached to this request is a copy of the up-dated Noise Study conducted by D. L. Adams and Associates, detailing the noise mitigation methods being proposed for Piikoi Vista Apartments. These mitigation methods will allow the interior noise levels of the apartment units to fall within the HUD guidelines of 45 dBA or less. Also attached for your review is a copy of the Draft EA submitted to the Department of Community Service in August, 2004.

We thank you for taking to time to review our request for a Waiver from the Federal Environmental Impact Statement (EIS) requirement that is triggered by the excessive noise levels at this location. We look forward to hearing from you in the near future. Please do not hesitate to call Keith Kurahashi or me at 988-2231 should you have questions.

Very truly yours,


Anne Kusao

cc: Department of Community Services
Housing and Urban Development, Honolulu Office
Mr. Gary Furuta

11-11-04 10:11 AM



D. L. ADAMS ASSOCIATES, LTD.

Consultants in Acoustics and Performing Arts Technologies

December 7, 2004

Ms. Anne Kusao
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5
Honolulu, Hawaii 96822

RE: Piikoi Vista HUD Noise Forms (DLAA #04-78)

Dear Ms. Anne Kusao:

The Piikoi Vista project site is located near a busy Interstate Highway, H1. Noise measurements taken at the site show a Day-Night Level, L_{dn} , of 82 dBA. This noise level falls under the HUD "unacceptable" category. It is our understanding that projects that fall above a noise level of $L_{dn} = 75$ dBA are reviewed on a case-by-case basis. Therefore, noise mitigation methods, above standard construction, must be included in the design of the building to meet HUD's acceptable interior noise level of 45 dBA or less.

The attached forms include Figure 19 from the HUD Noise Guidebook. This form includes exterior noise levels at the project, and noise attenuation provided by the building shell. A supplemental sheet to Figure 19 is included to fully explain the noise calculation methodology.

The results of Figure 19 show that the wall closest to Interstate H1 and runs parallel to the highway has a total combined STC rating of 54. The wall that runs perpendicular to H1 has a total combined STC rating of 55. This means that the noise level inside of the residential units will be 28 dBA or less from traffic noise on H1. The following equation is assumed:

$$\text{Exterior Noise Level (dBA)} = \text{Interior Noise Level (dBA)} - \text{Total Combined STC Rating}$$

Although the exterior noise levels exceed HUDs criteria for "acceptable" noise levels, the predicted interior noise levels are within the HUD guidelines of 45 dBA or less.

Please let me know if you have any questions.

Sincerely,

Todd Beiler, P.E.
Project Manager

Encl.

Figure 19
Description of Noise Attenuation Measures
(Acoustical Construction)

Part I

Project Name Piikoi Vista

Location Honolulu, HI

Sponsor/Developer Piikoi Vista, L.P.

Noise Level (From NAG) $L_{dn} = 82 \text{ dBA}$ Attenuation Required 40 dB

Primary Noise Source(s) Highway

Part II (See Attached)

1. For Walls (s) facing and parallel to the noise source(s) (or closest to parallel):

a. Description of wall construction _____

b. STC rating for wall (rated for no windows or doors): _____

c. Description of Windows: _____

d. STC rating for window type _____

e. Description of doors _____

f. STC rating for doors _____

g. Percentage of wall (per wall, per dwelling unit) composed of windows _____ and doors _____

h. Combined STC rating for wall component _____

2. For walls perpendicular to noise source(s):

a. Description of wall construction _____

b. STC rating for wall (rated for no windows or doors) _____

c. Description of windows _____

d. STC rating for windows _____

e. Description of doors _____

See Attached
Figure 19
Supplemental

f. STC rating for doors _____

g. Percentage of wall (per wall, per dwelling unit) composed of windows _____ and doors _____

h. Combined STC rating for wall component _____

3. Roofing component (if overhead attenuation is required due to aircraft noise):

a. Description of roof construction _____

No aircraft noise

b. STC rating (rated as if no skylights or other openings) _____

c. Description of skylights or overhead windows _____

d. STC rating for skylights or overhead windows _____

e. Percentage of roof composed of skylights or windows (per dwelling unit) _____

f. Percentage of roof composed of large uncapped openings such as chimneys _____

g. Combined STC rating for roof component _____

4. Description of type of mechanical ventilation provided _____

Window A/C units

Prepared by Todd R. Beiler, P.E. D.L. Adams Assoc. LTD

Date: 12/7/04

*If walls contain vents or similar openings, attach a description of duct arrangement and insulation and a statement of how much the wall STC is reduced by the presence of the vent.

Figure 19 Supplemental

Part I:

The noise level was measured at the nearest listener location approximately 50' above the existing grade. The highway, Interstate H1, is elevated in this area and the measurement microphone had a direct line-of-sight with all traffic lanes. The measurement location was selected as the "worst case" condition. Continuous hourly Equivalent Sound Levels, L_{eq} were measured to calculate the 24-hour Day Night Level, L_{dn} , for two days. The results of the measurements show a $L_{dn} = 82$ dBA.

Part II:

Consideration for noise mitigation was included in the design of the Piikoi Vista floor plan. An enclosed corridor is used to separate the highway from the residential units, as shown in Figure 1. In addition, the walls that are perpendicular to the highway have no windows.

The noise attenuation analysis considers one of the end units as the "worst case" condition since the end units have two walls exposed to the noise source.

1. For walls facing and parallel to the noise source:

a. Description of wall construction:

<u>Wall #1 – Closest to H1</u>	<u>Wall #2 – Corridor / Unit Wall</u>
<u>8" thick CMU, grout filled,</u>	<u>8" thick CMU, grout filled,</u>
<u>and painted (both sides)</u>	<u>and painted (both sides)</u>

b. STC rating for wall (rated for no windows or doors):

<u>Wall #1 = STC 55</u>	<u>Wall #2 = STC 55</u>
-------------------------	-------------------------

(Refer to attached laboratory STC test)

c. Description of Windows: 1/2" thick laminated glass windows.

Wall #1 only, Wall #2 has no windows.

d. STC rating for window type: STC 30

e. Description of doors: Insulated metal door with perimeter magnetic gaskets. Wall #2 only, Wall #1 has no doors.

f. STC rating for doors: STC 28 (Refer to Table 3 of HUD Noise Guidebook)

g. Percentage of wall (per wall, per dwelling unit composed of
Windows 20% (Wall #1 only) and doors 15% (Wall #2 only)

h. Combined STC rating for wall component: STC 54 (See Note 1 below)

2. For walls perpendicular to noise source:

a. Description of wall construction: Exterior wall consists of 8" thick CMU,
grout filled, and painted (both sides).

b. STC rating for wall (rated for no windows or doors): STC 55

c. Description of Windows: None

d. STC rating for window type: N/A

e. Description of doors: None

f. STC rating for doors: N/A

g. Percentage of wall (per wall, per dwelling unit composed of
Windows 0% and doors 0%

h. Combined STC rating for wall component: STC 55

3. Roofing component (if overhead attenuation is required due to aircraft noise): No
Aircraft Noise

4. Description of type of mechanical ventilation provided: Window A/C units.

Note 1: The wall parallel to the highway is unique for this project, in that two walls and a corridor space can be considered in the noise analysis. This dual wall configuration has a significant benefit for noise attenuation. For explanation of the noise attenuation calculations, we have prepared the following table, which summarizes the wall components and shows a calculation for the STC of the walls.

Wall #1 (Closest to H1)
 Wall STC = 55
 Window %Area = 20%
 Window STC = 30
 Door %Area = 0
 Door STC = N/A

Wall #2 (Corridor / Unit Wall)
 Wall STC = 55
 Window %Area = 0%
 Window STC = N/A
 Door %Area = 15%
 Door STC = 28

Wall #1 Combined STC = 36

Wall #2 Combined STC = 36

$$\text{Composite TL} = 10\text{Log} (\text{Sum}[S] / \text{Sum}[t*S])$$

where S = Area, t = transmission coefficient

$$\text{TL} = 10\text{Log} (1/t)$$

TL = (approx.) STC

References:

See *Architectural Acoustics* by M. David Egan pg 188 – 191
Handbook of Acoustical Measurements and Noise Control pg 33.9 – 33.11

Although each of the two walls will attenuate noise independently of each other, we do not believe that simply adding the STC ratings together will be a conservative estimate of the total combined STC rating. Since the corridor is a reverberant space, and the corridor is narrow (when compared to a full sized room), a conservative estimate of the total STC rating is to de-rate the STC rating of Wall #2 by ½. The result equation is:

$$\begin{aligned} \text{Total STC Rating} &= \text{Wall \#1 Combined STC} + \frac{1}{2} * \text{Wall \#2 Combined STC} \\ &= \text{STC 36} + \frac{1}{2} * \text{STC 36} \end{aligned}$$

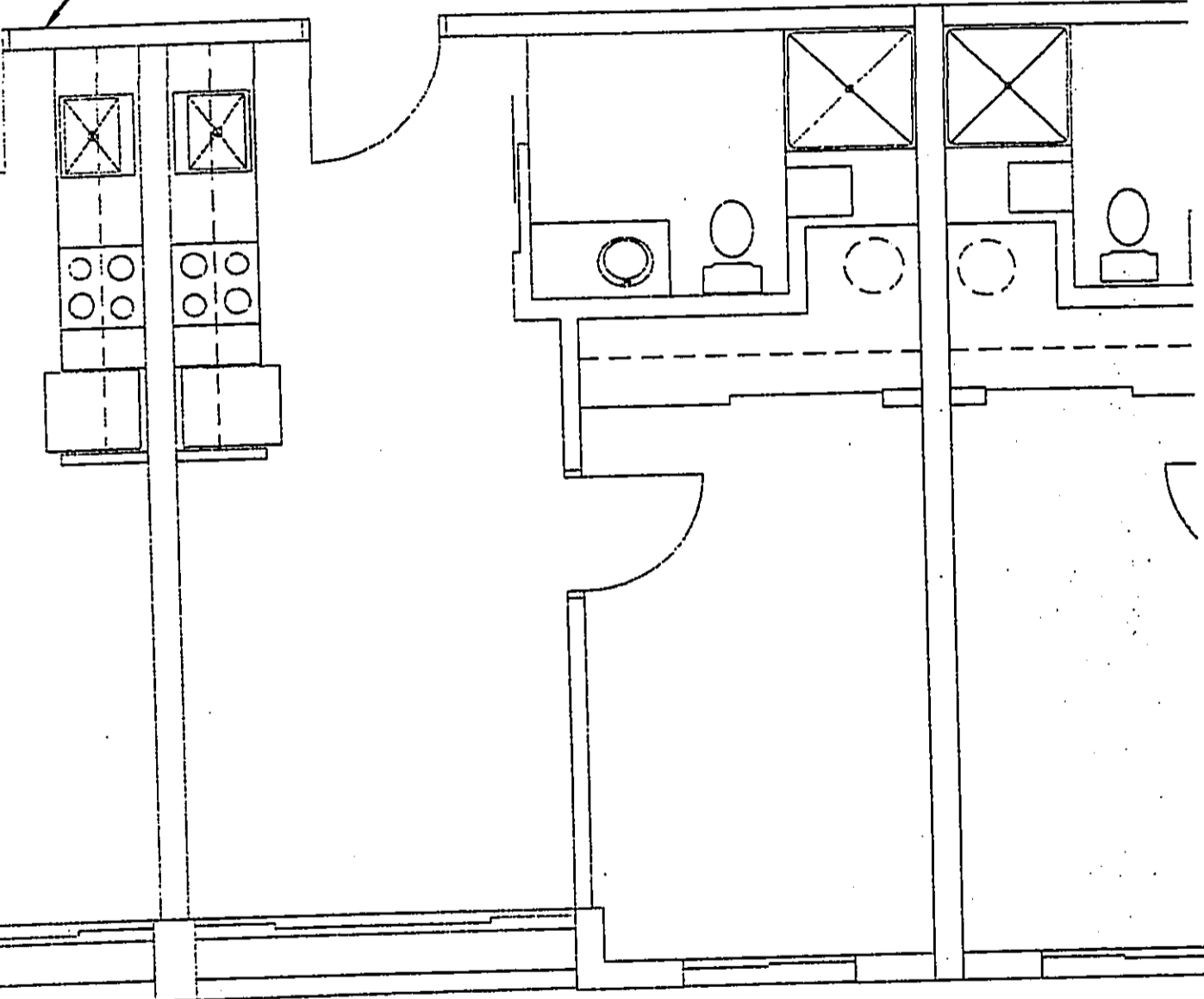
$$\text{Total STC Rating} = \text{STC 54}$$

↑↑
INTERSTATE H1


WALL #1 (WINDOWS, NO DOORS)

CORRIDOR

WALL #2 (DOOR, NO WINDOWS)



Wall Parallel to Interstate H1


D. L. ADAMS ASSOCIATES, LTD.
970 N. KALANHOA AVE. A-311
KAPAA, HAWAII 96754
808/254-5516 FAX 808/254-5595

Piikoi Vista

not to scale

Date
December 7, 2004

Project No.
04-78

Drawn By
TRB

Figure No

1

FAX TRANSMISSION



D. L. ADAMS ASSOCIATES, LTD.

Consultants in Acoustics and Performing Arts Technologies

970 N. KALAHEO AVE. • SUITE A311 • KAILUA, HAWAII 96734

808/254-3318 • FAX 808/254-5295

www.dlaa.com • hawaii@dlaa.com

To: Mr. Gary S. Furuta, Project Manager
Piikoi Vista L.P. **Date:** August 4, 2004

Copy To: Ms. Anne Kusao
Kusao & Associates Inc.

Fax #: 356-0455 **# Pages:** 6, including this page
988-1140

From: Todd Beiler, P.E.
Joe Hagedorn

Subject: Piikoi Vista Acoustical Recommendations (DLAA # 04-25)

We have completed our noise measurements and as expected, have concluded that noise from the H-1 freeway does impact the Piikoi Vista project site based on site acceptability standards of section 51.104 of HUD 24 CFR 51 [Reference 1]. Minimum interior noise standards for the proposed project can be achieved with certain construction and acoustical measures that can be taken in the design of the project. The following describes the details of our noise measurements and noise mitigation recommendations.

NOISE STANDARDS

In addition to HUD the other federal agency that has established guidelines and standards for assessing environmental noise impacts on urban development and has set noise limits to classify site acceptability is the U.S. Environmental Protection Agency (EPA). We have included the applicable standard and criteria in this report as a guide only.

U.S. Environmental Protection Agency (EPA)

The U.S. EPA has identified a range of yearly day-night equivalent sound levels, L_{dn} , sufficient to protect public health and welfare from the effects of environmental noise. The EPA has established a goal to reduce exterior environmental noise to an L_{dn} not exceeding 65 dBA and a future goal to further reduce exterior environmental noise to an L_{dn} not exceeding 55 dBA. Additionally, the EPA states that these goals are not intended as regulations as it has no authority to regulate noise levels, but rather they are intended to be viewed as levels below which the general population will not be at risk from any of the identified effects of noise.

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U.S. Department of Housing and Urban Development (HUD)

HUD's environmental noise criteria and standards in 24 CFR 51 [Reference 1] were established for determining housing project site acceptability. These standards are based on day-night equivalent sound levels, L_{dn} , and are not limited to traffic noise exposure. However, for project sites in the vicinity of highways, the L_{dn} may be estimated to be equal to the design hour $L_{eq(h)}$, provided "heavy trucks (vehicles with three or more axles) do not exceed 10 percent of the total traffic flow in vehicles per 24 hours and the traffic flow between 10:00 p.m. and 7:00 a.m. does not exceed 15 percent of the average daily traffic flow in vehicles per 24 hours." For these same conditions, L_{dn} may also be estimated as 3 dB less than the design hour L_{10} . HUD site acceptability criteria rank sites as Acceptable, Normally Unacceptable, or Unacceptable. "Acceptable" sites are those where exterior noise levels do not exceed an L_{dn} of 65 dBA. Proposed housing projects on "Acceptable" sites do not require additional noise attenuation other than that provided by customary building techniques. "Normally Unacceptable" sites are those where the L_{dn} is above 65 dBA, but does not exceed 75 dBA. Housing on "Normally Unacceptable" sites requires some form of noise abatement, either at the property line or in the building construction, to ensure the interior noise levels are acceptable. "Unacceptable" sites are those where the L_{dn} is 75 dBA or higher. The term "Unacceptable" does not necessarily mean that housing cannot be built on those sites. It means that more sophisticated sound attenuation will likely be needed.

NOISE MEASUREMENTS

Ambient noise level measurements were conducted on May 2-3, 2004 at the locations shown in Figure 1 to assess the existing acoustical environment at the project site. These measurements were taken with Larson-Davis Laboratories, Models 820 and 700 sound level meters. The results, presented in Table 1, expressed in terms of day-night equivalent sound levels, L_{dn} , in units of decibels (dB), were obtained using criteria specified in section 51.103 of HUD 24 CFR 51 [Reference 1].

Table 1 - Noise Measurement Results	Measured Day-Night Level, L_{dn}	
	Sunday (5/2/2004)	Monday (5/3/2004)
Location 1 (LD700)	*	*
Location 2 (LD800)	82 dBA	81 dBA

* Sound level meter experienced power failure at this location causing irretrievable noise measurement data.

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August 4, 2004

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NOISE RESULTS AND SITE ASSESSMENT**Site Acceptability**

Based on measured noise levels, the site classification is "unacceptable" based on Site Acceptability Standards stated in section 51.104 of HUD 24 CFR 51 [Reference 1]. The proposed project site will be impacted by traffic noise exceeding the HUD exterior noise goal of 55 dB (day-night average sound level) in which administrative action must be taken to approve the project in addition to applying noise attenuation in building design. Site acceptability standards clearly state that special approval by the Assistant Secretary for Community Planning and Development (CPD) or the Certifying Officer for activities subject to 24 CFR part 58. Additionally, all projects located in an unacceptable zone require a Special Environmental Clearance.

Noise Impact on the Project

Since the reduction of external noise is not feasible for this project, building design and construction will play an important role in meeting interior noise goals. For example, fixed windows and air-conditioning should be provided for these homes as part of noise mitigation measures for building design and construction. Window and door orientation to H1 freeway, the primary source of noise to the site, must be considered as part of noise mitigation measures which we can evaluate based on available construction drawings. With respect to HUD standards, construction methods should be employed so that the interior noise level shall not exceed a day-night average sound level of 45 dB. This means that the building shall need to provide a 37 dB reduction in noise level. Our noise mitigation recommendations are provided below.

NOISE MITIGATION RECOMMENDATIONS

The purpose of this section of our report is to provide you specific acoustical recommendations based on drawings and past discussions in order to meet minimum interior noise standards for these units. Assuming that no outdoor noise-sensitive activities take place on the site, our primary objective is to work towards a solution that maximizes the attenuation of noise from the H1 freeway and surrounding environment into the units.

As stated above, HUD site acceptability standards classify a site as "Acceptable" if noise levels do not exceed 65 dBA, "Normally Acceptable" if noise is above 65 dB but does not exceed 75 dBA, and "Unacceptable" if noise is above 75 dBA, requiring special

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August 4, 2004

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approvals. Noise measured at the site exceeds the acceptable limit of 75 dBA (L_{dn}) which places our focus on obtaining an interior noise level at or below 45 dBA, which HUD has established as a design goal in Section 51.101(a)(9). Based on the location and layout of the project relative to the H1 Freeway, the only practical approach towards noise attenuation measures is through building shell improvements. The selection and use of acoustically-rated doors and windows on the mauka, ewa, and Diamond Head exterior walls of the building combined with the use of A/C for the units will be necessary to predict an adequate reduction of noise from the outdoor measured levels. Combined noise attenuation measures will need to provide a minimum of 37 dBA of attenuation. While it may be easier to predict noise conditions for wall surfaces with a minimum of openings or penetrations, e.g. eliminate windows on mauka, ewa, and diamond head exterior walls, it is our belief that original design considerations for windows can be maintained through proper material and product selection and with regard to other interior considerations such as providing natural lighting to the living spaces. An acceptable alternate solution to the acoustically-rated doors and windows in the corridor walls of the unit would be continue the concrete block railing to the ceiling above to enclose the corridor, and possibly install insulated glass block patterns or acoustically-rated windows.

The following recommendations consider design and budgetary constraints, keeping in mind the intent of the noise standards section 51.104 of HUD 24 CFR 51 [Reference 1].

Building Improvements

Table 2. Acceptable Door & Window Selection For Mauka, Ewa, and Diamond Head Exterior Walls

Hardware	Description	Manufacturer (Model No.)
Door(s)	Sound-Rated Insulated Metal Door & Frame	Kreiger (NC5-18-9149)
	Sound-Rated Insulated Metal Door & Frame	Overly (as required)
Window Glazing	1/2" Laminated Glass - 2" Air Space - 3/16" Glass	Monsanto (as required)
Window (Fixed)	Factory Assembled Double Glazed Noise Lock 1/4" - 1/4" LSG-LSG (Laminated Safety Glass)	IAC (as required)

FAX TRANSMISSION

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Wall Construction

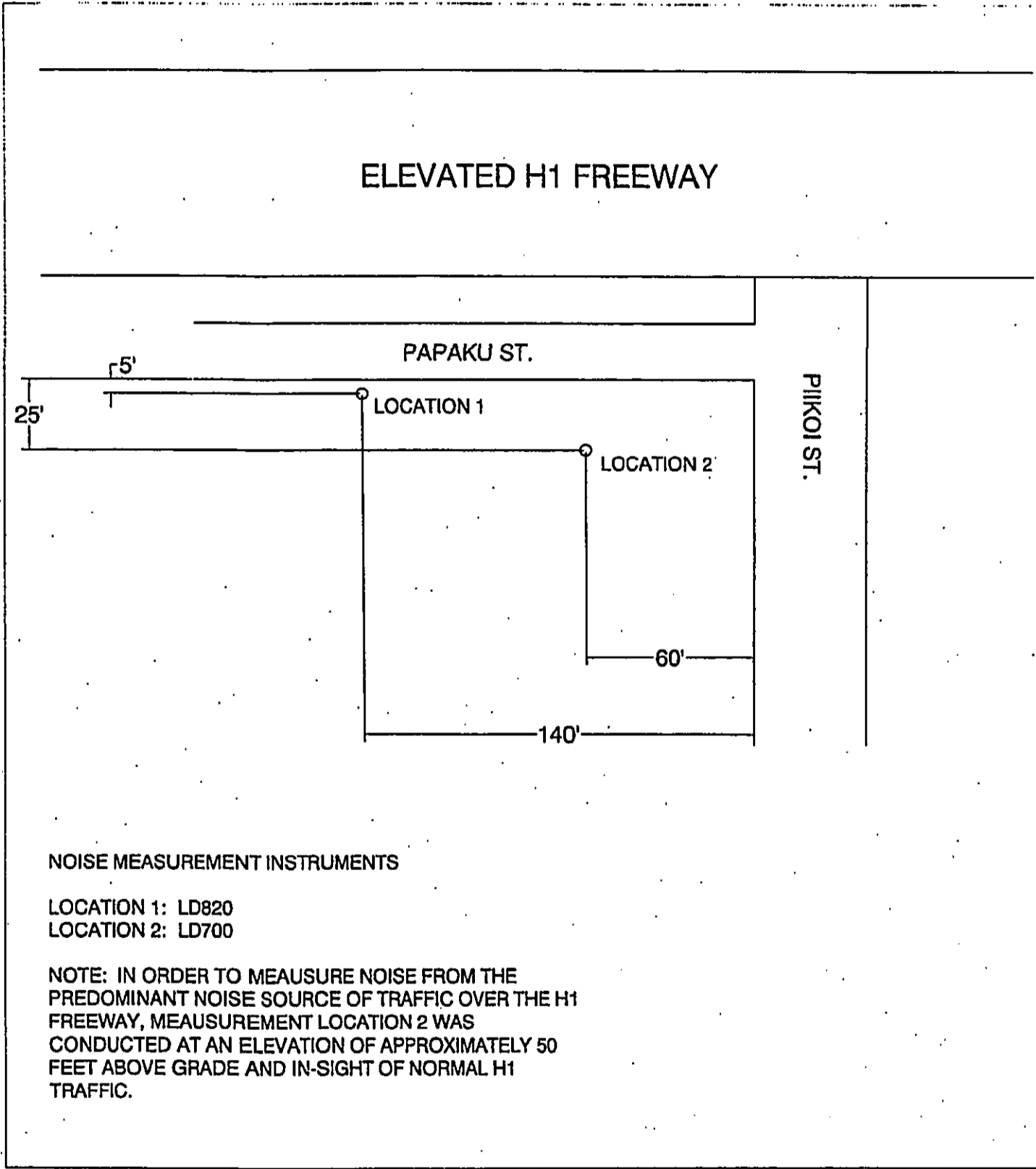
The planned exterior wall construction of grout-filled CMU is acceptable provided that both sides of the CMU are sealed. Noise leaks can be avoided by sealing all wall penetrations, gaps, and joints with resilient sealant and conforming to manufacturers specifications during window and door installation. We recommend that the proposed bathroom window be removed from the design and filled in with CMU. The bathroom can be ventilated by using exhaust fans and roof vents. For the case involving the end units, the bathroom unit window and living room window can remain provided the glazing configuration described below is used. The living room window should be a fixed window.


A/C & Mechanical Noise

Although it is our recommendation to utilize air conditioning for the units, thought must be applied to the selection of equipment in order to avoid excessive noise levels inside the residential unit due to the air conditioning mechanical equipment.

REFERENCES:

1. *Department of Housing and Urban Development Environmental Criteria and Standards*, Title 24, CFR, Part 51, 44 FR 40860, July 12, 1979; Amended by 49 FR 880, January 6, 1984.



 D. L. ADAMS ASSOCIATES, LTD. 970 N. KALAHNO AVE, A-311 KAHUA, HAWAII 96734 808/254-3318 FAX 808/254-5295	Noise Measurement Locations			Figure No
	Piikoi Vista Noise Assessment			1
	NTS			
	Date 25 May 2004	Project No. 04-25	Drawn By JH	

APPENDIX XII

**ARCHAEOLOGICAL LITERATURE REVIEW
FIELD INSPECTION
AND
CULTURAL IMPACT EVALUATION**

**Archaeological Literature Review, Field Inspection, and
Cultural Impact Evaluation of the Proposed
Pi'ikoi Vista Elderly Housing Project, Papakū Place and Pi'ikoi Street,
Honolulu Ahupua'a, Kewalo 'Ili, Kona District, Island of O'ahu**

TMK: [1] 2-4-012:026

by

Constance R. O'Hare, B.A.

and

Hallett H. Hammatt Ph.D.

Prepared for

Kusao & Kurahashi, Inc.

by

Cultural Surveys Hawai'i, Inc.

November 2004

ABSTRACT

Cultural Surveys Hawai'i (CSH) recently conducted an archaeological literature review, field inspection, and cultural impact evaluation of the proposed Pi'ikoi Vista Elderly Housing project site in the 'ili of Kewalo, Honolulu Ahupua'a, Kona District, Island of O'ahu (TMK 1-2-4-012:026). The project area is an empty lot bound by Papakū Place and Lunalilo Street on the north and *mauka* (inland) side, by Kīna'u Street on the *makai* (seaward) side, Pi'ikoi Street on the east side, and residential lots and a post office to the corner of Pensacola Street on the west.

No surface archaeological features were noted on the project area during the field inspection, conducted on November 19, 2004. The property is an empty lot covered with wooden construction shacks, parked cars, lumber piles, dirt piles, and a thin layer of gravel over a clay loam soil.

Archival research has indicated that the project area was in a traditional portion of Honolulu known as Kulaokahu'a, a barren, arid plain in the lower section of Makiki Valley north of King Street and between Punchbowl Avenue and Punahou Street. This area was known for its lack of water, vegetation, agriculture, and habitation. This environment is in contrast with the 'ili of Kewalo, south of King Street, which was known for its marshy land, fishponds, and wetland agriculture.

In the pre-contact period, the sparsely vegetated flat land was used as a playing field, for sports such as *makai* throwing and hunting rats with bows and arrows. In the early post-contact time, it was used as a racecourse for horse racing. Some of these horse paths may have crossed the project area, but the main trail in the post-contact period was located south of the project area, covered by the present alignment of King Street and Wai'alae Avenue.

There were several post-contact cemeteries in the lower Makiki area; one may have been on Pi'ikoi Street, but probably south of the current project area, on the corner of Pi'ikoi and King Street. Most of the pre-contact and early post-contact burials in this area of Honolulu and Waikīkī have been found in undisturbed layers of sand. The project area has a clay loam subsoil with possible fill materials, so it is unlikely that there are sand deposits. It is therefore unlikely that pre-contact or post-contact burials will be found in the project area.

In summary, the archival research indicates that the project area was probably never densely inhabited or used for intensive agriculture. Streams, springs, and fishponds are not found in Kulaokahu'a. Neither pre-contact or early post-contact burials are usually found in the soil type found in the project area. The fact that the area was developed early in the mid-nineteenth century for residential and business lots means that any evidence for temporary or occasional use of the area may have been obliterated. The project area is not currently used for any type of cultural practices. Based on this investigation, it is also unlikely that the project area contains any substantial cultural deposits or burials; it may contain some pre-contact artifacts, such as *maika* stones and bone arrow points and some post-contact artifacts, such as nineteenth and twentieth century bottles, ceramics, and other discarded trash.

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I. INTRODUCTION

A. Project Background

At the request of Ms. Anne Kusao of Kusao & Kurahashi, Inc., 2752 Woodlawn Drive, Suite 5-202, Honolulu, Hawai'i, 96822, Cultural Surveys Hawai'i (CSH) recently conducted an archaeological literature review, a field inspection, and a cultural impact evaluation of the proposed Pi'ikoi Vista Elderly Housing project site in the 'ili of Kewalo, Honolulu Ahupua'a, Kona District, Island of O'ahu (TMK 1-2-4-012:026) (Figure 1 and Figure 2). The project area is an empty lot bound by Papakū Place and Lunalilo Street on the north and *mauka* (inland) side, by Kīna'u Street on the *makai* (seaward) side, Pi'ikoi Street on the east side, and residential lots and a post office to the corner of Pensacola Street on the west.

B. Scope of Work

The scope of work includes:

- 1) Documentary research to include study of archival sources, historic maps, Land Commission Awards, oral traditions, and previous archaeological reports to construct a history of land-use on or near this property;
- 2) A field inspection of the project area to assess the project area's current conditions, potential natural resources, and the potential for on-going traditional cultural practices; and,
- 3) Preparation of a short report to include the results of the background research and the field inspection. This report will present an argument with supporting documentation regarding the likelihood of ongoing traditional cultural practices within the project area.

C. Methods

The archaeological field inspection for the proposed Pi'ikoi Vista Elderly Housing Project involved a surface survey of the project area by Cultural Surveys Hawai'i archaeologist, Constance R. O'Hare, on November 19, 2004. Notes on the current ground surface of the lot were taken, and several views of the parcel were photographed. The area is an open lot, with a thin layer of gravel over the soil. Most of the lot is covered with wooden construction shacks, piles of lumber, dirt piles, and parked cars. Tall apartment buildings surround the lot on the *makai* side and the post office parking lot surrounds the lot on the *mauka* and west sides. The lot is bound by Pi'ikoi Street on the east side.

Historical background research included study of archival sources, Land Commission Awards and historic maps, legends and oral traditions, as well as a review of past archaeological research in the vicinity to construct a history of land use. From these sources, a predictive model was developed to give a general idea of pre-contact and historic land use patterns in this section of Honolulu.

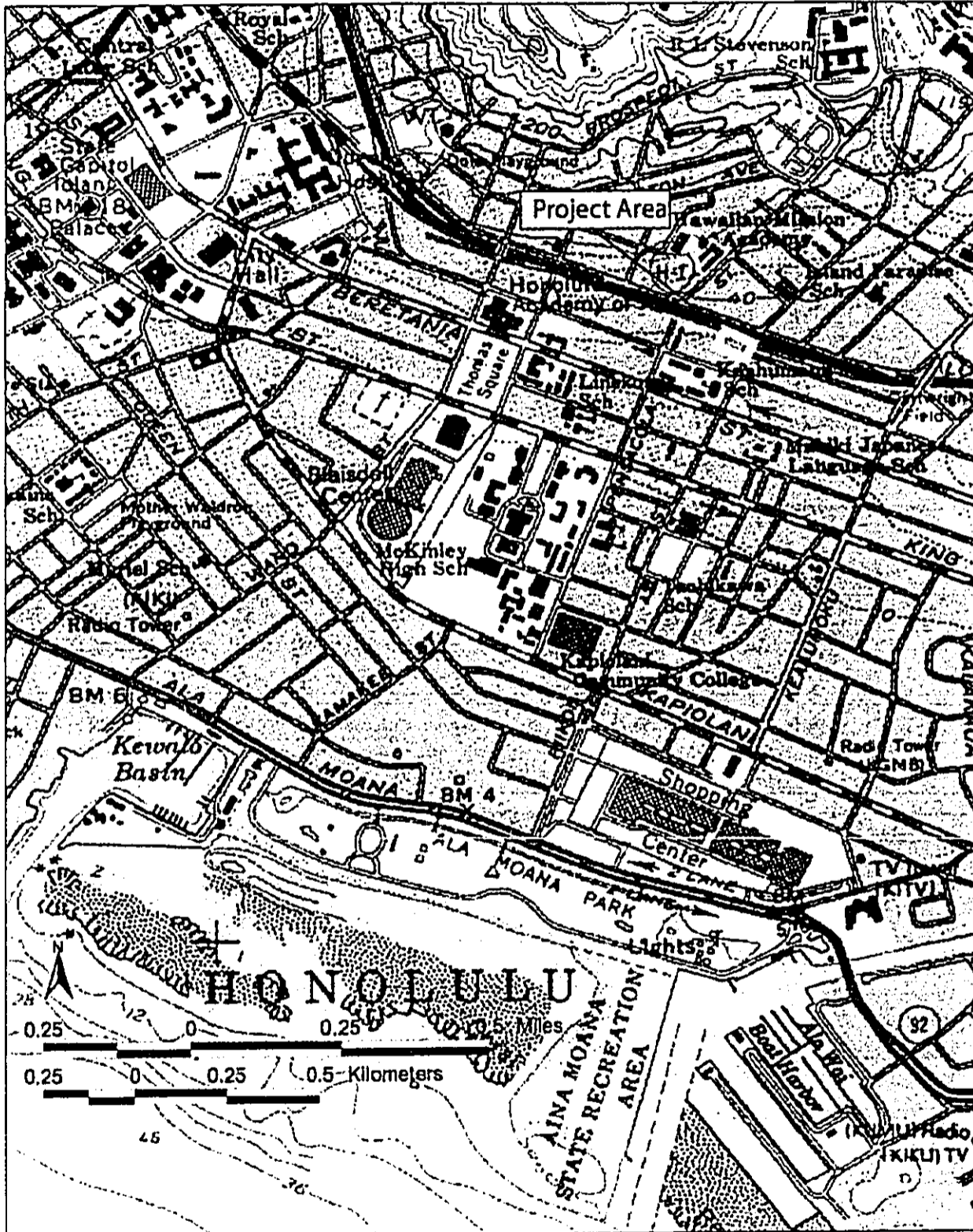


Figure 1. USGS Topographic Map, Honolulu Quad, showing project area

Introduction

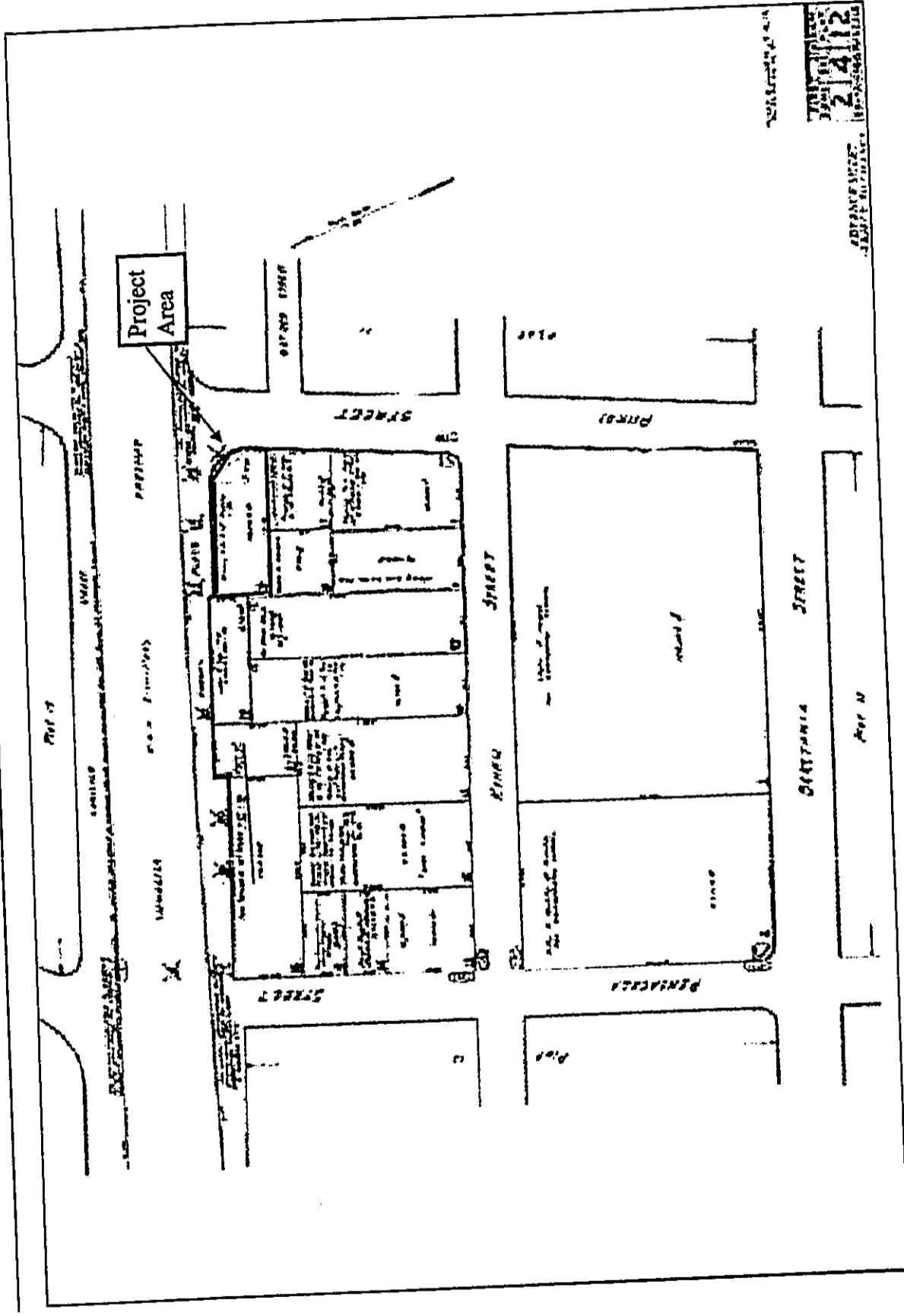


Figure 2. Tax Map Key 2-4-12, showing project location (Lot 26)

The cultural impact evaluation provides information pertinent to the assessment of the proposed project's cultural impacts [per Hawai'i Revised Statutes (HRS) Chapter 343 and the Office of Environmental Quality's *Guidelines for Assessing Cultural Impacts*]. Cultural impact evaluation studies are intended as a more time and cost effective means of addressing potential impacts to cultural practices within project areas that have been fully developed for a long time and where, accordingly, there is less likelihood of ongoing cultural practices. CSH's methods for this cultural impact evaluation did not include formal ethnographic interviews and oral histories, which were deemed unwarranted due to the subject parcel's long history as a developed portion of Honolulu. Instead, the methods focused on a literature review to evaluate the likelihood of ongoing cultural practices within the project area. During both the field inspection and background literature search, information was sought regarding: 1) on-going traditional Hawaiian activities practiced in the project area, such as the gathering of native plants, animals, and other resources; 2) existing archaeological or cultural features, trails, burials, etc., which may be affected by the proposed project; and 3) and legendary, religious, or other cultural associations pertaining to the project area.

D. Natural Setting

Makiki Valley can be divided into three topographic areas: (1) an upper, inland steep sided valley adjacent to the Ko'olau Mountain Range; (2) the lower, gentle slopes where the four tributary streams join just above the dry plain area; and, (3) a *makai* area with irrigated fields and marshy lands near Makiki Stream, surrounded by generally dry lands distant from the stream (Fitzpatrick 1989:23). The current project area is near the *makai* boundary of the *ahupua'a*, in the dry plain area, traditionally known as Kulaokahu'a. The project is also within the traditional land area known as the *'ili* of Kewalo.

Makiki Valley is in the wet, Ko'olau Mountain Range and receives an average annual rainfall of 100 inches in the upper valley near Pu'u 'Ōhi'a, but only 25 inches in the lower plain (Giambelluca et al. 1986). The valley is cut northeast to southwest by streams, ridges, and valleys. Kanahā, Kānealole, Moleka, and Maunalaha are the headwater streams that eventually merge into Makiki Stream. The Makiki watershed encompasses 2,020 acres of land and 7.3 miles of stream, including the three miles of stream in the upper watershed. Early maps indicate that the lower portion of Makiki Stream followed an indistinct path to the sea. The stream probably followed the borders of taro fields to shoreline ponds in the vicinity of the present Ala Wai Boat Harbor. The mouth of the stream was confined to its present location at the Ala Wai Canal around 1928 when the canal was completed; the stream above this termination was confined to its present course around 1931, based on the age of bridges in this area (Oceanit 2004:4).

The lower portion of the project area is now covered with residential subdivisions and business districts. The upper slopes are covered with trees, but this forested area is mainly the result of a reforestation program begun in 1910. Before this, the slopes were denuded of trees due to "heavy timber cutting in the latter half of the 1800s for the sandalwood trade and to supply firewood for the Honolulu area" (Yent and Ota 1980:12). Overgrazing by cattle also contributed to this loss of forest (Fitzpatrick 1989:22). Makiki Valley today is covered mainly by introduced species of trees and plants. During the reforestation project begun in 1910, the ridge tops were planted with Norfolk Pines and ironwoods. Other common exotic trees include Java plum, octopus tree, eucalyptus, silver oak, mango, avocado, and banyan. The understory is covered with introduced grasses, ginger, *kī* plants, and other shrubs. *Koa haole* is the dominant

plant on the upper slopes (Carpenter and Yent 1994:7). Vegetation on the lower slopes in this heavily residential area consists of mostly introduced species, such as lawn grass, and ornamental trees such as Java plum, octopus tree, eucalyptus, silver oak, mango, avocado, and banyan.

The U. S. Department of Agriculture soil survey of the Hawaiian Islands designates the soil type in this section of Honolulu as Makiki Clay Loam (MkA) on 0-10 degree slopes. This soil is found on smooth fans and terraces and is a dark brown clay loam usually about 20 inches thick (50 centimeters). The subsoil is underlain by similar material, about 24 inches thick (60 centimeters), that is massive. Below this are volcanic cinders.

Some of the topsoil may be mixed fill land (FL), a land type used for urban development. The fill consists of "materials dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources." The filling and subsequent development of the low-lying marshes, tidal flats, fish ponds, and reef areas which constituted the undeveloped natural condition of the Kewalo area, permanently changed it into its present fully urbanized character, complete with underground infrastructure, pavement, sidewalks, parking lots and commercial buildings.

II. HISTORICAL BACKGROUND

A. Kulaokahu'a, the Honolulu Plains

The project area is in the census section called the Sheridan Tract, which is within the modern boundary of Makiki, a land unit within the *ahupua'a* of Honolulu. The southern boundary of Makiki is King Street, three blocks south of the project area. The boundaries of Makiki currently encompass the former *'ili* of Makiki, Kalāwahine, and Kewalo; the project area is within the *'ili* of Kewalo. In the pre-contact and early historic periods, Kalāwahine and Kewalo were considered *'ili* of Honolulu Ahupua'a, while Makiki was an *'ili* of Waikīkī Ahupua'a.

Makiki's lower portion was in an area known as "The Plains". This seems to have consisted of area in the lands of Kaka'ako, Kewalo, Makiki, Pāwa'a, and Mō'ili'ili (Fitzpatrick 1989:25). A survey of this area was mapped by a government surveyor, Theophilus Metcalf, in 1846, who labeled the area as Kulaokahu'a, which translates as "the plain of the boundary" (Pukui et al. 1974:123). Metcalf's map extended from Alapa'i Street on the west to Makiki Street on the east, and Wilder Avenue on the north (*mauka*) to King Street on the south (*makai*). The eastern section of this area is illustrated on an 1874 surveyor's map (Figure 3). Kulaokahu'a, although close to Makiki, apparently did not traditionally lie within the Makiki boundary, but within the boundary of the *'ili* of Kewalo. This flat plain land blended together and was often identified as the Makiki plains (Fitzpatrick 1989:26).

This area was known for its barrenness and aridity, as seen by a description made in 1853 by the American missionaries that lived on the eastern edge of Honolulu town. Sereno Bishop, son of one of these Protestant missionaries said:

... that by May or June there was much heat and dust, and no verdure in sight. The small mission herd had thoroughly depastured the plain which extended unbroken by house or tree to Punahou, while brown Punchbowl with its dry slopes frowned darkly above [Bishop 1916:34].

Gorman Gilman remembered how this area appeared in the 1840s.

Beyond the mission premises there was but one other building, the residence of Mr. And Mrs. A. Johnstone, who were the teachers in the Oahu Charity School, of which I wrote. I think, in my former communication. Beyond this was Kulaokahua, or the Plains, a dry, dusty waste without a shrub to relieve its barrenness. There were a couple of hau trees on the mauka side of the road covering the little cottage. On the seaward side, further out, was what was called "Little Britain." - the residence in later years of Capt. Luce and Mr. J. N. Wright. Between these two places, nothing but a most exceedingly dreary parcel of land with here and there a horse trail as path-way [Gilman 1909:9-91].

The flat plains were perfect for horse racing, and the area between present-day Pi'ikoi and Makiki Streets was a well-known racing track (Peterson 1984:371).

Historical Background

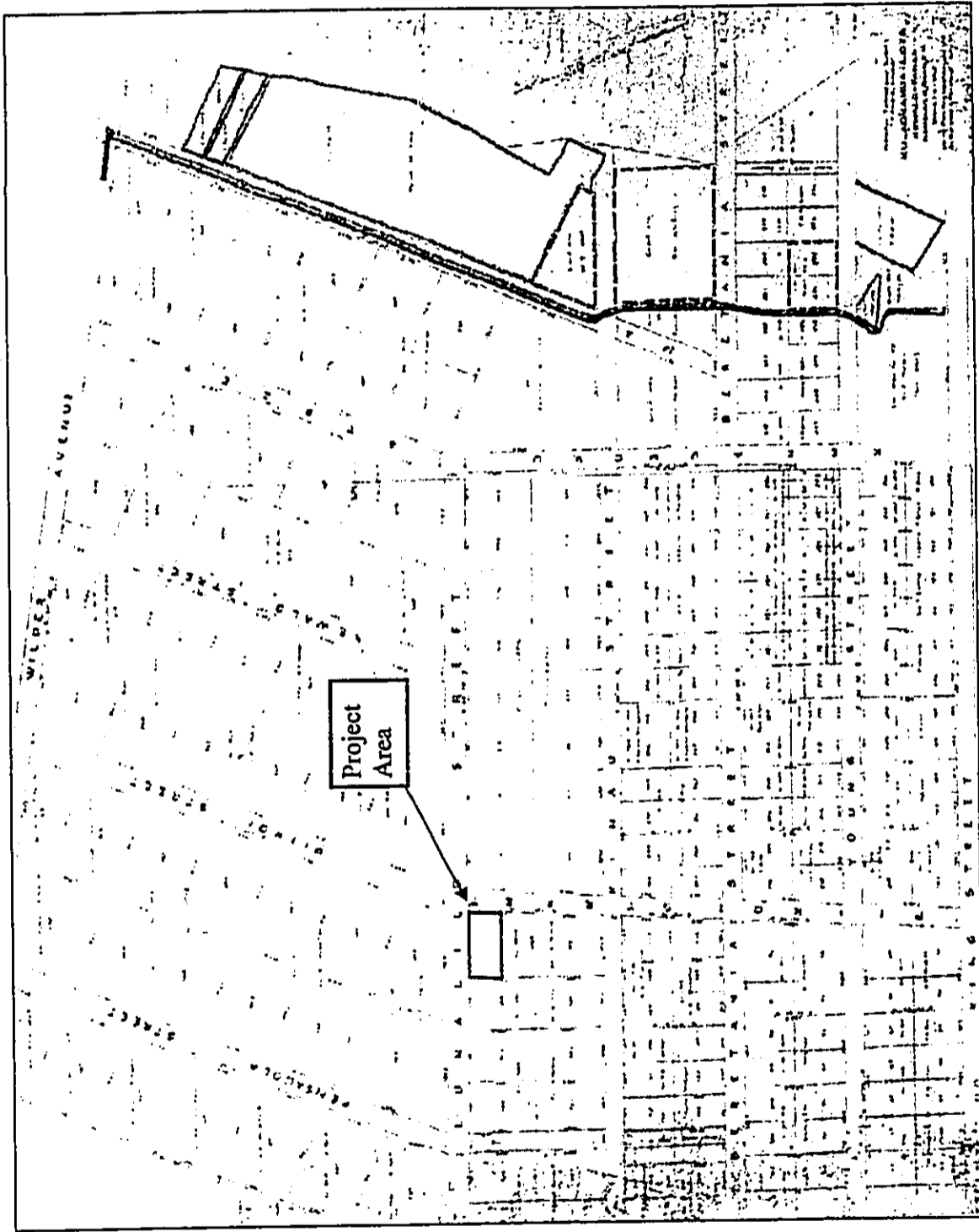


Figure 3. Eastern portion of a c. 1877 map of the Kulaokahu'a Lots in the 'ili of Kewalo

B. Legendary Accounts

In 1865, John Papa 'I'i identified Kulaokahu'a as a "play ground, where the 'maika' etc. was played" (Boundary Commissioners Record Book, Kewalo, cited in King 1989:26). *Maika* is a Hawaiian sport which uses a disc-shaped stone, called an *'ulu maika*, for a bowling type of game. This flat plain would be a favorable place to play this sport. Pukui et al. (1974) state that the name *makiki* comes from the type of stone used to make octopus lures. This is the same type of stone that was used to make *'ulu maika*, and Fitzpatrick (1989:29) has speculated that the name of the *ahupua'a* may have originated from its association with the *maika* sport rather than, or in addition to, the making of octopus lures.

Several other legends are associated with this arid plain. Hi'iaka, sister of the goddess Pele, passed through this area before her departure from O'ahu:

... she wasted no time in leave-taking . . . Their route lay eastward across the dusty, wind-swept plain of Kula-o-kahu'a - destined in the coming years to be the field of many a daring feat of arms; - then through the wild regions of Ka-imu-ki, thickset with bowlders [sic] - a region at one time chosen by the dwarf Menehune as a sort of stronghold where they could safely plant their famous ti ovens and be unmolested by the nocturnal depredations of the swinish Kama-pua'a. Hi'iaka saw nothing or took no notice of these little rock-dwellers. Her gaze was fixed upon the ocean beyond, whose waves and tides they must stem before they reached and passed Moloka'i and Maui, shadowy forms that loomed in the horizon between her and her goal [Emerson 1915:185-186].

The description of this area as a playing field is also recounted in the "Legend of Pikoï the Rat Killer." In this tale, a chief on Kaua'i had eight children, six "god daughters or demi-gods", one real daughter, and one real son. The real son, Pikoï, became a noted rat hunter on Kaua'i, using a bow and arrow to kill the rats. The real daughter moved to O'ahu and married the chief of Mānoa. One day Pikoï and his father decided to travel to O'ahu to visit their sister at Mānoa. While in O'ahu, Pikoï wandered from Mānoa toward the harbor at Honolulu:

On the plain called Kula-o-ka-hua he saw a chiefess with some of her people. This plain was the comparatively level ground below Makiki Valley. Apparently it was covered at that time with a small shrub or dwarf-like tree, called aweoweo. Rats were hiding under the shelter of the thick leaves and branches [Westervelt 1963:160].

Pikoï impressed the chiefess and her followers by shooting at a hidden rat, and striking and entangling the whiskers of three rats in one shot. He then proceeded to kill an additional number of rats in one shot, all strung along the length of the arrow.

This arid plain was also mentioned in the "Legend of Hanaaumoe" as a place that must be crossed to travel to the more agriculturally productive area of Nu'uānu. Halali'i, the king of the spirits, designated the spirit Hanaaumoe to guard the coasts of O'ahu. When canoes from other islands were seen, Hanaaumoe invited the crews to land and promised them food and wives. One day several canoes appeared with friends of the king of Kaua'i, including a lame man named Kaneopa. Hanaaumoe enticed them to land at Kou and sleep in the canoe shed, while they waited

for the food and wives that he had promised. When the spirit thought that everyone was asleep, he returned to the shed and said:

<i>Kahea ana o Hanaaumoe, moe ea?</i>	Asleep are you?
<i>Halahala kau e,</i>	Piled on one another,
<i>Halahala kau e,</i>	Scattered here and there,
<i>Ua moe oukou?</i>	Are you all asleep?

Only the man Kaneopa was awake. Beginning to suspect Hanaaumoe was a spirit who wished to eat the people, Kaneopa answered that all were awake and waiting for the food, meat, and wives promised. Hanaaumoe lied and said that these things could not arrive quickly since the road down from Nu'uaniu (Valley) was long, the climb from Kapūkaki (crater near Pearl Harbor) was long, and the plain of Kulaokahu'a (plain in Makiki) was far off. When Kaneopa could stay awake no longer, he dug a hole under the sill of the house, knowing that if the king of the spirits came to the house, he would sit at this place of honor. Hanaaumoe came back to the house and again asked if everyone was sleeping. When he got no reply he summoned the rest of the spirits, including the king Halali'i, who sat on the sill of the house. The spirits ate all of the people inside, and dug up the floor to search for anyone hiding. The only place they did not dig was the spot under the sill where the king was sitting.

When the spirits left, Kaneopa came out of his hiding place, launched a canoe, and fled back to Kaua'i. He told the king of Kaua'i about the evil spirits. The king and his followers returned to O'ahu, bringing with them a number of wooden carvings made to look like men. They landed at Lē'ahi (Diamond Head). Hanaaumoe again enticed the people to land and sleep in the canoe shed by promising food and wives. When Hanaaumoe left, the people left the wooden carvings in the shed and went back to their canoes to wait. The spirits with their king entered the shed and began to gnaw on the wooden idols. When all of the spirits were within, the Kaua'i people crept up on them and burned the house down (Fornander 1917, Vol. IV:476-482; 1919, Vol. V:428-434).

This legend led to a Hawaiian saying, used to describe any unkept promise of food, fish, etc. (Pukui 1983:84-85).

<i>He Lō'ihī o 'Ewa; he pali o</i>	'Ewa is a long way off;
<i>Nu'uaniu; he kula o Kulaokahu'a;</i>	Nu'uaniu is a cliff; Kulaokahu'a is a dry plain;
<i>He hiki mai koe.</i>	but all will be here before long.

As mentioned previously, portions of Kulaokahu'a were within the 'ili of Kewalo (Figure 4). Kewalo literally means "the calling," as in an echo (Pukui et al. 1974:109). Kewalo once had a freshwater spring in the central portion (current location unknown), as seen in the proverb "*Ka wai huahua'i o Kewalo*" which translates as "The bubbling water of Kewalo." Two springs are mentioned in a traditional story of the Waters of Ha'o. This legend tells of two children of the chief Ha'o who ran away from their cruel stepmother. They stayed a time with the caretakers of Kewalo Spring, which may have been located close to the trail that connected Waikīkī and Honolulu. The children then left when they heard that the chiefess had sent men to look for them. The two children followed the moonlit trail across the plain toward Kou (Honolulu), but finally collapsed from weariness and thirst. In a dream, the boy's mother told him to pull up a plant close to his feet. When he did, he found a spring under the plant, which was called the Water of Ha'o, or Kawaiaha'o. This spring is located at the western end of the trail, near Kawaiaha'o Church in Kaka'ako (Pukui 1988:87-89).

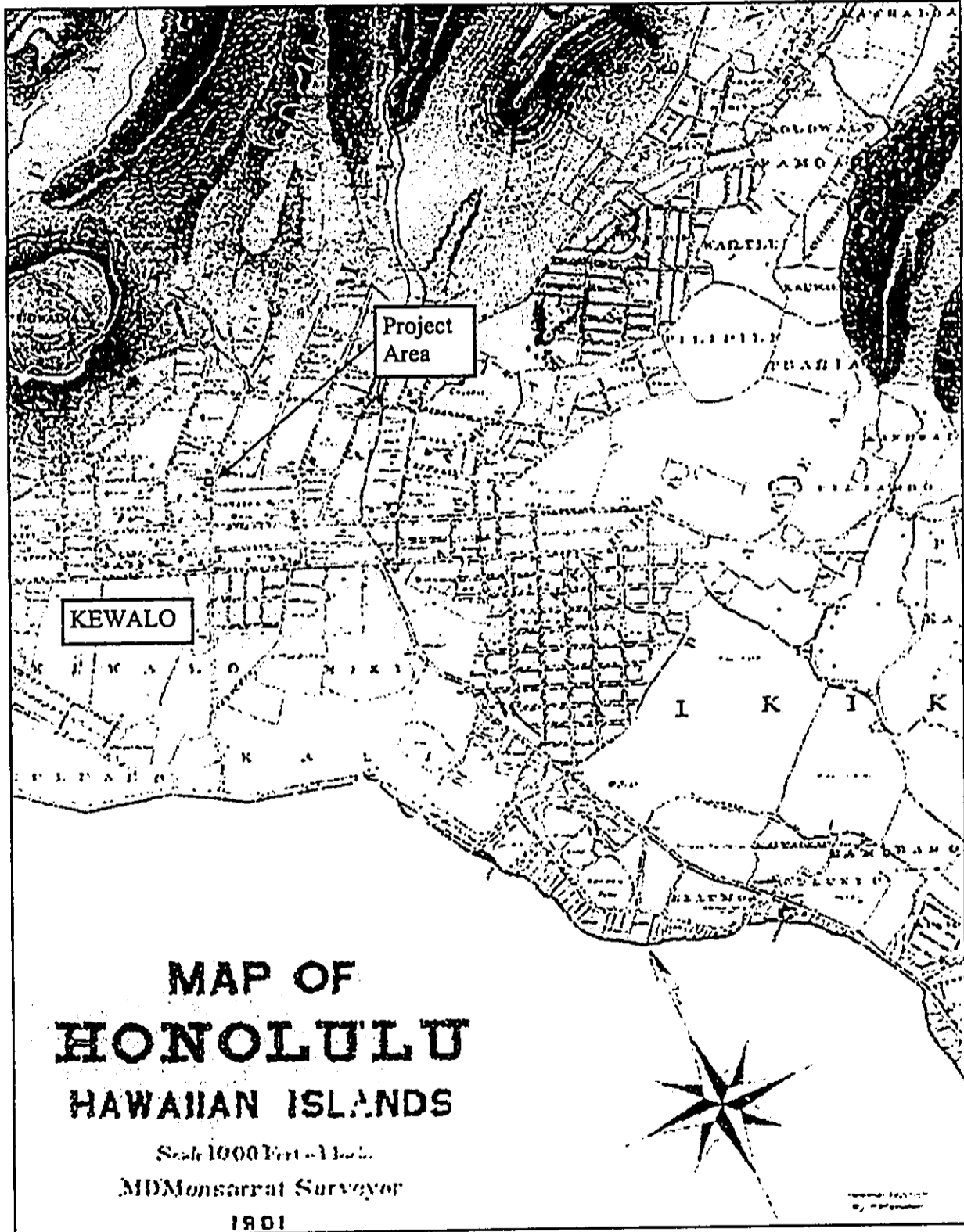


Figure 4. Portion of an 1897 map by the surveyor M. D. Monsarrat, showing traditional land names for Waikiki and distribution of swampy areas, fishponds, and rice fields

The Kewalo area also once had a famous fishpond, which was used to drown members of a pariah caste (*kauwā*) or *kapu* (taboo) breakers as the first step in a sacrificial ritual known as *Kānāwai Kaihehe'e* (Kamakau 1991:6) or *Ke-kai-he'ehe'e*, which translates as "sea sliding along," suggesting the victims were slid under the sea (Westervelt 1963:16). Sterling and Summers (1978: 292) describe Kewalo as:

A fishpond and surrounding land on the plains below King Street, and beyond Koula. It contains a spring rather famous in the times previous to the conversion to Christianity, as the place where victims designed for the Heiau of Kanelaa on Punchbowl slopes, was first drowned. The priest holding the victim's head under water would say to her or him on any signs of struggling, "Moe malie i ke kai o ko haku." "Lie still in the waters of your superiors." From this it was called Kawailumalumai, "Drowning waters."

Kewalo is mentioned in a legend as a marsh near the beach, where tall *pili* grass was growing. Kapoi went to this area to get thatching for his house. While there, Kapoi found seven owls eggs and took them home to cook for his supper. An owl perched on the fence surrounding his house and cried out "O Kapoi, give me my eggs!" Kapoi eventually returned the eggs, and the owl became his family god and instructed him to build a *heiau* in Mānoa. Kapoi built the *heiau* and placed some bananas on the altar as a sacrifice. He also set the *kapu* (taboo) days for its dedication. The king of O'ahu, Kākuhihewa, who was building his own *heiau* in Waikīkī, had made a law that if any man among his people erected a *heiau* and set the *kapu* before him, that man should die. Kapoi was seized and taken to the *heiau* of Kūpalaha, at Waikīkī. The owl that Kapoi had first met secured the aid of the king of the owls at Owl's Hill (Pu'u Pu'eo) in Mānoa, who gathered all of the owls of the islands; they flew to Kūpalaha and battled the king's men, who finally surrendered. From this time the owl was considered a powerful *akua* (god). The battle area was known as Kukaunahio-ka-pueo, which means "the confused noise of owls rising in masses" (Westervelt 1963: 132-135; Thrum 1998: 200-202).

Kewalo was also the birthplace of the great chief Hua-nui-ka-la-la'ila'i, as mentioned in this *mele* (story) chanted by Kamakau (1991a:24):

<p><i>'O Hua-a-Kamapau ke 'li'i</i> <i>O Honolulu o Waikīkī</i> <i>I hānau no la i kahua la i Kewalo,</i> <i>'O Kālia la kahua</i> <i>O Makiki la ke ēwe,</i> <i>I Kānelā'au i Kahehuna ke piko,</i> <i>I Kalo i Pauoa ka 'a'a;</i> <i>I uka i Kaho'iwai i</i> <i>Kanaloaho'okau . . .</i></p>	<p>Hua-a-Kamapau the chief O Honolulu, of Waikīkī Was born at Kewalo, Kālia was the place [the site] At Makiki the placenta, At Kānelā'au at Kahehuna the navel cord, At Kalo at Pauoa the caul; Upland at Kaho'iwai, at Kanaloaho'okau . . .</p>
--	---

The chief Hua was famous for his love of cultivation and his care for the people. His *heiau* was in Kukulūāe'o in Honolulu, called Pu'u'ukea; it is mentioned in a traditional *wānana* (prophecy) recorded by Kamakau (1991b:24-25).

<p><i>[Ka makaua ua kahi o 'Ewa]</i> <i>Ua puni ka i'a o Mokumoa,</i> <i>Ua kau i'a ka nene;</i></p>	<p>[The increasing "first rain" of 'Ewa] Overcomes the fish of Mokumoa, Washes up fish to the nene plants;</p>
--	--

*Ua ha'a kalo ha'a nu;
 Ha'a ka i'a o kewalo,
 Ha'a na 'ualu o Pahua,
 Ha'a ka mahiki i Pu'uhea,
 Ha'a ka unuunu i Pele'ula,
 Ha'a Makaaho i ke ala.
 E Kū e, ma ke kaha ka ua, e Kū,*

[I 'ai 'na ka i'a o Maunalua] . . .

Lays low the taro as it patters down;
 Lays low the fish of Kewalo,
 Lays low the sweet potatoes of Pahua,
 Lays low the mahiki grass at Pu'uhea,
 Lays low the growing things at Pele'ula
 Lays low Makaaho [Makāho] in its path
 O Kū, the rain goes along the edge [of the
 island], O Kū

["Eating" the fish of Maunalua] . . .

From these legendary accounts it can be seen that Kewalo was traditionally noted for its fishponds, its marsh lands where *pili* grass could be collected, for ceremonial sites such as the Kewalo spring and the fishpond at which sacrifices were made, and for its trails that allowed transport between the more populated areas of Waikīkī and Honolulu. Important chiefs were born in the area and conducted religious rites, and commoners traveled to the area to procure food and other resources; some commoners probably also lived in the area, possibly adjacent to the fishponds and the trails.

C. Pre-Contact to Early 1800s

Kewalo, including the plains area called Kulaokahu'a, was situated between two centers of population and activity in pre-contact O'ahu, Kou and Waikīkī. In Waikīkī a system of irrigated taro *lo'i* fed by streams descending from Makiki, Mānoa, and Pālolo valleys blanketed the Waikīkī plain, and networks of fish ponds dotted the shoreline. Similarly, Kou – the area of the present downtown Honolulu surrounding Honolulu Harbor – possessed shoreward fish ponds and irrigated fields watered by streams from Nu'uānu and Pauoa valleys. Kewalo's "identity" – its pre-contact population and activity patterns – may have derived from its relationship to these two densely populated areas: it may have participated in some of the activities associated with Kou and Waikīkī. Thus, the attempt to portray the Kewalo region (and the present study area) as it existed for Hawaiians during the centuries before western contact must begin with accounts of Kou and Waikīkī.

Waikīkī is actually the name of a large *ahupua'a* (traditional land division) encompassing lands stretching from Honolulu to Maunalua Bay. Within that *ahupua'a*, by the time of the arrival of Europeans during the late eighteenth century, the area today known as Waikīkī had long been a center of population and political power on O'ahu. According to Martha Beckwith (1940:383), by the end of the fourteenth century Waikīkī had become the "ruling seat of the chiefs of O'ahu." The pre-eminence of Waikīkī continued into the eighteenth century and is confirmed by the decision of Kamehameha, in the midst of unifying control of the Hawaiian Islands, to reside there after wresting control of O'ahu by defeating the island's chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa 'I'i, himself a number of the *ali'i*, described the king's Waikīkī residence:

Kamehameha's houses were at Puaaliili, makai of the old road, and extended as far as the west side of the sands of Apuakehau. Within it was Helumoa where Kaahumanu *ma* went to while away the time. The king built a stone house there, enclosed by a fence... ['I'i 1959:17]

‘I‘i further noted that the “place had long been a residence of chiefs. It is said that it had been Kekuapoi’s home, through her husband Kahahana, since the time of Kahekili” (‘I‘i 1959:17).

Chiefly residences, however, were only one element of a complex of features – sustaining a large population – that characterized Waikīkī. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system – an impressive engineering feat the design of which is traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua‘a*. Water was also available from springs in nearby Mō‘ili‘ili and Punahou. Closer to the Waikīkī shoreline, coconut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouver, arriving at “Whyteete” in 1792, captured something of this profusion in his journals:

On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.

[Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.

This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or *taro* root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the *taro* plantations.

[We] found the plain in a high state of cultivation, mostly under immediate crops of *taro*; and abounding with a variety of wild fowl, chiefly of the duck kind. . . . The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plains, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence [Vancouver 1798: I, 461-464].

Further details of the exuberant life that must have characterized the Hawaiians’ use of the lands that included the *ahupua‘a* of Waikīkī are given by Archibald Menzies, a naturalist on Vancouver’s expedition:

The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of

those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back into the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes, and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of *Dracaena* without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading into various directions so as to be able to supply the most distant fields at pleasure, and the soil seems to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlew [Menziess 1920: 23-24].

These and other early written accounts clearly depict a continuous zone of population and cultivation from the shoreline of the present day Waikīkī Beach extending north well into Mānoa Valley. These accounts, however, are less clear on the western and eastern bounds of this zone, and there are no specific references to Waikīkī's abundance reaching into the Kewalo region.

A basic description of Honolulu and Kou up to western contact is given by E.S. Craighill Handy and Elizabeth Handy:

What is now Honolulu was originally that flatland area between the lower ends of Nu'uanu and Pauoa Valleys and the harbor. [W.D.] Westervelt . . . wrote that "Honolulu" was probably a name given to a very rich district of farm land near what is now . . . the junction of Liliha and School Streets, because its chief was Honolulu, one of the high chiefs of the time of Kākuhihewa. . . . It is probable that the chief referred to by Westervelt took his name from the harbor and adjoining land. The original name of the land where the town grew when the harbor became a haven for foreign ships was Kou. . . . The number of *heiau* in this area indicates that it was a place of first importance before the era of foreign contact [Handy and Handy 1972:479].

Rev. Hiram Bingham, arriving in Honolulu in 1820, described a still predominantly Hawaiian environment – still a "village" – on the brink of western-induced transformations:

We can anchor in the roadstead abreast of Honolulu village, on the south side of the island, about 17 miles from the eastern extremity. . . . Passing through the irregular village of some thousands of inhabitants, whose grass thatched habitations were mostly small and mean, while some were more spacious, we walked about a mile northwardly to the opening of the valley of Pauoa, then turning southeasterly, ascending to the top of Punchbowl Hill, an extinguished crater, whose base bounds the northeast part of the village or town. . . . Below us, on the south and west, spread the plain of Honolulu, having its fishponds and salt making pools along the seashore, the village and fort between us and the harbor, and the valley stretching a few miles north into the interior, which presented its scattered habitations and

numerous beds of *kalo* (*arum esculentum*) in its various stages of growth, with its large green leaves, beautifully embossed on the silvery water, in which it flourishes [Bingham 1981: 92-93].

The Kewalo region would have been in Bingham's view as he stood at "Punchbowl Hill" looking south toward Waikīkī: it would have comprised part of the area he describes as the "plain of Honolulu" with its "fishponds and salt making pools along the seashore."

Another visitor to Honolulu in the 1820s, Jacobus Boelen, hints at the possible pre-contact character of Honolulu and its environs, including the Kewalo area:

It would be difficult to say much about Honoruru. On its southern side is the harbor or the basin of that name (which as a result of variations in pronunciations [*sic*] is also written as Honolulu, and on some maps, Honoonoono). The landlocked side on the northwest consists mostly of *tarro* fields. More to the north there are some sugar plantations and a sugar mill, worked by a team of mules. From the north toward the east, where the beach forms the bight of Whytete, the soil around the village is less fertile, or at least not greatly cultivated [Boelen 1988: 62].

Boelen's description suggests preliminarily that the Kewalo region and the present project area are within a "not greatly cultivated" region of Honolulu perhaps extending from Pūowaina (Punchbowl Crater) at the north through Kaka'ako to the Kālia portion of Waikīkī in the east.

The traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O'ahu was soon to change, disrupted by the same Euro-American contact that produced the first documentation (including the records cited above) of that traditional life. The *ahupua'a* of Honolulu, with the only sheltered harbor on O'ahu, became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. This shift in pre-eminence is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu. By the 1830s and 1840s, disease, the demands on labor for the sandalwood trade, and other factors had led to a general depopulation of the Kewalo area by native Hawaiians. The irrigated taro *lo'i* and the fishponds were neglected and began to be filled in with sediments. In 1828, the missionary Levi Chamberlain observed:

. . . we took a path on our right leading through a grove of tall coconut trees toward Waikiki—our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now over grown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the native respecting this present neglected state. They ascribed it to the decrease of population. . . [Chamberlain 1957:26].

An early, somewhat generalized depiction of the pre-contact native Hawaiian shaping of Waikīkī, Honolulu and the Kewalo region is given on an 1817 map by Otto von Kotzebue, commander of the Russian ship *Rurick*, who had visited O'ahu during the previous year. The map (Figure 5) shows taro *lo'i* (the rectangles) massed around the streams descending from Nu'uanu and Mānoa valleys. The depicted areas of population and habitation concentration (indicated by the trapezoids), however, probably reflect distortions caused by the post-contact

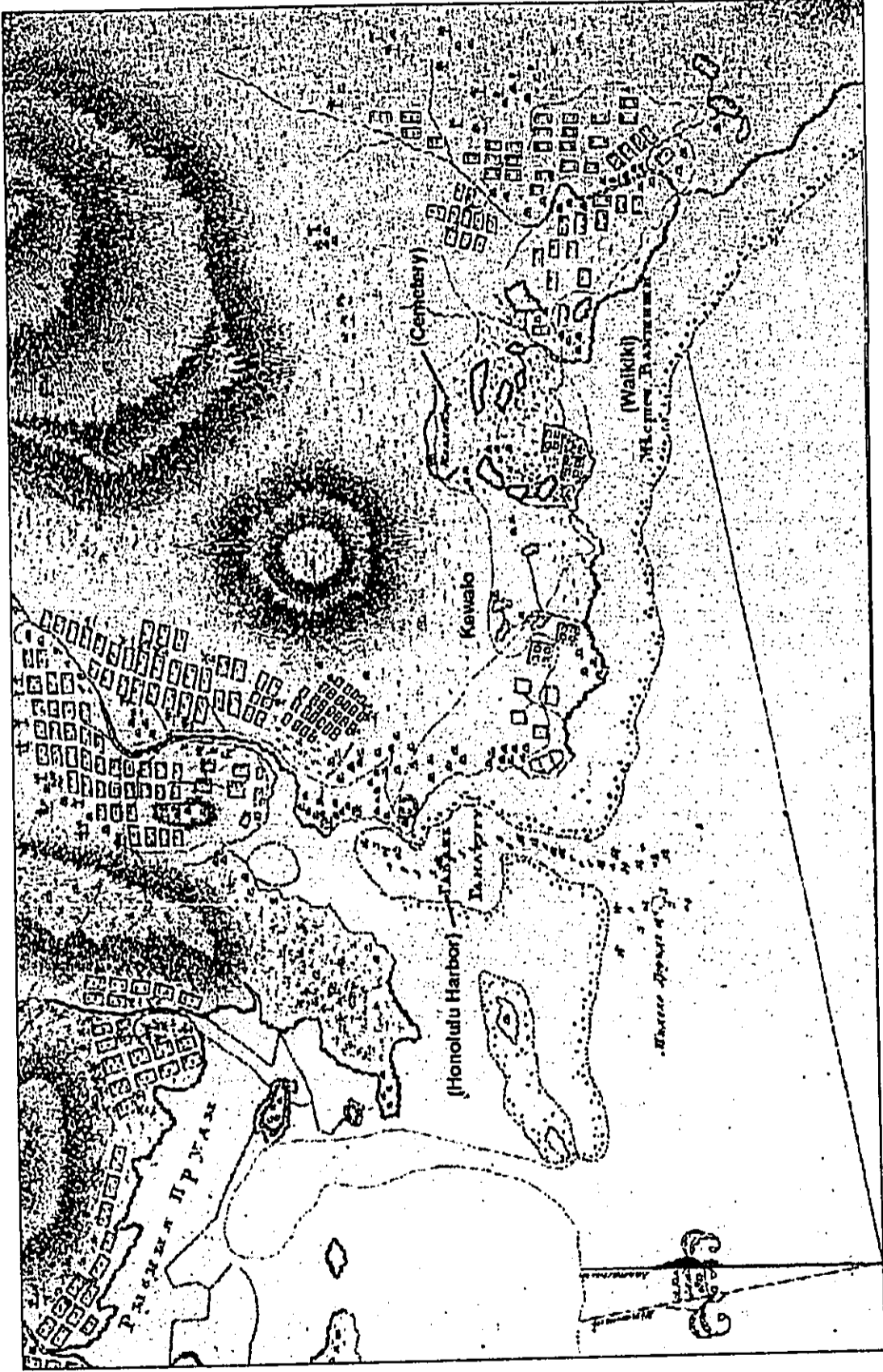


Figure 5. Portion of a 1817 map made during the visit of Otto von Kotzebue of the Russian Ship *Rurick* (figure taken from Fitzpatrick 1986:49)



shift of Hawaiians to the area around Honolulu Harbor – the only sheltered landing on O‘ahu and the center of increasing trade with visiting foreign vessels. Kamehameha himself had moved from Waikīkī to Honolulu in 1809.

Kotzebue’s map suggests that the land between Puowaina (Punchbowl Crater) and the shoreline – which would include the Kewalo area—formed a “break” between the heavily populated and cultivated centers of Honolulu and Waikīkī: the area is only characterized by fishponds, trails connecting Honolulu and Waikīkī, and occasional taro *lo‘i* and habitation sites.

One of these trails is illustrated in an 1840 sketch by a member of the Wilkes expedition (Figure 6). This drawing shows a cluster of houses near the Honolulu Harbor and a second cluster in the far background at Waikīkī, in front of Diamond Head. The trail is oriented parallel to the coast and is lined by scattered habitations. This trail would later become a major road, first called King Street, then Waikīkī Road; and in the nineteenth century the name changed to its present designation, Kalākaua Avenue (Kuykendall 1965:112).

D. Early 1800s to Mid-Nineteenth Century

A clearer picture of Kewalo and the present project area develops with accounts of other visitors to – and settlers of – Honolulu during the first half of the nineteenth century. Gorman D. Gilman, who arrived in Honolulu in 1841, recalled in a memoir the limits of Honolulu during the early 1840s:

The boundaries of the old town may be said to have been, on the makai side, the waters of the harbor; on the mauka side, Beretania street; on the Waikiki side [*i.e.*, the area just beyond Punchbowl Street], the barren and dusty plain, and on the Ewa side, the Nuuanu Stream [Gilman 1904: 97].

Gilman further describes the “barren and dusty plain” beyond (east of) Punchbowl Street:

The next and last street running parallel [he had been describing the streets running *mauka/makai*] was that known as Punchbowl Street. There was on the entire length of this street, from the makai side to the slopes of Punchbowl, but one residence, the two-story house of Mr. Henry Dimond, mauka of King Street. Beyond the street was the old Kawaiahao church and burying ground. A more forsaken, desolate-looking place than the latter can scarcely be imagined. One to see it in its present attractiveness of fences, trees and shrubbery, can hardly believe its former desolation, when without enclosure, horse and cattle had free access to the whole place [Gilman 1904:89].

That the Kaka‘ako environs of the missionary enclave and Kawaiaha‘o Church were indeed “forsaken” and “desolate-looking” in the 1820s when the missionaries were first settled there is confirmed in the memoirs of the American missionary C.S. Stewart who, arriving on Maui after living at Kaka‘ako, declared Lahaina to be “like the delights of an Eden” after “four weeks’ residence on the dreary plain of Honoruru” (Stewart 1970:177). It is likely that these descriptions of the Honolulu plain also include – at least for western sensibilities – the Kewalo region beyond Kaka‘ako.

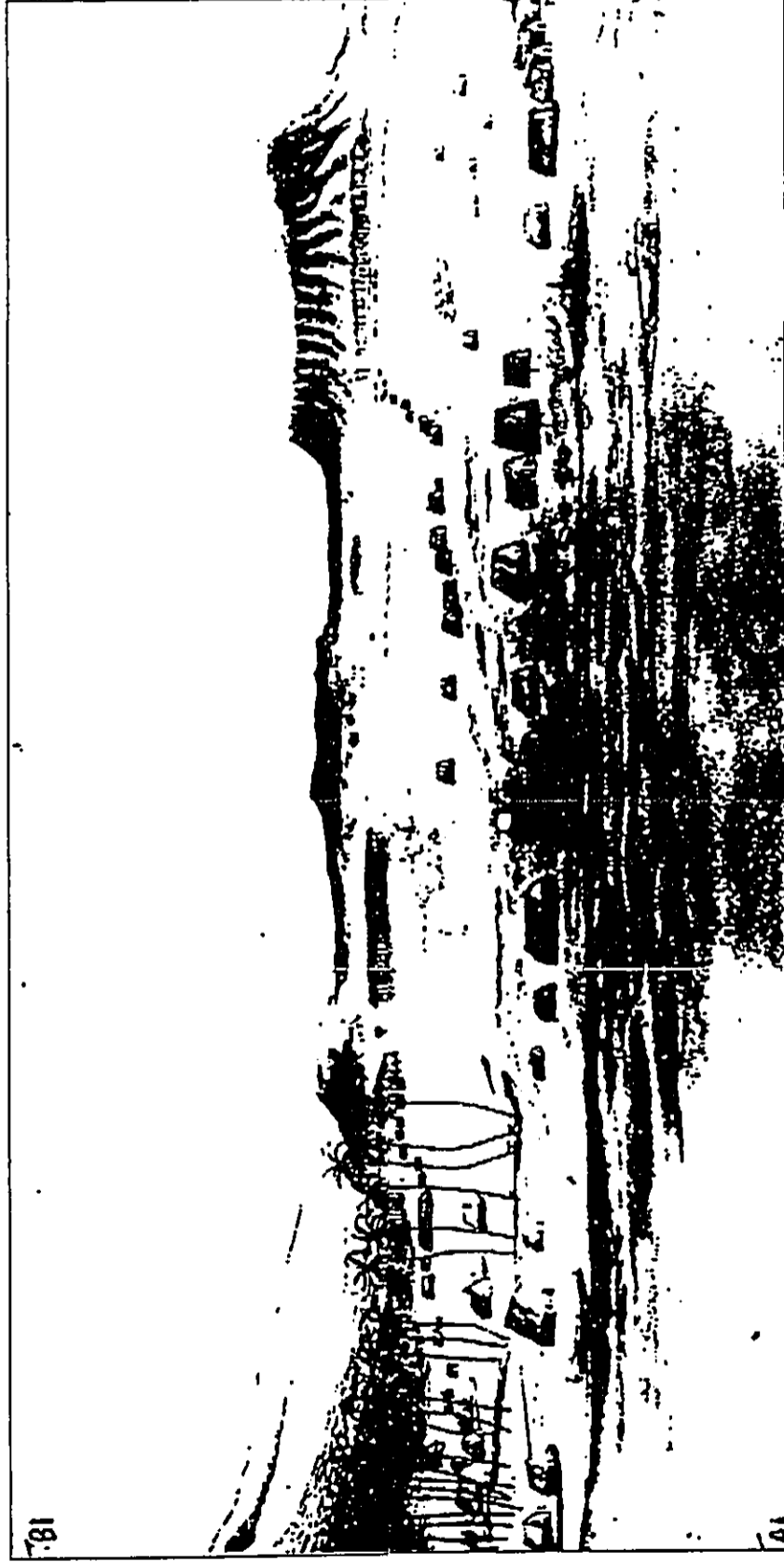


Figure 6. Copy of 1840 Wilkes Expedition sketch from Honolulu Harbor to Diamond Head, showing trail and scattered habitations in the Kewalo area

E. Mid-Nineteenth Century and the *Māhele*

The Organic Acts of 1845 and 1846 initiated the process of the *Māhele* – the division of Hawaiian lands – which introduced private property into Hawaiian society. In 1848 the crown, the Hawaiian government, and the *ali'i* (royalty) received their land titles. Subsequently in the *Māhele*, Land Commission Awards (LCAs) for *kuleana* (tenant) parcels were given to commoners and others who could prove residency on and use of the parcels they claimed. Land Commission Award records document awardees continuing to maintain fishponds and irrigated and dry-land agricultural plots, though on a greatly reduced scale than had been previously possible with adequate manpower.

An 1881 Hawaiian Government survey map by S.E. Bishop (Figure 6) provides a detailed record of the physical landscape of Waikīkī before the transformations of the twentieth century. The map reveals an extensive complex of irrigated fields, streams and irrigation watercourses, and ponds stretching inland from the Waikīkī shoreline to the plains of Mō'ili'ili. Land Commission Award records for the awards shown on the map document houselots near the shore with associated taro *lo'i* [irrigated plots] located inland and house lots adjacent to inland taro *lo'i*.

A portion of LCA 10605, awarded to Kamake'e Pi'ikoi, a member of the *ali'i*, comprised the entire *'ili 'aina* of Kewalo (270.84 acres). Kamake'e Pi'ikoi was a member of the *ali'i* and the younger sister of the wet nurse to Kamehameha III, who later became Kamehameha III. She was also the wife of Iona Pi'ikoi who served both Kamehameha II and Kamehameha III (Dorton 1986:282). Documents related to this large award – LCA 10605 – reveal little of the actual character of the land. However, records for other awards – including testimonies entered for smaller *kuleana* awards to individuals living in the area – give a more detailed picture of Kewalo.

The land immediately *makai* of Kewalo was included in LCA 387 to the American Board of Commissioners for Foreign Missions (ABCFM). Testimonies describe the land – identified as "Punahou" – and the background of the ABCFM's claim to it:

The boundaries of that part which lies on the sea shore we cannot define so definitely, but presume there will be no difficulty in determining them, as it is commonly known as pertaining to Punahou. This part embraces fishing grounds, coral flats & salt bed.

The above land was given by Boki to Mr. Bingham, then a member of the above named Mission & the grand was afterwards confirmed by Kaahumanu. (*Foreign Register*: vol. 2, pg. 33)

The Makai part of Punahou is bounded Mauka by "Kewalo" and "Koula", Waititi side by "Kalia", seaward it extends out to where the surf breaks. Honolulu side by "Honolulu".

This land was given to Mr. Bingham for the Sandwich Island Mission by Gov. Boki in 1829. . . . From that time to these the S.I. Mission have been the only Possessors and Konohikis of the Land

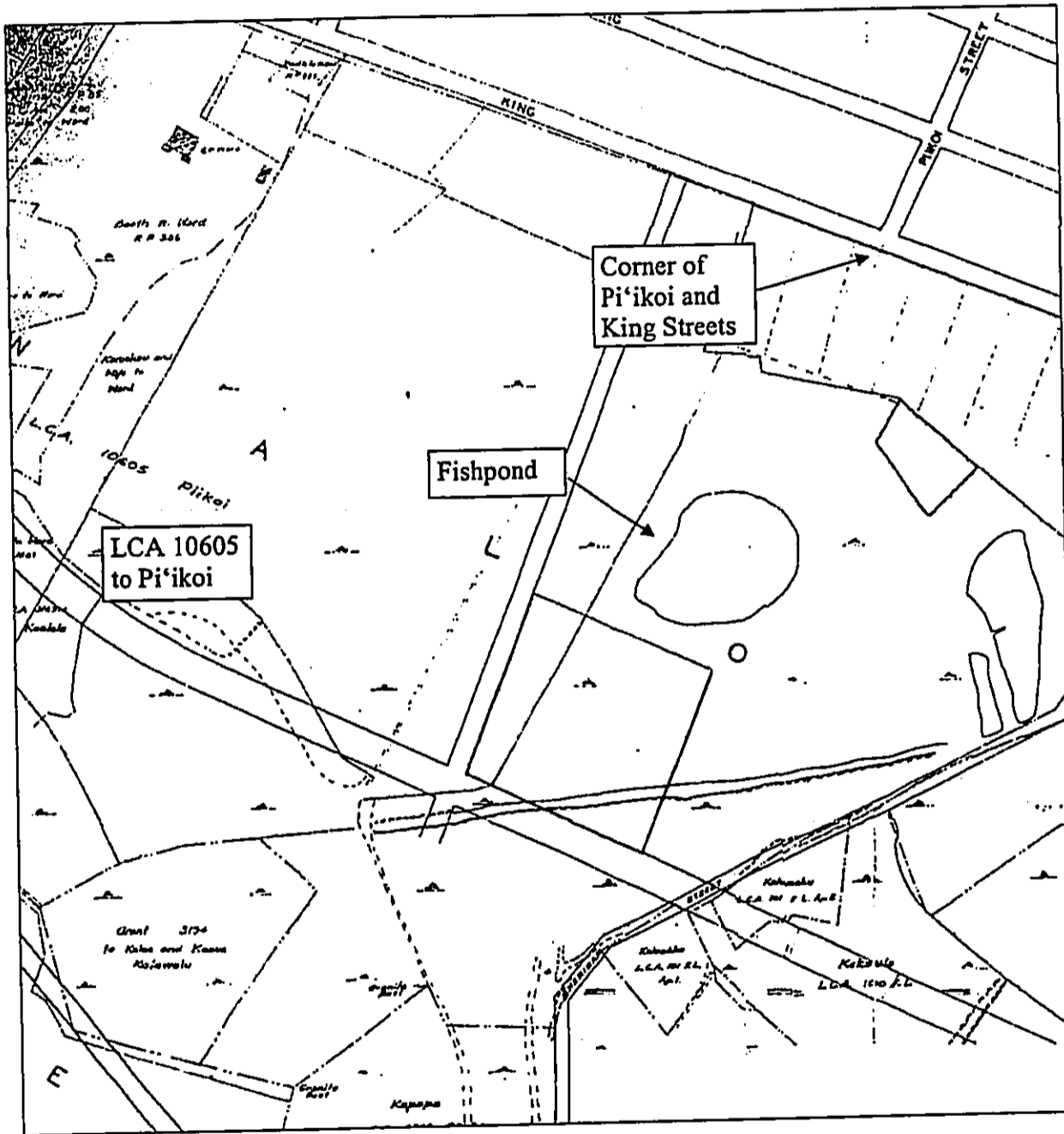


Figure 7. Portion of an 1881 map of Kewalo by Sereno E. Bishop, showing LCAs, marshy land (tuft symbols denote marshy areas), and fishponds south of King Street

The name of the Makai part is Kukuluaeo. There are several tenants on the land of Punahou whose rights should be respected. (*Foreign Testimony*, vol. 3, pg. 115)

The LCA records thus help clarify both the pre-contact and mid-nineteenth century pictures of the Kewalo region. They suggest that the traditional Hawaiian usage of the region and its environs may have been confined to salt making and farming of fish ponds, with some wetland agriculture in those areas *mauka* or toward Waikīkī at the very limits of the field system descending from Makiki and Mānoa valleys. The characterization by a native Hawaiian of the area *makai* of Kewalo as the "salt plains of Honolulu" itself suggests the environmental constraints that would have made the general region less desirable for long-term permanent habitation by any sizeable population. However, the testimonies do indicate that the area was lived on and was shaped by Hawaiians before the nineteenth century.

The Kulaokahu'a Plains were awarded to the Crown in March of 1848 (Fitzpatrick 1989:54) during the Great *Māhele*. These Crown lands, set aside for Kamehameha II, were at first leased to a private individual. An 1873 map by the surveyor W.D Alexander (Figure 8) shows the small number of Land Commission Awards in the lower section of Makiki. There were only three LCAs (Figure 9) awarded south of Kīna'u Street, LCAs 95, 1447, and 3135. LCA 95 was awarded to Hannah A. Holmes Jones and consisted of *kula* land, which could have been used as pasture or for dryland agriculture. LCA 3135 was awarded to James Walker who had three houses on one *kula* lot. LCA 1447, was awarded to Kahue, who had a houselot and a *lo'i* (irrigated agricultural plot). This is the only LCA in the area that definitely indicates some agricultural pursuits and also the only one directly adjacent to Makiki Stream, whose waters were undoubtedly used to irrigate the crops.

F. Late Nineteenth Century

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the nineteenth century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the islands. Contracts were for five years, and pay was \$3 a month plus room and board. Upon completion of their contracts, a number of the immigrants remained in the islands, many becoming merchants or rice farmers. As was happening in other locales, in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming. The taro lands' availability throughout the islands in the late 1800s reflected the declining demand for taro as the native Hawaiian population diminished. Figure 10 illustrates the appearance of the Waikiki plains in the late nineteenth and early twentieth centuries, with taro planted in the well-watered sections near the coast, rice planted in the inland marshy areas, and the drier areas, such as the project area in Kulaokahu'a, farther inland of the Kewalo marshes.

By 1876 there was still a considerable amount of former taro land available for rice farming. The great demand for rice land brought disused taro patches into requisition-especially because water rights attached to them. Such was the desire of the Chinese to use every piece of land to its fullest extent for paddy that they cut away the paths which the Hawaiians had used between taro patches to strips so narrow that a man could walk along them only with difficulty. Such a circumstance made it very difficult later on to mark exactly the boundaries between *kuleanas* and gave rise to legal trouble in courts [Coulter and Chun 1937:11].

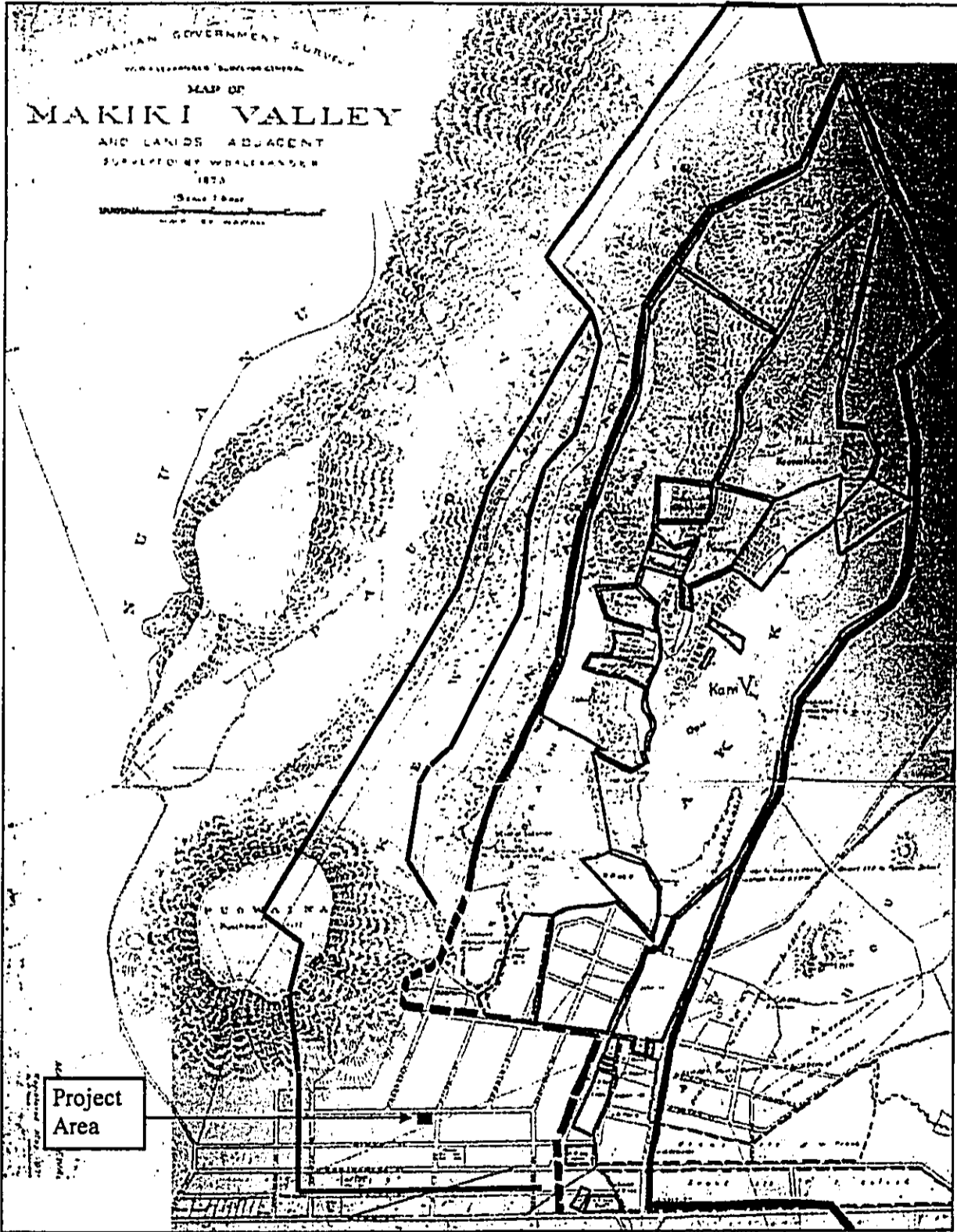


Figure 8. 1873 Map of Makiki Valley by W. D. Alexander, showing project area; land units and LCAs are outlined in black

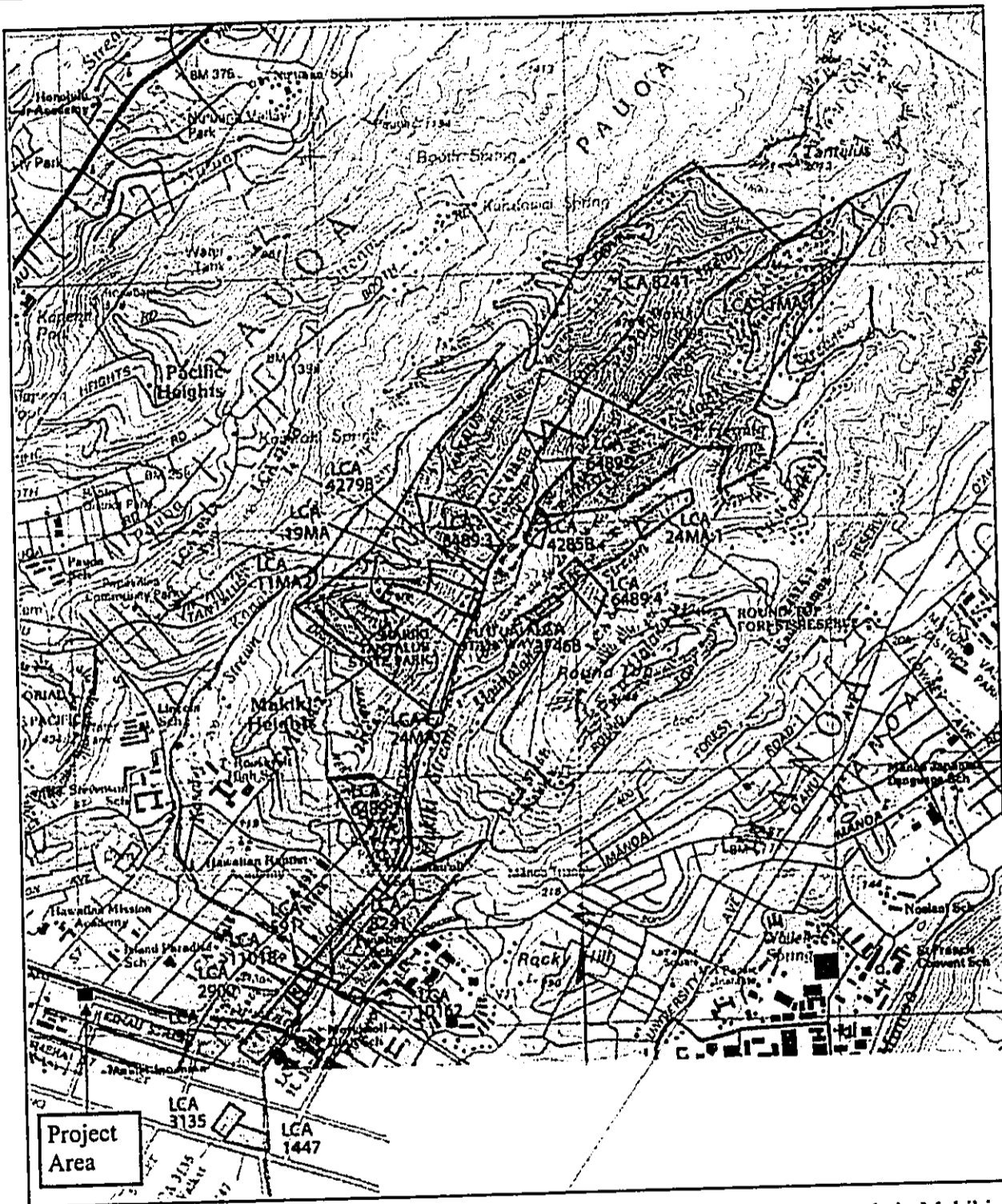


Figure 9. Location and approximate boundaries of known Land Commission Awards in Makiki [adapted from Reg Map No. 813 by W. D. Alexander (1873)] overlain on modern USGS map of Makiki

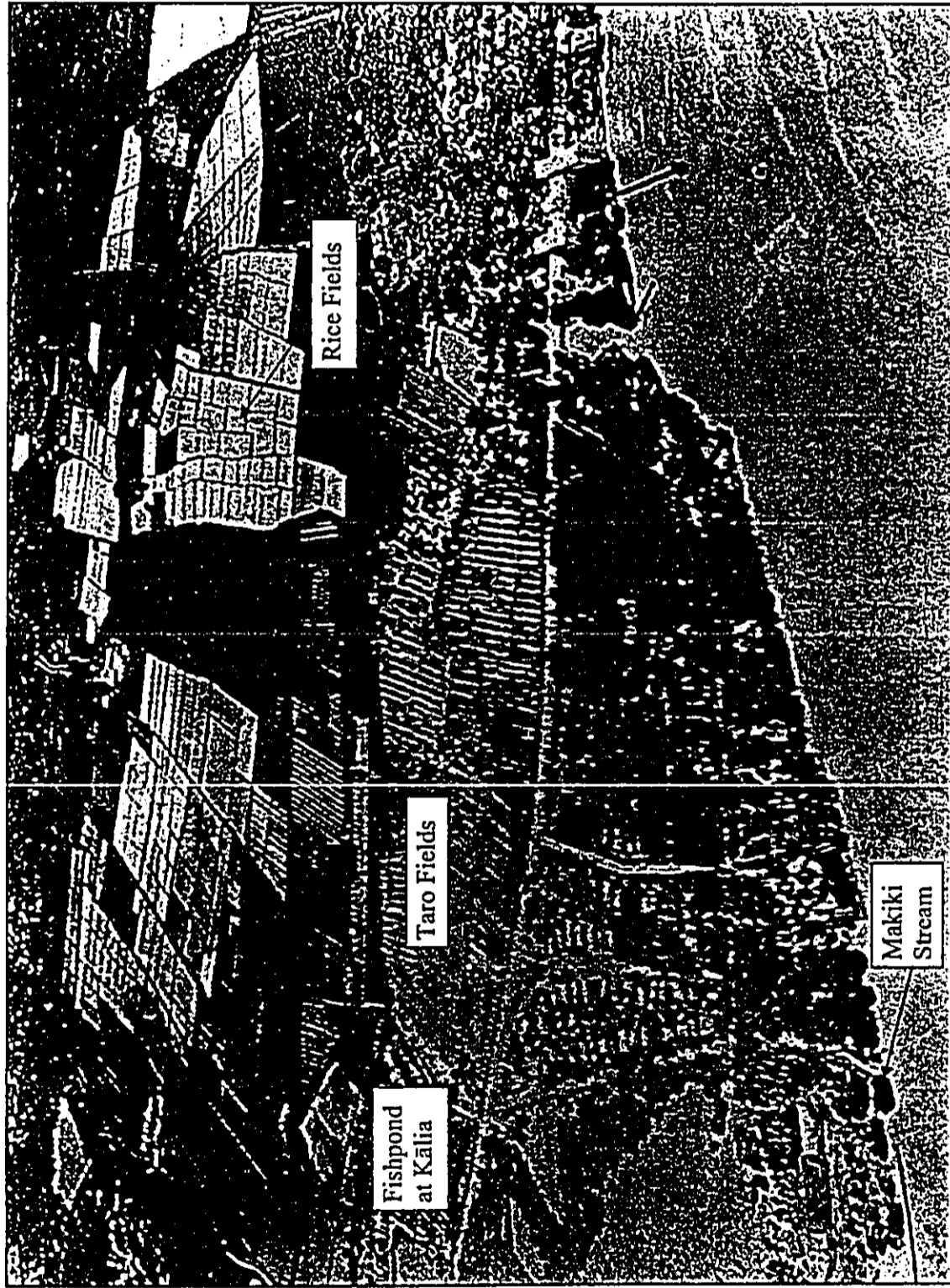


Figure 10. 1920 Photograph of the Waikiki Plain before the construction of the Ala Wai Canal; the project area would be near the top left of the photo, west of Makiki Stream and *mauka* of the taro and rice fields (photo from Grant 1996:63)

As the demand for rice continued, it became profitable to bring into use land hitherto unused. The land most easily rendered fit for rice cultivation was swamp or marshland of which there was a large amount in the islands.

The Hawaiian Islands were well positioned for rice cultivation. A market for rice in California had developed as increasing numbers of Chinese laborers immigrated there since the mid-nineteenth century. Similarly, as Chinese immigration to the islands also accelerated, a domestic market opened.

The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.

In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai'i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product [Coulter and Chun 1937: 13].

By 1892, Waikīki had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O'ahu. Most of the former taro *lo'i* converted to rice fields were located *mauka* (inland) of the present Ala Wai Boulevard.

The *mauka* section of the Kulaokahu'a later became government lands and was divided into lots and sold to private individuals between 1877 and 1882. Kulaokahu'a was one of the earliest planned blocks in Honolulu. People at first seem to have bought the numbered lots as an investment, since the owner names on the lots changed frequently. Only a few people in the mid-nineteenth O'ahu tax books are listed as actually living in Kulaokahu'a or on "the plains" (Fitzgerald 1989:28). T. Blake Clark has noted that "the settling of the Plains did not come until the 1880s, after water was brought from Makiki Valley" (Blake 1939:12).

Two developments in the Kewalo area – Thomas Square and the "Old Plantation" – during the second half of the nineteenth century are paradigmatic of western-conceived and induced change imposed on the landscape. In 1870, Cyrus P. Ward bought the property across King Street from Thomas Square at auction for \$2450 from the estate of the late J. Booth. The property originally consisted of 17 acres with a fishpond but, by 1875, Ward's property comprised 30 acres. An article in the *Pacific Commercial Advertiser* (September 4, 1875) reported:

In taking a drive out on the Kulaokahua continuation of King street, attention is attracted to the premises just beyond the Catholic cemetery, the property of Mr. C.P. Ward. The lot consists of some thirty acres, and is thickly planted with algaroba and, in rows, there are some seven thousand thrifty young cocoanut trees. . . The algarobas will certainly be valuable as firewood, and the cocoanuts alone will in a few years produce a handsome income. The property is well watered by means of pumps driven by windmills, there being an inexhaustible supply of water a few feet below the surface of the plains.

Five years later, Ward had built a homestead on the land. He had been dead more than twenty years when the property, by then known as the "Old Plantation" and lived on by his widow Victoria Ward and their children, was described in a 1901 *Paradise of the Pacific* article as

Now one vast coconut grove, containing upwards of 2,000 trees. . . . It is the largest collection of coconut palms in Hawaii and must yield nearly 100,000 nuts a year.

Thomas Square, named for Admiral Richard Thomas who in July 1843 had restored the Hawaiian flag to Kamehameha III at that site, was designed by Archibald S. Cleghorn in 1875.

Maps of the 1880s and 1890s (including the 1884 Bishop map) record an "arm" of streets projecting from downtown Honolulu into Kewalo. A large portion of Kewalo, however, remains open and the maps reveal that much of the region has become rice fields while other areas are designated marsh lands. In these years, Punahou Street marked the easternmost *mauka/makai* route of urban Honolulu. However, Pi'ikoi did not extend seaward of King Street. The area of Kewalo was to remain relatively undeveloped until the 1920s.

G. Twentieth Century to Present

During the 1920's the Honolulu and Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal – begun in 1921 and completed in 1928 – resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō'ili'ili, and McCully districts, as well as lower Makiki and Mānoa. . .

The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block [Johnson 1991:311].

During the course of the Ala Wai Canal's construction, the banana patches and ponds as far as McKinley High School were filled and the present grid of streets was laid out. A 1922 Fire Control Map by the U.S. Army Corps of Engineers shows the new McKinley High School campus, and shows that Pi'ikoi Street has just been completed (no buildings are shown *makai* of about Rycroft Street).

These newly created land tracts spurred a rush to development in the 1930's. An article in the *Honolulu Star-Bulletin* in 1938 extolled the area's progress:

The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.

These developments are being made by island residents who have recognized the fact that Waikiki presents the unparalleled possibility for safe investment with excellent return [Newton 1938: 10].

The writer speculated that the "future of Waikīkī is assured."

Dredging for the Ala Wai Canal began in 1921 and was completed seven years later. The final result was a "canal three miles long, with an average depth of twenty-five feet and a breadth of two hundred fifty feet" (*Honolulu Advertiser*, 17 October 1928:2:16). Several claims were made against the dredging company, including compensation for destroyed crops and livestock, by farmers living in Waikīkī. For instance, a Chinese tenant farmer named Chang Fow, leasing lands in Waikīkī from the Bishop Trust Company wrote a letter of complaint indicating that the salt water that leached into his lands as a result of the dredging of the canal had devastated his fishponds and stocks of ducks and chickens (letter from Chang Fow to the Bishop Trust Company, 23 May 1922, quoted in Nakamura 1979:100-101). His claims, along with those of other residents of the area, give an impression of the continuing agricultural subsistence base in Waikīkī that lasted into the 1920s, and rapidly became a thing of the past.

Nakamura (1979:85) writes that the government of the Territory of Hawai'i solicited bids, in 1920, for the dredge and fill project planned for the environs of Waikīkī. The plan was to create hundreds of acres of urban land—at the expense of wetland agriculture and aquaculture in the area. The advertisement soliciting bids for the project, put forward by Lyman H. Bigelow, masked the significance of the project by stating that "for Dredging a Drainage Canal and Filling and Reclaiming Certain Unsanitary Lands at Waikiki" (Nakamura 1979:85). He further writes that State laws were passed requiring property owners to pay for the filling in of their lands, which apparently was going to be done whether they wanted it or not. A lien would be fixed against their property and if all payment was not made on time, land would be foreclosed on. Nakamura points out that the cost was so high for some of the property owners that the bank lien could extend into a fifteen-year mortgage (Nakamura 1979:89).

Once land that the Territory of Hawai'i government wanted filled in (for state buildings) was complete, any further dredged materials became the property of the dredging company—the Hawaiian Dredging Company—and they in turn could sell the materials to the property owners, who in turn were forced to buy the product. Walter F Dillingham, of the Hawaiian Dredging Company died in 1963. *Time* magazine, in their article about him and his involvement in the project stated that ". . . Walter Dillingham used the muck dragged up from the sea to fill in low, marshy areas around Honolulu, over the years created 5,000 acres of solid ground that now holds a full third of the city's population" (cited in Nakamura 1979:112).

The land surface of much of Honolulu is the result of this decade long dredging and fill project of which the creation of the Ala Wai Canal was included. In Nakamura's (1979:113) "The Story of Waikīkī and the "Reclamation" Project" he writes that this land "reclamation" program changed the ecology of the area from a once viable and important agriculture and aquaculture center . . . destroyed by profit-seeking capitalist entrepreneurs. . . under the subterfuge of "drainage" and "sanitation." Many of the original property owners lost their land or had serious damage to their property as a result of the reclamation activities and/or the costly expense for the mandatory filling in of their properties.

Information about the actual dredging and fill process, and the materials dredged-up and used for fill is minimal. Statements and pictures regarding the event suggest that dredging was done

both off-shore, on the ocean bed, and in the area slated for the canal. As yet, information regarding the filling process of personal properties—with the excess dredge that became the property of the Hawaiian Dredging Company—is unclear. Numerous phases seem to have been undertaken. It is known that in 1922, fill was pumped from the Ala Wai to the McKinley High School Site (Griffin et al. 1987:58), located south of the current study area on the west side of Pensacola Street.

Waikīkī had been changed forever by the Ala Wai Canal. The ancient irrigation systems were gone, the farms were gone, the streams were gone, the mosquitoes were gone, and Waikīkī was separated from the rest of Honolulu by a broad canal. On the new high-and-dry lands behind the hotels, developers laid out tracts of inexpensive homes and garden apartments. Almost overnight Waikīkī became urban (Grant 1996:54).

Aerial photographs of the 1920s and 1930s (Figure 11) indicate that the open areas of Kewalo are in the process of being filled with material dredged from the Ala Wai Canal, Ala Moana Beach Park, and Kewalo Basin, and with material from the city incinerator at the Kewalo coastline. By the late 1940s, Kewalo was completely filled.

Kapi'olani Boulevard and Pensacola Street were constructed in the 1930s. In 1928, work began on Kapi'olani Boulevard, commencing at the intersection of South and King Streets. By 1931 the boulevard had reached Sheridan Street. Pensacola Street, named for U.S.S. Pensacola, had been laid out in the nineteenth century but did not extend *makai* past King Street until the late 1930s. A photograph (see Figure 11) by Ray Jerome Baker, taken in 1931, shows an extensive white area at the seaward end of Pi'ikoi Street and Kapi'olani Boulevard under construction. The white shade represents coral fill deposited and pumped into the area.

Makai of Kapi'olani Boulevard, Kewalo developed into a complex of commercial and industrial sites, and ethnic residential camps. This mixed use pattern would continue through the mid-twentieth century when the project area and its surroundings were fully incorporated into the urban landscape of Honolulu. A 1922 fire control map (Figure 12) and a 1943 USGS topographic map (Figure 13) show that the project area is within a residential block with many houses and other structures



Figure 11. 1931 aerial photograph taken during the construction of Kapi'olani Blvd. showing white areas of coral fill from the Kewalo Basin dredging

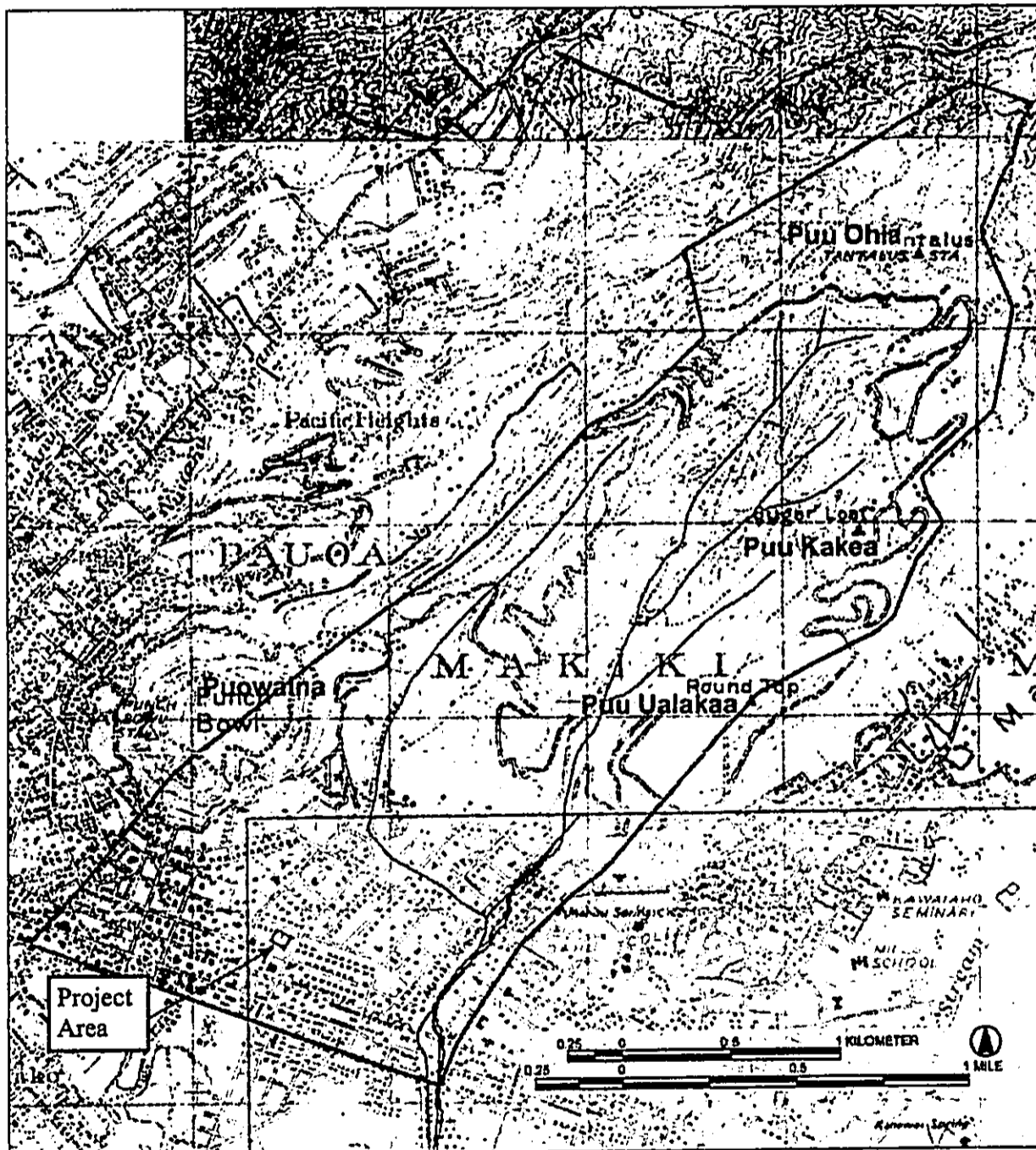


Figure 12. 1922 Fire Control map with modern boundary of Makiki (Kālawahine, Kewalo, and Makiki 'ili) in red

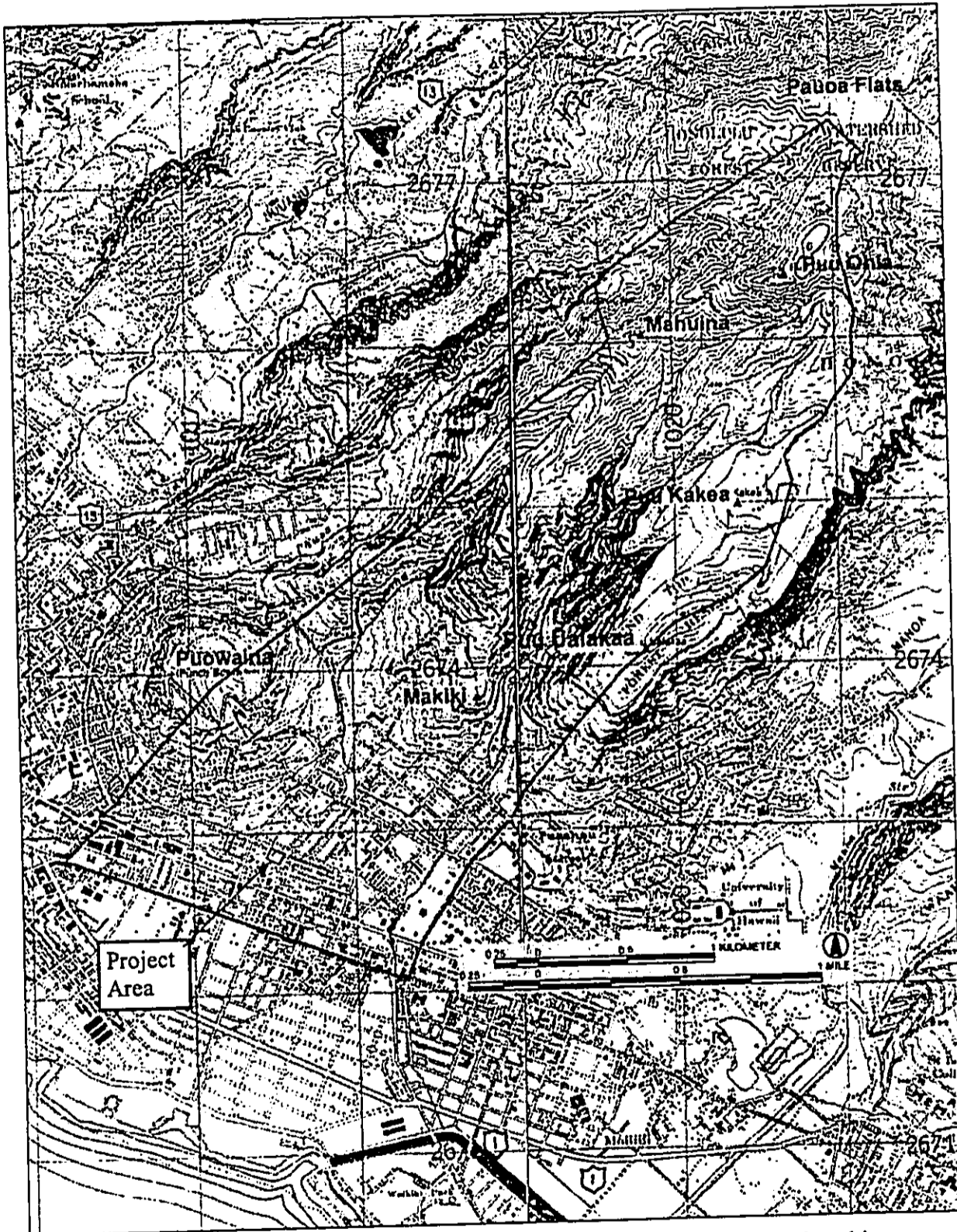


Figure 13. 1943 USGS Topographic Map with modern boundary of Makiki (Kālawahine, Kewalo, and Makiki 'ili) in red

III. PREVIOUS ARCHAEOLOGICAL RESEARCH

All of the archaeological work in Makiki Ahupua'a has been carried out in areas in the upper valley of the main Makiki Stream or in the tributaries. No work has been carried out in the area between the highway and King Street. Since the project area is in the arid plains of Honolulu, it is more appropriate to discuss previous archaeological work that has been conducted near the project area in Kulaokahu'a, in the 'ili of Kaka'ako and Kewalo.

The Kaka'ako district of Honolulu became a focus of archaeological work during the 1980s, impelled by the construction of local and federal government buildings and by the state-planned redevelopment of the area (Figure 13; Table 1). The Kaka'ako Community Development District was first designated as an area comprised by Punchbowl Street to the west, Ala Moana Boulevard to the south, King Street to the north, and Pi'ikoi Street to the east. This development area is larger than the ancient Kaka'ako, and extends into lands once known as Ka'akaukui, Kukuluae'o, and Kewalo. This development district thus includes the present study area, which is in the 'ili of Kewalo.

In 1987, the first report for this area, entitled *Kaka'ako: Prediction of Sub-surface Archaeological Resources, Detailing Archival Research and Archaeological Assessment of the Kaka'ako Community Development District* (Griffin et al. 1987) provided background information and summarized the historical import of the area:

Kaka'ako - the Kaka'ako Community Development District - is not the center of life in greater Honolulu that is, or was, either Waikiki or 'downtown' ewa of Punchbowl. It is, however, relatively rich in the remains of nineteenth century Honolulu, of prehistoric Hawaiian life, and of the ethnic influx from the late 1800's until 1940.

Without doubt the single most striking archaeological deposit, and the one to which we assign the highest priority, is the 1853 Honuakaha Cemetery fronted by South Street and bisected by Quinn Lane. More than 1000 human burials are reportedly therein. . . .

Burials will be found throughout Kaka'ako. Some will be in sand remnants, others intruding into the pumice deposited from ancient Punchbowl eruptions. Most will be prehistoric or early historic. We expect that, as in the case of the Ka'akaukui Cemetery, deaths from pre-1853 epidemics resulted in many burials throughout Kaka'ako. The chance of high status burials, from residences in adjacent elite locations, is high [Griffin et al. 1987: 73].

In 1995, an archaeological assessment of 20 parcels bound by Punchbowl, Halekauwila Street, Kūōla, and Ilalo Sts. was made by Cultural Surveys Hawai'i (Hammatt and Chiogioji 1995). The Kaka'ako Development area was later subdivided into seven districts. The study area for this project is near portions of Districts 4, 7, and 10. Based on the background research, four areas of archaeological concern were listed: (1) the locations of fishponds noted on historic maps, (2) burial sites known from background research or from previous archaeological studies, (3) the location of a leprosy hospital recorded as built in 1881 near the seashore, and the

Previous Archaeological Research

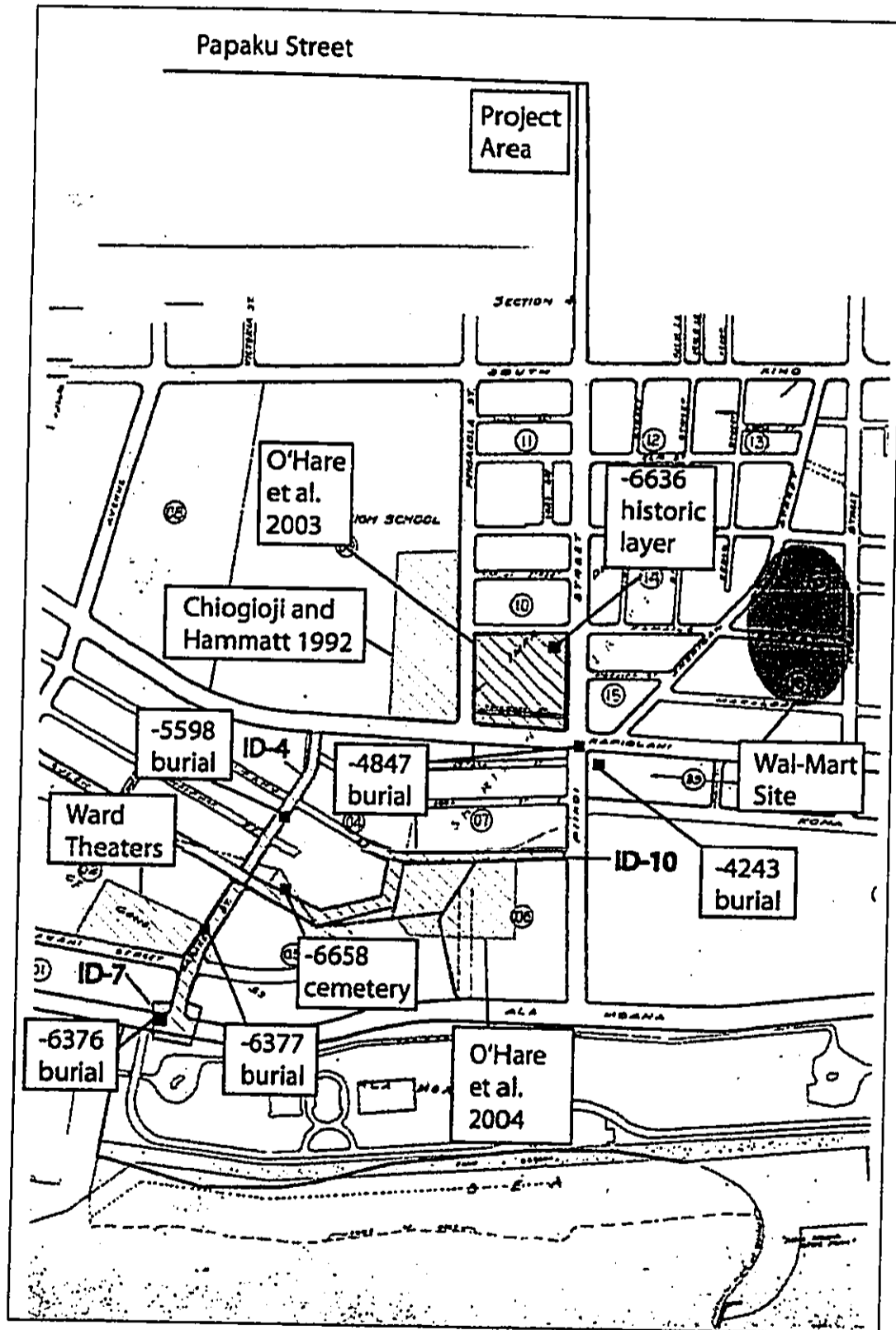


Figure 14. Previous Archaeological Work in Kewalo near the project area

Previous Archaeological Research

Table 1. Previous archaeological work near the project area

Author	Year	Site 50-80-14	Report Description and Findings
Smith	1989	-4243	Kamake'e to Ke'eaumoku - one human bone found
Chiogioji and Hammatt	1992		McKinley High School lot: Archaeological Assessment
Athens et al.	1994	-4847	Kamake'e to Ke'eaumoku Sts.: One human burial recorded in a wetland environment
Winieski and Hammatt	1998		Kaka'ako ID-7:- Monitoring Plan
Sinoto	2000		Wal-Mart/Sams Club Development Area: Archaeological Assessment. Recommendation for Archaeological Monitoring
Winieski and Hammatt	2000a	-5598	Kaka'ako ID-4: Monitoring Report - Two coffin burials were recorded
Winieski and Hammatt	2000b		Kaka'ako Ward Village - Monitoring Plan
Winieski and Hammatt	2001a		Kaka'ako Ward Village: Monitoring Report - No finds, but intact sand deposits were present
Bush and Hammatt	2002		Kaka'ako ID-10: Monitoring Plan
Sinoto and Pantaleo	2002		Wal-Mart/Sams Club Development Area: Archaeological Monitoring Plan
Souza et al.	2002	-6376; -6377; -6378	Kaka'ako ID-7: Three isolated burials found
O'Hare et al.	2003a	-6636 -6637	6-acre parcel on Kapi'olani between Pi'ikoi and Pensacola Archaeological Inventory Survey
CSH	2003	-6658	Kaka'ako ID-10: In-progress project; 30 burials have been disinterred and reinterred
O'Hare et al.	2003b		Ko'olani Condominiums, Queen Street burials

locations of possible ethnic "camps," or areas in which people of different ethnic backgrounds lived in separate enclaves.

Between March 1999 and January 2001, monitoring (Winieski and Hammatt 2001b) was conducted along the route of the Nimitz Highway Reconstructed Sewer Project, which extended from River Street on the west to Nimitz Highway, along Queen Street and to South Street on the east. The sewer line was installed employing the micro-tunneling technique, which limited the extent of open cut trenching, requiring instead the excavation of 24 jacking and receiving pits spaced along the route. No finds, other than the observation of fill materials, occurred during monitoring of potholing excavations.

In 2003, a monitoring plan (Chiogioji and Hammatt 2003) was written by Cultural Surveys Hawai'i for the rehabilitation of Kapi'olani Boulevard from Kalākaua Avenue to Ward Avenue,

Kamake'e Street from Kapi'olani Boulevard to Auahi Street, and Atkinson Drive from Kapi'olani Boulevard to Ala Moana Boulevard. Because of previous burials found on Kamake'e Street (Winieski and Hammatt 2000a; Souza et al. 2002), and the possible presence of a fishpond (Loko Kūwili) near the west end of the project area (outside of Kaka'ako), a program of on-call monitoring was recommended for the project.

A. Kaka'ako Improvement District 4

The Kaka'ako Improvement District 4 project was on Kamake'e Street between Queen Street and Kapi'olani Boulevard (TMK 2-3-02 thru 05). From August 1995 to August 1996, archaeological monitoring for the Kaka'ako Improvement District 4 construction project was conducted by Cultural Surveys Hawai'i (Winieski and Hammatt 2000a). The project documented two isolated historic coffin burials (state Site 50-80-14-5598), on Kamake'e Street, between the intersections of Kawaiaha'o and Waimanu Streets. The two burials, adjacent to one another, were within an undisturbed beach sand deposit, directly underlying an "A" horizon, which itself underlay approximately 50 cm of constructing fill and pavement. Well-defined burial pits were present, as well as staining from the deteriorated coffin wood. No associated artifacts, other than the coffins, were discovered during disinterment. Additionally, during excavation for a manhole hookup approximately two meters west of Kamake'e Street on Waimanu Street, a horse or mule skeleton was discovered within the undisturbed sand layer, approximately one meter below the surface. No other materials were observed during the Kaka'ako ID-4 project, except for randomly scattered bottles and bottle fragments of modern provenience discovered within fill materials. One "Star Soda Works" bottle was dated to c. 1900.

B. Kaka'ako Improvement District 7

The Kaka'ako Improvement District 7 (ID-7) project constructed improvements to drainage, water, sewer, and utility systems on Kamake'e Street between Queen Street and Ala Moana Boulevard, and also extended the drain system from Ala Moana Boulevard to Kewalo Basin (TMK 2-1-58, 2-3, 2-3-01 thru 05). The project additionally included the realignment of the existing Kamake'e Street between Auahi Street and Ala Moana Boulevard. A monitoring plan for this work was written by Cultural Surveys Hawai'i (Winieski and Hammatt 1998).

The monitoring was conducted beginning in October of 2000. During excavation activities associated with the Kaka'ako Improvement District 7 Construction Project, three human burials were encountered (Souza et al. 2002). Burial 1 (State site 50-80-14-6376) was inadvertently discovered by Delta personnel on October 13, 2000 in the base yard backdirt pile. Burial 2 (State site 50-80-14-6377) was encountered by a Cultural Surveys Hawai'i archaeologist during backhoe excavations for a box drain. The burial was within an undisturbed beach sand deposit. Burial 3 (State site 50-80-14-6378) was recovered in the Delta Co. base yard on Pensacola Avenue and Kapi'olani Boulevard.

In 2000, Cultural Surveys Hawai'i, Inc., performed archaeological monitoring for Victoria Ward Ltd. at the site of the Ward Village Phase II (Ward Theaters) construction project in Kaka'ako (TMK 2-3-02:1) (Winieski and Hammatt 2000b; Winieski and Hammatt 2001a). This project area is adjacent to the Kaka'ako ID-7 District and is bound by Ala Moana Boulevard on the south and Kamake'e Street to the east. No pre-contact materials, historic cultural materials, or human burials were encountered. Observation of the stratigraphic sequences within the project area revealed that fill materials were placed over a pre-existing marshy surface. In the northwest

corner of the project area, an old "A" horizon and naturally deposited pond sediments and calcareous sand were observed. In the southwest corner of the project area, an old "A" horizon and naturally deposited calcareous sand were observed.

C. Kaka'ako Improvement District 10

The Kaka'ako Improvement District 10 (ID-10) project constructed improvements to drainage, water, sewer, and utility systems on Queen Street and Waimanu Street beginning at Kamake'e Street and ending at Pi'ikoi Street (TMK 2-3-04, 06, & 07). The project area for the extension of Queen Street, between Kamake'e Street and Pi'ikoi Street is approximately 792 linear meters (2600 linear feet) long (Bush and Hammatt 2002). This project is on-going and is the subject of a current data recovery plan; field monitoring and analysis of human remains and artifacts have not been completed at this time. During construction of the monitoring, 30 human burials were found and disinterred. A preliminary analysis (O'Hare et al. 2003b) of the human skeletons and the associated grave goods indicates that 28 of the burials constitute a cemetery possibly used between the 1840s and the 1880s. Two burials were isolated finds and may not be related to the main cemetery cluster. The human remains and associated grave goods will be reburied on-site in a specially-constructed vault complex.

D. Kamake'e Street east to Ke'eaumoku Streets

In 1989, four bone fragments were found by construction workers in a property (TMK 2-3-39:19) on the southeast corner of Kapi'olani Boulevard and Pi'ikoi Street (in a lot southeast of the current project). The find was reported to Marc Smith (1989) of the SHPD (State Historic Preservation Division). Smith examined the bones and determined that only one was human; the remaining bones were pig bones. The human bone was a right tibia shaft fragment. The bone was temporarily taken to the Honolulu SHPD office and the site was given the designation of 50-80-14-4243.

In 1992, an archaeological assessment (Chiogioji and Hammatt 1992) of a lot that once housed the Kapi'olani Community College was conducted by Cultural Surveys Hawai'i. This project area is bound by Pensacola Street on the east and Kapi'olani Street on the south. This report covered the historical and archival research used to predict possible sub-surface deposits that may be within the project area. Based on the background and previous archaeological research, it was concluded that the property could contain burials, the remains of Hawaiian agricultural features, and pre-and post-habitation deposits. Due to these concerns, archaeological monitoring was recommended during any future construction in the study area.

In 1994, during excavation of a trench for an underground telephone line near the north-east corner of Pi'ikoi Street and Kapi'olani Boulevard, the remains of a single individual were inadvertently discovered and later disinterred (Athens et al. 1994). Osteological analysis revealed that the remains were the fairly complete skeleton of a 12 to 15-year old female. Radiocarbon analysis of a sample of bone collagen yielded a date of death between AD 1295-1473, supporting the osteological determination of Hawaiian/Polynesian ancestry. The remains were interred within a wetlands environment at a shallow depth of 50-80 cmbs (centimeters below surface). A lack of burial goods and the presence of the remains within an unusual wetlands context, strongly suggested that the location of the remains did not reflect an intentional burial. Osteological analysis revealed severe bone infection of the right pubis as the probable cause of death. The individual probably passed away, undiscovered, at the very spot of interment. Athens et al.

(1994:8) placed the location of this burial near an earth embankment that was probably used as a trail between a fishpond and other marshy areas in the Kewalo region.

In September of 2003, Cultural Surveys Hawai'i (Bush et al. 2004) completed the fieldwork pertaining to the archaeological inventory survey of the proposed Ko'olani Condominium project. The project area is located on Waimanu Street in Kaka'ako, bounded by the Hawaiiki Tower to the east, the Nauru Tower to the south, and the Queen Street Extension Project to the west. The archaeological inventory survey primarily consisted of subsurface testing as the project area had undergone previous stages of filling and surface clearing. The majority of the project area at the time of the survey was paved asphalt, with additional landscaped and bare-earth areas. Subsurface testing consisted of thirteen trenches excavated with the use of a backhoe. Subsurface testing indicated the presence of undisturbed beach sand in the southwestern (*makai*) portion of the project area. A historic garbage pit (c. 1920s-1940s) was observed in the central *makai* portion of the project area (Site 50-80-14-6641, Features A & B). The remaining trenches contained primarily mixed dry fill materials, over pumped-dredge fill materials, down to the underlying coral shelf. Based on the results of the inventory survey, archaeological monitoring was recommended.

In 2003, Cultural Surveys Hawai'i (O'Hare et al. 2003a) completed an archaeological inventory survey of an approximately six acre parcel lying between Kapi'olani, Pi'ikoi, Kamaile, and Pensacola Street (Figure 13). No burials were found in the 24 trenches excavated during the inventory survey, as predicted, no pre-contact or pre-twentieth century habitation deposits were recorded, but historical trash pits (Site 50-80-14-6637) and a new defined berm (Site 50-80-14-6636) related to agricultural activities were documented.

Site 50-80-14-6636 consists of the pre-contact to early twentieth century land surface that underlays the dredged fill materials from the Kewalo and Ala Wai Canal land reclamation projects, which took place in the 1920s and 1930s. This land surface is a wetland deposit (Stratum III), which was thought likely to extend across the six-acre parcel. This site also contains a sand berm that crosses the southeast corner near the intersection of Pi'ikoi and Kapi'olani. This sand berm is illustrated on an 1884 map (see Figure 7) and may have been constructed in traditional Hawaiian times.

State Site #50-80-14-6637 consists of a trash dump found in six trenches, all located in the northeast corner of the project area near Pi'ikoi Street. This trash pit contained wood, brick, tires, ceramic dinnerware, insulators, rusted metal, and glass bottles. Many of the glass bottles were dated to the 1920s to 1940s, some specifically to the 1930s. The type of material present does not seem to be individual household garbage, but may be related to the businesses in the surrounding area.

In an area and bounded by Sheridan and Ke'eaumoku Streets is the "Wal-Mart Site". Two reports, Sinoto 2000 (archaeological assessment) and Sinoto and Pantaleo 2002 (monitoring plan) were completed prior to the archaeological monitoring of the Wal-Mart property. According to information provided in personal communication with State Historic Preservation Division (SHPD) personnel, multiple human burials have been encountered during excavations within the block bounded by Sheridan, Rycroft, Ke'eaumoku, and Makaloa Streets. Some of these burials have been identified in different areas but most are confined to the area of the block at the corner of Sheridan and Makaloa Streets, within the *mauka*-most portion of the Land

Previous Archaeological Research

Commission Award (LCA) 100 parcel to Kekaula. According to SHPD personnel, the *makai* extent of this burial area – i.e. *makai* of Makaloa Street – has yet to be determined.

E. Summary of Previous Archaeological Work Near the Project Area

In Kaka'ako Improvement District 4, two coffin burials were recorded (Winieski and Hammatt 2000b).

In Kaka'ako Improvement District 7, three isolated burials (State sites 50-80-24-6376 to 6378) have been recorded.

In Kaka'ako Improvement District 10, thirty burials (O'Hare et al. 2003b) have been recorded in a cemetery area. Preliminary analysis suggests that the individuals were of Hawaiian ancestry buried around 1840-1870.

Two burials have been found near the intersection of Kapi'olani and Pi'ikoi Streets, one under the road (Athens et al. 1994), designated State Site 50-80-14-4847, and one from a lot to the southeast of the road junction (Smith 1989), designated State site 50-80-14-4243. Multiple burial finds, both within coffins and those without evidence of a coffin, have been documented within the "Wal-Mart Site" to the east of Pi'ikoi Street.

In summary, no major pre-contact habitation areas have been documented to date, in the Kaka'ako area. It appears, based on the results of previous archaeological work, that all or most of the permanent habitation sites were located farther inland, near well-watered areas. Post-contact habitation refuse and fill layers are found throughout the area. Several refuse dumps have been dated to the late nineteenth and early twentieth century, when the expansion of street construction east of the main Honolulu area brought in businesses and large number of occupants, some who lived in separate ethnic enclaves, into the area. Based on the archaeology reports, it appears that all pre-contact human burials in the Kaka'ako area that have been encountered were buried in sandy deposits. The majority have been identified as probably of Hawaiian ethnicity, buried in the post-contact period from the eighteenth to the twentieth centuries.

IV. RESULTS OF ARCHAEOLOGICAL FIELD INSPECTION

A brief field inspection of the subject property was made by Constance R. O'Hare on November 19, 2004. The property is an empty lot (Figure 15, Figure 16, and Figure 17); most of the ground surface is covered with wooden construction shacks, dirt piles, lumber stacks, and parked cars. Around the parked cars the bare soil is covered with a thin layer of gravel. There were no surface structures indicating any archaeological features or use of the property for traditional cultural practices. The soil on the ground and in the dirt piles seems to be a clay loam soil or fill material. No pre-contact or historic artifacts were noted in the back dirt piles. There is no indication that there might be intact sand deposits in the project area, and thus it is unlikely that pre-contact or early post-contact burials are present. It is possible that some cultural material could be found, such as pre-contact artifacts and early post-contact artifacts, and nineteenth to twentieth century trash, such as glass bottles and other discarded objects.



Figure 15. Central section of the project area (behind the chain-link fence), view to the south from Papakū Street

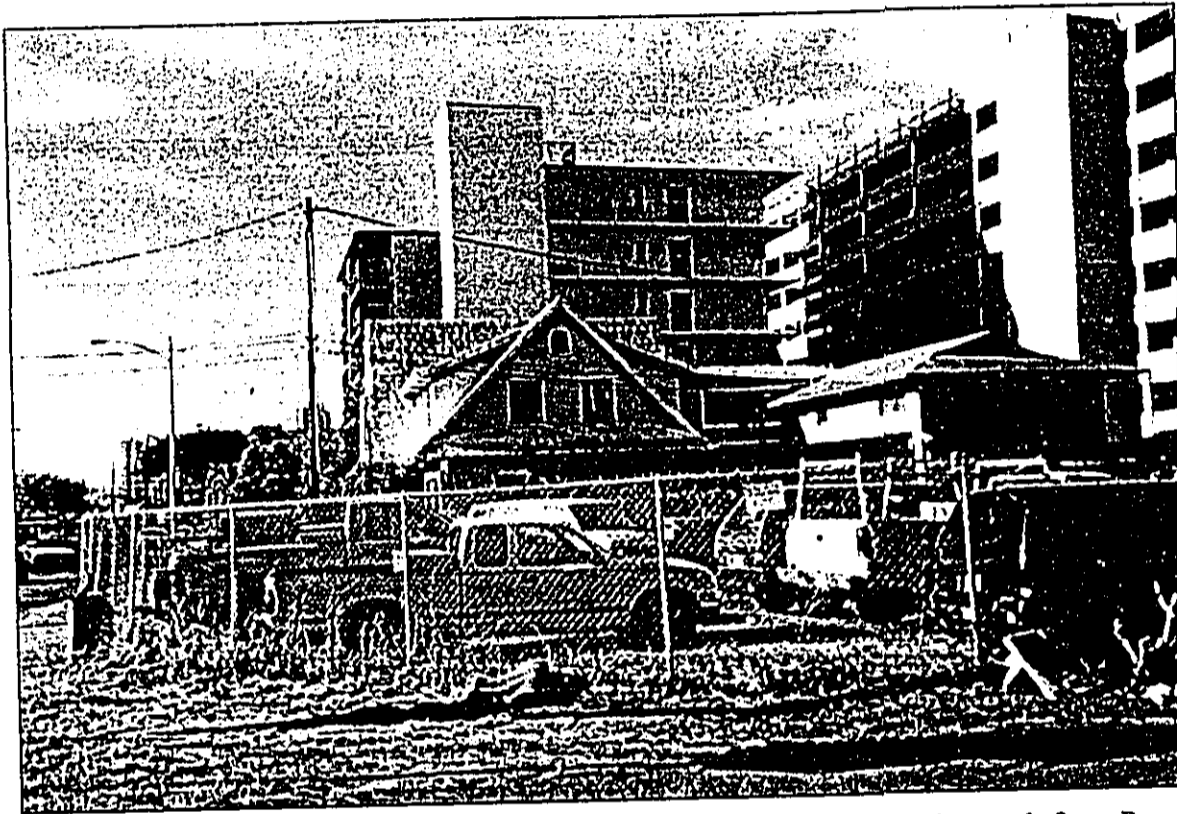


Figure 16. West end of project area (behind the chain-link fence), view to the south from Papakū Street

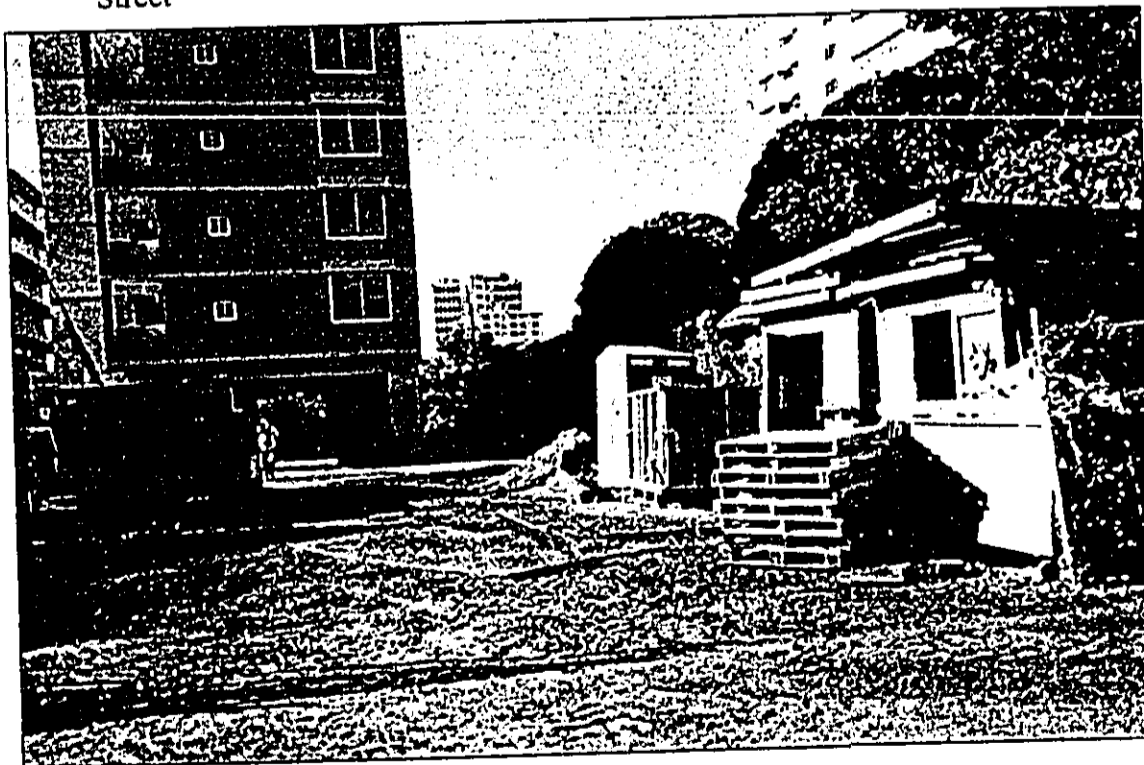


Figure 17. East end of the project area, view to the south from Papakū Street

V. TRADITIONAL PRACTICES

Traditional cultural practices are based on profound awareness concerning harmony between man and their natural resources. The Hawaiians of old depended on these cultural practices for survival. Based on their familiarity with specific places and through much trial and error, Hawaiian communities were able to devise systems that fostered sustainable use of nature's resources. Many of these cultural practices have been passed down from generation to generation and are still practiced in some of Hawai'i's communities today.

This section will include discussions on different types of traditional practices and cultural resources that may have been associated with the project area.

A. Habitation and Agriculture

The project area is located in an area traditionally known as Kulaokahu'a, the dusty, arid plains of Honolulu and Makiki. All historic accounts of this area emphasize the lack of water, vegetation, and habitations in this area.

In 1865, John Papa 'I'i (King 1989:26) said this flat area was used as a playground, including the sport of *maika* throwing, made with a stone quarried from the ridges of Makiki Valley. The legend of Hi'iaka suggests that it was also used for other types of games (Emerson 1915:185-186). The legend of Pikoi not only identifies this area as a place for the sport of shooting rats with bow and arrow, but also again emphasizes the emptiness of the area, covered only with the occasional bush hiding hoards of rats. In the early post-contact period, the area was used as a horseracing course (Peterson 1984:371).

In the 1820s, Boelen suggested that the area "north and east" of Honolulu was not "greatly cultivated" (Boelen 1988: 62). Gilman described the plains in the 1840s as "a dry, dusty waste without a shrub to relieve its barrenness" (Gilman 1909:9), and a "desolate-looking place . . . without enclosure, horse and cattle had free access to the whole place" (Gilman 1904:89). In 1853, Sereno Bishop (1916:34) characterized the plains from Punchbowl to Punahou as a depastured plain with wandering cattle, with no trees or houses in sight.

An attempt to address the destructive nature of wandering cattle to the dry plains was made in the early nineteenth century. About 1830, Queen Ka'ahumanu ordered that a wall should be built in the Makiki area to keep cattle from the inland residential areas. The stone wall also marked a path across Makiki which was first called Stonewall Street; presently this former path is covered by Wilder Avenue. The wall along Wilder Avenue still remains (Fitzpatrick 1989:316).

In summary, the project area was in an area known for its lack of habitation and water needed for agriculture. In the pre-contact period it was a known area used by the *ali'i* for their games and sports. Because of this, it is possible that scattered artifacts, such as stone *'ulu maika* (for the *maika* game) or bone points for arrows could be found in subsurface deposits. In the early post-contact period, this area was used only as a cattle pasture and for horse paths. After the mid-nineteenth century, Kulaokahu'a was rapidly divided into lots for sale to residents or businesses.

B. Stream Resources and Hawaiian Aquaculture

One fishpond is shown on older maps (see Figure 7) south of the project area and subsurface gleyed deposits for this pond have recently been identified during an archaeological project on the corner of Pi'ikoi Street and Kapi'olani Avenue (O'Hare et al. 2003a), south of the current project area. This pond was in the area known as Kewalo, which was distinguished by its marshy lands and fishponds. The project area is located in the area once known as Kulaokahu'a, the dry, dusty plains of Honolulu and Makiki. As shown by early historic maps (see Figure 7), the extent of the swamp lands covered only the lower portion of Pi'ikoi Street, not the upper portion, north of King Street. Thus the project area would not have been associated with any type of stream resources or aquaculture. Although the project area is within the dry plains of Honolulu, people may have traveled to this fishpond and the swampy areas of Kewalo for resources, as seen in the story of Pi'ikoi, who traveled to the area for *pili* grass to thatch his hut.

As early as 1828 (50 years after contact), foreign visitors (Duhaut-Cilly 1834-5; Chamberlain 1957) commented on the state of decline and disrepair of the fish ponds and taro fields in Waikiki. The French navigator, Auguste Duhaut-Cilly, attributed this decline to the missionary who coerced the Hawaiian to spend most of their time in school reading the bible rather than working the their field, and to the hardships of the sandalwood trade. Hawaiian author, George Kanahele, credits the deterioration of the Waikiki fish ponds, to several negative impacts, such as introduced diseases, which decimated not only the ponds' caretakers, but the general laborer class who maintained the ponds, and the *Māhele*, which altered the land tenure system and diminished the power of the *konohiki* (land manager) to control *corvee* labor (Kanahele 1986:126). No doubt, all these reasons contributed to a continual decline.

Motivated by business, in the late 1880s, Chinese farmers began leasing the ponds from Hawaiians to raise fish and ducks and the taro fields were converted to rice fields. Many ponds were later filled in when the Ala Wai Canal was dredged in the 1920s. The filling in of the ponds (and the taro fields) had dramatic implications for future generations of Hawaiians; it forever altered the traditional landscape, and it prevented Hawaiians from being able to return to their traditional way of life.

C. Trails

John Papa 'I'i (1959:92) described many of the major trails in the Honolulu and Waikiki area during the early nineteenth century. The main cross-*ahupua'a* trail extended from Honolulu (Honuakaha) to Wai'alaie. This trail is now covered by the modern alignment of King Street and Wai'alaie Avenue. Thus no major trails were adjacent to the present project area, however several *mauka-makai* trails are shown on the 1881 Kewalo map by S.E. Bishop near Pi'ikoi Street (see Figure 7). The *mauka* extensions of these trails are not shown on the Bishop map, which plots only the area south of King Street. In the mid-nineteenth century, Gilman described Kulaokahu'a, the arid Honolulu plains as "a most exceedingly dreary parcel of land with here and there a horse trail as path-way" (Gilman 1909:9-91). From 1840 to 1875, only a few unpaved roads were in the area, probably along the present course of King, Young, Beretania, and Punahou Streets. These roads or horse paths "ran a straggling course which changed as often as the dust piled up deep" (Clark 1939:12). It is possible that some minor foot trails or horse paths were once present adjacent or crossing the project area, but there is no definite evidence for this from the historic archival material.

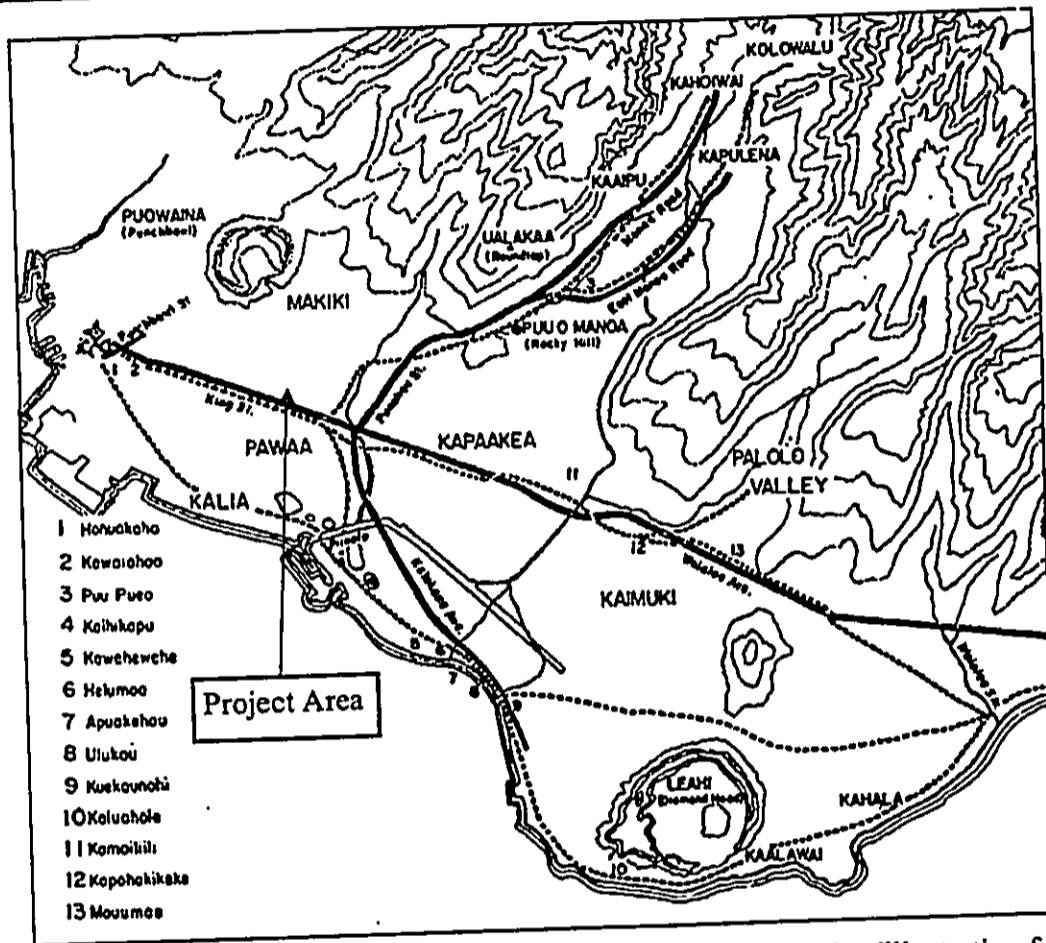


Figure 18. Early nineteenth century trails on the southwest coast of O'ahu (illustration from 'I'i 1959:93); King Street and Wai'ala'e Avenue now follow the ancient main trail

D. Pre-Contact Burials

The discovery of burials in the Kewalo area, on Pi'ikoi, Kapi'olani, Kamake'e, and Sheridan Streets, during recent construction projects have been a cause for concern over the last few years. Burials are commonly reported from clean, consolidated sand deposits, and was clearly a common method of interment practiced by Hawaiians (Cleghorn 1987:42). One of the earliest references to traditional Hawaiian burial practices was made by Urey Lisiansky, who visited Hawai'i in June 1804. He noted: "The poor are buried anywhere along the beach . . ." (Lisiansky 1814:122).

Commenting on the nature of burial areas and body positions used in burial, the English missionary William Ellis (2004:363-364), who visited the islands in 1823 noted:

The common people committed their dead to the earth in a most singular manner. After death, they raised the upper part of the body, bent the face forwards to the knees, the hands were next put under the hams, and passed up between the knees, when the head, hands, and knees were bound together with cinet [sic] or cord. The body was afterwards wrapped in a coarse mat, and buried the first or second day after its decease. . . .

Their artificial graves were either simple pits dug in the earth, or large enclosures. One of the latter, which we saw at Keahou, was a space surrounded with high stone walls, appearing much like an ancient heiau or temple. . . .

Occasionally they buried their dead in sequestered places, at a short distance from their habitations, but frequently in their gardens, and sometimes in their houses. Their graves were not deep, and the bodies were usually placed in them in a sitting posture.

Hawaiians placed significance on the *iwi* (bones), which were regarded as a lasting physical manifestation of the departed person and spirit. "The bones of the dead were guarded, respected, treasured, venerated, loved or even deified by relatives; coveted and despoiled by enemies" (Pukui et al. 1972:107).

The recent field inspection of the project area did not identify any surface features that would indicate that pre-contact burials are present. This section of Honolulu has been developed for residential and business interests since the mid-nineteenth century, but it is still possible that some intact and undisturbed soil layers lie below the modern fill layers.

E. Historic Cemeteries

1. Makiki Cemetery

There are several historic cemeteries in the lower Makiki and Kewalo area. Makiki Cemetery, located on Pensacola and Prospect Street has graves dating from the mid-nineteenth century and is shown on several early historic maps, such as the 1873 Alexander map (see Figure 8) and the 1897 Monsarrat map (see Figure 4). The graves at this cemetery are clustered by ethnicity into Hawaiian, Japanese, and Portuguese sections, with distinctive grave markers for each. This graveyard is still in use today.

2. Ke Kahuā Hale Kula

A second graveyard in Makiki seems to have been used for only a little time. There is now a small park, called Makiki Square, at the corner of Wilder Avenue and Punahou Street. In 1850, one-twentieth of all government lands were set aside for the support of government schools. A building is shown pictured on the 1873 Alexander map (see Figure 8), near the Wilder/Punahou corner, labeled "Gov't", which probably indicates that the government had set aside this land for a schoolhouse (Fitzpatrick 1989:339). Schoolhouses were often kept in the meetinghouses or chapels of Protestant or Catholic schools. These schoolhouses "consisted in the ordinary of grass huts, with little or no equipment, the pupils sitting on mats on the earthen floor. A few books from the mission press and a few slates comprised the tools of learning" (Wist 1940:53-54).

A church in Makiki was mentioned in the *Māhele* documentation for this area. In the testimony for Moku's Land Commission Award (LCA 10162, a housesite), it is described as being next to the "church". In the sale of Grant 153 from Mr. E.W. Clark, one of the boundaries was described as next to the "meeting house" (Fitzgerald 1989:339). In an 1865 letter from Punahou School's president, W. D. Alexander to his father, Alexander wrote: "I am getting to have quite a flourishing little Sunday School at the church near Father Gulick's . . . The people of Makiki & Manoa are anxious to have me preach to them, & I mean to do so occasionally" (cited

in Alexander and Dodge:283). Father Gulick had purchased part of the Clark land. In 1879, Emily Eberhardt and others sold some Makiki land, a portion of which had originally been part of Moku's LCA (Fitzgerald 1989:340). The title description said that the land lay next to "ke Kahuā Hale Kula", meaning "the school house place" (Bureau of Conveyances, Book 59:1-2).

An article, published sometime between 1960 and 1966, also mentions not only a church on this spot, but also a graveyard. Emma Lyons Doyle noted in an article published between 1960 and 1966 (dateless newspaper in the Punahou School Cook Library archives, cited in Fitzgerald 1989:340) that next to a sidewalk was a "tiny, forgotten Hawaiian graveyard . . . it was the 'churchyard' of the parish, the little church . . . at the far corner of the ground." The origin and nature of this church is not well known. It was not mentioned in Thrum's list of churches in his 1876 register, nor does it seem to be one of the many 'āpana (branch) churches of the Kawaiaha'o Church in Honolulu (Fitzgerald 1989:341). What occurred with the graves in this area is unknown.

3. Cemetery of the Foreigners

A third cemetery, associated with the Kewalo area, may have been fairly close to the project area, *makai* of the project area, possibly near Pi'ikoi Street. The literature associated with this cemetery has been extensively researched by Robert Schmitt (2000), which he reviewed in an article called "The Cemetery for Foreigners" in *The Hawaiian Journal of History*. Most of the following discussion is based on his comprehensive research.

The first interment at this cemetery may have been as early as 1794. In this year, Mr. Kendrick, captain of the American ship *Lady Washington*, was accidentally killed by a shot fired in salute by the British ship *Jackal*, as both ships were anchored in Honolulu Harbor (Cartwright 1922:23).

In 1802, Captain Charles Derby, commander of the ship *Caroline*, died at Honolulu and was buried "somewhere on the plains east of Kawaiaha'o where the prostrate stone was found, but not the grave" (Mellen 1940:5). The "prostrate stone" is now in the Kawaiaha'o Church Cemetery at the corner of King Street and Punchbowl. The church was on a major cross-*ahupua'a* trail that extended from Honolulu Harbor to Wai'alae past Diamond Head. This trail is now covered by the present alignment of King Street and Wai'alae Avenue. This means that the true burial spot for Captain Derby must have been further east of Kawaiaha'o Church, in Kewalo or the dusty plains of Honolulu. Richard Cleveland visited the burial spot in 1803, describing it as in a verdant spot, which is more suggestive of the wet Kewalo region than the dry Kulaokahu'a area.

. . . I made a long excursion on shore, among the beautiful rural scenery in the neighbourhood of the [Whyteete] bay. In a retired spot, clothed with verdure and surrounded by cocoanut trees, my guide pointed to the grave of my old friend and former shipmate, Charles Derby, who died here last year, on board a Boston ship, which he commanded, from the Northwest Coast (Cleveland 1842 Volume 1:232).

An anonymous note in the *Papers of the Hawaiian Historical Society* (1929:6) asserts that this cemetery was at the corner of King and Pi'ikoi Streets.

In 1802, Captain Charles Derby, of the well-known Derby family of Salem, Mass., died in Honolulu and was buried in a lot set apart for the interment of foreigners,

situated at what is now near the corner of Piikoi and King Streets. When this burying ground was abandoned the tombstone at the head of the Derby grave was removed to the Kawaiahao churchyard. It was lately discovered to be face downward in the rear of the Mission cemetery.

John Papa 'I'i's gave an account of the death in 1810 of Isaac Davis, an American sailor who had settled in the Hawaiian Islands, becoming a confidant of Kamehameha I:

Many chiefs and notables mourned Davis, including Kamehameha and the company of warriors who watched over him. The funeral procession went from Davis' dwelling at Aienui to Kewalo, where his body was deposited on the land of Alexander, a haole who had died earlier. At the time of his death, Davis was an old man with white hair and other signs of age ['I'i 1959: 85].

An article about Davis in *The Friend* of February 1862 mentions only that his grave was "in the burying place of the Europeans, near Hana-rura," suggesting that the Kewalo region and the "burying place" were outside the limits of Honolulu both at the time of Davis' death and 42 years later when the article was written.

Captain Otto von Kotzebue of the Russian ship *Rurick*, who stopped at the islands in 1816 and 1817, traveled to a cemetery to see the grave of Isaac Davis. It is probably the same cemetery labeled (in Russian) on his 1817 map of the Honolulu area, southeast of Punchbowl (see Figure 5).

In the burial-place of the Europeans, near Hana-rura, we read this simple monument of Mr. Davis: 'The remains of M. Isaac Davis, who died at this Island, April 1810, aged 52 years' [Kotzebue 1821, Volume 3:258].

In 1824, Andrew Bloxam, a scientist aboard the British ship the *Blonde*, commanded by Lord Byron, also gave a description of the gravesite of Isaac Davis.

The road to it [Diamond Head] leads to the picturesque village of Waititi, near which, a little to the right of the road, there is a small enclosed spot, where the remains of Isaac Davis, one of the first Europeans who assisted Tamehameha in the practical civilization of the Island, are interred . . . [Bloxam 1826:145].

This excerpt suggests that the burial plot was somewhere along a trail that extended from Honolulu to Waikiki, probably the main trail that was later covered by King Street, confirming the 1929 Hawaiian Historical Society note that placed the graveyard on the corner of King and Pi'ikoi Streets.

An 1838 article concerning the establishment of the new O'ahu Cemetery in Nu'uauu, also confirms that the grave plot was near a major road or trail. John Diehl wrote:

Thus the disgrace, which has so long attached to the revolting, not to say indecent, burial of foreigners at this port, in a common immediately contiguous to a public high-way, and entirely exposed to the intrusion of beasts, will as we trust, be speedily wiped off [Diehl 1838:86].

The mention of roaming cattle suggests that the burial was *makai* of the wall on Wilder Street built by the order of Queen Ka'ahumanu in 1830, and also reemphasizes that the burial ground was near a major trail or road.

In 1923, Bishop Henry B. Restarick, asserted that "Kendrick was buried at the place where Captain Derby was interred in 1802 and Isaac Davis in 1810" (Restarick 1923:58-59), concluding that they were probably all buried close to each other, or in the same place, a lot set aside by the Hawaiian chiefs for the interment of foreigners. Restarick had been the first to publish that the graveyard was on the *makai* corner of Pi'ikoi and King Street, and that the graveyard was abandoned in 1900. In 1923, he stated that:

Many now living remember seeing the grave stones of Derby and Davis at the place named until they were removed in 1900. They state that there were a number of sunken unmarked graves near by [Restarick 1923:58-29].

As Restarick mentions, other foreigners, besides the three mentioned, were also buried at this site. Maria Loomis recorded that an orphan was buried at the site in 1821, and in the following year a young native man was buried in the same plot, "the first instance of natives burying their dead after the manner of civilized nations" (Loomis 1819, 1921, typescript in the Hawaiian Mission Children's School archives, cited in Schmitt 2000:65).

When the graveyard was abandoned the gravestones were removed, however, Davis' original headstone of Chinese granite was later lost (Restarick 1924:20). Purnell, writing about a headstone found for Davis now at O'ahu Cemetery wrote:

Although Davis' name appears on a family tombstone in O'ahu Cemetery, it is not certain that he is buried here. Documentation indicates that he was originally buried in an unnamed cemetery in Makiki, and that his ashes [*sic*] may have later been disinterred and scattered at sea [Purnell 1928:121].

Although Restarick stated that the graveyard was at the corner of King and Pi'ikoi, other authors have suggested other locations. Glynn Barratt (1988:235) placed the graveyard at Pensacola and Pi'ikoi Street, although Schmitt thinks he was confusing this cemetery with the mid-nineteenth Makiki Cemetery on Pensacola and Prospect Street. Edwin McClellan (1928a, b) placed the cemetery at the junction of King and Kewalo Streets, however the present Kewalo Street ends at Lunalilo Street not at King Street. These three suggestions have placed the cemetery west (Pensacola Street), north (Kewalo Street) and south (Pi'ikoi and King Street) of the project area.

To add additional research for this question, the 1817 Kotzebue map, which has a cemetery plotted, perhaps the foreigner's cemetery in question, was overlain on the 1897 Monsarrat map (Figure 19). Using the coastline, Punchbowl, and several fishponds as reference points, the location of the cemetery on the 1817 map was placed on the 1897 map, which shows street names of the time. Although this is a very imprecise correlation given the number of intervening years between the two maps and the difference in detail between the two (Monsarrat's map is more detailed and assumed to be closer to reality), the location of the graveyard falls around the junction of Pi'ikoi and Young Streets, close to Restarick's belief that the cemetery was near the junction of King and Pi'ikoi Streets.

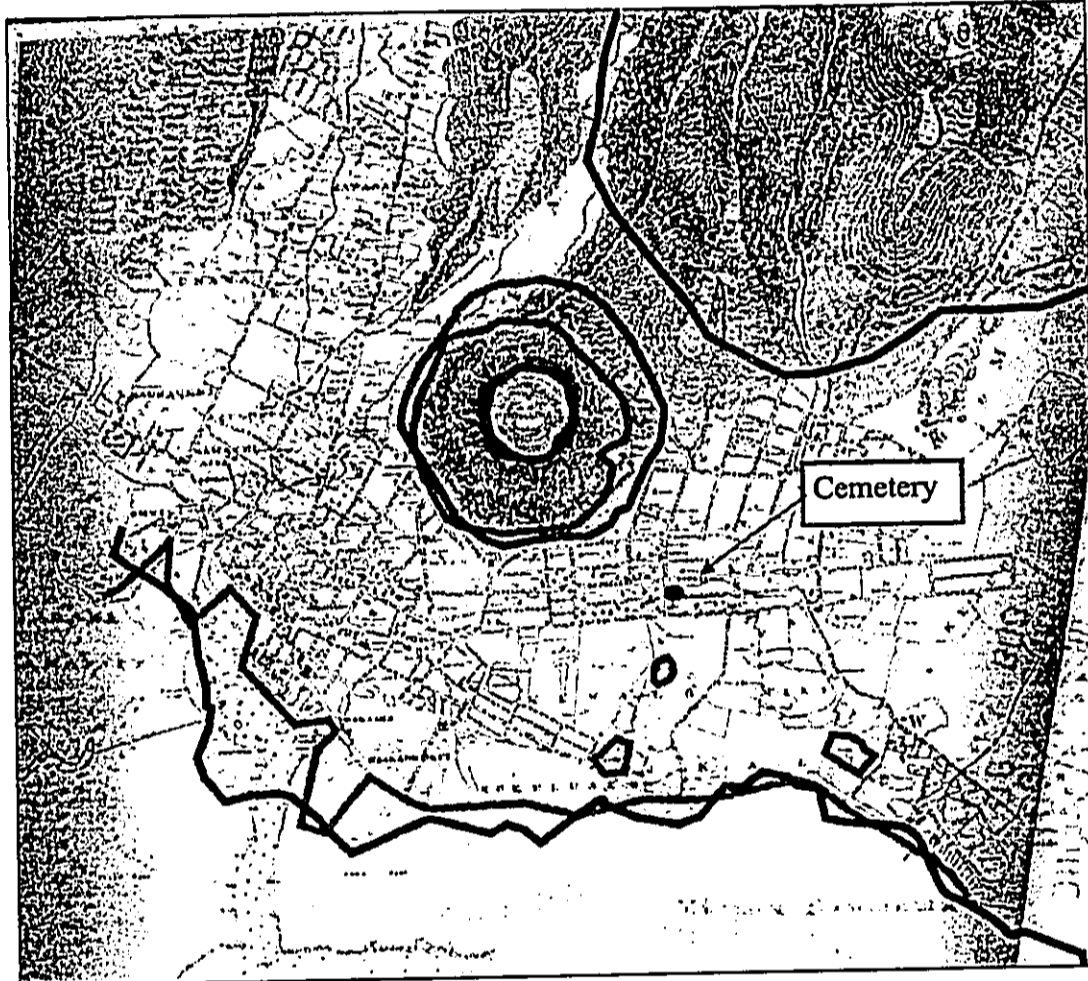


Figure 19. 1897 Monsarrat Map (red outlines) overlain on 1817 Kotzebue map (blue outlines), showing relative location of the cemetery plotted by Kotzebue

VI. PREDICTIVE MODEL

The present project area is located between two centers of traditional Hawaiian population and activity on the southern shore of pre-contact O'ahu: Kou and Waikīkī. Land Court Award documentation from the time of the *Māhele* indicate no Land Commission Award (LCA) parcels were awarded in the project area; this section of Honolulu, called Kulaokahu'a, quickly became government land that was developed as residential or business lots. A few LCAs were awarded in Makiki between Kīna'u and King Street; two of these had houselots on the *kula*, or dryland area. Only one, adjacent to Makiki Stream, had documentation of some traditional agriculture, as the stream was used to irrigate a *lo'i*, possibly for taro.

The current project area was always in an arid portion of Honolulu, in an area only sparsely inhabited or used for traditional practices. In the early post-contact period, it was a windswept plain criss-crossed by a few foot and horse paths. The major trail in the area, which is now covered by the present alignment of King Street and Wai'alae Avenue, was far south (*makaī*) of the project area. Most of the habitations were probably clustered around this trail or around Makiki Stream.

Although considered part of the *'ili* of Kewalo, the area known as Kulaokahu'a was very different in environmental characteristics. Kewalo was general marshy land with many fishponds; Kulaokahu'a, *mauka* of Kewalo, did not have any fishponds or other water resources. Wetland sediments would not be expected in the project area; early historic maps indicate no fishponds near the project area, although farther south of Pi'ikoi Street there was at least one fishpond.

Burials have been found around Pi'ikoi, Sheridan, and Queen Streets, usually in undisturbed sand layers. One skeleton found near Pi'ikoi Street may represent an accidental death, and not a purposeful burial. Several historic cemeteries are also located near the project area. The location of one of these, first used in the late eighteenth to early nineteenth century for the interment of foreigners, is not exactly known, although several historic accounts and one map indicate that it may be near the corner of Pi'ikoi and King Streets, south of the current study area. It is unlikely that burials are in the project area, since the soil in this section of Honolulu is a clay loam or fill material, not the sand in which both pre-contact and post-contact burials are typically found in other areas of Honolulu and Waikīkī.

VII. SUMMARY AND CONCLUSIONS

Traditional native Hawaiian cultural practices declined with the extensive land modification and urbanization of the greater Honolulu and Waikīkī areas. As the wetlands were drained and ponds were filled to accommodate the continuing expansion of urban Honolulu, the traditional way of life for native Hawaiians was not longer possible in Kewalo or Kulaokahu'a. There are therefore no on-going traditional cultural practices in the vicinity of the current project area.

Based on the literature review conducted for this project, the study area was located in the flat plains of Honolulu, an area called Kulaokahu'a, which was often described as a barren and desolate area with no water, little vegetation, and few habitations, criss-crossed only with a few minor foot trails or horse paths. The recent field inspection indicated no surface archaeological features in the study area. The lack of water for irrigation of crops in the area suggests that no cultural deposits associated with agriculture, fishpond maintenance, or permanent habitations are likely for the project area. The project area probably does not contain any of the type of sandy deposits in which pre-contact and early post-contact burials are typically found in Honolulu and Waikīkī. In summary, although it is possible that a few pre-contact artifacts and some historic trash deposits are present within the subsurface soil of the project area, it is unlikely that intact cultural deposits or human bones would be found in the study area.

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COMMENTS AND RESPONSES TO DRAFT EA
APPENDIX XIII

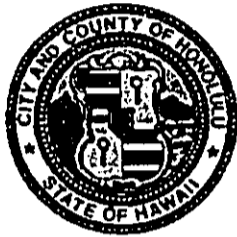
LIST OF AGENCIES COMMENTING ON DRAFT EA

City : **Department of Facility Maintenance
Department of Parks and Recreation
Board of Water Supply
Department of Planning and
Permitting -Land Use Permits Division;
Traffic Review Branch; Site
Development Division**

State : **Office of Environmental Quality Control
Department of Business, Economic
Development & Tourism, Land Use
Commission
Department of Land and Natural Resources,
Land Division - Engineering Division; Oahu
District Land Office; State Parks Division;
Division of Forestry and Wildlife.
Department of Land and Natural Resources
- Historic Preservation Division.
Senator Carol Fukunaga, 11th District**

Federal : **Department of the Army, Regulatory
Branch.**

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, KAPOLEI HALE, SUITE 215, KAPOLEI, HAWAII 96707
TELEPHONE : (808) 692-5054 FAX: (808) 692-5857



JEREMY HARRIS
MAYOR

LARRY J. LEOPARDI, P.E.
DIRECTOR AND CHIEF ENGINEER

JOSEPH MAGALDI
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 04-827

October 4, 2004

MEMORANDUM

TO: KEITH ISHIDA
DEPARTMENT OF COMMUNITY SERVICES

FROM: *Larry Leopardi*
LARRY LEOPARDI, P.E., DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF FACILITY MAINTENANCE

SUBJECT: **DRAFT ENVIRONMENTAL ASSESSMENT (EA)
FOR THE PROPOSED PIIKOI VISTA AN AFFORDABLE
ELDERLY RENTAL DEVELOPMENT, TMK:2-4-12:026**

Thank you for giving us the opportunity to review the draft EA. We have no comments to offer at this time.

We wish you well with your project and should you have any questions, please contact me at 692-5054.

cc: Office of Environmental Quality Control
Kusao & Kurahashi, Inc.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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E-Mail: kkurahashi@hawaii.nr.com

November 15, 2004

Mr. Larry Leopardi, P.E.,
Director and Chief Engineer
Department of Facility Maintenance
City and County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawaii 96707

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Leopardi:

Thank you for your memorandum, dated October 4, 2004, to Mr. Keith Ishida of the Department of Community Services, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review our Draft EA and thank you for your words of encouragement.

Your comments and this response will be included in the Final EA.

Very truly yours,



Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services

October 4, 2004

TO: MICHAEL AMII, DIRECTOR
DEPARTMENT OF COMMUNITY SERVICES

FROM: WILLIAM D. BALFOUR, JR., DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSEMENT
PIIKOI VISTA AFFORDABLE ELDERLY RENTAL DEVELOPMENT
TAX MAP KEY: 2-4-12: 026

Thank you for the opportunity to review and comment on the Draft Environmental Assessment relating to the Piikoi Vista Affordable Elderly Rental Development.

The Department of Parks and Recreation has no comments at this time.

Should you have any questions, please contact Mr. John Reid, Planner, at 692-5454.

Edward T. Shippa, Director

WILLIAM D. BALFOUR, JR.
Director

WDB:mk
(78358)

cc: Office of Environmental Quality Control
Kusao and Kurahashi, Inc.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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E-Mail: kkurahashi@hawaii.m.com

November 12, 2004

Mr. William D. Balfour, Jr., Director
Department of Parks and Recreation
City and County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, Hawaii 96707

**Subject: Draft Environmental Assessment (EA) for the Proposed Piikoi
Vista Affordable Elderly Rental Development
Tax Map Key: 2-4-12: 26**

Dear Mr. Balfour:

Thank you for your letter dated October 4, 2004, regarding the proposed Piikoi Vista Elderly Rental Apartments. We appreciate you taking the time to review and comment on our Draft EA, and make note that you have no comments at this time.

Your comments and our response will be included in the Final EA.

Very truly yours,



Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services,
City and County of Honolulu

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



October 5, 2004

JEREMY HARRIS, Mayor

EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice-Chairman
HERBERT S. K. KAOPUA, SR.
DAROLYN H. LENDIO

RODNEY K. HARAGA, Ex-Officio
LARRY J. LEOPARDI, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

DONNA FAY K. KIYOSAKI
Deputy Manager and Chief Engineer

Mr. Keith Ishida, Planner
Department of Community Services
715 South King Street, Suite 311
Honolulu, Hawaii 96913

Dear Mr. Ishida:

Subject: Draft Environmental Assessment (EA) for the
Proposed Piikoi Vista Affordable Elderly Rental
Development, TMK: 2-4-12:26

Thank you for the opportunity to comment on the subject document.

The existing water system is presently adequate to accommodate the proposed development. The availability of water will be confirmed when the Building Permit is submitted for approval. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

The proposed project is subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the building Permit Applications.

If you have any questions, please contact Joseph Kaakua at 748-5442.

Very truly yours,

for CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: Office of Environmental Quality Control
✓ Kusao & Kurahashi, Inc.

KUSAO & KURAHASHI, INC.

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November 12, 2004

Mr. Clifford S. Jamile, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

**Subject: Environmental Assessment (EA) for Piikoi Vista an Affordable
Elderly Rental Development: Tax Map Key: 2-4-12: 26**

Dear Mr. Jamile:

Thank you for your letter dated October 5, 2004, regarding the proposed Piikoi Vista Elderly Rental Apartments, we appreciate you taking the time to review and comment on our Draft EA.

The following are our responses to your recommendations and comments:

1. We understand and appreciate the fact that the water system is presently adequate to accommodate the proposed development.
2. We further understand that the availability of water will be confirmed when the building permit is submitted for approval.
3. When water is made available, the applicant will pay the BWS Water System Facilities Charges for resource development, transmission, and daily storage.
4. We understand that the proposed project is subject to Board of Water Supply Cross-Connection Control and Back-flow Prevention requirements prior to the issuance of the building Permit Application.

Your comments and this response will be included in the Final EA.

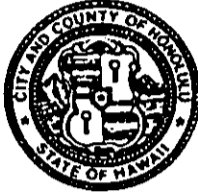
Very truly yours,

Anne Kusao
Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 523-4414 • FAX: (808) 527-6743
DEPT. WEB SITE: www.honolulu.gov • CITY WEB SITE: www.honolulu.gov

JEREMY HARRIS
MAYOR



ERIC G. CRISPIN, AIA
DIRECTOR

BARBARA KIM STANTON
DEPUTY DIRECTOR

2004/ELOG-2183(gu)

October 26, 2004

MEMORANDUM

TO: KEITH ISHIDA, PLANNER
DEPARTMENT OF COMMUNITY SERVICES

FROM: BARBARA MOON, DIVISION CHIEF
LAND USE PERMITS DIVISION
DEPARTMENT OF PLANNING AND PERMITTING

VIA: PATRICK SEGURANT, CHIEF
URBAN DESIGN BRANCH

SUBJECT: DRAFT EA, PIIKOI VISTA AFFORDABLE HOUSING PROJECT

The LUPD has reviewed the subject DEA, and offers the following comments:

1. Noise study - page 3 of the D.L. Adams Noise Study for the project states:

"The proposed project site will be impacted by traffic noise exceeding the HUD exterior noise goal of 55 dB (day-night average sound level) in which administrative action must be taken to approve the project in addition to applying noise attenuation in building design. Site acceptability standards clearly state that *special approval* by the Assistant Secretary for Community Planning and Development (CPD) or the Certifying Officer for activities subject to 24 CFR part 58. Additionally, all projects located in an unacceptable zone require a *Special Environmental Clearance*". [Emphasis added].

The DEA should describe the process and timing for obtaining the "special approval" and the "Special Environmental Clearance" the noise study states are required for this project. Specifically, are these approvals required before: a) City Council action is taken on the 201G requested exemptions; b) prior to issuance of construction or building permit approvals?

Additionally, the DEA should describe how, if necessary, the applicant will inform the DPP and/or other pertinent City agencies that these required approvals have been obtained.

Mr. Keith Ishida
Page 2
October 26, 2004

2. Traffic Assessment - It is not clear whether the Traffic Assessment - Piikoi Vista by Julian Ing (January 29, 2004) has been reviewed by the DPP's Traffic Review Branch. Therefore, it is recommended that the applicant consult with the TRB, and that the TRB's comments be included in the project's Final project EA.
3. Piikoi Vista Loading Zone. More information should be provided regarding the proposed access to the project from Piikoi Street. Photos and dimensions of the access way should be provided as well as a description of the easement. Rationale should also be provided as to why separate access to a loading zone is necessary when internal maneuvering appears able to accommodate access to the loading space. In addition, discussion should be provided on the traffic control measures to be used that will prevent use of this access way for ingress and egress to the both apartment units. The traffic assessment should also give adequate discussion to the impact ingress and egress from this driveway will have onto Piikoi Street.
4. Park Dedication. The area designated for a victory garden is quite small and access to it very restricted. Therefore, it is recommended that the applicant consult with the Site Development Division, and that the Subdivision Branch's comments be included in the project's Final project EA.
5. Requested Exemptions - Appendix VIII of the DEA describes the exemptions to be requested through the project's 201G application. In a May 14, 2004, letter to Mr. Keith Kurahashi, project agent, the DPP acknowledged Mr. Kurahashi's intent to submit an additional exemption request to have the \$300.00 processing fee for the CUP (minor) (for joint development) waived.

Although no additional request has been received to date, should the applicant intend to include such an exemption in the project's 201G application, it should be listed under this Appendix in the Final EA.

We appreciate this opportunity to comment. Should you have any questions, please contact Geri Ung of our staff at 527-6044.

BAM:pl

Doc. 331267

cc: OEQC
Kusao & Kurahashi, Inc.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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E-Mail: kkurahashi@hawaii.m.com

January 7, 2005

Ms. Barbara Moon, Division Chief
Department of Planning and Permitting
City and County of Honolulu
650 S. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Ms. Geri Ung, Staff Planner

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Ms. Moon:

Thank you for your letter dated October 26, 2004 to Mr. Keith Ishida, Planner, Department of Community Services, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on the Draft EA for Piikoi Vista.

Our responses to your comments are as follows:

1. **Noise Study** - On November 5, 2004 we met with Mr. Richard Knight of the local U.S. Housing and Urban Development (HUD) office along with representatives from the City's Department of Budget and Finance to discuss the noise levels relating to the proposed Piikoi Vista Apartments. Mr. Knight informed us that a Waiver from the Federal Environmental Impact Statement (EIS) requirement, that is triggered by the excess noise levels, can be requested since noise is the only Federal environmental issue involving this development. Chapter 24 CFR 51.104.B.2 Federal Regulations, amended 1996, allows for a Waiver from the EIS requirement, that may be granted by the Chief Executive Officer (CEO) of the City and County of Honolulu.

D.L. Adams Associates, Ltd. conducted an undated Noise Study, dated December 7, 2004, detailing the noise mitigation methods being proposed for Piikoi Vista Apartments. These mitigation methods will allow the interior noise levels of the apartment units to fall within the HUD guidelines of 45 dBA or less.

On December 14, 2004, we sent a Waiver request to Mr. Ivan Lui-Kwan, Director of the Department of Budget and Finance of the City and County of Honolulu. On December 30, 2004, the Director signed a Noise Abatement Waiver. Please see copy of Waiver requested and approval, attached.

2. **Traffic Assessment** - The Traffic Assessment for Piikoi Vista was reviewed by your Traffic Review Branch. Please see attached copy of their response. Prior to submittal of the construction plans and/or building permits, the applicant will obtain approval from the State Department of Transportation - Highways Division with regard to the proposed access onto Piikoi Street. A traffic management plan will be prepared prior to occupancy of the units to identify a "move in" schedule of when tenants will be allowed to physically move furniture and other large items into the housing units, in order to minimize the number of larger vehicles on this section of Kinau and Piikoi Streets. The plan will identify the hours when the tenants will be permitted to move in, which will be scheduled outside the normal peak traffic periods.
3. **Piikoi Vista Loading Zone** - The Piikoi Street access easement to Piikoi Vista Apartments measures 10 feet wide. The Piikoi Street access easement will be chained at the Kinau Vista property line. Please refer to photographs attached. The chain will be opened by the resident manager only to provide access to vehicles that exceed a vertical clearance of 7 feet-8 inches to allow use of the loading space for Piikoi Vista Apartments. All other vehicles with clearance of 7 feet-8 inches or less will access the Piikoi Vista loading space via Kinau Street and Kinau Vista driveway. This is necessitated due to the 7 feet-8 inch height clearance under the building beam at the mauka end of Kinau Vista.

Impacts to Piikoi Street will be minimal due to anticipated infrequent use of the access easement for loading purposes.

As stated in the Draft EA, from past experience in similar affordable elderly developments, it will be mostly family members using their own personal vehicles assisting the elderly in loading and unloading their furniture and personal items. All appliances are provided by Piikoi Vista. The majority of personal vehicles will be able to access Piikoi Vista via Kinau Street and Kinau Vista driveway.

4. **Park Dedication** - The Subdivision Branch of the Site Development Division reviewed the Park Dedication being proposed in the Draft EA and had no objections to the project. Please see comments, attached.

Piikoi Vista will be the fifth affordable elderly rental apartment developed by Hawaii Housing Development Corporation, a non-profit corporation, in the Primary Urban Center of the island, where our seniors can live and play in familiar surroundings. Due to the restraints imposed with smaller lots found within the Primary Urban Center, open space is always at a premium. However, in comparing the proposed Park Dedication for Piikoi Vista (approximately 2,500 square feet) to other senior affordable developments by this applicant, it is quite similar. For instance, Artesian Vista with 54 one-bedroom units has a total of 1,777.4 square feet for park dedication, that includes a private park, victory garden and a multipurpose recreational room. Piikoi Vista with only 47 one-bedroom units is proposing 2,500 square feet of park dedication that includes a private park, a victory garden and a multipurpose recreational room. Through the 201G process the applicant is requesting an exemption from Chapter 22, Article 7, ROH, to allow the provision of approximately 2,500 square feet for park dedication, portions of which encroach into the required side yard and rear yard for park dedication. Park dedication requirements for the project would normally amount to 2,903 square feet, (10% of 29,029 floor area = 2,903 square feet or 47 units x 110 square feet = 5,170 square feet,

whichever is less). Please refer to Appendix VIII of the Draft EA - Major Exemptions Being Requested Through the 201G Application.

Access to the proposed Victory Garden will be via a 3 ½ foot wide walkway adjacent to the lobby entrance and parking stall No. 20. Each victory garden plot will measure approximately 3 feet x 3 feet, similar to the layout of victory gardens in similar affordable elderly Vista projects.

5. **Requested Exemptions** - We will include an exemption request to have the \$300.00 processing fee for the CUP (minor) (for joint development of Kinau Vista and Piikoi Vista) waived. An amended exemption request will be included in Appendix VIII of the Final EA.

Again, thank you for taking the time to review Piikoi Vista Draft EA. Your comments and this response will be included in the Final EA.

Very truly yours,


Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services

ATTACHMENT
NOISE WAIVER AND APPROVAL

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.m.com

December 14, 2004

Mr. Ivan Lui-Kwan, Director
Department of Budget and Fiscal Services
City and County of Honolulu
530 S. King Street, Room 208
Honolulu, Hawaii 96813

**Subject: Piikoi Vista Apartments - Request for Waiver from the Federal
Environmental Impact Requirement Due to Excessive Exterior
Noise Levels -Tax Map Key: 2-4-12: 026**

Dear Mr. Lui-Kwan:

Hawaii Housing Development Corporation, a non-profit corporation, is proposing to develop an eight-story affordable elderly rental apartment building at 1326 Piikoi Street in Honolulu, Hawaii. This is the fifth such affordable elderly rental development, by the applicant, in the Primary Urban Center of Honolulu. The other developments are: Wistera Vista on S. King Street; Kalakaua Vista on Kalakaua Avenue; Artesian Vista on the corner of Young and Artesian Street; and Kinau Vista, now under construction, on Kinau Street.

We have prepared a Draft Environmental Assessment (EA) for Piikoi Vista, that is currently being reviewed by the Department of Community Services and various government agencies, and a 201G application was submitted to the Department of Planning and Permitting (DPP) and will be processed by DPP should we receive a "Finding of No Significant Impact" (FONSI) for the Final EA.

The applicant has applied for Federal (CDBG) Funding for Piikoi Vista. Unfortunately, due to the developments location adjacent to the H-1 Freeway, the exterior noise levels at this location are above the Federal guidelines. At a recent meeting with staff at the local Housing and Urban Development (HUD) office, we were informed that we can request a Waiver from the Federal Environmental Impact Statement (EIS) requirement, that is triggered by the excess noise levels, since this is the only environmental issue involving this development. Chapter 24 CFR 51.104.B.2 Federal Regulations, amended 1996, allows for a Waiver from the EIS requirement, that may be granted by the Chief Executive Officer (CEO) of the City and County of Honolulu.

The applicant intends to mitigate the noise levels by incorporating into the design of the building, the following measures such as:

- The mauka side of the building facing the freeway where the corridors leading to the apartments are located, as well as the sides of the building, will be solid grouted concrete block, and painted. Fixed laminated windows along the corridors exterior wall will be used as architectural features and day lighting. The exterior corridor wall, air space, and apartment unit wall will help to insulate the apartment units from the exterior noise.
- The corridor will be mechanically vented to the roof.
- The mauka side walls of the apartment units will not have windows. Apartment doors will be insulated metal doors with perimeter magnetic gaskets. The makai side of the apartment units, facing away from the freeway, will have laminated ventilation windows and all units will be air-conditioned.

Attached to this request is a copy of the up-dated Noise Study conducted by D. L. Adams and Associates, detailing the noise mitigation methods being proposed for Piikoi Vista Apartments. These mitigation methods will allow the interior noise levels of the apartment units to fall within the HUD guidelines of 45 dBA or less. Also attached for your review is a copy of the Draft EA submitted to the Department of Community Service in August, 2004.

We thank you for taking to time to review our request for a Waiver from the Federal Environmental Impact Statement (EIS) requirement that is triggered by the excessive noise levels at this location. We look forward to hearing from you in the near future. Please do not hesitate to call Keith Kurahashi or me at 988-2231 should you have questions.

Very truly yours,


Anne Kusao

cc: Department of Community Services
Housing and Urban Development, Honolulu Office
Mr. Gary Furuta



D. L. ADAMS ASSOCIATES, LTD.

Consultants In Acoustics and Performing Arts Technologies

December 7, 2004

Ms. Anne Kusao
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5
Honolulu, Hawaii 96822

RE: Piikoi Vista HUD Noise Forms (DLAA #04-78)

Dear Ms. Anne Kusao:

The Piikoi Vista project site is located near a busy Interstate Highway, H1. Noise measurements taken at the site show a Day-Night Level, L_{dn} , of 82 dBA. This noise level falls under the HUD "unacceptable" category. It is our understanding that projects that fall above a noise level of $L_{dn} = 75$ dBA are reviewed on a case-by-case basis. Therefore, noise mitigation methods, above standard construction, must be included in the design of the building to meet HUD's acceptable interior noise level of 45 dBA or less.

The attached forms include Figure 19 from the HUD Noise Guidebook. This form includes exterior noise levels at the project, and noise attenuation provided by the building shell. A supplemental sheet to Figure 19 is included to fully explain the noise calculation methodology.

The results of Figure 19 show that the wall closest to Interstate H1 and runs parallel to the highway has a total combined STC rating of 54. The wall that runs perpendicular to H1 has a total combined STC rating of 55. This means that the noise level inside of the residential units will be 28 dBA or less from traffic noise on H1. The following equation is assumed:

$$\text{Exterior Noise Level (dBA)} = \text{Interior Noise Level (dBA)} - \text{Total Combined STC Rating}$$

Although the exterior noise levels exceed HUDs criteria for "acceptable" noise levels, the predicted interior noise levels are within the HUD guidelines of 45 dBA or less.

Please let me know if you have any questions.

Sincerely,

Todd Beiler, P.E.
Project Manager

Encl.

970 N. KALAHEO AVE. • SUITE A311 • KAILUA, HAWAII 96734
808/254-3318 • FAX 808/254-5295
www.dlaa.com • hawaii@dlaa.com

Figure 19
Description of Noise Attenuation Measures
(Acoustical Construction)

Part I
Project Name Piikoi Vista
Location Honolulu, HI
Sponsor/Developer Piikoi Vista, L.P.
Noise Level (From NAG) $L_{dn} = 82 \text{ dBA}$ Attenuation Required 40 dB
Primary Noise Source(s) Highway

Part II (See Attached)

1. For Walls (s) facing and parallel to the noise source(s) (or closest to parallel):

- a. Description of wall construction* _____

- b. STC rating for wall (rated for no windows or doors): _____
- c. Description of Windows: _____

- d. STC rating for window type _____
- e. Description of doors _____

- f. STC rating for doors _____
- g. Percentage of wall (per wall, per dwelling unit) composed of windows _____ and doors _____
- h. Combined STC rating for wall component _____

2. For walls perpendicular to noise source(s):

- a. Description of wall construction* _____

- b. STC rating for wall (rated for no windows or doors) _____
- c. Description of windows _____

- d. STC rating for windows _____
- e. Description of doors _____

See Attached
Figure 19
Supplemental

f. STC rating for doors _____

g. Percentage of wall (per wall, per dwelling unit) composed of windows _____ and doors _____

h. Combined STC rating for wall component _____

3. Roofing component (if overhead attenuation is required due to aircraft noise):

a. Description of roof construction _____

No aircraft noise

b. STC rating (rated as if no skylights or other openings) _____

c. Description of skylights or overhead windows _____

d. STC rating for skylights or overhead windows _____

e. Percentage of roof composed of skylights or windows (per dwelling unit) _____

f. Percentage of roof composed of large uncapped openings such as chimneys _____

g. Combined STC rating for roof component _____

4. Description of type of mechanical ventilation provided _____

Window A/C units

Prepared by Todd R. Beiler, P.E. D.L. Adams Assoc. LTD

Date: 12/7/04

*If walls contain vents or similar openings, attach a description of duct arrangement and insulation and a statement of how much the wall STC is reduced by the presence of the vent.

Figure 19 Supplemental

Part I:

The noise level was measured at the nearest listener location approximately 50' above the existing grade. The highway, Interstate H1, is elevated in this area and the measurement microphone had a direct line-of-sight with all traffic lanes. The measurement location was selected as the "worst case" condition. Continuous hourly Equivalent Sound Levels, L_{eq} were measured to calculate the 24-hour Day Night Level, L_{dn} , for two days. The results of the measurements show a $L_{dn} = 82$ dBA.

Part II:

Consideration for noise mitigation was included in the design of the Piikoi Vista floor plan. An enclosed corridor is used to separate the highway from the residential units, as shown in Figure 1. In addition, the walls that are perpendicular to the highway have no windows.

The noise attenuation analysis considers one of the end units as the "worst case" condition since the end units have two walls exposed to the noise source.

1. For walls facing and parallel to the noise source:

a. Description of wall construction:

<u>Wall #1 – Closest to H1</u>	<u>Wall #2 – Corridor / Unit Wall</u>
<u>8" thick CMU, grout filled,</u>	<u>8" thick CMU, grout filled,</u>
<u>and painted (both sides)</u>	<u>and painted (both sides)</u>

b. STC rating for wall (rated for no windows or doors):

<u>Wall #1 = STC 55</u>	<u>Wall #2 = STC 55</u>
-------------------------	-------------------------

(Refer to attached laboratory STC test)

c. Description of Windows: 1/4" thick laminated glass windows.

Wall #1 only, Wall #2 has no windows.

d. STC rating for window type: STC 30

e. Description of doors: Insulated metal door with perimeter magnetic gaskets. Wall #2 only, Wall #1 has no doors.

f. STC rating for doors: STC 28 (Refer to Table 3 of HUD Noise Guidebook)

g. Percentage of wall (per wall, per dwelling unit composed of
Windows 20% (Wall #1 only) and doors 15% (Wall #2 only)

h. Combined STC rating for wall component: STC 54 (See Note 1 below)

2. For walls perpendicular to noise source:

a. Description of wall construction: Exterior wall consists of 8" thick CMU,
grout filled, and painted (both sides).

b. STC rating for wall (rated for no windows or doors): STC 55

c. Description of Windows: None

d. STC rating for window type: N/A

e. Description of doors: None

f. STC rating for doors: N/A

g. Percentage of wall (per wall, per dwelling unit composed of
Windows 0% and doors 0%

h. Combined STC rating for wall component: STC 55

3. Roofing component (if overhead attenuation is required due to aircraft noise): No
Aircraft Noise

4. Description of type of mechanical ventilation provided: Window A/C units.

Note 1: The wall parallel to the highway is unique for this project, in that two walls and a corridor space can be considered in the noise analysis. This dual wall configuration has a significant benefit for noise attenuation. For explanation of the noise attenuation calculations, we have prepared the following table, which summarizes the wall components and shows a calculation for the STC of the walls.

<u>Wall #1 (Closest to H1)</u>	<u>Wall #2 (Corridor / Unit Wall)</u>
Wall STC = 55	Wall STC = 55
Window %Area = 20%	Window %Area = 0%
Window STC = 30	Window STC = N/A
Door %Area = 0	Door %Area = 15%
Door STC = N/A	Door STC = 28
 Wall #1 Combined STC = 36	 Wall #2 Combined STC = 36

*Composite TL = 10Log (Sum[S] / Sum[t*S])*
where S = Area, t = transmission coefficient

TL = 10Log (1/t)
TL =(approx.) STC

References:

See Architectural Acoustics by M. David Egan pg 188 – 191
Handbook of Acoustical Measurements and Noise Control pg 33.9 – 33.11

Although each of the two walls will attenuate noise independently of each other, we do not believe that simply adding the STC ratings together will be a conservative estimate of the total combined STC rating. Since the corridor is a reverberant space, and the corridor is narrow (when compared to a full sized room), a conservative estimate of the total STC rating is to de-rate the STC rating of Wall #2 by ½. The result equation is:

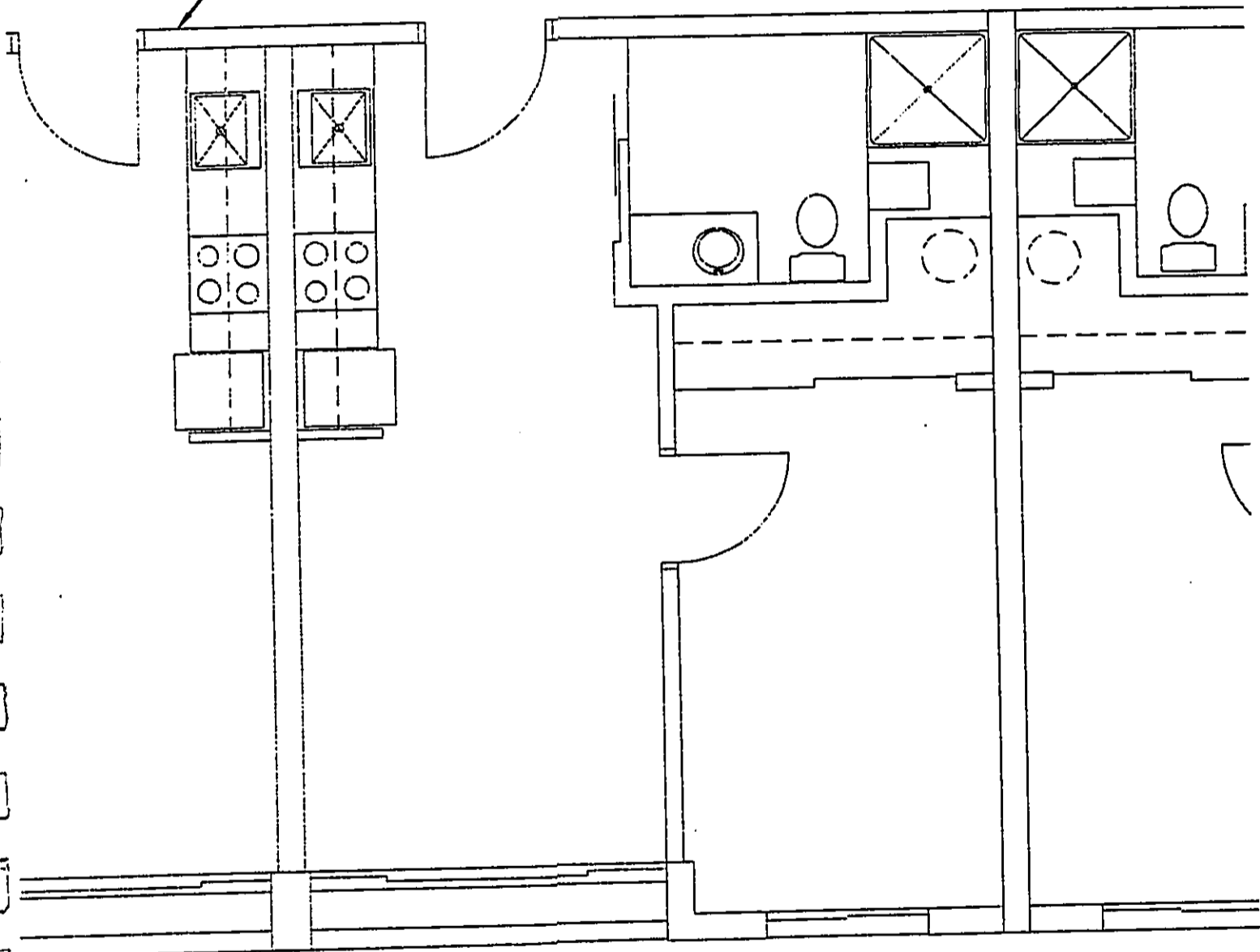
$$\begin{aligned}
 \text{Total STC Rating} &= \text{Wall \#1 Combined STC} + \frac{1}{2} * \text{Wall \#2 Combined STC} \\
 &= \text{STC 36} + \frac{1}{2} * \text{STC 36} \\
 \text{Total STC Rating} &= \text{STC 54}
 \end{aligned}$$

↑↑
INTERSTATE H1


WALL #1 (WINDOWS, NO DOORS)

CORRIDOR

WALL #2 (DOOR, NO WINDOWS)



Wall Parallel to Interstate H1



D. L. ADAMS ASSOCIATES, LTD.
970 N. KALANHOE AVE., A-311
KAILUA, HAWAII 96734
808/254-3518 FAX 808/254-5295

Piikoi Vista

not to scale

Date
December 7, 2004

Project No.
04-78

Drawn By
TRB

Figure No

1

DEPARTMENT OF BUDGET AND FISCAL SERVICES
CITY AND COUNTY OF HONOLULU

530 SOUTH KING STREET, ROOM 208
HONOLULU, HAWAII 96813
Phone: (808) 523-4616 Fax: (808) 527-4771 Internet: www.honolulu.gov

C-04-331
CI-04-1165
BFS-CDBG

JEREMY HARRIS
MAYOR



IVAN M. LUI-KWAN
DIRECTOR

CHRIS A. DIEBLING
DEPUTY DIRECTOR

December 30, 2004

MEMORANDUM

TO: MICHAEL T. AMIL, DIRECTOR
DEPARTMENT OF COMMUNITY SERVICES

FROM: IVAN M. LUI-KWAN, DIRECTOR *I. M. L. K.*
DEPARTMENT OF BUDGET AND FISCAL SERVICES *✓*

SUBJECT: PIIKOI VISTA
NOISE ABATEMENT WAIVER

This is in response to your memorandum dated December 20, 2004 recommending the Certifying Officer waive the requirement of an Environmental Impact Statement (EIS) for the subject project.

Noise measurements taken by the consultant D.L. Adams Associates, Ltd. determined that the noise level at the project site was 82 dBA, which falls within the unacceptable range based on the U.S. Department of Housing and Urban Development's (HUD's) guidelines. Title 24 of the Code of Federal Regulations, Part 51.104(b)(2) requires that an EIS be conducted, before projects with unacceptable noise exposure can be approved. The Certifying Officer however, can waive this requirement if noise is the only issue and outdoor noise sensitive activities are not expected to take place on the project site.

The Piikoi Vista project is a senior rental-housing complex and outdoor noise sensitive activities are not associated with the project. Mitigation measures recommended by the consultant, such as laminated windows, insulated metal exterior doors, enclosing the exterior corridors and solid grouting of the concrete block is anticipated to reduce the interior noise levels to an acceptable level of 28 dBA. Encapsulating the exterior corridors to address the noise, however, will diminish the natural airflow to the units. The consultant has recommended the installation of air conditioning, which should provide adequate mechanical ventilation.

MICHAEL T. AMII, DIRECTOR
December 30, 2004
Page Two

The corrective measures indicated above are expected to address the project's unacceptable noise exposure and ventilation problem. Your recommendation of Kusao & Kurahashi, Inc.'s request for a waiver from the EIS requirement is therefore approved.

Should you have any questions regarding the above, please contact Holly Kawano, Federal Grants Coordinator (X5062).

IMLK/CT:nf

cc: Cheryl Tanabe

ATTACHMENT

TRAFFIC REVIEW BRANCH RESPONSE

Main Identity

From: "Hirayama, Mel J." <mhirayama@honolulu.gov>
To: <akusao@hawaii.rr.com>
Cc: "Ung, Geri Y. O." <gung@honolulu.gov>
Sent: Thursday, January 06, 2005 4:34 PM
Subject: Piikoi Vista Affordable Senior Housing - Draft EA

Ann...

We understand that the Piikoi Vista Affordable Senior housing project will consist of 47 rental apartment units and will be jointly developed with the Kinau Vista housing project, which consists of 62 senior rental apartment units. Access to these housing projects will be from both Kinau and Piikoi Streets.

Based on our review of the traffic assessment for this project, we generally concur with the findings and recommendations contained in the report. However, prior to submittal of the construction plans and/or building permits, the developer should obtain approval from the State Department of Transportation - Highways Division, with regard to the proposed access onto Piikoi Street, due to the change in the intensity of use of the existing driveway.

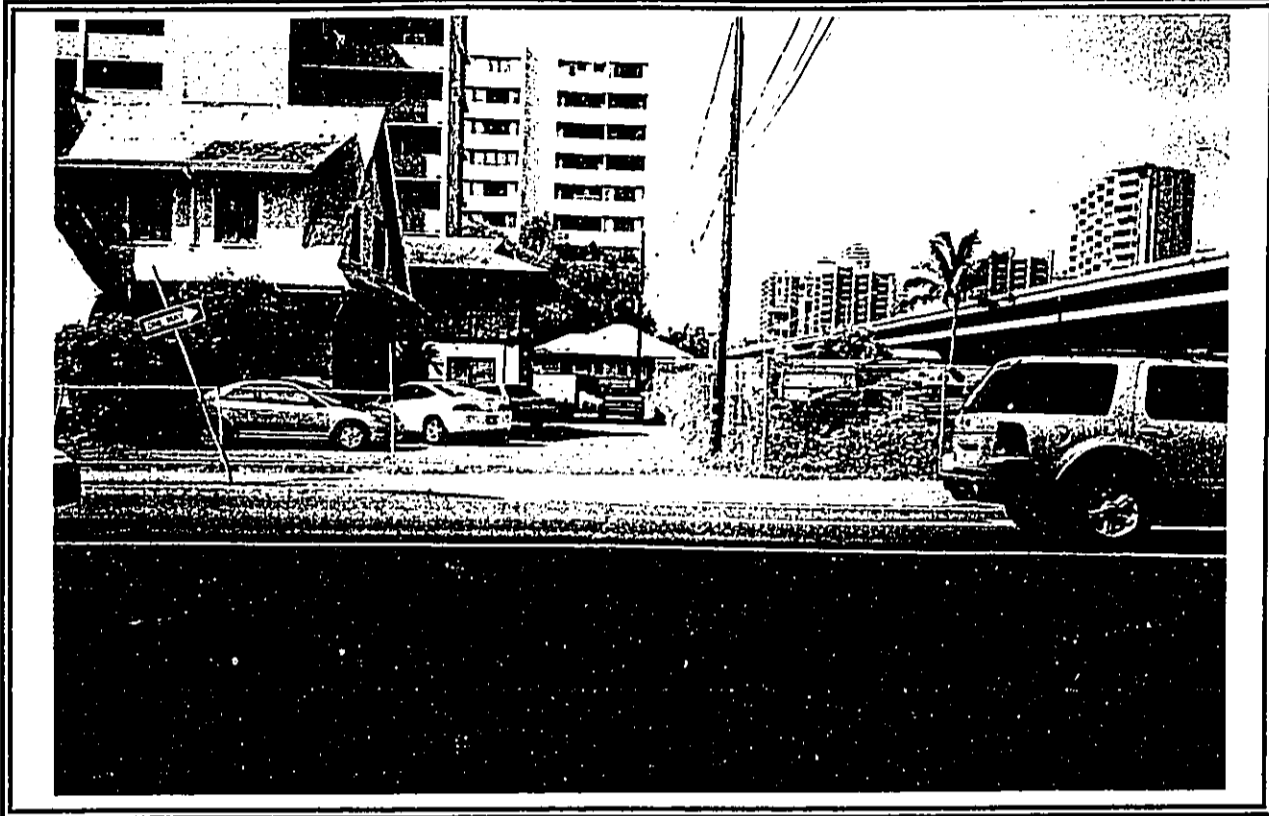
A traffic management plan should be prepared prior to occupancy of the units to identify a "move in" schedule of when tenants will be allowed to physically move furniture and other large items into the housing units. The intent is to stagger the number of tenants moving into the building at any one time to minimize the number of larger vehicles on this section of Kinau and Piikoi Streets. The plan should also identify the hours when the tenants will be permitted to move in, which should be scheduled outside the normal peak traffic periods.

Mel Hirayama - Traffic Review Branch (523-4119)

1/7/2005

ATTACHMENT

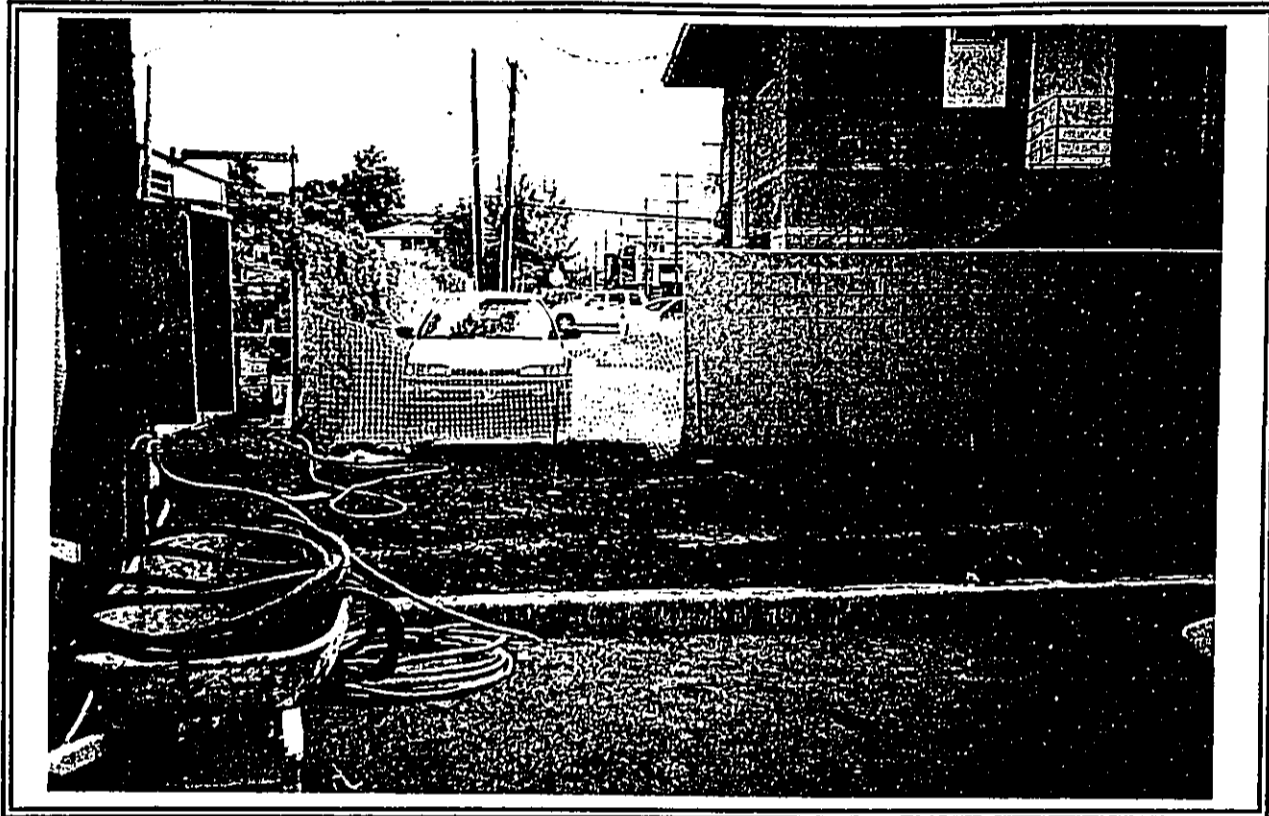
PHOTOGRAPHS OF ACCESS EASEMENT FROM PIIKOI STREET



Photograph No. 1 Entrance to access way from Piikoi Street, with views of Piikoi Vista vacant site on right.



Photograph No. 2 View of access easement from Kinau Vista property line.



Photograph No. 3 View of access easement from Kinau Vista property.



Photograph No. 4 Close up view of access easement.

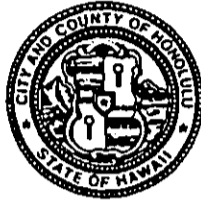
ATTACHMENT

SITE DEVELOPMENT DIVISION COMMENTS

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 523-4414 • FAX: (808) 527-6743
DEPT. WEB SITE: www.honolulu.gov • CITY WEB SITE: www.honolulu.gov

MUFI HANNEMANN
MAYOR



HENRY ENG, FAICP
ACTING DIRECTOR

DAVID K. TANQUE
DEPUTY DIRECTOR

January 7, 2005

Ms. Anne F. Kusao
Kusao & Kurahashi, Inc.
Manoa Marketplace
2752 Woodlawn Dr., Suite 5-202
Honolulu, Hawaii 96822

Dear Ms. Kusao:

Subject : Park Dedication
Project : Piikoi Vista Affordable Housing Project
Location : 1326 Piikoi St., Makiki, O'ahu, Hawaii
Tax Map Key: 2-4-012: 026

This is in response to your electronic mail of January 6, 2005 requesting our review and comment on the proposed private park plan for the above described project.

We have reviewed the private park plan, draft EA and our letter to Keith Ishida of the Department of Community Services and have no objections to the project.

If you have any questions or need further assistance, please contact Mr. Lester Lai of our Subdivision Branch at 523-4252.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Henry Eng", is written over a horizontal line.

for HENRY ENG, FAICP
Acting Director of Planning
and Permitting

HE:11

LINDA LINGLE
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186
E-mail: oeqc@health.state.hi.us

September 23, 2004

Michael Amii
Department of Community Services
715 South King Street, Suite 205
Honolulu, Hawaii 96813

Attn: Keith Ishida

Dear Mr. Amii:

Subject: Draft Environmental Assessment (EA) for Piikoi Vista

We have the following comments to offer:

Cultural impacts assessment:

Act 50 was passed by the legislature in April 2000. This mandates an assessment of impacts to current cultural practices by the proposed project. In the final EA include such an assessment.

✓ If the subject area is in a developed urban setting, cultural impacts must still be assessed. Many incorrectly assume that the presence of urban infrastructure effectively precludes consideration of current cultural factors. For example, persons are known to gather kauna'oa, 'ilima, 'uhaloa, noni or ki on the grassy slopes and ramps of the H-1 freeway and some state highways on the neighbor islands. Certain landmarks and physical features are used by Hawaiian navigators for sailing, and the lines of sight from landmarks to the coast by fisherman to locate certain fishing spots. Blocking these features by the construction of buildings or tanks may constitute an adverse cultural impact.

For assistance in the preparation refer to our *Guidelines for Assessing Cultural Impacts*. Contact our office for a paper copy or go to our homepage at <http://www.state.hi.us/health.oeqc/guidance/index.html>. You will also find the text of Act 50 linked to this section of our homepage.

✓ Community meeting: In the final EA include a synopsis of the February 19th, 2004 neighborhood board meeting presentation. A verbatim transcript is not required, just a synopsis of the issues discussed.

Michael Amii
September 23, 2004
Page 2


Paving: Hawaii Revised Statutes 103D-407 requires the use of recycled glass in paving materials whenever possible. For the text of this section of HRS contact our office for a paper copy or go to our website at <http://www.state.hi.us/health/oeqc/guidance/index.html>.

Income criteria: Section III.A.2, *Need*, uses the abbreviation "MFI." Is this the same as AMI? In the final EA explain the term or correct it if necessary.

Backup generator: The EA notes that there will there be no backup generator, but only battery operated lights in the stairwells. In the event of a power failure how will frail residents be able to evacuate the building during an emergency, and how will water be supplied to the upper floors?

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,


GENEVIEVE SALMONSON
Director

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.rr.com

November 16, 2004

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
236 S. Beretania Street, Suite 702
Honolulu, Hawaii 96813

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Ms. Salmonson:

Thank you for your letter, dated September 23, 2004, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on our Draft EA.

Our responses to your comments are as follows:

Cultural Impacts Assessment: Cultural Surveys Hawaii, Inc. is currently researching and preparing a cultural impact literature review and field inspection for Piikoi Vista Development. A copy of their report will be included in the Final EA.

Community Meeting: We will include a synopsis of the February 19, 2004 Neighborhood Board Meeting in our Final EA.

Paving: Recycled glass in paving materials will not be used in this development. Recycled glass is considered a design mix or special mix, and as such is economically feasible in only much larger developments where quantity dictates.

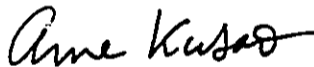
Income Criteria: In reference to Section III.A.2, Need, we will make the correction in the Final EA to read "AMI".

Backup Generator: A backup power source will provide lights in the stairwell in case of a power outage. A backup generator is not statutorily required for this type of project and in light of the fact that extended power outages are infrequent, we will not be providing a backup generator. None of our other affordable housing projects have generators for this purpose. Over the past seven years we have not experienced any situation where a generator was found to be necessary.

Should the situation arise where the building needs to be evacuated, those residents who are in need of assistance have been instructed to stay in their apartments until fire department officials arrive to assist them down the stairs. Each unit has a sprinkler system and each system has sufficient water pressure to operate, regardless of electrical supply. In addition, each fire engine vehicle has its own independent pump that can pump and supply whatever water pressure is required for the operation.

Your comments and this response will be included in the Final EA.

Very truly yours,



Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services

LINDA LINGLE
GOVERNOR



ANTHONY J.H. CHING
EXECUTIVE OFFICER

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION
P.O. Box 2359
Honolulu, Hawaii 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

October 11, 2004

Mr. Eric G. Crispin, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Crispin:

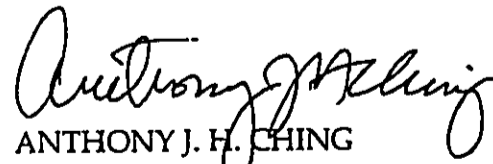
Subject: Draft Environmental Assessment (EA) for the Proposed Piikoi Vista, an Affordable Elderly Rental Development
Tax Map Key: 2-4-12:026

We received Kusao & Kurahashi, Inc.'s September 25, 2004 letter regarding the above-mentioned subject project and confirm that the subject parcel is designated within the boundary of the State Land Use Urban District.

Given the location, scope, and nature of the proposed activity, the State Land Use Commission defers to the judgment of the City and County of Honolulu in this matter. We have no further comments to offer at this time.

Please feel free to contact me at 587-3822 should you require clarification or any further assistance.

Sincerely,


ANTHONY J. H. CHING
Executive Officer

c: Keith Kurahashi, Kusao & Kurahashi, Inc.
Keith Ishida, Department of Community Services, City and County of Honolulu
Office of Environmental Quality Control

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.m.com

November 12, 2004

Mr. Anthony J. H. Ching, Executive Officer
State of Hawaii
Department of Business, Economic Development & Tourism
Land Use Commission
P.O. Box 2359
Honolulu, Hawaii 96804-2359

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Ching:

Thank you for your letter dated October 11, 2004, regarding the proposed Piikoi Vista Elderly Rental Apartments. We appreciate you taking the time to review and comment on our Draft EA, and for confirming that the subject parcel is designated within the boundary of the State Land Use Urban District.

Your comments and this response will be included in the Final EA.

Very truly yours,



Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services,
City and County of Honolulu

LINDA LINGLE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION

2004 OCT -5 P 3:40



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

October 1, 2004
PIIKOIVISTAHOUSING.CMT

LD/NAV
Suspense Date: 10/9/04

MEMORANDUM:

TO: *XXX Engineering Division
*XXX Division of State Parks
*XXX Division of Forestry and Wildlife
*XXX Commission on Water Resource Management
*XXX Office of Conservation and Coastal Lands
✓ *XXX Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Draft Environmental Assessment for the Proposed Piikoi
Vista an Affordable Elderly Rental Development

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nick Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

*Note: One copy of the document is available in the Land Division Office, Room 220.

We have no comments.

Comments attached.

Signed: Cecil Santos

Date: 10/5/04

Name: Cecil Santos

Division: LAND

CCA

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.m.com

November 15, 2004

Mr. Cecil Santos

State of Hawaii

Department of Land and Natural Resources

Land Division

Post Office Box 621

Honolulu, Hawaii 96809

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Santos:

Thank you for your memorandum, dated October 5, 2004, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on our Draft EA, and we make note that you have no comments on our Draft EA.

Your comments and this response will be included in the Final EA.

Very truly yours,



Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services

LINDA LINGLE
GOVERNOR OF HAWAII



RECEIVED
DIVISION

2004 OCT -6 P 3:40



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

October 1, 2004
PIIKOIVISTAHOUSING.CMT

LD/NAV
Suspense Date: 10/9/04

MEMORANDUM:

TO: *XXX Engineering Division
*XXX Division of State Parks
*XXX Division of Forestry and Wildlife
*XXX Commission on Water Resource Management
*XXX Office of Conservation and Coastal Lands
*XXX Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Draft Environmental Assessment for the Proposed Piikoi
Vista an Affordable Elderly Rental Development

Please review the document pertaining to the subject matter
and submit your comments (if any) on Division letterhead signed and
dated by the suspense date.

Should you need more time to review the subject matter, please
contact Nick Vaccaro at 587-0384.

If this office does not receive your comments by the suspense
date, we will assume there are no comments.

*Note: One copy of the document is available in the Land Division
Office, Room 220.

() We have no comments.

Comments attached.

Signed: Eric T. Hirano

Date: 10/6/04

Name: ERIC T. HIRANO, CHIEF ENGINEER

Division: Engineering

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/NAV

Ref.: PIKOIVISTAHOUSING.CMT

COMMENTS

- (X) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone X, area determined to be outside the 500-year flood plain. The National Flood Insurance Program does not have any regulations for development within Zone X.
- () Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone.
- () Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ____.
- () Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- () Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.
- () Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Enler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
- () Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
- () Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

- (X) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

- (X) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

() Additional Comments: _____

() Other: _____

Should you have any questions, please call Mr. Andrew Monden of the Planning Branch at 587-0229.

Signed: Eric T. Hirano
ERIC T. HIRANO, CHIEF ENGINEER

Date: 10/6/04

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 888-2231
FAX. (808) 888-1140

E-Mail: kkurahashi@hawaii.m.com

January 5, 2005

Mr. Eric T. Hirano, Chief Engineer
State of Hawaii
Department of Land and Natural Resources, Engineering Division
Post Office Box 621
Honolulu, Hawaii 96809

Attention: Mr. Andrew Monden and Ms. Suzie Agraan

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Hirano:

Thank you for your memorandum, dated October 6, 2004, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on the Piikoi Vista Draft EA.

Our response to your comments are as follows:

1. Thank you for confirming that the project site is located in Zone X.
2. Please see attached letter from the Board of Water Supply, dated February 19, 2004, informing the applicant that the existing water system is presently adequate to accommodate the proposed development.
3. Please see attached letter from the Board of Water Supply, dated February 19, 2004.

Again, thank you for reviewing the Piikoi Vista Draft EA. Your comments and this response will be included in the Final EA.

Very truly yours,


Anne Kusao

cc: Department of Community Services
Mr. Gary Furuta

FROM : ARSOA/YATO

PHONE NO. : 9550052

MAR. 15 2004 09:42AM P2

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



February 19, 2004

JEREMY HARRIS, Mayor

EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice-Chairman
JAN M.L.Y. AMII
HERBERT S.K. KAOPUA, SR.
DAROLYN H. LENDIO

RODNEY K. HARAGA, Ex-Officio
LARRY J. LEOPARDI, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

DONNA FAY K. KIYOSAKI
Deputy Manager and Chief Engineer

Mr. Kazutoshi Yato
Kazu Yato, AIA & Associates
2033 Round Top Terrace
Honolulu, Hawaii 96822

Dear Mr. Yato:

Subject: Your Letter Requesting Water Availability for Rental Units
for Low Income Seniors. TMK: 2-4-012: 26 and 2-6-024: 70 and 71

Thank you for your letter regarding water service for the proposed rental units for low income seniors.

The existing water system is presently adequate to accommodate the proposed development.

The development plan may require approval by the Department of Planning and Permitting before the Board of Water Supply processes the building permit on the proposed development. The availability of water will be confirmed when the building permit is approved. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

If you have any questions, please contact Joseph Kaakua at 748-5442.

Very truly yours,

for CLIFFORD S. JAMILE
Manager and Chief Engineer

LINDA LINGLE
GOVERNOR OF HAWAII

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'04 OCT -4 A9:49



DEPT OF LAND AND NATURAL RESOURCES
NATURAL RESOURCES

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

FOR:
ADMINISTRATOR
ASST ADMIN
DEV BR
PLAN BR
RES MGT BR
CLERICAL
ADMIN ASST
INTERP BR

46103

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAH DAVIDSON
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

October 1, 2004
PIIKOIVISTAHOUSING.CMT

LD/NAV
Suspense Date: 10/9/04

MEMORANDUM:

TO: *XXX Engineering Division
/ *XXX Division of State Parks
*XXX Division of Forestry and Wildlife
*XXX Commission on Water Resource Management
*XXX Office of Conservation and Coastal Lands
*XXX Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Draft Environmental Assessment for the Proposed Piikoi
Vista an Affordable Elderly Rental Development

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nick Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

*Note: One copy of the document is available in the Land Division Office, Room 220.

() We have no comments.

() Comments attached.

Signed: Daniel S. Quinn

Date: 10/6/04

Name: Daniel S. Quinn

Division: State Parks

2004 OCT -7 P 3:42

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LAND DIVISION

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.m.com

November 15, 2004

Mr. Daniel S. Quinn
State of Hawaii
Department of Land and Natural Resources
Division of State Parks
Post Office Box 621
Honolulu, Hawaii 96809

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Quinn:

Thank you for your memorandum, dated October 6, 2004, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on our Draft EA, and we make note that you have no comments on our Draft EA.

Your comments and this response will be included in the Final EA.

Very truly yours,


Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services

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2004 OCT -7 3:41



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LAND DIVISION

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PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

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October 1, 2004
PIIKOIVISTAHOUSING.CMT

LD/NAV
Suspense Date: 10/9/04

MEMORANDUM:

- TO:
- *XXX Engineering Division
 - *XXX Division of State Parks
 - ✓ *XXX Division of Forestry and Wildlife
 - *XXX Commission on Water Resource Management
 - *XXX Office of Conservation and Coastal Lands
 - *XXX Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Draft Environmental Assessment for the Proposed Piikoi
Vista an Affordable Elderly Rental Development

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nick Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

*Note: One copy of the document is available in the Land Division Office, Room 220.

We have no comments.

Comments attached.

Signed: Paul J. Conry

Date: OCT - 4 2004

Name: **PAUL J. CONRY, ADMINISTRATOR**
DIVISION OF FORESTRY AND WILDLIFE

Division: _____

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.m.com

November 15, 2004

Mr. Paul J. Conry, Administrator
State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Post Office Box 621
Honolulu, Hawaii 96809

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Conry:

Thank you for your memorandum, dated October 4, 2004, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on our Draft EA, and we make note that you have no comments on our Draft EA.

Your comments and this response will be included in the Final EA.

Very truly yours,



Anne Kusao

cc: Mr. Gary Furuta
Department of Community Services

Dec-07-2004 03:04pm

From-STATE Historic Preservation

808 682 8020

T-545 P.002/002 F-669

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
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DEPUTY DIRECTOR - LAND

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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Mr. Keith Ishida, Planner
Department of Community Services
715 South King Street, Ste 311
Honolulu, Hawaii 96813

LOG NO: 2004.3389
DOC NO: 0411EJ21

Dear Mr. Ishida:

**SUBJECT: National Historic Preservation Act Section 106 Review - Draft
Environmental Assessment (DEA) for Pi'ikoi Vista: Affordable
Rental Development at 1326 Pi'ikoi Street
Honolulu, Kona, O'ahu
TMK: (1) 2-4-012:026**

Thank you for the opportunity to comment on the DEA for the Pi'ikoi Vista: Affordable Rental Development at 1326 Pi'ikoi Street. We understand that this project will be partially funded through HUD, and therefore requires compliance with Section 106 of the National Historic Preservation Act. We received the DEA on September 29, 2004 and apologize for our late comments.

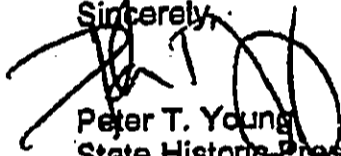
The proposed undertaking consists of the development of an eight-story affordable elderly rental apartment building at the intersection of Pi'ikoi and Papaku Streets. According to Section IV.E.1 of the DEA the site is currently vacant and has been in urban use for many years. There are no known archaeological sites at this location and significant historic sites have not been identified during the many development projects surrounding this area in the past decades. We agree that previous development and grading of the parcel makes it unlikely that archaeological resources would be found at this location. Thus, we believe that this project will have "no effect" on significant historic sites. However, we note that a historic home is located adjacent to this parcel and although it is not listed on the Register for Historic Places, we suggest that landscaping buffers be provided.

Mr. Keith Ishida, Planner
Page 2

In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity must stop and the State Historic Preservation division must be contacted at 692-8015.

Should you have any questions about archaeology, please feel free to call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027. Should you have any questions about cultural matters, please feel free to contact Nathan Napoka 587-0192. Should you have any questions about architectural matters, please call Thomas Lim at 692-8030.

Sincerely,



Peter T. Young
State Historic Preservation Officer

EJ:jen

YML
c: OEQC, State Office Tower, 235 S. Beretania Street, #702, Hon., HI 96813
Keith Kurahashi, Kusao & Kurahashi, Inc., 2752 Woodlawn Drive, Suite 5-202,
Honolulu, Hawaii 96822
Nathan Napoka, Branch Chief, History and Culture Branch
A. Van Horn Diamond, Chair, O'ahu Island Burial Council

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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E-Mail: kkurahashi@hawaii.m.com

January 3, 2005

Mr. Peter T. Young, Chairperson
Board of Land and Natural Resources
State of Hawaii, P.O. Box 621
Honolulu, Hawaii 96809

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Young:

Thank you for your letter dated December 7, 2004 to Mr. Keith Ishida, Planner, Department of Planning and Permitting, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on the Draft EA and make note that your letter states there are no known archaeological sites at this location and that significant historic sites have not been identified during the many development projects surrounding this area in the past decades. Your letter further states that the project will have "no effect" on significant historic sites.

As your requested, landscape buffering will be provided along that portion of property line separating Piikoi Vista Apartments from the historic home identified in your letter.

Should historic sites, including human burials, be uncovered during construction, the contractor will have all work in the vicinity stopped and will have the State Historic Preservation Division notified immediately.

Again, thank you for your review and response to the Piikoi Vista Draft EA. Your comments and this response will be included in the Final EA.

Very truly yours,


Anne Kusao

cc: Department of Community Services
Mr. Gary Furuta



The Senate
State of Hawaii

STATE CAPITOL

HONOLULU, HAWAII 96813

October 20, 2004

Mr. Gary Furuta
Project Manager, Piikoi Vista L. P.
Hawaii Housing Development Corporation
725 Kapiolani Boulevard, Suite C-103
Honolulu, Hawaii 96813

Re: Piikoi Vista Draft Environmental Assessment (Draft EA)

Dear Mr. Furuta:

Thank you for the opportunity to submit comments on the project's draft EA dated August 2004. I appreciate the Hawaii Housing Development Corporation's initiative in seeking to provide long-term affordable rental housing opportunities to senior citizens in Senate District 11.

I am writing to express my concerns about safety hazards associated with the congested Kinau Street traffic corridor, and the need to provide additional parking or pick-up/turnaround space at the proposed senior housing project.

Although the draft EA discusses traffic on nearby city streets, it does not take into account two major developments: 1) the October 2004 opening of the Wal-Mart/Sam's Club on Keeaumoku Street and 2) additional traffic on surface streets during morning rush hours due to the pilot Lunalilo On-Ramp Diversion Project.

Traffic concerns have always been at the forefront of debate during the planning and design stages of the Wal-Mart/Sam's Club shopping complex. We expect additional vehicular congestion on streets in surrounding neighborhoods, particularly after the first two weeks beyond its opening.

Currently, Wal-Mart/Sam's Club shopping complex has contracted twelve off-duty HPD officers to assist in mitigating traffic congestion between 6:00 a.m. and 12:00 p.m. midnight daily. However, the influx of traffic in and around Keeaumoku Street, Piikoi Street, Kapiolani Boulevard and Sheridan Street will definitely add to the congestion in the Kinau Street corridor.

Mr. Gary Furuta
October 20, 2004
Page 2

The draft EA traffic study does not consider the increased traffic associated with the opening of the shopping complex.

The State Department of Transportation began its pilot Lunalilo On-Ramp Diversion Project as an attempt to alleviate existing traffic congestion on the Lunalilo Freeway portion of H-1 on August 9th. Although the project is scheduled to end on October 29th, the Department of Transportation may recommend that the diversion become a permanent fixture.

As a by-product of the project, district legislators have received reports of increased traffic on Kinau Street, in the Beretania Street/McCully Street corridor, and in the Punchbowl-Magellan Avenue area. The traffic consultant's study (dated on January 29, 2004) occurred seven months before the Lunalilo project began.

Thus the data on which HHDC's traffic study is based could not have taken into account the impact the proposed project will have on vehicular flow based on the traffic changes associated with the Lunalilo On-ramp Diversion project.

Finally, the proposed senior housing project is located immediately mauka of Kaahumanu School, from which parents must pick-up or drop off their children on Kinau Street or Beretania Street in the midst of traffic rush hours. District legislators received many comments regarding safety concerns involving morning and afternoon rush-hour traffic in the area.

Accordingly, given the extremely congested traffic flow on Kinau and Piikoi Streets — two of the streets immediately adjacent to this senior housing project — I believe it is unrealistic to expect residents to be walking as their major means of access to public bus transportation and shopping areas. The project identifies the Kinau-Piikoi crosswalk as the primary pedestrian access. Additional consideration should be given to providing additional parking spaces so that residents can use their own vehicles, or have a pick-up/turnaround area more easily accessible to handivan and other forms of senior transportation vehicles.

Thank you for this opportunity to offer my comments on the Piikoi Vista Affordable Elderly Housing Rental Apartment Development.

Sincerely,



Carol Fukunaga
Senator, 11th District

cc: City and County of Honolulu Department of Community Services

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

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FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.m.com

December 3, 2004

Senator Carol Fukunaga, 11th District
State of Hawaii
The State Capitol
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable Elderly Rental Development - Tax Map Key: 2-4-12: 26

Dear Senator Fukunaga:

Thank you for your letter, dated October 20, 2004, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate your taking the time to review and comment on our Draft EA.

We took time to review your letter with some of our project team consultants, and our responses to your comments are as follows:

Additional Parking at Piikoi Vista Apartments

- Based on actual usage of parking stalls at our senior affordable rental projects, additional parking should not be needed at Piikoi Vista. As stated on page 43 of our Draft EA, Kalakaua Vista Affordable Elderly Rental Apartments presently have 7 vacant stalls out of 29 tenant stalls, Wisteria Vista has 9 vacant stalls out of 32 tenant stalls, and Artesian Vista has 1 vacant stall out of 12 tenant stalls. In addition to the tenant stalls, guest stalls (10% of the number of units) over and above the figures listed above also are available. The parking ratio (1:2.78) of parking stalls to apartment units for Piikoi Vista is better than Artesian Vista, with consistent parking stall vacancy. It also is well above the stated minimum allowable 1:4 parking ratio in Ordinance 01-12, Section 4, Chapter 21, Article 5, related to senior housing projects. When the units and parking for the joint development of Piikoi Vista and the adjacent Kinau Vista are combined, the 47 parking stalls for the 110 units provide for a parking ratio of 1:2.3, comparable to Kalakaua Vista and Wisteria Vista.

- We also have a standard condition in our previous 201G approvals that for our affordable elderly rental apartments that states that every tenant that owns a vehicle must have a tenant parking stall. If we run out of parking stalls, new tenants must not own a vehicle.
- The typical senior household is a single elderly female. With the advanced age of each resident and the limited income, the cost of maintaining and up-keeping a car, in addition to other living expenses, such as rent, food and clothing, may be cost prohibitive in some instances.
- Catholic Charities will be offering services similar to an assisted living component on an "as needed basis". Among these services will be transportation for the senior resident to doctors' offices, financial appointments, grocery shopping, personal shopping, and many more services. The Catholic Charities transportation service has been very well received by residents in our other senior developments.

Pick-up/Turnaround Space

- The proposed Piikoi Vista parking lot plan provides for off-street passenger drop-off and pick-up with adequate maneuvering areas to turn around.

Kinau Street Traffic Corridor and Wal-Mart/Sam's Club and Lunalilo On-Ramp Diversion Project

- While changes in traffic will occur due to Wal-Mart/Sam's Club and the Lunalilio On-Ramp A.M. closure, based on widely used trip generation rates, the Piikoi Vista project will generate only 3 vehicles entering the site and 1 vehicle exiting the site in the morning peak hour and only 2 vehicles entering the site and 2 vehicles exiting the site during the afternoon peak hour. We have done a Traffic Report for Piikoi Vista that sufficiently covers the traffic impact of the project. According to our traffic consultant a full traffic study is not warranted, based on recommendations by The Institute of Transportation Engineers, in its "Traffic Access and Impact Studies

for Site Development, A Recommended Practice, 1991". The new traffic generated by the project alone is less than one-tenth of the peak hour volume deemed necessary by the Institute to recommend a traffic study. With this minimal traffic impact, a full traffic study is not warranted.

- While we understand the concern about the traffic congestion created by the Wal-Mart/San's Club shopping complex, senior housing use of this property provides one of the lowest, trip generators of typical and surrounding uses and will serve to minimize the potential traffic impact of developing this site.
- We have attached a copy of an article written by Mike Leidemann of the Honolulu Advertiser on October 27, 2004 regarding the Lunalilo Street on-ramp diversion project. In his report, Mr. Leidemann quotes Scott Ishikawa of the Department of Transportation as saying, "Before the change, it used to take an average of 9.2 minutes to travel from Piikoi Street to the freeway's Queen Emma overpass via the Lunalilo Street on-ramp," Ishikawa said. "With the rerouting in place, the same distance is covered in an average of 4.5 minutes. **Congestion on Piikoi, Lunalilo and Pensacola Streets has cleared because of the project.**"

Kaahumanu School

- The existing situation with school drop-off and pick-up occurs for no more than 45 minutes in the morning and 30 minutes in the afternoon. One of the primary safety concerns related during these hours is the maukabound left turn from Piikoi Street to Beretania Street, nearly two blocks makai of Piikoi Vista, from the second lane (which is illegal and is done to get to the mauka curb or enter the school from Beretania Street). Because of the school's youth pedestrian traffic, many surrounding intersections have been made safer, by the City, with turn restrictions on red at several of the surrounding intersections. The minimal trip generation of Piikoi Vista will not have a significant impact on traffic in the area during school drop-off and pick-up periods.

Unrealistic to Expect Residents to be Walking as their Major Means of Access to Public Bus Transportation

- The senior affordable income group that Piikoi Vista will support is the group earning only 50% and below the Area Median Income. With their limited income, the cost of maintaining and up-keeping a car, in addition to other living expenses, such as rent, food and clothing may be cost prohibitive. Hawaii Housing Development Corporation, a non-profit corporation, has always developed their independent living senior affordable rentals in the Primary Urban Center of Honolulu, for just such reasons, so that the senior can walk to nearby bus stops and walk to nearby banks, doctors' offices, grocery stores, etc. and not rely completely on their own private transportation.
- Also, as stated on page 12 of our Draft EA, Catholic Charities will provide numerous services to our seniors in Piikoi Vista, including transportation services for food shopping, personal shopping, medical appointments, financial appointments and many other services too numerous to list. Please refer to pages 12, 13 and 14 of the Draft EA.
- Any congested traffic situation would have the tendency to encourage residents to walk to public bus transportation or to nearby convenience stores (Seven Eleven, located at the intersection of Piikoi Street and Kinau Street) rather than get into their cars and get stuck in traffic. The congestion would also provide an incentive for the seniors to utilize the Catholic Charities van service for their shopping needs and other appointments. In our opinion, congestion would tend to discourage rather than encourage our seniors to use and/or own personal vehicles.
- Based on our experience with senior rental housing parking needs, more parking stalls for the project are not necessary. If the project were required to add parking, providing more stalls would have to be accomplished by providing a two level parking structure (only surface parking provided at this time) which would make the project infeasible and reduce the number of units that could be made

Senator Carol Fukunaga
Page 5

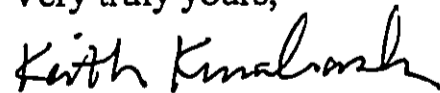
available for seniors. The additional parking stalls would result in even more vacant stalls than that experienced at other senior affordable rental apartments.

- The Piikoi Vista project has direct access from Piikoi Street to a loading stall for Handi-Van pick-up and drop-off. We also have a pick-up and drop-off on Kinau Street for joint use by Kinau Vista and Piikoi Vista. It is our understanding that the policy of Hani-Van is to pick-up and drop-off at curb side.

Hawaii Housing Development Corporation's three completed affordable elderly rental developments have all been enthusiastically received by the community. The modern affordable rental units offered to the senior, along with the services offered by Catholic Charities, fosters the "aging in place" concept and helps the individuals manage living in their own apartments and community environment for as long as possible and as independently as possible. With the Piikoi Vista affordable elderly rental development it is the hope of Hawaii Housing Development Corporation that they can continue to offer those residents in most need, a dignified and pleasant life style, and in familiar surroundings.

Your comments and this response will be included in the Final EA. Should you have questions regarding our response, please do not hesitate to call our office at 988-2231.

Very truly yours,



Keith Kurahashi

cc: Mr. Gary Furuta
Department of Community Services

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Posted on: Wednesday, October 27, 2004

H-1 study may take more time

By Mike Leidemann

Advertiser Transportation Writer

The state is considering extending the demonstration period for a project that closes a busy on-ramp on the H-1 Freeway during morning rush hour, transportation officials said yesterday.

Preliminary reports show the closing of the Lunalilo Street on-ramp has had a positive impact on both freeway and some local traffic, Department of Transportation spokesman Scott Ishikawa said.

However, engineers would like more time to fairly evaluate the project's results.

"We'd like to extend it to gather more data, but the director promised he'd listen to the community" before a decision is made, Ishikawa said.

Transportation Director Rod Haraga will update residents on the project in a meeting tonight at Hawaiian Mission Academy. Members of the community are invited to express their opinions at that time, Ishikawa said.

Originally, the state had hoped to evaluate the project, which began Aug. 9, after three months and determine whether to make the change permanent.

But several nearby traffic projects began unexpectedly about the same time, which could affect the results of any evaluation, Ishikawa said.

Those included an emergency sewer pipe replacement project on Kapi'olani Boulevard that forced cancellation of the morning rush-hour contraflow lane there and a waterline project near Royal School on Punchbowl Street.

Both of those projects could have directly affected how many people used the freeway or alternate routes. The closing of the Kapi'olani contraflow lane, for instance, could have added an extra 1,000 cars per hour on the freeway, Ishikawa said.

Even so, preliminary data based on phone calls, e-mails and several drives through the area before and

11/18/2004

after the project began indicate that drivers from East O'ahu are saving about 10 minutes during their morning commute, Ishikawa said.

More surprisingly, the same data show that some drivers trying to access the freeway from Makiki also are saving time.

"Before the change, it used to take an average of 9.2 minutes to travel from Pi'ikoi Street to the freeway's Queen Emma overpass via the Lunalilo Street on-ramp," Ishikawa said. "With the rerouting in place, the same distance is covered in an average of 4.5 minutes. Congestion on Pi'ikoi, Lunalilo and Pensacola streets has cleared because of the project."

Closing the Lunalilo on-ramp between 6 and 9:30 a.m. on weekdays eliminated a crisscross of freeway-bound drivers merging with commuters leaving H-1 at the same spot via the Vineyard off-ramp. The hope was that would reduce a westbound freeway backlog that normally occurred in the area.

The change has not been done without some complaints from area residents, some of whom have said it has added to the time they spend on neighborhood streets before getting on the freeway, especially at the Punahou Street on-ramp.

Reach Mike Leidemann at 525-5460 or mleidemann@honoluluadvertiser.com.

Article url: <http://the.honoluluadvertiser.com/article/2004/Oct/27/ln/ln16p.html>
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DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

September 30, 2004

Regulatory Branch

Mr. Keith Ishida, Planner
Director of Community Services
City and County of Honolulu
715 South King Street, Suite 311
Honolulu, Hawaii 96813

Dear Mr. Ishida:

This responds to your request for review comments on the Draft Environmental Assessment (DEA) for the proposed Piikoi Vista, on Oahu (TMK 2-4-12: 026). We have reviewed the project information in the document with respect to the Corps' authority to issue Department of the Army (DA) permits under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Based on the information provided in the DEA, it appears that the project would not involve any activity in waters of the United States, including adjacent wetlands; therefore, a DA permit will not be required.

Should you have questions concerning this determination, please contact Ms. Paulette Choy of my staff by telephone at (808) 438-9258 or by fax at (808) 438-4060. Written inquiries should cite File No. 200400533 and may be sent to: Regulatory Branch (CEPOH-EC-R); U.S. Army Engineer District, Honolulu; Building 230; Fort Shafter, Hawaii 96858-5440 (please update your current records as we are not located at Palm Circle).

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Copy Furnished:

Office of Environmental Quality Control, 235 S. Beretania St, #702, Honolulu, HI 96813
Kusao & Kurahashi Inc., 2752 Woodlawn Dr., #5-202, Honolulu, HI 96822

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 968-2231

FAX. (808) 968-1140

E-Mail: kkurahashi@hawaii.m.com

November 15, 2004

Mr. George P. Young, P.E.
Chief, Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Ft. Shafter, Hawaii 96858-5440

**Subject: Draft Environmental Assessment (EA) for Piikoi Vista Affordable
Elderly Rental Development - Tax Map Key: 2-4-12: 26**

Dear Mr. Young:

Thank you for your letter dated, September 30, 2004, regarding the proposed Piikoi Vista Affordable Elderly Rental Apartments. We appreciate you taking the time to review and comment on our Draft EA, and for advising us that based on the information in our EA, a Department of the Army (DA) permit will not be required for this project.

Your comments and this response will be included in the Final EA.

Very truly yours,

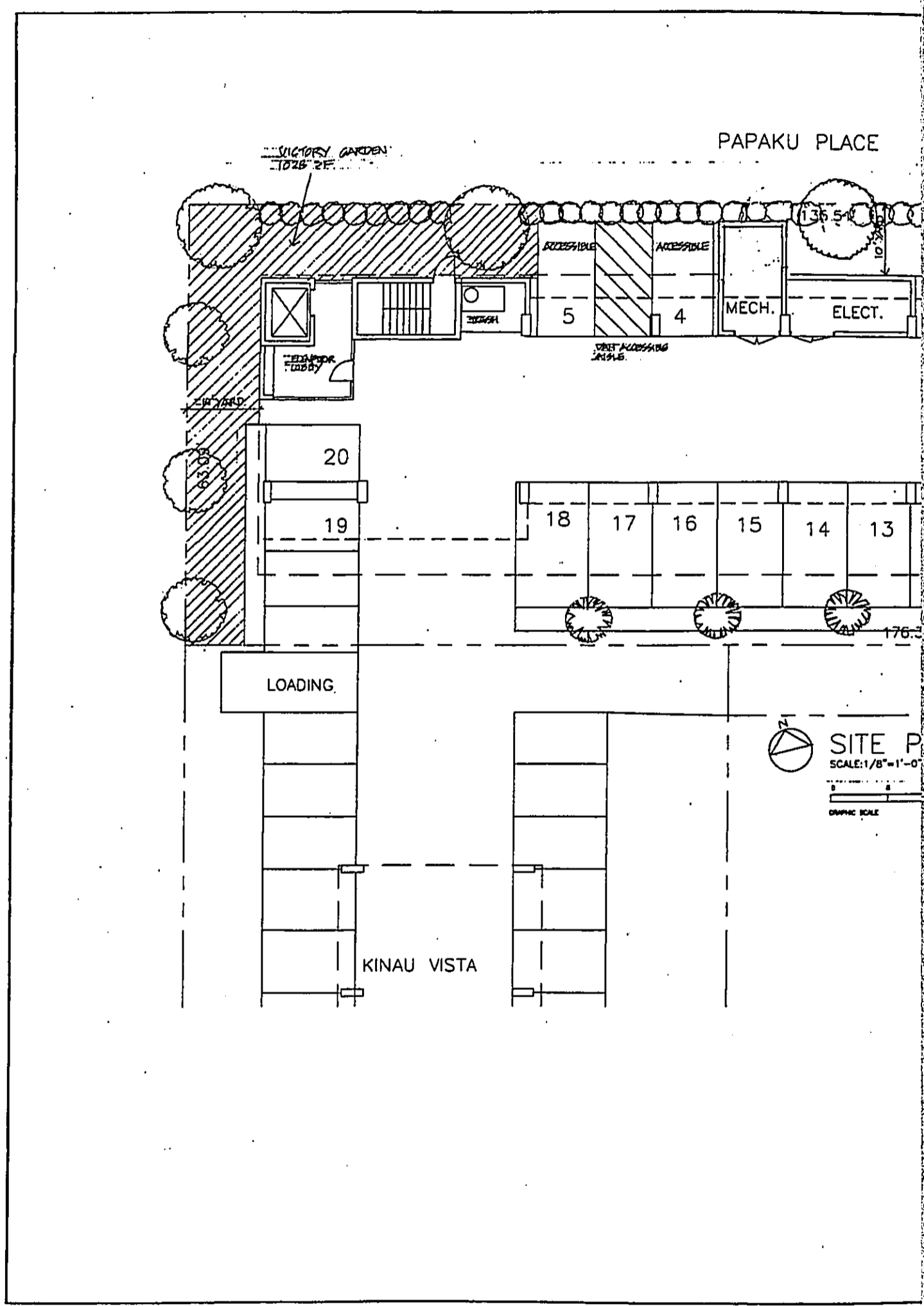


Anne Kusao

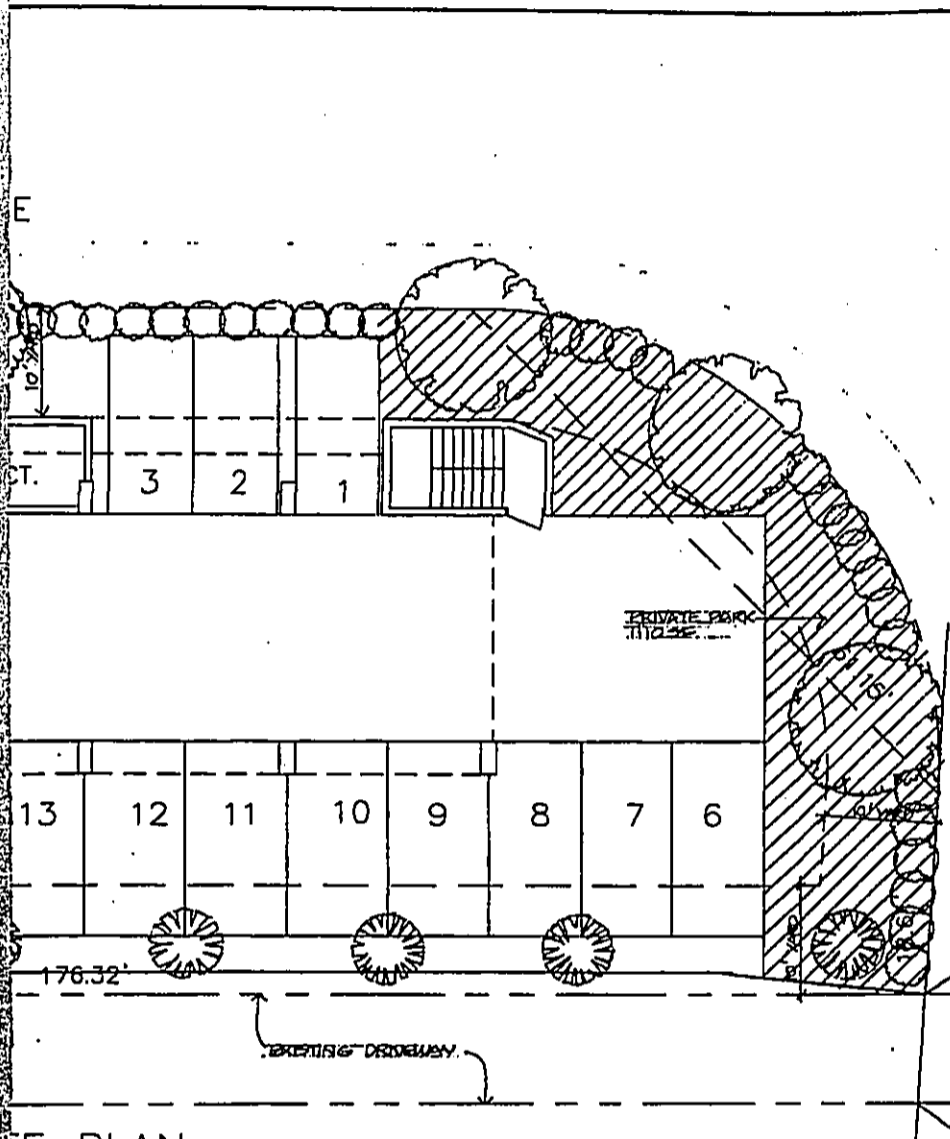
cc: Mr. Gary Furuta
Department of Community Services

REDUCED IN
FILE

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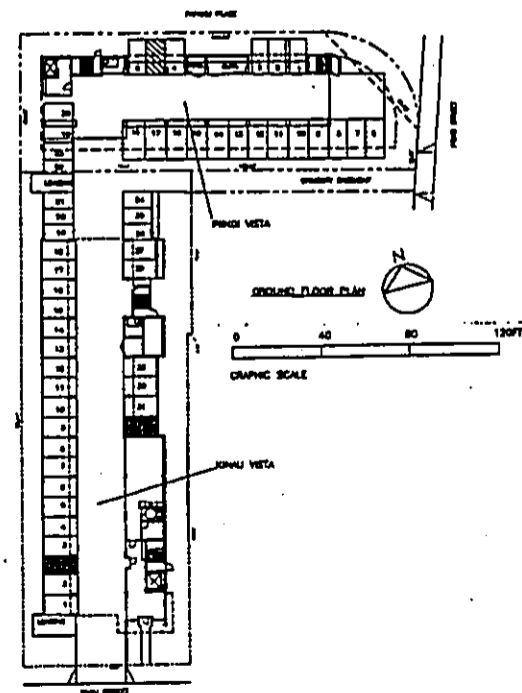
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E PLAN

1/8" = 1'-0" 805sf

PROJECT DATA
 TRACT 7245-512126
 LOT AREA = 10,809 SF
 ZONE = A-2, 150 FT HEIGHT LIMIT
 FLOOR AREA RATIO = 2.0002210, 216,111.316
 PERMITTED FLOOR AREA = 1.516 X 10,809 = 14,224 SF
 PROPOSED
 37 UNIT (ONE BEDROOM UNITS)
 13 STORY, 66 FT HEIGHT
 TOTAL FLOOR AREA = 21,071 SF OR EAR OF 2.68
 TYPE OF CONSTRUCTION
 TYPE III R



PIIKOI STREET

NO.	DATE	REVISIONS
1	1/21/04	FA
2	7-25-04	
3	10-05	

THIS PROJECT WAS PREPARED BY
 ME OR UNDER MY SUPERVISION
 AND I AM A LICENSED ARCHITECT
 PROJECT WILL BE UNDER MY
 SUPERVISION

PIIKOI VISTA
 HONOLULU, HAWAII

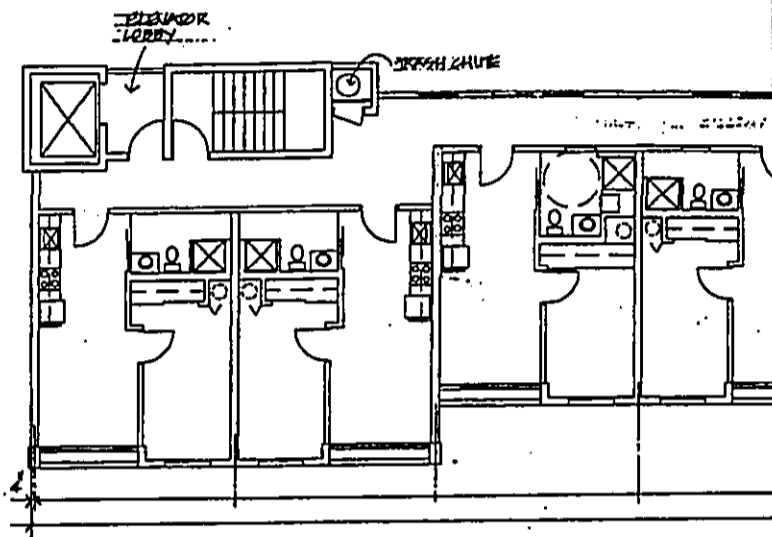
SITE PLAN

KAZU YATO, AIA & ASSOCIATES

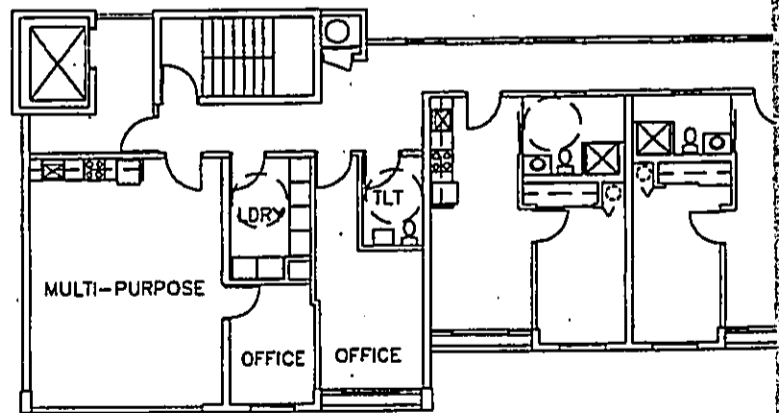
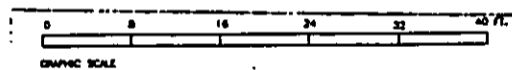
DATE	BY	CHKD	BY	FILE
1/21/04	BY	CHKD	BY	FILE

SHEET
 A-1

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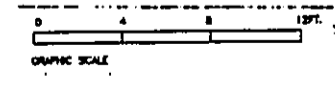
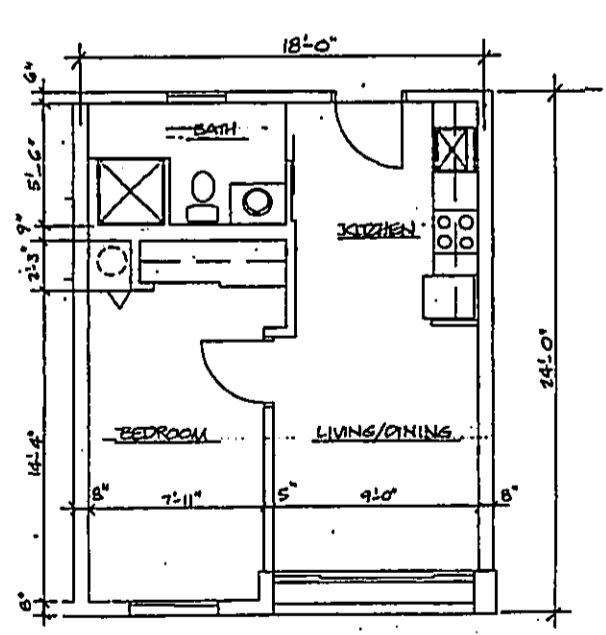
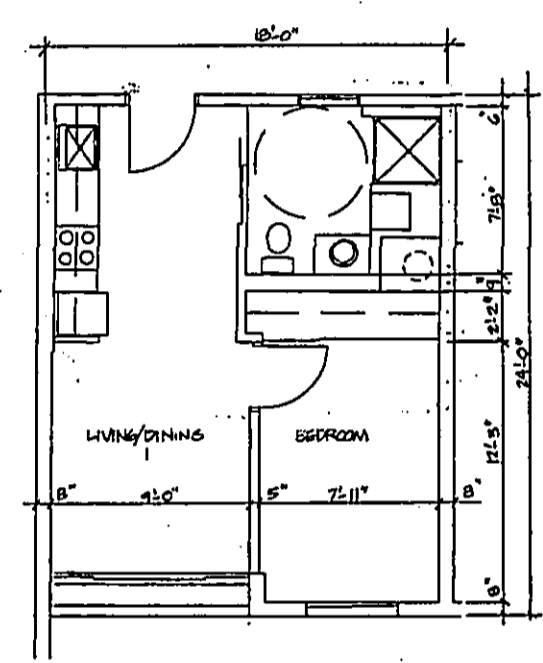
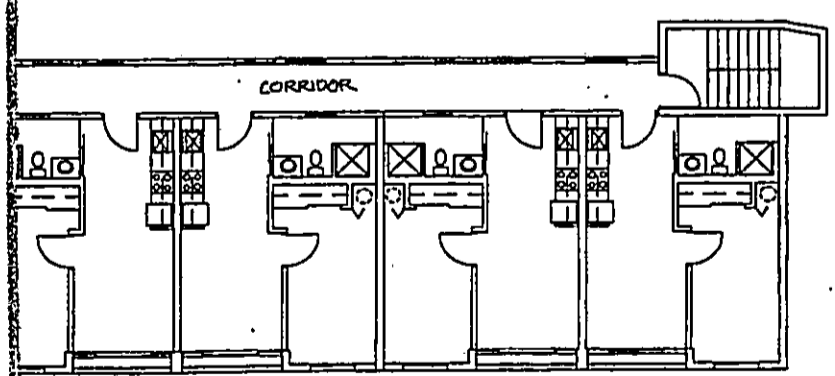
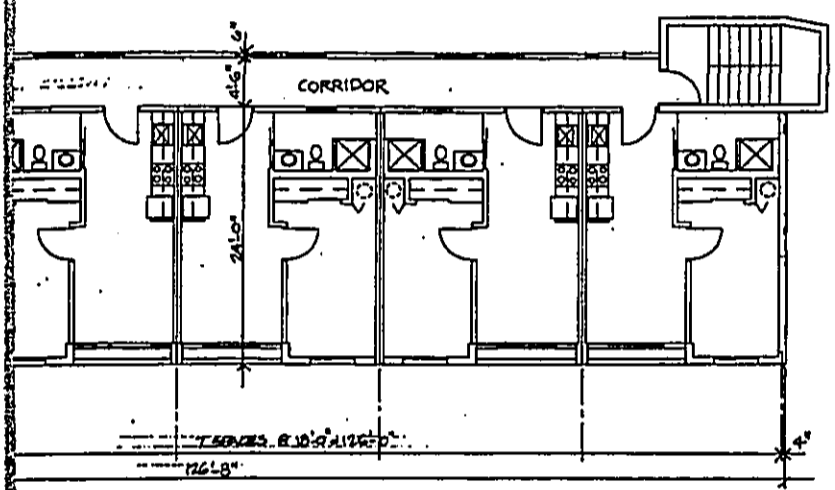


TYPICAL FLOOR PLAN- FLOORS
SCALE: 1/8" = 1'-0"



8TH FLOOR PLAN
4032sf

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NO.	DATE	REVISIONS
	1/10/05	

THIS PROJECT WAS PREPARED BY
KAZU YATO, AIA & ASSOCIATES
AND CONSTRUCTION OF THIS
PROJECT WILL BE UNDER MY
SUPERVISION.

PIIKOI VISTA
HONOLULU, HAWAII

FLOOR PLANS

KAZU YATO, AIA & ASSOCIATES

3000 KALANANAKU AVENUE
SUITE 1000
HONOLULU, HI 96815
TEL: (808) 551-1111
FAX: (808) 551-1112

DATE	BY	CHKD	BY	PLD
1/10/04				

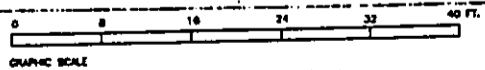
SHEET

A-2

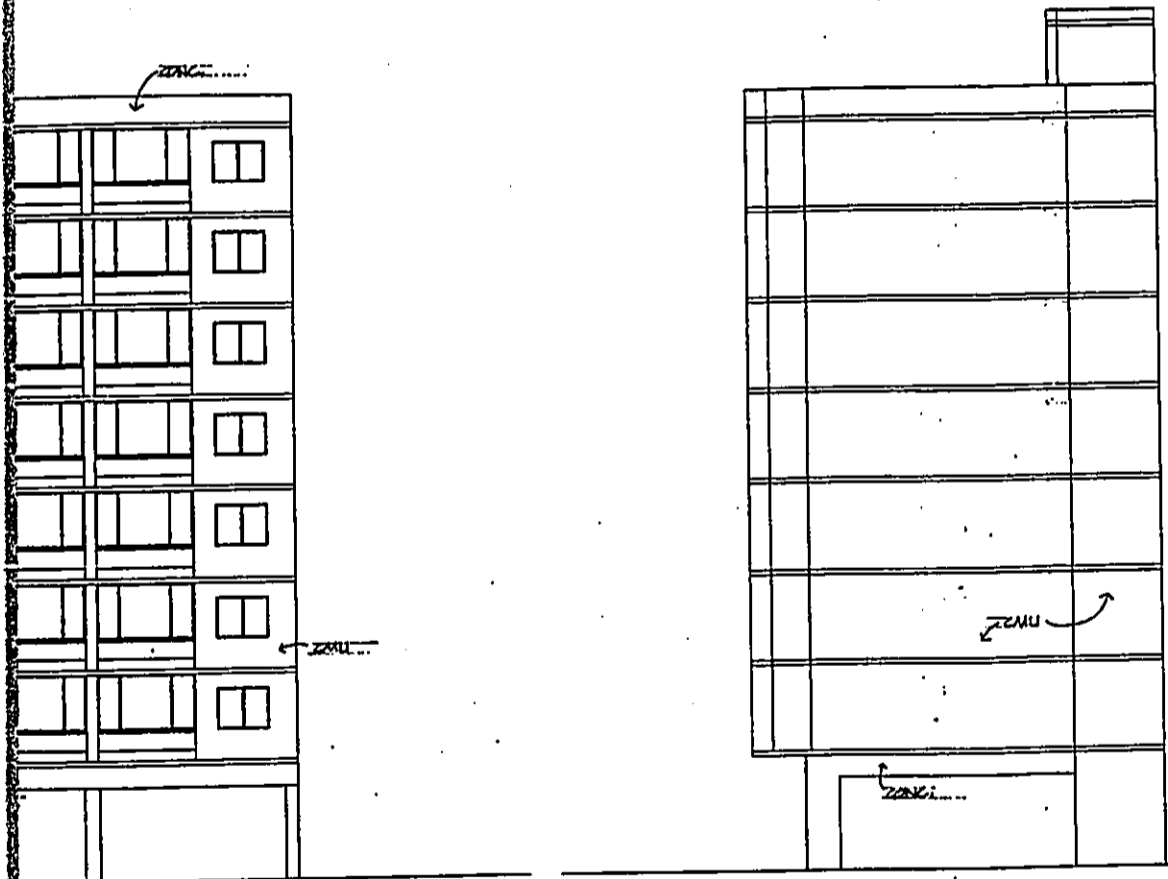
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MAKAI ELEVATION
SCALE: 1/8" = 1'-0"



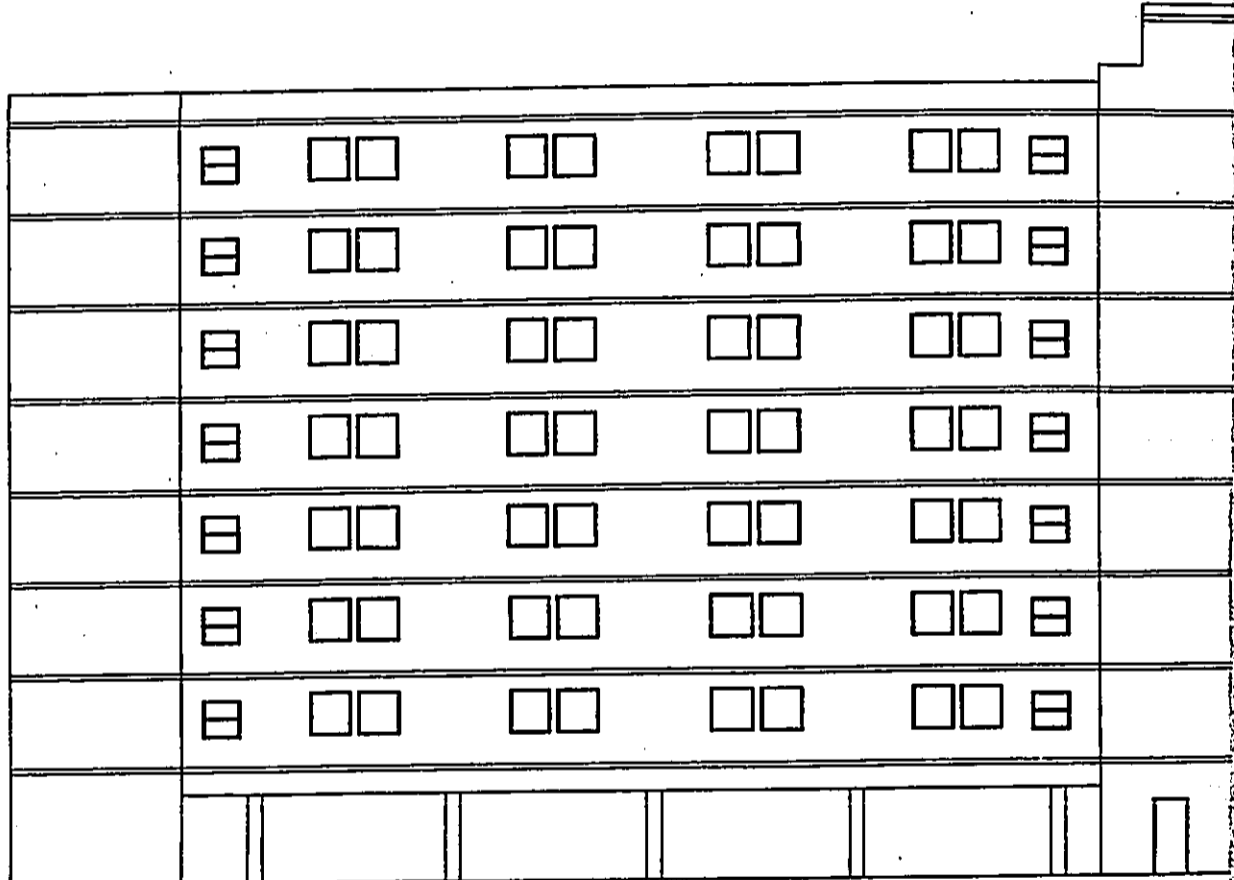
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DIAMOND HEAD ELEVATION

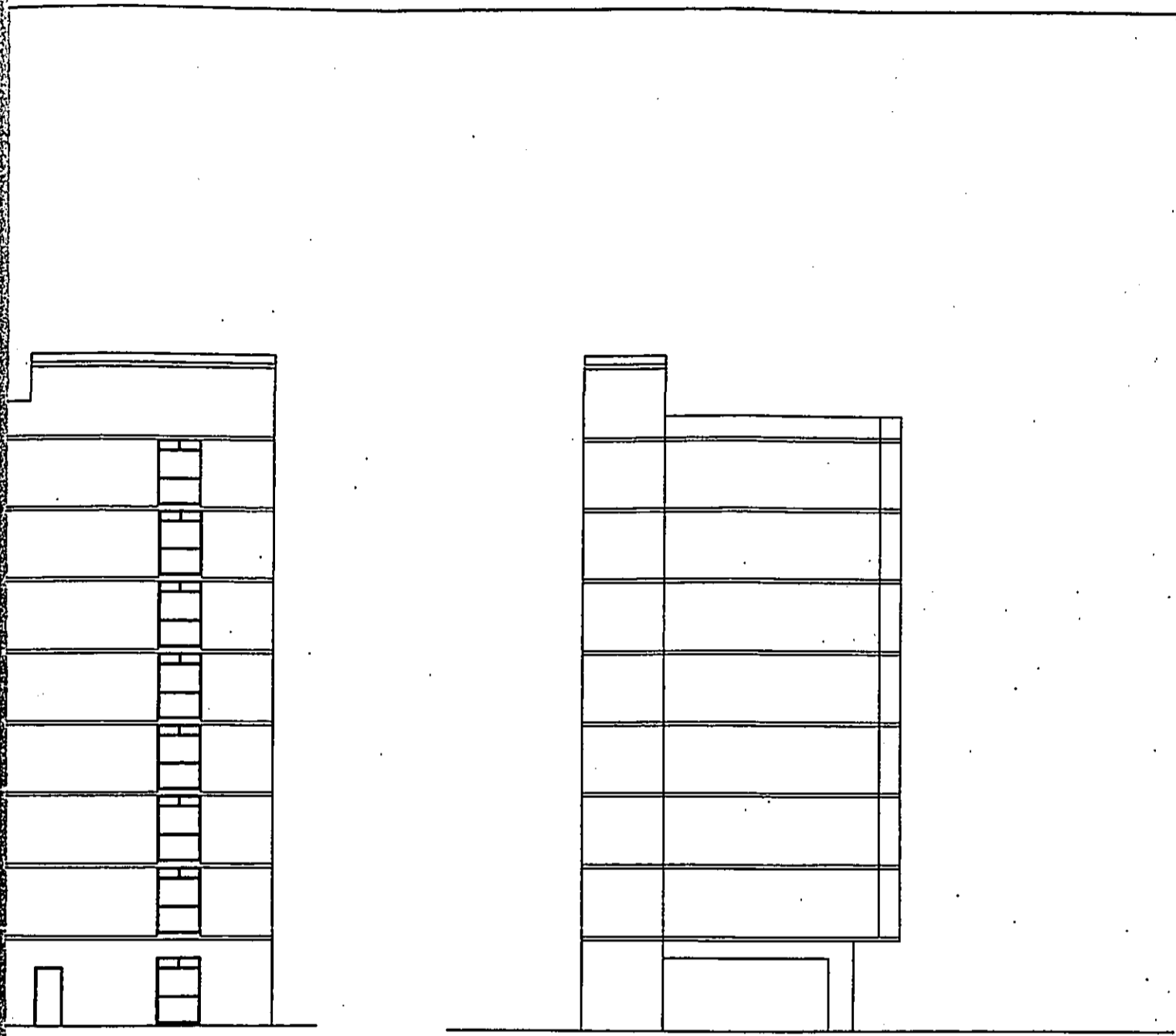
NO.		DATE		REVISION	
<p>PIIKOI VISTA HONOLULU, HAWAII</p>				<p>NO. 100 100 100 100</p>	
<p>KAZU YATO, AIA & ASSOCIATES</p> <p>3000 KALANANAKU AVENUE HONOLULU, HI 96821</p>				<p>NO. 100 100 100 100</p>	
SVA	DATE	BY	CHK	TJ	
<p>A-3</p>					

RECEIVED AS FOLLOWS




MAUKA ELEVATION

RECEIVED AS FOLLOWS



EWA ELEVATION

NO.		DATE	REVISIONS
		1/17/04	
PROJECT			
PIIKOI VISTA 1328 PIIKOI STREET HONOLULU, HAWAII			
KAZU YATO, AIA & ASSOCIATES  ARCHITECTS 1125 KALANIANA'OLE AVENUE SUITE 200 HONOLULU, HI 96813 TEL: 808-955-8888 FAX: 808-955-8889			
DATE	SCALE	BY	CHKD
1/17/04			
SHEET			
4			