DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

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2006/ED-17 (JP)

February 8, 2007

The Honorable Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
State Office Tower, Room 702
235 South Beretania Street
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Subject: Chapter 343, Hawaii Revised Statutes
Environmental Assessment (EA) Determination
Finding of No Significant Impact
Heeia Fishpond Aquaculture Support Facilities

Applicant:	Kamehameha Schools
Agent:	Helber Hastert & Fee, Planners
Location:	46-077 Ipuka Street - Heeia
Tax Map Key:	4-6-5: 1
Proposal:	Improvements to aquaculture support facilities accessory to an historic site (Heeia Fishpond)
Determination:	Finding of No Significant Impact (FONSI)

Attached and incorporated by reference is the Final EA prepared by the applicant for the above-referenced project. Based on the significance criteria outlined in Title 11, Chapter 200, Hawaii Administrative Rules, we have determined that preparation of an Environmental Impact Statement is not required.

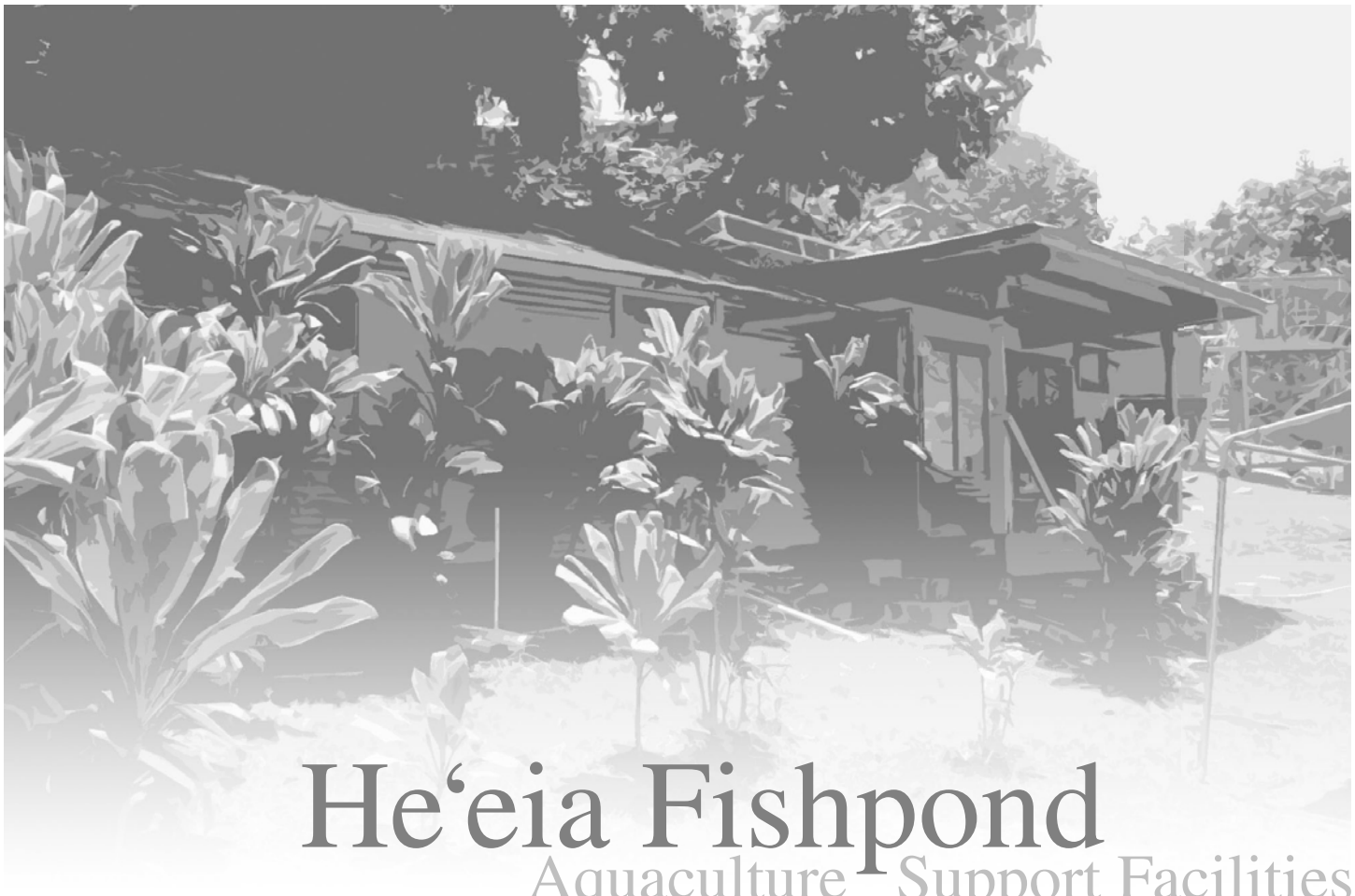
We have enclosed two (2) copies of the Final EA and a compact disk with the Final EA in PDF format, a completed OEQC publication form and its related project summary on a diskette. If possible, please include the project in the February 23, 2007 publication of "*The Environmental Notice*."

He‘eia Fishpond
Aquaculture Support Facilities

FINAL | ENVIRONMENTAL ASSESSMENT



He‘eia
Ko‘olaupoko District, O‘ahu
February 2007



He‘eia Fishpond
Aquaculture Support Facilities

FINAL | ENVIRONMENTAL ASSESSMENT

Prepared for
KAMEHAMEHA SCHOOLS

Prepared by
HELBER HASTERT & FEE
PLANNERS

He‘eia
Ko‘olaupoko District, O‘ahu
February 2007

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ACRONYMS

BLNR	Board of Land and Natural Resources
CIA	Cultural Impact Assessment
CDUA	Conservation District Use Application
CUP	Conditional Use Permit
CZM	Coastal Zone Management
DBEDT	State of Hawai‘i Department of Business Economic Development and Tourism
DLNR	State of Hawai‘i Department of Land and Natural Resources
DOH	State of Hawai‘i Department of Health
DP	Development Plan
DPP	City and County of Honolulu Department of Planning and Permitting
EA	Environmental Assessment
EIS	Environmental Impact Statement
FTE	full-time equivalent
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HAR	Hawai‘i Administrative Rules
HECO	Hawaiian Electric Company
HPD	Honolulu Police Department
HRS	Hawai‘i Revised Statutes
KS	Kamehameha Schools
LUO	Land Use Ordinance
mgd	million gallons per day
MSL	mean sea level
NRHP	National Register of Historic Places
OEQC	Office of Environmental Quality Control
POH	Paepae o He‘eia
ROH	Revised Ordinances of Honolulu
SCP	Sustainable Communities Plan
SHPD	State of Hawai‘i Department of Land and Natural Resources Historic Preservation Division
SMA	Special Management Area
SMP	Special Management Area Use Permit
TMK	Tax Map Key
USDA	United States Department of Agriculture
WQLS	Water Quality Limited Segment

PROJECT SUMMARY

The applicant and landowner, Kamehameha Schools (KS), proposes to construct new facilities at He‘eia Fishpond to support existing aquaculture operations and promote the restoration, preservation and long-term use of the fishpond. The proposed improvements (i.e., the Proposed Action), which are essential for the continued success of the existing aquaculture program, include replacement of an existing caretaker’s residence and the construction of accessory aquaculture facilities and associated utility improvements. The entire fishpond and parts of the adjacent land-based areas, including a portion of the project site, is listed on the National Register of Historic Places (NRHP) (State Historic Site Number 80-10-327).

This draft environmental assessment (EA) is being prepared in compliance with Chapter 343, Hawai‘i Revised Statutes (HRS), as amended, and the environmental impact statement (EIS) regulations promulgated by Chapter 200 of Title 11, Department of Health (DOH), Hawai‘i Administrative Rules (HAR). The Proposed Action is subject to the environmental review process because it proposes to use land within a historic site designated by the NRHP. The purpose of this document is to determine whether the Proposed Action may have a significant impact on the environment and whether an EIS is required.

Based on the information gathered during preparation of this EA, it is anticipated that the direct, indirect, and cumulative effects of the Proposed Action will not have a significant adverse effect on the environment and that a Finding of No Significant Impact (FONSI) will be issued. In accordance with Chapter 343, HRS and Title 11, Chapter 200, HAR, DPP has determined that a FONSI should be issued for the Proposed Action and that an EIS will not be required. The rationale for this determination is described in Chapter 6.

Project Name:	He‘eia Fishpond Aquaculture Support Facilities
Proposed Action:	Replacement of an existing caretaker’s residence and construction of permanent aquaculture support facilities and utility system improvements, including an air-conditioned office space, toilets and shower/changing area, equipment and material storage, and parking
Applicant/Landowner:	Kamehameha Schools 567 South King Street Honolulu, Hawai'i 96813
Approving Agency:	City and County of Honolulu Department of Planning and Permitting 650 South King Street, 7th Floor Honolulu, Hawai‘i 96813
EA Preparer:	Helber Hastert & Fee, Planners 733 Bishop Street, Suite 2590 Honolulu, Hawai‘i 96813 (808) 545-2055 Tom Fee / Corlyn Orr

Project Location:	46-077 ‘Īpuka Street Kāne‘ohe, O‘ahu, Hawai‘i
Tax Map Key Parcel:	4-6-05: por. 001
Project Area:	Approximately 0.75 acres
Existing and Proposed Uses:	Aquaculture
National Register of Historic Places:	Site Number 80-10-327 (listed January 17, 1973)
State Land Use District:	Urban
City and County of Honolulu Ko‘olaupoko Sustainable Communities Plan Designation:	Open Space/Preservation
City and County of Honolulu Zoning:	P-2 General Preservation
Special Management Area:	Within SMA boundary

1.0 DESCRIPTION OF THE PROPOSED PROJECT

Fishponds, which are enclosed stone-wall structures constructed by Native Hawaiians to cultivate fish, were essential to the Native Hawaiian subsistence economy. With fish providing one of the main sources of protein for the traditional Native Hawaiian diet, fishponds ensured a steady supply of fish and supplemented the ocean’s harvest, which typically depended upon the weather conditions and other seasonal changes. Given the fishponds’ significant role in supporting the Native Hawaiian population, it is not surprising that these manmade structures were once common landscape features found along the shorelines of all the main Hawaiian Islands. Today, many of the early fishponds have been destroyed and displaced by residential and urban development, and the few that remain are generally in poor condition due to neglect and lack of use. On O‘ahu, more than four-fifths, or 80% of the island’s known fishponds (144 ponds) have been destroyed. Of the 178 fishponds inventoried, only 2% of the fishponds (4 ponds) are in excellent working condition and less than 17% of the fishponds (30 ponds) are in good to fair condition (DHM Planners 1989). As the current movement to revive Native Hawaiian cultural practices grows stronger, the few remaining fishponds are increasingly regarded as cultural and historic treasures, symbolic of the Native Hawaiian people’s cultural past and their complex understanding of ecological systems.

Loko i‘a o He‘eia, or He‘eia Fishpond, is one of the last intact fishponds remaining on O‘ahu. It is a seashore pond, or *loko kuapā,* located on the shoreline of Kāne‘ohe Bay on the windward side of O‘ahu, in the *moku* of Ko‘olaupoko and the *ahupua‘a* of He‘eia. The fishpond wall, which measures about 5,000 feet in length, is one of the longest fishpond walls on O‘ahu and notably encircles the entire 88 acres of the pond (including the shoreline). The fishpond’s current owner, KS, envisions the restoration and preservation of the fishpond to perpetuate traditional Native Hawaiian cultural practices and knowledge, and has contracted with a non-profit organization known as Paepae o He‘eia (POH) to restore and manage the fishpond. While fishpond restoration and preservation for cultural and historic purposes is POH’s primary goal, the organization also aims to establish a self-sufficient aquaculture program that combines technical aquaculture operations with cultural and environmental educational activities and sustainable community-based economic development initiatives. Lacking commercial aquaculture business interests to take over the fishpond and without any viable commercial fishponds operating in the State, POH’s innovative approach to integrating education and cultural programs with aquaculture provides an important new community-based paradigm for managing natural resources. Since its inception in 2001, the group has been able to remove over 500 feet of mangrove and repair more than 150 feet of the fishpond wall with the assistance of community volunteers participating in organized community workdays, as well as establish an eco-cultural educational program with hands-on research and learning activities. In total, POH have served over 7,000 individuals, including elementary/secondary and post-secondary students, families, Hawaiian language immersion communities, and other various community organizations.

Strongly committed to maintaining a vibrant and comprehensive aquaculture program at the fishpond, KS is proposing facility improvements to enhance the productivity of existing aquaculture operations, including the replacement of an existing caretaker’s residence and the construction of aquaculture support facilities and associated utility improvements. The 88-acre shallow water fishpond and the shoreline areas adjacent to the pond comprise a total land area of about 97 acres that are identified as Tax Map Key (TMK) parcel 4-6-05: 001. The proposed

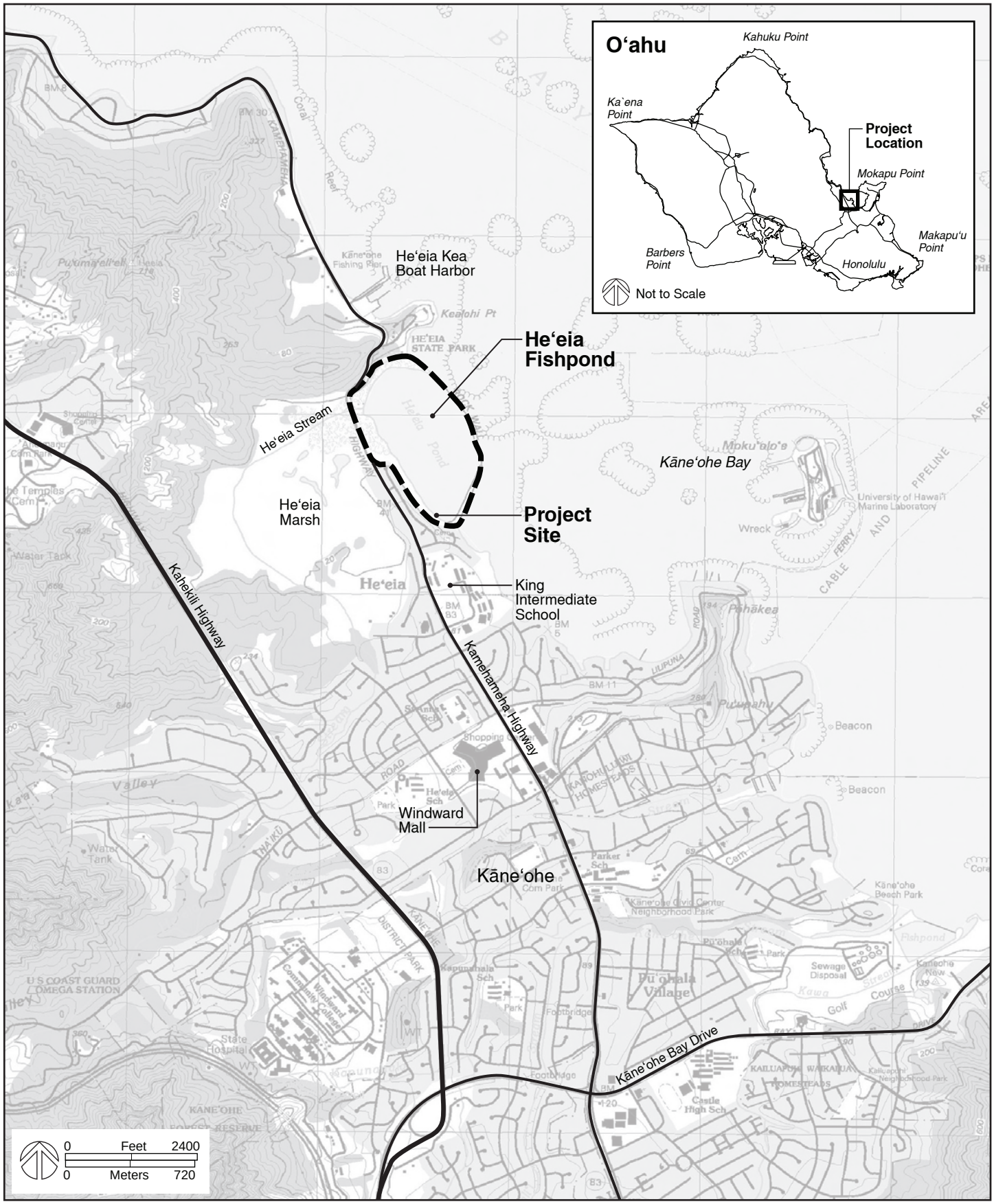
improvements would be concentrated on approximately 0.75 acres of the parcel's land area (project site), near the southernmost corner of the fishpond where the existing fishpond operations are currently located. Figure 1 presents a vicinity map showing the general location of He'eia Fishpond. Figure 2 presents the TMK parcel map.

1.1 Technical Characteristics

The Proposed Action is intended to reinforce the continued success of the existing aquaculture program and promote the continuous, long-term use of the fishpond by providing facilities that help to increase the efficiency and productivity of the existing aquaculture program. Aquaculture operations are currently served by a hodgepodge of temporary, improvised structures, including a large portable canvas canopy, a dilapidated Quonset hut historically used as a caretaker's residence, metal storage containers, portable toilets, temporary outdoor showers and rinsing stations, a series of aquaculture holding tanks with water filtration system, and gravel parking. Existing site photographs are shown in Figure 3. In general, existing support facilities are considered inadequate due to either their poor condition or temporary construction.

The existing Quonset hut, which has an area of about 1,600 square feet, is the only permanent structure on the project site. The structure is no longer suitable for its intended use as a caretaker's residence due to its poor condition, and is alternately used for equipment storage and administrative office space. With poaching and vandalism persistently threatening the viability of fishpond operations, replacement of the existing caretaker's residence would provide accommodations for a caretaker to remain on-site at all times and monitor against illegal activities. As proposed, the caretaker's residence would be constructed in the vicinity of the former caretaker's residence. The new house would consist of two floors, including living quarters (two bedrooms, a large living room and dining room/kitchen area, and one bathroom) on the upper floor, and an attached laundry, storage area and two-car carport on the ground floor. The gross building area of the caretaker's residence would occupy about 2,200 square feet, with roughly 1,200 square feet of livable space and about 800 square feet for the laundry, carport, and storage areas.

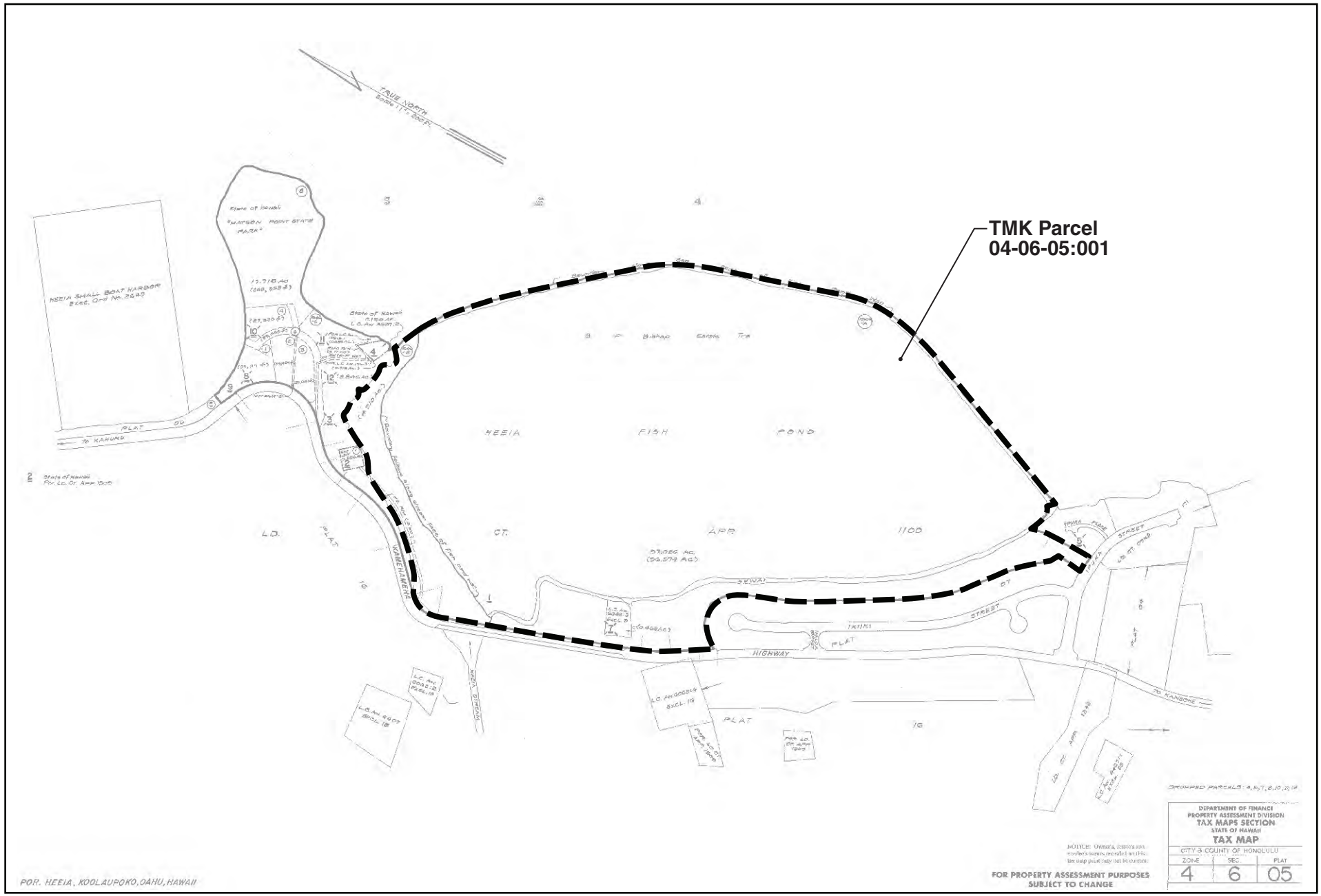
The new aquaculture support facilities would be planned to meet the needs of the permanent program staff and the various ecological, educational, and cultural programs that involve the collaboration of community volunteers and visiting students in conjunction with the aquaculture operation. The proposed facilities would include an air-conditioned office space, toilets and a shower/changing area, equipment and material storage, and parking improvements. Proposed parking amenities would consist of 11 parking stalls to accommodate the caretaker and daily staff parking needs. Proposed on-site parking includes two paved parking stalls near the top of the driveway, one paved handicapped-accessible stall with access aisle and route, two stalls in the carport, and six gravel stalls adjacent to the van turnaround area (cul-de-sac). An existing metal storage container, metal storage shed and pavilion tent, and aquaculture holding tanks and water filtration system, would be retained on-site for use by the aquaculture operations. The total floor area of the aquaculture support facilities proposed for construction would consist of about 1,350 square feet.



Vicinity Map

Figure 1

He‘eia Fishpond Aquaculture Support Facilities EA
Ko‘olaupoko, O‘ahu, Hawai‘i
Helber Hastert & Fee, Planners



Tax Map Key Parcel Map

Figure 2

He‘eia Fishpond Aquaculture Support Facilities EA
Ko‘olaupoko, O‘ahu, Hawai‘i
Helber Hastert & Fee, Planners

View of project site from ʻĪpuka Street

View from driveway looking makai

View of Quonset hut and attached extension

View from fishpond looking mauka

Site Photographs

Figure 3

He‘eia Fishpond Aquaculture Support Facilities EA
Ko‘olaupoko, O‘ahu, Hawai‘i
Helber Hastert & Fee, Planners

The total floor area of the proposed facilities is estimated to be about 3,350 square feet (see Table 1). The facilities would be designed to accommodate the existing program, and no changes in overall land use or intensity of use are anticipated.

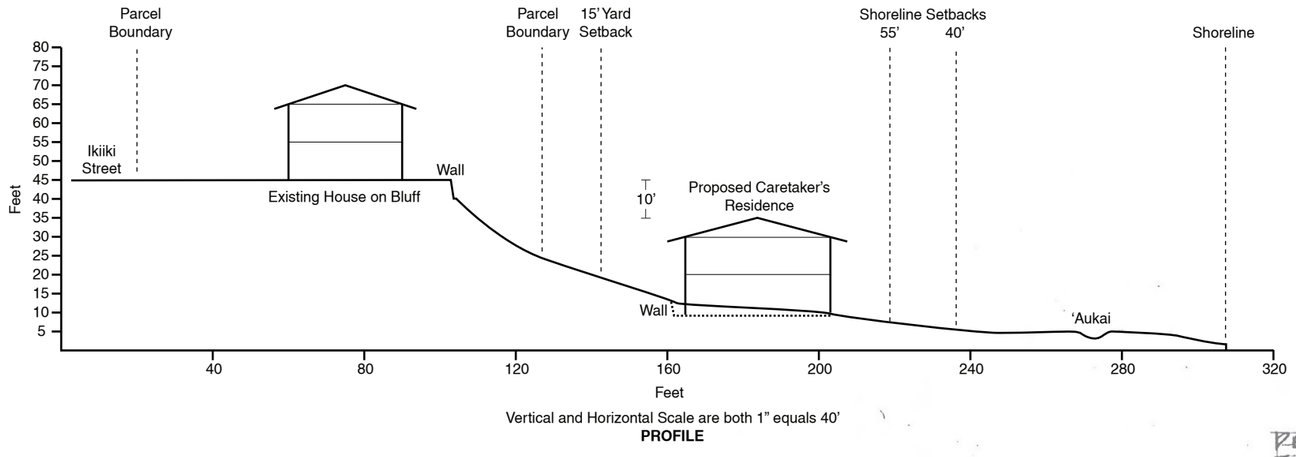
Table 1
Proposed Uses and Approximate Floor Area

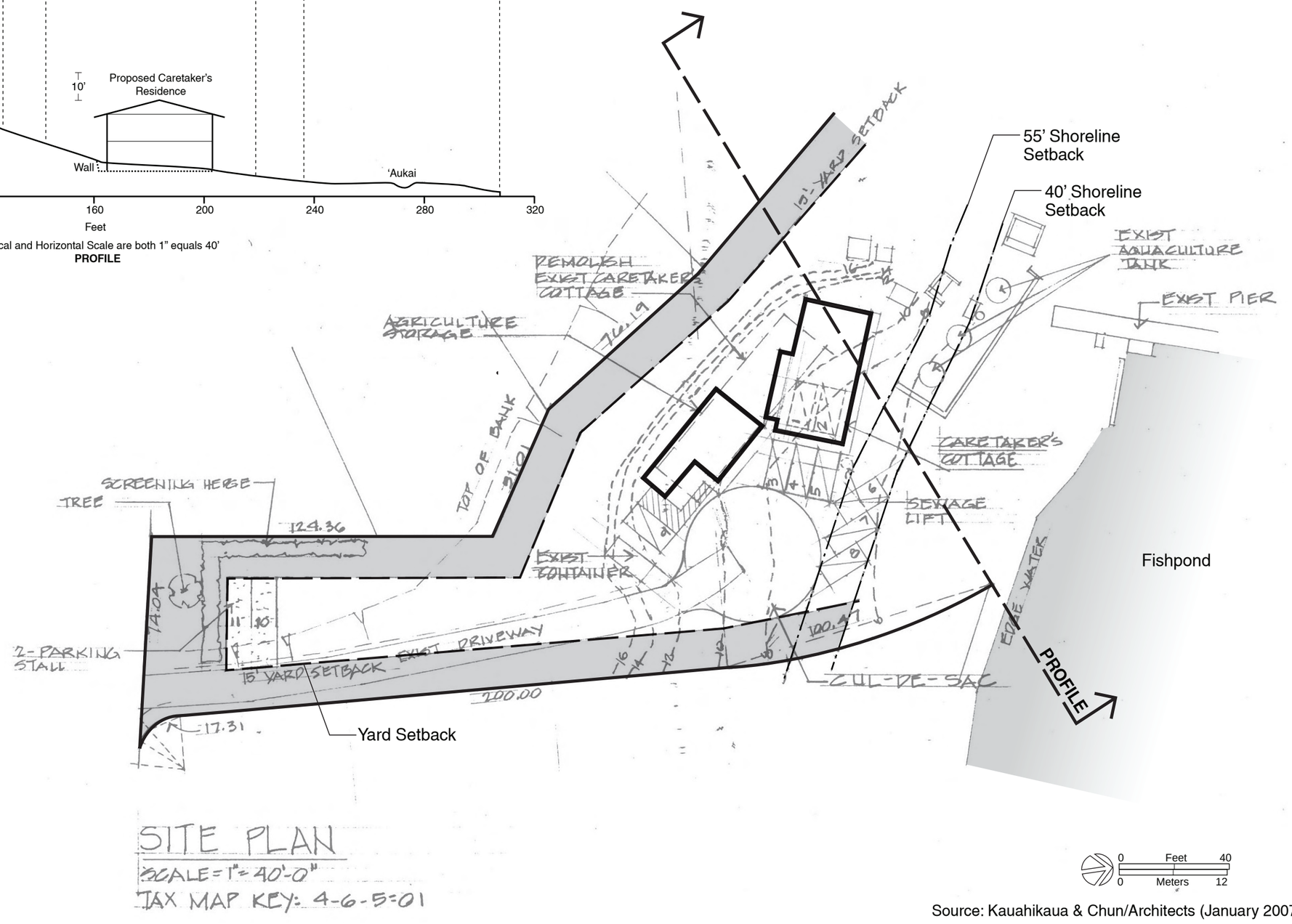
Proposed Use		Floor Area (sf)
Caretaker's dwelling	1,400	
Garage, laundry and storage	800	
Subtotal		2,200
Aquaculture office	150	
Toilets and shower/changing room	550	
Storage	550	
Sewage pump building	100	
Subtotal		1,350
TOTAL (estimated)		**3,550**

The proposed conceptual site plan is presented in Figure 4 along with a typical section/profile cut through the proposed caretakers residence. Accompanying architectural drawings are presented in Appendix A. While the proposed uses and allotted floor areas are not expected to change, the individual components of the site plan may be adjusted as the project moves through the design phase. As currently planned, the proposed improvements would be consolidated and constructed as two adjacent buildings within the *mauka* (southwestern) portion of the project site, thereby maintaining open areas along the shoreline for use by the aquaculture operations. The existing caretaker's residence (old Quonset hut) would be demolished, and replaced by two new structures. One structure would be a two-story building designed with a carport and storage, toilets and a shower/changing area downstairs and the caretaker's living area upstairs. The other structure would be a separate one-story building to accommodate the aquaculture office and storage. A retaining wall would be constructed *mauka* of the one-story building to accommodate the existing topography. Siting and design of the proposed facility improvements would complement the site's natural topography and would enhance the site's unique cultural and historic features. The plan and profile presented in Figure 4 illustrate how confined the buildable areas of the site are relative to the required yard and shoreline setbacks and the hillside behind the site.

Domestic water, electrical and telephone service are currently provided by the City and County of Honolulu Board of Water Supply, Hawaiian Electric (HECO) and Hawaiian Telcom, Inc. from systems on ʻĪpuka Street. Existing utility connections would be maintained, and a new connection to the City's sewer system along ʻĪpuka Street would be installed. A cesspool that was previously used for the former caretaker's residence would be pumped and backfilled in coordination with the State of Hawaiʻi DOH.

Table 2 provides a summary of the possible permits and approvals that may be required for the Proposed Action.





Source: Kauahikaua & Chun/Architects (January 2007)

Proposed Site Plan **Figure 4**

He'eia Fishpond Aquaculture Support Facilities EA
Ko'olaupoko, O'ahu, Hawai'i
Helber Hastert & Fee, Planners

Table 2
Required Permits and Approvals

Approval Required	Authority
Chapter 343, HRS Environmental Review and Determination	City and County of Honolulu Department of Planning and Permitting
Conditional Use Permit	City and County of Honolulu Department of Planning and Permitting
Construction and Building Permits	City and County of Honolulu Department of Planning and Permitting

1.2 Social Characteristics

The Proposed Action would provide accommodations for a local family to reside on property and secure the fishpond when program staff is not on duty. The caretaker's principal responsibility would be to monitor against illegal activities such as poaching and vandalism, which are common occurrences that jeopardize the viability of the fishpond. A live-in caretaker at the fishpond would reestablish a function that was an important part of traditional fishpond operations. As was customary with traditional Native Hawaiian fishponds, the *kia'i loko (*fishpond caretaker) was the person who lived at the fishpond and was responsible for fishpond maintenance, fish harvesting, and guarding against theft and other undesirable activities.

The Proposed Action would construct facilities to support the existing aquaculture program and reinforce its stability. The planned office, storage, and sanitation improvements are intended to enhance staff productivity and efficiency, and provide suitable sanitation facilities to serve both program staff and community members that participate in the aquaculture program.

1.3 Economic Characteristics

The cost of the proposed improvements is estimated at $350,000. The landowner, KS, would pay all costs associated with the proposed improvements.

Construction would commence after all required permits for the project are received and would be completed within one year of start-up, assuming that no unforeseen circumstances arise. All construction would be completed in accordance with the requirements and conditions established by the City and County of Honolulu.

2.0 AFFECTED ENVIRONMENT

2.1 Existing and Surrounding Land Uses

He‘eia Fishpond is situated nearly one mile north of Kāne‘ohe town, *makai* (seaward) of Kamehameha Highway along O‘ahu’s windward coast. The 88-acre semi-circular pond structure is situated on the shoreline of Kāne‘ohe Bay, to the south of Lae O Ke ‘Alohi (Kealohi Point). Land uses surrounding the fishpond and its adjacent land areas include He‘eia Kea Small Boat Harbor and He‘eia State Park directly to the north, and He‘eia Stream and He‘eia Marsh to the west *mauka* of Kamehameha Highway. The residential communities of Ali‘i Bluffs and Ali‘i Landing border the fishpond on its southwestern boundary, with the City and County of Honolulu Corporation Baseyard, King Intermediate School, the Ali‘i Shores residential subdivision, and Kāne‘ohe town’s commercial core located farther south (see Figure 1).

The project site encompasses a land area of about 0.75 acres at the southernmost corner of the fishpond in the area where existing aquaculture operations are headquartered. Figure 5 is an aerial photo that illustrates the surrounding land uses in relation to the project site and the fishpond. Access to the project site is provided from ‘Īpuka Street via a steep concrete driveway. Single-family residences abut the eastern, southern, and western boundaries of the project site, with the shoreline and fishpond extending to the north. The Ali‘i Landing subdivision along ‘Īpuka Street is to the east and south, including three homes that abut the eastern edge of the fishpond’s driveway. The Ali‘i Bluffs subdivision is to the west overlooking the fishpond, buffered from the project site by a thick cluster of java plum and hau trees and the sloping hillside that separates the project site and the neighboring homes.

2.2 Topography and Soils

The steep, grooved cliffs of the Ko‘olau Mountain Range are the dominant topographic features that define Windward O‘ahu and form the region’s scenic background. The low ridges that shape He‘eia valley stretch *makai* from the base of the Ko‘olau mountains and gradually fade into the lower reaches of the coastal plains that spread out into Kāne‘ohe Bay. While the upper section of He‘eia is narrow and hilly similar to other Windward O‘ahu mountain areas, the lower section becomes an extremely flat coastal plain covered almost entirely by marshland. Lae O Ke ‘Alohi, or Kealohi Point, which is a peninsula formed by the northern ridge of He‘eia Valley that measures 55 feet above mean sea level (MSL) at its summit, is located to the north of the fishpond.

The project site is comprised of two distinct sections – (1) the steep concrete driveway that connects the property to ‘Īpuka Street; and (2) the lower area at the base of the driveway where the existing aquaculture operations are concentrated. The project site, which slopes downward towards the shoreline, is highest at the driveway entrance along ‘Īpuka Street where the elevation measures about 45 feet above MSL. With a slope ranging from between 5% near the street and about 25% near the middle section, the concrete driveway extends about 200 feet in length before reaching the lower section of the project site adjacent to the fishpond. In this lower section, the topography is generally level, with a slight slope towards the shoreline.

Aerial Photograph

Figure 5

He'eia Fishpond Aquaculture Support Facilities EA
Ko'olaupoko, O'ahu, Hawai'i
Helber Hastert & Fee, Planners

Elevations in this lower section range from sea level at the shoreline to about 15 feet above MSL along the back of the existing caretaker's cottage. The elevation along the *mauka* (western) boundary of the project site measures about 45 feet above MSL, forming the edge of the bluff on which neighboring homes are situated. The steepest slopes, which range from approximately 40 to 70 percent, are located between the *mauka* boundary of the project site and the caretaker's cottage. With the exception of the paved driveway, the open, unoccupied areas within the project site are either dirt- or grass-covered.

According to the U.S. Department of Agriculture (USDA) Soil Conservation Service (1972), soils within the project site consist primarily of Loleka'a silty clay, 15 to 25 percent slopes (LoD) (see Figure 6). This soil is typically found on side slopes of terraces and along drainageways, and is used for pasture. In general, the runoff rate is medium and the erosion hazard is moderate.

2.3 Surface Waters

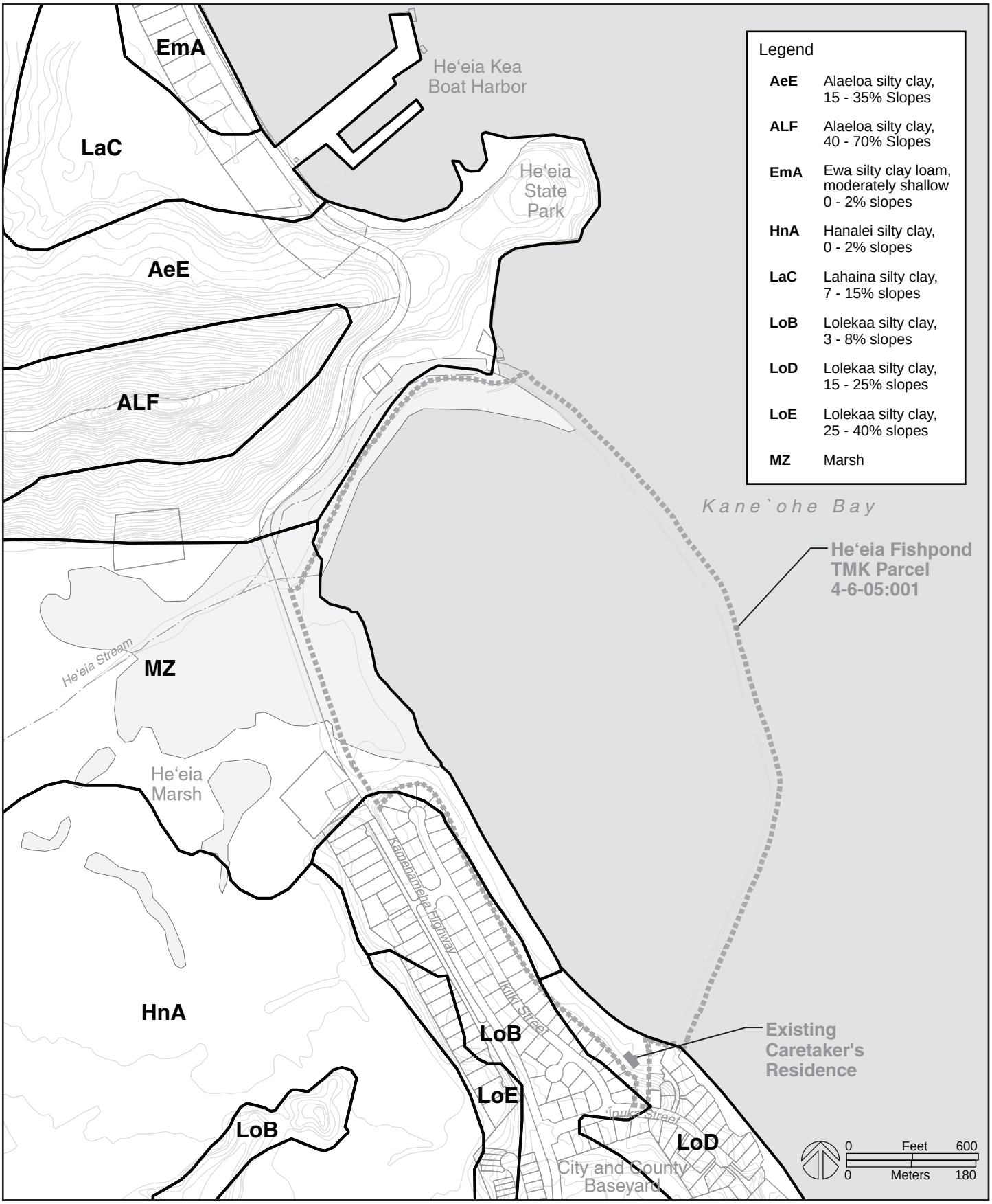
There are no perennial or intermittent streams in the immediate vicinity of the project site. The closest stream, He'eia Stream, drains the He'eia watershed and empties into the northwestern corner of the fishpond about one-half mile north of the project site and into Kāne'ohe Bay at a point just beyond the northernmost boundary of the fishpond wall.

Except for swamp mangrove areas growing along the edges of the fishpond and a short *'aukai,* which is a ditch that carries water to the sea, there are no surface water features or wetland areas within or near the project site. The *'aukai* is fed by a natural freshwater spring approximately 20 feet from the shore, and runs parallel to the shoreline for about 50 feet before emptying into the fishpond near the base of the pier. Taro that is irrigated by the *'aukai* is being grown near the mouth of the freshwater spring, and water from the filtration system for the aquaculture holding tanks is discharged into the *'aukai* below where the taro grows.

Stormwater runoff from the project site currently flows across the project site from higher to lower elevations, ponding in lower areas and eventually draining into adjacent near shore areas. There are no storm drain inlets within or directly adjacent to the project site, except for the municipal storm drain system within 'Īpuka Street that drains into Kāne'ohe Bay.

Pursuant to Section 303(d) of the Clean Water Act, the State of Hawai'I DOH has identified Water Quality Limited Segments (WQLS) around the State. WQLS are defined as water bodies within the State, which, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain State Water Quality Standards. The WQLS listing is commonly known as the "303(d)" list. Primary pollutants identified by the DOH include nutrients, suspended solids and sediment, turbidity, polychlorinated biphenyls (PCBs), bacteria, and phosphorus. The *Final 2004 List of Impaired Waters in Hawai'i* identifies Kāne'ohe Bay as a Category 5 water body, indicating that the water is impaired or threatened and a Total Maximum Daily Load[1] is needed. Kāne'ohe Bay is the largest embayment in the State of Hawaii with a surface area of 18 square miles. Its watershed is 140 square miles and average stream

[1] TMDLs are defined as the maximum amount of a given pollutant that may be discharged into a water body from all sources without violating water quality standards.



USDA Soil Conservation Service **Figure 6**

He'eia Fishpond Aquaculture Support Facilities EA
Ko'olaupoko, O'ahu, Hawai'i
Helber Hastert & Fee, Planners

flows are 64 million gallons per day (mgd) (State of Hawai‘i Office of Planning, Coastal Zone Management Program and State of Hawai‘i DOH Polluted Runoff Control Program, 2000). Pollutants of concern identified at the monitoring station closest to the project (He ‘eia Kea Small Boat Harbor Station 0003672) consist of pathogens, nutrients, and nitrogen.

2.4 Natural Hazards

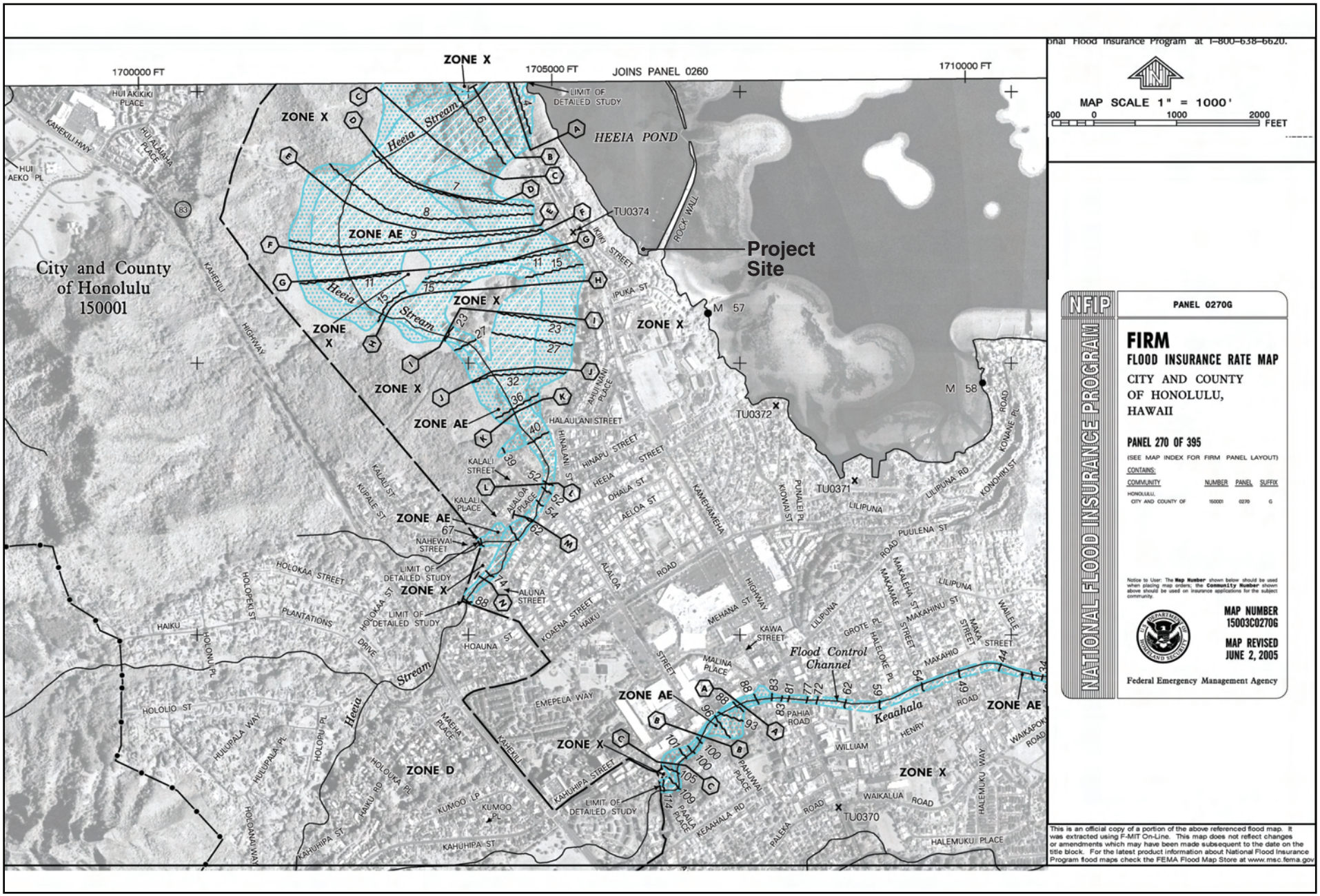
According to the Federal Emergency Management Agency Flood Insurance Rate Map (FIRM) Map No. 15003C0270G (June 2, 2005), the project site lies in Zone X, which denotes areas determined to be outside the 500-year floodplain (see Figure 7).

Based on evacuation zone maps prepared for the O‘ahu Civil Defense Agency, the project site is located outside of the tsunami evacuation zone. Public hurricane emergency shelters within a one-mile radius of He‘eia Fishpond include King Intermediate School and He‘eia Elementary School.

2.5 Scenic and Visual Resources

The project site is not visible from Kamehameha Highway or from ‘Īpuka Street due to the elevation of the roadway and the surrounding homes, and the project site’s location at the base of the driveway. ‘Īpuka Street is a typical neighborhood street, lined on both sides by single-family homes. The view of the project site from ‘Īpuka Street is limited to the driveway entrance and adjacent grassed yard that slope *makai* away from the street. None of the existing structures are visible from the street. A standard mailbox mounted on a wooden post sits curbside next to the driveway, and the property’s street number is painted on the curb. The concrete driveway and adjoining landscaped yard blends in with the single-family homes along ‘Īpuka Street, and the driveway could be easily mistaken for a residential driveway serving a home set below the road. There are no signs or distinct markers to suggest the presence of the fishpond. A metal gate across the top of the driveway is the only indicator to distinguish the property from neighboring driveways.

He‘eia State Park is the only public vantage point from which the project site is visible. From this vantage point at Kealohi Point, the project site is about seven-tenths of a mile (3,700 feet) to the south and appears as a narrow clearing amidst the dense mangrove and mature tree canopies that line the shoreline. From this distance, existing structures closest to the shoreline are scarcely visible, and the existing caretaker’s residence is obscured by the trees and structures on the property. Single-family residences located on the sloping hillside above the fishpond, as well as the large buildings associated with King Intermediate School and the City and County’s baseyard facilities, are visible behind and beyond the project site. In relation to the thick massing of shoreline vegetation and the expansive backdrop formed by the neighboring suburban landscape against the towering Ko‘olau Mountain Range, the project site is concentrated within a relatively small section of the shoreline that is overshadowed by the surrounding panoramic view.



Flood Insurance Rate Map

Figure 7

He'eia Fishpond Aquaculture Support Facilities EA
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2.6 Biological Resources

Flora. LeGrande Biological Surveys, Inc. conducted a botanical resources assessment of the project site in May 2006. Survey findings are summarized in this section and Section 3.6. The report is presented in Appendix B.

The project site consists of two vegetation types, including ornamental landscaping covering the majority of the project site and mangrove swamp vegetation dominating the borders near the fishpond. The section covered by ornamental landscaping is characterized by mowed or weedy grass lawns interspersed with various plantings. Grassed areas consist mainly of manienie *(Cynodon dactylon),* swollen fingergrass *(Chloris barbata),* West Indian dropseed *(Sporobolus indicus),* and the weedy kili'o'opu (*Kyllinga nemoralis*), and larger grasses such as guinea grass *(Panicum maximum)* and California grass *(Brachiaria mutica)* grow around the edges of the structures. Other plant species include kalo *(Colocasia esculenta)* and 'ahu'awa *(Cyperus javanicus)* growing in and along the fresh water *'aukai*, coconut trees adjacent to the *'aukai*, and several native species such as naupaka (*Scaevola sericea),* naio *(Myoporum),* a'ali'i *(Dodonaea viscosa),* pohinahina *(Vitex rotundifolia),* and achyranthes *(Achyranthes splendens var. rotundata)* around the portable pavilion. A monotypic stand of mangrove (*Bruguiera sexangula*), which is being actively cut and cleared, blankets the shoreline of the fishpond along the eastern and western boundaries of the project site. A hau (*Hibiscus tiliaceus*) thicket grows between the wetter mangroves and the natural slope to the north of the project site, and large trees of Java plum *(Syzygium cumini)* grow on the sloping hillside behind the existing caretaker's residence.

None of the naturally occurring plants on the project site are threatened and endangered species or species of concern (U.S. Fish and Wildlife Service, 1999a, 1999b, 2004; Wagner et. al., 1999). Although achyranthes *(Achyranthes splendens var. rotundata)* is an endangered plant variety, it is a planted specimen with no known provenance, and there are no protection measures in place for such plants.

Fauna. Mr. Phillip L. Bruner conducted an avifaunal and feral mammal field survey of the project site in April 2006. The findings are summarized in this section and Section 3.7. The report is presented in Appendix C.

Avian species and feral mammal species typically found in this region of O'ahu were recorded at the project site, including nine alien species of birds and one feral cat *(Felis catus)*. Other mammal species common to suburban areas such as rats (*Rattus sp.*) and the house mouse (*Mus musculus*) are also likely to occur on the property. No native land birds or native waterbirds were observed, although native waterbirds including the Black-crowned Night Heron or 'Auku'u *(Nycticorax Nycticorax)* and the Black-necked Stilt or Ae'o *(Himantopus mexicanus knudseni)* have been reported along the edges of the fishpond. While no seabirds were recorded during the field survey, the Black Noddy or Noio *(Anous minutus)* and Great Frigatebird or 'Iwa *(Fregata minor)* are expected in this region. The Pacific Golden-Plover or Kolea *(Pluvialis fulva)* is the only migratory shorebird that would use the limited lawn habitat within the project site, and was not observed due to the time of year when the survey was conducted. The Hawaiian Hoary Bat *(Lasiurus cinereus semotus),* which is known to forage over ponds and bays and roost in dense forests similar to the hau and mangrove vegetation, may occur on occasion in this area.

2.7 Cultural, Historical and Archaeological Resources

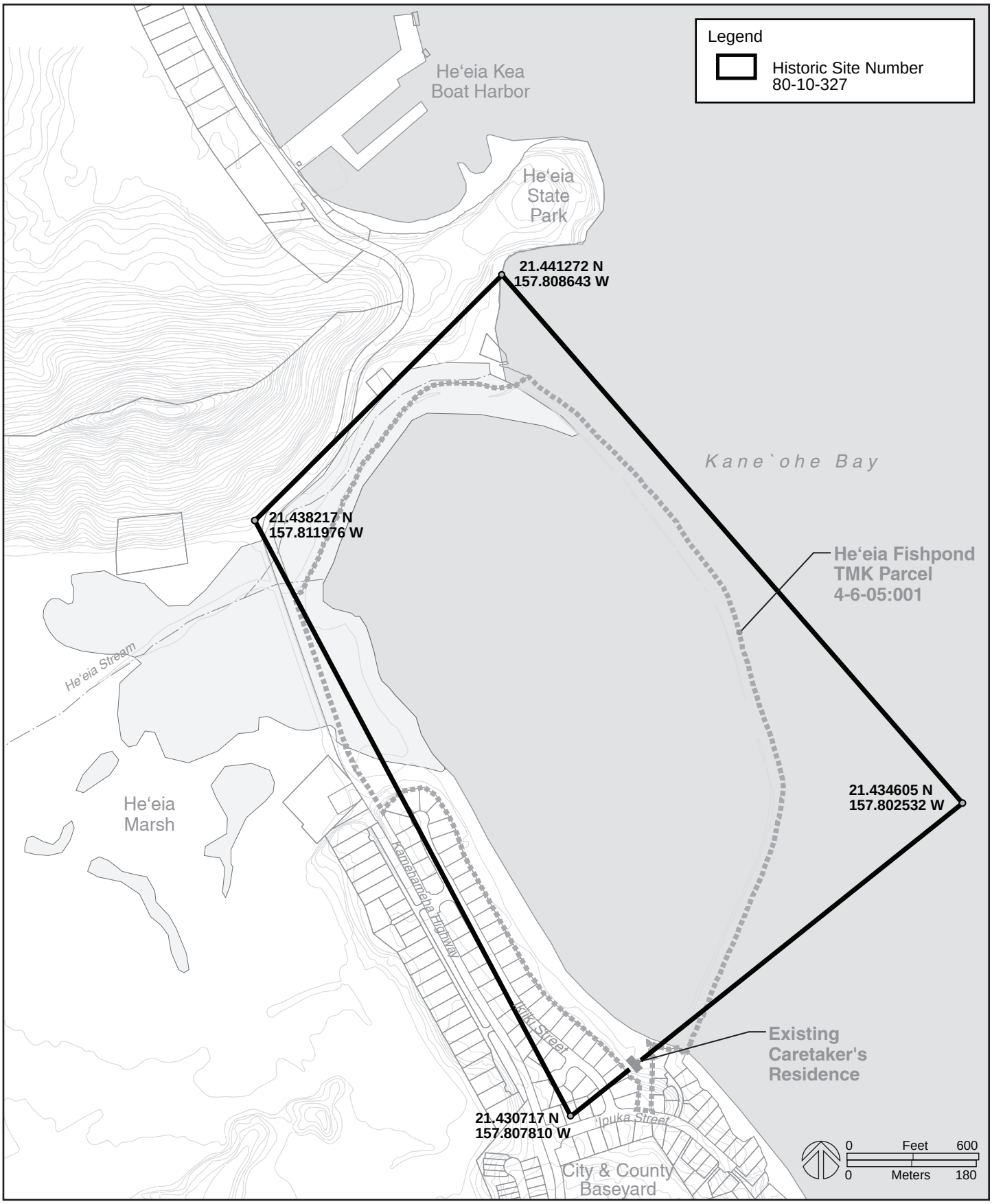
An Archaeological Assessment was conducted for the project site by International Archaeological Research Institute, Inc in June 2006. The report was revised in December 2006 to address State of Hawai‘i Department of Land and Natural Resources (DLNR) Historic Preservation Division (SHPD) concerns regarding additional subsurface testing to determine the presence of historically-significant deposits and the preparation of an architectural assessment to evaluate the significance of the Quonset hut in relation to the project site. The findings are summarized in this section and in Section 3.7. A copy of the full report is attached as Appendix D.

Results of the archaeological assessment indicate that Native Hawaiians used and occupied much of the lands within the *ahupua‘a* of He‘eia prior to European contact (pre-1778). In 1848, after a tenure system of private land ownership was adopted, the lands in He‘eia were granted to High Chief Abner Paki (Ku-ho‘oheihei-pahu Paki). Although Land Commission Awards indicate several family residences and cultivation plots in He‘eia, none appear to be associated specifically with the project site. Chief Paki’s daughter was Princess Bernice Pauahi, who upon her father’s death, received 5,800 acres of land which included the *ahupua‘a* of He‘eia. When Princess Pauahi died in 1884, her estate was used to establish Kamehameha Schools for the education of Native Hawaiian children. Today, He‘eia Fishpond remains under the jurisdiction of Kamehameha Schools.

In general, historic use of the lands in the He‘eia region was influenced by changes in the governing social, political and economic systems, including: (1) Native Hawaiian use and occupation; (2) large-scale sugarcane and pineapple plantation agriculture between the 1870s and 1930s; (3) military defense build-up during World War II; and (4) post-World War II suburban residential development. No archaeological studies have been conducted at the fishpond itself, but considerable survey and testing has been completed in adjacent land areas. Such archaeological investigations have recorded numerous archaeological sites, including agricultural and residential ruins and features, cultural deposits, religious artifacts and *heiau* and human burials, as well as remnants from World War II. The closest archaeological survey nearest to the project site was conducted for property immediately to the southeast of the project area. Although the surface survey and subsurface testing did not reveal any archaeological features or deposits, a historic Japanese cemetery dating from the plantation era was identified about 350 feet southeast of the project site at the end of ‘Īpuka Street.

The archaeological assessment conducted for this project included surface survey and limited subsurface testing in the area proposed for the new caretaker’s residence. The surface survey included visual inspection of the ground surface and a 10 meter (32.8 feet) radius buffer at the areas planned for construction and beneath the existing Quonset hut. No archaeological remains were identified during the surface survey. The limited subsurface testing included three auger borings more than 2 meters (6.6 feet) below the surface. Three separate clay layers identified as a result of the auger borings suggest that no significant archaeological deposits are present within the area and depth of planned construction activities.

He‘eia Fishpond (Site 50-10-80-0327) is the most significant archaeological feature in the vicinity of the project site. Although the date of construction is unknown, the fishpond is expected to have been constructed around 1400 AD. While almost all of the coastal fishponds use the shoreline as a natural landward barrier, He‘eia Fishpond is unique in that the fishpond



Boundaries of Historic Site Number 80-10-327 **Figure 8**

He'eia Fishpond Aquaculture Support Facilities EA
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wall completely encircles the entire fishpond, including on the land side. The landward boundary wall prevents infiltration of surface runoff and flood waters, and gates along the north side of the wall bordering He‘eia Stream provide measures to monitor freshwater flow and control salinity. Encompassing about 88 acres, He‘eia Fishpond is listed on the NRHP as an excellent example of traditional Native Hawaiian aquaculture and for its artistic and engineering values. Figure 8 presents the official boundary of the historic site, as depicted in the NRHP nomination form. The site boundary intentionally encompasses a “buffer” area comprised of additional land areas adjacent to the fishpond, including the project site for the Proposed Action. This “buffer” area provides a mechanism for resource management, and is considered a non-contributing element to the defined significance of Site 0327.

The Quonset hut presently located within the project site was re-located to the area after World War II. It is considered a noncontributing element to the significance of Site 0327. Although a number of military bunkers, gun emplacements, Quonset huts, and other military facilities were constructed around O‘ahu during World War II, no such features were located within the project area or its immediate vicinity at that time. Informant interviews revealed that the Quonset hut was one of a number of Quonsets moved to the project area in the 1960s, and was used as a caretaker’s residence since the 1970s (Prasad 2006). Although the primary use has been as a caretaker’s residence, it has also been used for equipment storage and general office support.

The Quonset hut is located on artificial land fill of 20th-century origin, possibly overlaying older layers that have filled a former marshy shore zone. A 20th-century origin is suggested by uniformly sized gravel produced by a rock-crusher not available before the early 20th century. Documentation of the Quonset hut indicates that the existing structure is consistent with the typical model, except for several modifications and additions. Modifications include cutting of windows and doors, trimming and reshaping of the roof curvature, and adding new awnings and a new structural component. The architectural assessment concluded that the Quonset hut does not retain the integrity of location, architectural design, or association to be considered a significant historic resource, and does not contribute to the archaeological significance of He‘eia Fishpond as nominated in the NRHP.

2.8 Air Quality and Noise

Land uses surrounding the project site are primarily residential in nature. There are no major sources of air pollution in the immediate vicinity of the property to jeopardize air quality, with the exception of the periodic burning of mangrove along the edges of the fishpond. Mangrove burning aids in the permanent removal of mangrove, and is permitted by the State of Hawai‘i DOH. The disposition of the aquacultural activities, combined with the prevailing on-shore direction of the tradewinds, and the predominance of residential uses and open space areas surrounding the project site contribute to air pollutant levels below State and Federal ambient air quality standards.

Noise levels in the vicinity of the project site are relatively low, consistent with the character of the surrounding residential uses. The primary source of noise at the project site results from activities associated with the existing fishpond operations and includes power tools, small boat outboard engines, the chatter of visiting groups, and vehicular noise from cars, school buses, and delivery trucks. Secondary noise sources are related to the neighboring residences, traffic on Kamehameha Highway, and vegetation rustling in the wind.

2.9 Traffic and Roadways

Access to the project site is from ʻĪpuka Street off of Kamehameha Highway (State Route 830). ʻĪpuka Street is a standard two-lane roadway owned by the City and County of Honolulu. The road is a typical improved residential street lined on both sides by single-family residential driveways, curbs and gutters, planting strips and sidewalks. On-street parking is available on both sides of the street. ʻĪpuka Street runs *makai* of Kamehameha Highway, and intersects with Ikiiki Street and ʻĪpuka Place before ending in a cul-de-sac. Both Ikiiki Street and ʻĪpuka Place extend in a north-south direction perpendicular to ʻĪpuka Street. The roadway width of ʻĪpuka Street varies, measuring 36 feet at its widest point where it intersects with Kamehameha Highway and about 32 feet at the fishpond driveway before tapering to a width of 24 feet at the entrance to the hammerhead cul-de-sac.

Existing bus routes that service the He'eia area in the general vicinity of the project site include Route 55 Kāneʻohe Circle Island, Route 65 Kāneʻohe-Kahaluʻu and Route 86A Kāneʻohe-Kahaluʻu-Pearl Harbor Express. Route 55 runs between Ala Moana and Kāneʻohe via Wahiawā and the North Shore (i.e., circles the island), and Route 65 runs between Ala Moana and Kahaluʻu via the Likelike Highway. Route 86A is an express bus route that provides service between Kāneʻohe-Kahaluʻu and Pearl Harbor in the morning, and then runs in the other direction in the afternoon. All routes run on Kamehameha Highway and stop near the ʻĪpuka Street intersection.

Traffic along ʻĪpuka Street is limited to local traffic associated with the residences and the fishpond. Regular fishpond operations are conducted daily (Sunday through Saturday) during daylight hours, resulting in between 5-10 staff vehicles traveling on ʻĪpuka Street. Commercial delivery trucks are typically expected one or two times per week. Additional weekday traffic generated by visiting school and community groups is limited to normal school hours, with most groups arriving between 8:30 and 9:00 am and departing between 11:30 am and 2:00 pm, although some groups may extend their visits into the afternoon beyond standard school hours. School and community groups currently programmed for regular fishpond visits include Kamehameha Schools, Native Hawaiian Charter School programs, King Intermediate School and UH-Manoa. Individual school fieldtrips and other special group visits are accommodated based on availability. Depending on the size of the group, transportation for weekday visits is provided by either private vehicles, passenger vans or shuttle buses that park on-site at the base of the driveway or a maximum of two full-size school buses that load/unload and park on ʻĪpuka Street near the driveway entrance. School bus loading/unloading is conducted on ʻĪpuka Street because the slope of the driveway and the limited turn-around space on the project site make it difficult to maneuver the buses, and as a courtesy to the homes adjacent to the driveway. School buses typically enter ʻĪpuka Street from Kamehameha Highway and turn onto Ikiiki Street, then reverse down ʻĪpuka Street and stop alongside the curb near the fishpond driveway. School bus engines are turned off when the buses are idle and parked.

Table 3 summarizes the parking requirements for the various activities scheduled at the fishpond. The information, which is based on current program schedules, represents typical daily operations and is subject to change as individual programs are modified. Existing on-site parking, which consists of 6 parking spaces *makai* of the driveway and adjacent stacked parking (total), is generally sufficient for weekday staff requirements. While most weekday visitors are transported by bus or van, a small segment arrives by car and uses public on-street parking. In

general, the demand for on-street parking during the week is limited, with increased demand occurring on Saturdays. Saturday events consist of community service workdays twice a month (average between 40 and 100 volunteers arriving by private vehicles, 15-20 cars average parked on the public street), a monthly Hawaiian Language enrichment activity (average 30-40 participants, on-site parking maximized and up to 10 cars parked on the public street), and special “open house” and fundraiser events. Fundraiser events which typically generate a large number of participants are held between 4 and 6 times per year. During typical fundraisers and other special community events when large numbers of attendees are expected, visitors park on the public streets and additional arrangements are made to provide off-site parking at neighboring properties (such as He‘eia State Park, King Intermediate School and Windward Mall) with shuttle service to the fishpond. While parking for most visiting groups and events is accommodated on-site or along ‘Īpuka Street, POH, the current fishpond operator, is sensitive to the surrounding neighbors and works to limit the frequency and demand for on-street parking by arranging an off-site parking location when large turnouts are expected.

Table 3
Parking Requirements

	Monday – Friday	**Saturday**	**Sunday**
Fishpond staff	8 cars average park on-site daily	8 cars average park on-site	8 cars average park on-site
Educational groups (elementary to high school students)	• 2 passenger vans or shuttle buses park on-site (average 3 times/week) • 2 school buses load/unload/park on ‘Īpuka Street (average 2 times/week)	n/a	n/a
University groups	Average 5 cars use public on-street parking (average once a week)	n/a	n/a
Community groups/visits (1st & 3rd Saturday)	n/a	Up to 10 cars use public on-street parking	n/a
Community workdays (2nd & 4th Saturday)	n/a	Average 15-20 cars use public on-street parking	n/a
Fundraisers and Special Events (4 -6 events/year)	n/a	Arrangements made for off-site parking w/ shuttle service, average 15-20 cars use public on-street parking	n/a

Many residents living adjacent to the fishpond generally dislike the traffic, on-street parking demand, school buses and noise associated with fishpond activities and events. POH and KS are aware of the neighbors’ complaints, and have implemented various strategies to address

neighbors concerns and minimize the disturbances. Specific strategies that are currently being used by POH in response to neighbors concerns are described below:

- A quarterly newsletter is delivered to all 'Īpuka Street and Ikiiki Street homes to inform neighbors of future activities and events.
- POH contact information (phone, email, mailing address and POH staff list) is listed in each newsletter so that neighbors know how to submit their questions or concerns
- A complaint log is used to document neighbors concerns, with specific procedures to ensure that each incident is responded to appropriately
- Carpooling is encouraged to minimize on-street parking by fishpond visitors
- Fishpond visitors are asked to be respectful and considerate of the neighbors
- School buses that load/unload and wait on 'Īpuka Street turn off their engines when idle
- Community open house events are conducted several times a year for neighbors to visit the fishpond and communicate with POH staff
- Most activities are scheduled during daylight hours to be considerate to neighbors.

2.10 Utilities

Water. Domestic water service is currently provided by the Board of Water Supply from 'Īpuka Street. Existing service is via an existing 5/8-inch water meter located to the west of the existing driveway apron. The maximum capacity for this meter is 20 gallons per minute (gpm) (Bow Engineering and Development, Inc. July 2006). The nearest fire hydrant is located on 'Īpuka Street approximately 160 feet east of the existing driveway.

Wastewater. Wastewater generated by the previous caretaker's residence was handled by a cesspool system, which is no longer operational. The project site is not connected to the City's wastewater collection system, and is currently served by two portable toilets. Water from the outdoor rinsing stations and sinks is directed into nearby grassed areas.

Solid Waste. The City and County of Honolulu currently provides domestic solid waste collection for the project site. Trash collection occurs twice a week, with service on Mondays and Thursdays.

Electrical Power and Telephone. Electrical power and telephone service is currently provided by HECO and Hawaiian Telcom, Inc. from systems on 'Īpuka Street. Both electrical and telephone distribution systems are underground in the vicinity of the project area.

2.11 Emergency, Fire and Police Protection

The City and County of Honolulu Police Department provides police protection services to the project site and surrounding areas. The project site falls within the jurisdiction of the Honolulu Police Department's (HPD) District 4 (Kāne'ohe/Kailua/Kahuku) command. District 4 is HPD's

largest patrol area, extending from Makapu‘u Point to Kawela Bay on the Windward side of O‘ahu.

The City and County of Honolulu Fire Department Battalion 3 provides fire protection services for Windward O‘ahu from Makapu‘u Point to Kawela Bay. The Kāne‘ohe Fire Station Number 17 is located in the heart of Kāne‘ohe town, approximately 1.5 miles from the project site. The next station closest to the project site, Kahalu‘u Fire Station Number 37, is located nearly four miles from the project site. Station 17 serves as Battalion 3 headquarters and is equipped with an engine company and a ladder company. Station 37 is equipped with an engine company.

The State of Hawai‘i contracts with the City and County of Honolulu Department of Emergency Services to provide emergency medical services and emergency medical ambulance services on O‘ahu. The ambulance unit closest to the project site is based at the Kāne‘ohe Fire Station. A Rapid Response Paramedic Unit providing additional coverage to Windward O‘ahu is based at the Ka‘a‘awa Post Office.

2.12 Socio-Economic Factors

Population and Demographics. Table 4 presents demographic information for the He‘eia Census Tract (105.05) and the island of O‘ahu for the years 1990 and 2000. The He‘eia Census Tract (105.05) generally includes the area bounded by He‘eia Stream to its intersection with Kahekili Highway, Haiku Road, and Lilipuna Road.

In 2000, the population of the He‘eia study area was 3,512 persons, of which nearly 43% were reportedly Asian, 21% White, and 9% were Native Hawaiian or other Pacific Islander. The overall population of the He‘eia study area decreased by almost 3% between 1990 and 2000, while the islandwide population increased by almost 5% (an increase of about 40,000 persons). In 2000, the median age in He‘eia was 43.7, which was older than the islandwide median age of 35.5. The population of the He‘eia study area showed the greatest changes in persons over the age of 65 (+103%) and those between the ages of 20 and 34 (-38%), in contrast to Honolulu County where the groups that demonstrated the largest changes were the elderly population (those over age 65) (+28%), the adult population between the ages of 35 and 64 (+16%) and persons between the ages of 20 and 34 (-16%). Comparison of the changes in the population distribution indicates that the He‘eia study area is aging faster than the overall county population.

There were 1,067 households and 1,092 available housing units in the He‘eia study area in 2000, indicating a slight increase since 1990 (+1% and +2% respectively). In comparison, the number of households and available housing units at the county level increased by 8% and 12% between 1990 and 2000, supporting the county policies that direct population growth to ‘Ewa and Central O‘ahu. The average household size in the He‘eia study area (3.28) was slightly higher than the county average (2.95). Likewise, the He‘eia study area had a higher median household income ($76,626) and a higher percentage of owner-occupied housing units (89%) than at the county level ($51,914, 52% owner-occupied).

Table 4
Population Trends

	He'eia (Census Tract 105.05)		Honolulu County	
Year	**2000**	**1990**	**2000**	**1990**
Population	3,512 (-2.8 %)	3,612	876,156 (+4.7%)	836,231
Race				
White	740 (21.1%)	1006 (27.8%)	186,484 (21.3%)	264,372 (31.6%)
Black/African Amer.	11 (0.3%)	23 (0.6%)	20,619 (2.4%)	25,875 (3.1%)
Amer Ind/Alaskan Nat	2 (0.1%)	9 (0.2%)	2,178 (0.2%)	3,532 (0.4%)
Asian	1,504 (42.8%)	2543 (70.4%)	403,371 (46.0%)	413,349 (49.4%)
Nat Hawn/Othr Pac Isl	320 (9.1%)	N/A	77,680 (8.9%)	113,110 (13.5%)
Some other race	26 (0.7%)	40 (1.1%)	11,200 (1.3%)	15,993 (1.9%)
Two or more races	909 (25.9%)	N/A	174,624 (19.9%)	N/A
Sex and age				
Male	1,752 (49.6%)	1,767 (48.9%)	440,518 (50.3%)	425,994 (50.9%)
Female	1,770 (50.4%)	1,845 (51.1%)	435,638 (49.7%)	410,237 (49.1%)
Median Age (years)	43.7	--	35.7	32.2
≤ 19	808 (23.0%)	875 (24.2%)	232,024 (26.5%)	228,672 (27.3%)
20-34	518 (14.8%)	839 (23.2%)	196,000 (22.4%)	232,037 (33.9%)
35-64	1,575 (44.8%)	1597 (44.2%)	330,395 (37.7%)	283,690 (33.9%)
≥ 65	611 (17.4%)	301 (8.3%)	117,737 (13.4%)	91,832 (11.0%)
Total households	1,067	1,056	286,450	265,304
Average hshld size	3.28	3.42	2.95	3.02
Median hshld income	$76,626	$64,886	$51,914	$40,581
Total housing units	1,092	1,068	315,988	281,683
Occupied units	1,067 (97.7%)	1,056 (98.9%)	286,450 (90.7%)	265,304 (94.2%)
By owner	950 (89.0%)	943 (89.3%)	156,290 (49.5%)	137,910 (49.0%)
By renter	117 (11.0%)	113 (10.7%)	130,160 (41.2%)	127,394 (45.2%)

Economic Factors. POH is a 501(3)(c) non-profit organization founded to use the restoration, preservation and utilization of He'eia Fishpond as a mechanism to provide collaborative cultural and ecological educational programs and community-based economic development opportunities . As stated in their vision statement, POH's mission is to "implement values and concepts from the model of a traditional fishpond to provide physical, intellectual, and spiritual sustenance for our community." Established in 2001, POH currently serves approximately 2,500 participants annually.

POH employs a total of 16 staff members, including 5 full-time and 11 part-time employees (i.e., 9 full-time equivalent (FTE) jobs). Positions include a variety of types and levels of work, including management and administrative responsibilities, physical maintenance of the fishpond and facilities, technical aquaculture operations, and educational program instruction. Based on 2005 wages, annual FTE compensation paid by POH amounted to approximately $380,000.

2.13 Traditional Customs and Practices

A Cultural Impact Assessment (CIA) prepared in accordance with the Office of Environmental Quality Control (OEQC) Guidelines for Assessing Cultural Impacts (1997) was conducted for the project site by International Archaeological Research Institute, Inc. (June 2006). The findings are summarized in this section and in Section 3.13. A copy of the full report is attached as Appendix E.

The identification of cultural resources, practices and beliefs associated with the project area comes primarily from oral/ethnographic sources and review of written documents. Individuals and organizations with knowledge of the area were consulted, including various *kupuna,* former and current residents from the area, former fishpond caretakers, and staff from Paepae o He'eia and Friends of He'eia.

The project site is located within the *ahupua'a* of He'eia, which extends from the Ko'olau Mountains across Kāne'ohe Bay to Mokapu Peninsula and includes the offshore islets of Moku lo'e (Coconut Island). Translated literally, the name He'eia means octopus *(he'e)* fish *(i'a),* possibly named for the octopus that swarm the waters at a certain time of the year. Legends associated with the naming of He'eia attribute the name to *he'e 'ia,* meaning "washed" in reference to: (1) a tidal wave that swept natives out to sea and back to fulfill a prophecy during a battle with people from Leeward O'ahu; and (2) the deities Haumea and Wākea being swept out to sea before being saved by the god Lono.

He'eia Fishpond is a living artifact of traditional Hawaiian culture. Although the date of pond construction is not known, it is believed to be associated with several members of Hawaiian royalty. Whitman (1815) provides one of the earliest descriptions of He'eia Fishpond:

> "This wall is about one mile in length and extends from the southern part of a small bay to a point of land [Lae O Ke 'Alohi] jutting out about one mile into the sea. It is wide enough on the top for four men to walk abreast, and over the wall, we passed several gates of strong wicker work through which the water had free passage. Here we observed thousands of fish, some of which were apparently three feet long. A small hut at one end of the wall is the residence of an old man who guards the fish. This pond is the property of the King [Kamehemeha I] and no fish are allowed to be taken out of it without his orders, and there had not at this time been any taken out for several years (in Henry 1993:19)."

Traditionally, there are many stories and legends associated with He'eia Fishpond. Meheanu is believed to be the traditional female guardian spirit who watched over He'eia Fishpond. With supernatural powers to change herself into many different forms, Meheanu lived at Luamo'o (Site 50-80-10-0326), a small land area adjacent to the pond near the mouth of He'eia Stream. Like Luamo'o, other traditional sites noted in the CIA (Kalaeulaula Heiau and Koamano Reef) are also located a fair distance from the project site. Kalaeulaula Heiau (Site 50-80-10-0324) was a large structure on nearby Kealohi Point that was destroyed by the sugar and pineapple plantations. Koamano Reef (Site 50-80-10-0325), an oval-shaped reef where numerous sharks lived, is presently located about 660 feet *makai* of the fishpond's outer wall.

According to the information presented in the CIA, non-Hawaiian immigrants such as the Chinese and Filipino have been the primary caretakers of the fishpond in the past 100 years. Three guardhouses stood along the walls of the fishpond in the 1960s. The occupants (guards) were Filipino men who remained in the area to work the fishpond after the sugar plantations closed. The caretaker at the time was a Chinese named Choi who had a house directly above the middle of the pond. The house, which burned down in 1978, was located in the currently undeveloped area adjacent to the Ali'i Bluffs subdivision.

Damage to the outer wall of the fishpond caused during the Keapuka Flood of 1965, as well as the aggressive growth of mangrove, has seriously hindered the use and productivity of the fishpond. After remaining idle for more than 25 years, KS entered into an agreement in the early 1990s with Ms. Mary Brooks who planned to restore the fishpond to its former working condition and establish a commercial aquaculture farm at the pond. Operating as a sole proprietorship, Ms. Brooks partially repaired the fishpond wall and raised limu and fish in moderate commercial quantities until 1999 when the tenancy agreement was not renewed. The decision to discontinue the agreement was due to significant labor and economic constraints and losses that resulted from poaching and environmental conditions (such as increased water temperatures and/or decreased salinity).

The current fishpond tenant, POH, has taken on the restoration and preservation goals of the former commercial enterprise, with an emphasis on reviving and expanding traditional and historic cultural knowledge. In addition to restoring the structural integrity of the fishpond wall and developing sustainable fishpond management practices, POH coordinates activities and programs at the fishpond to foster and advance traditional Native Hawaiian cultural values and practices. Activities have been designed to incorporate traditional concepts such as ahupua'a management, place names and historical significance of the area, fishpond construction and operation, traditional aquaculture practices, and the application of traditional language and customs. Current beneficiaries actively participating in POH programs include students from Kamehameha Schools, area schools, and various Hawaiian charter schools and Hawaiian language immersion programs.

3.0 SUMMARY OF ENVIRONMENTAL CONSEQUENCES AND MEASURES TO MITIGATE ADVERSE EFFECTS

3.1 Land Use Compatibility

The Proposed Action would not change the use of the property or the character of the surrounding neighborhood. The proposed improvements would be designed to meet the facility needs of the existing aquaculture program and enhance the current operations. The site would continue to support the fishpond and its associated activities, and the current aquaculture use and intensity of activities would remain unchanged. Fishpond operators are sensitive to the quality of the surrounding residential neighborhood and work to foster a strong, cohesive relationship with the community. Construction of the proposed office, storage and sanitation improvements would increase operational efficiency and promote the long-term viability of the aquaculture program, in addition to satisfying general health and safety objectives. Most importantly, the replacement of the former residence would allow a *kia'i loko* (fishpond caretaker) to once again live on-site. A permanent caretaker would ensure a constant presence at the fishpond to guard against poaching and theft, relieving the strain on the surrounding neighbors who look after the fishpond property and watch for suspicious activities when staff is off-duty.

3.2 Topography and Soils

The Proposed Action would not significantly alter the existing topography or soils found within the project site. The general topographic profile of the project site would be retained, and there would be minimal grading and ground disturbance. Given the relatively level topography of the areas where construction is proposed, minor grading and groundwork would be limited to preparation work for the foundation of the new caretaker's residence/aquaculture facilities, parking improvements and retaining wall. A grading permit would be obtained if determined to be needed. Minor trenching would be required to connect the project's wastewater pump station to the City's sewer lateral on 'Īpuka Street. Construction activities would employ best management practices to prevent soil loss and sediment discharge from the project site. If any releases of hazardous substances, pollutants or contaminants are found to have occurred on the site, they will be abated according to applicable Federal and State requirements.

3.3 Surface Waters

The Proposed Action would not significantly impact surface water resources. There are no perennial or intermittent streams or wetland areas in or near the project site, and the only surface water feature near the project site is the natural *'aukai* that drains into the fishpond near the existing pier. Both the *'aukai* and the mangrove swamp areas growing along the edges of the fishpond are located *makai* of the City's 40-foot shoreline setback area, and would not be disturbed or altered as part of the Proposed Action.

With the exception of the paved driveway and existing structures on the property, the majority of the project site is open and undeveloped, either covered with dirt or vegetation, with no visible signs of storm water erosion. The Proposed Action would result in a small increase in the amount of impervious surfaces on the site due to the construction of the proposed improvements, including paved parking near the top of the driveway, a paved parking stall with

access aisle and pathway to satisfy ADA requirements, sidewalks and the new buildings. The proposed facilities would replace nearly 2,300 square feet of the pervious area currently found on the site with impervious surfaces, covering roughly 12% of the project site with impervious surfaces (almost 3,900 total square feet of impervious surfaces, including the area currently covered by the Quonset hut). The existing sheet flow drainage would be maintained, with storm water runoff continuing to sheet flow across and away from the project site towards the fishpond. Landscaping and grassed areas would further minimize the rate of storm water runoff. Construction activities could increase erosion hazard, primarily when the foundation for the parking and building are being prepared. Best management practices would be employed to minimize soil loss and control erosion into the fishpond during construction, including the use of silt fences and sand bag barriers, and scheduling construction activities during drier months.

The Proposed Action, which is limited to uses that are accessory to aquaculture, would not be a significant source of pollutants or toxins, and therefore would not significantly increase the potential for pollutants or toxins to impact the water quality in Kāne‘ohe Bay. An existing cesspool that served the previous residence would be backfilled and closed in accordance with State DOH regulations. Project activities and uses would comply with State of Hawai‘i DOH regulations determined in HAR, Title 11 Chapter 54 – Water Quality Standards, Chapter 55 – Water Pollution Controls, and Chapter 62 – Wastewater Systems.

3.4 Natural Hazards

The Proposed Action would not significantly increase the risk of human health or property due to exposure to natural hazards. The project site is located in an area with minimal flood hazard risk and is outside of the tsunami evacuation area.

3.5 Scenic and Visual Resources

The existing Quonset hut sits at the base of a low bluff, and is not visible from ‘Īpuka Street due to its location tucked into the hillside or from nearby Ikiiki Street homes situated on the bluff immediately behind the project site (see profile presented in Figure 4). The caretaker’s residence proposed to replace the Quonset hut would be a two-story building sited in the general vicinity of the existing Quonset (see Figure 4 for comparison of respective footprints). The scale of the proposed improvements would be comparable to a single-family residential development, and would not interfere with or detract from any coastal viewplanes or views of Kāne‘ohe Bay. The proposed two-story caretaker’s residence would be no more than 25 feet in height (about 10 feet higher than the existing Quonset) and would not impede distant views of Kāne‘ohe Bay currently enjoyed by the neighboring homes. Given the ground elevation differences between the proposed caretaker’s residence (estimated at about 10 feet above MSL based on preliminary studies) and the neighboring homes up on the bluff (about 45 feet above MSL), the tallest point of the proposed caretaker’s residence would be about 10 feet below the ground elevation of the homes on the bluff (subject to change in forthcoming design process). The proposed office/storage building is planned as a single-story structure with an estimated peak roof height of about 16 feet above MSL, about 9 feet shorter than the proposed adjacent caretaker’s residence. Although the rooflines may be visible from the homes immediately adjacent to the project site, the proposed structures would appear well below the horizon viewplane. Like the existing Quonset hut, the proposed structures would be obscured by existing trees and vegetation on the project site and would be minimally visible from surrounding

coastal and offshore areas. Complementary design elements and building colors would to used to maintain the character and integrity of the site. Paved parking to accommodate two vehicles would be constructed in a section of the landscaped yard that fronts ‘Īpuka Street, with appropriate landscaping (such as a hedge to screen the parking and retention of existing vegetation) to complement the existing residential character along ‘Īpuka Street.

3.6 Biological Resources

The Proposed Action would not significantly impact biological resources. The proposed development would be concentrated within a portion of the property that had been previously developed and is currently used to support aquaculture activities at the fishpond. There are no rare, threatened or endangered listed bird, mammal or plant species protected by Federal and State regulations, or species of concern that would be affected by the Proposed Action. Vegetation observed within the project site is composed mostly of ornamental landscaping that is being actively maintained. The proposed development would not displace any mature trees, and would retain as much of the existing vegetation as possible. Although an endangered plant variety *(Achyranthes splendens* var. *rotundata)* is present within the project site, it was determined to be a planted specimen with no known provenance and does not possess the same protection status as wild extant plants. Fauna likely to frequent the project site consists primarily of bird and mammal species typically found along the shoreline in this region. While it is possible that the endangered Hawaiian Hoary Bat *(Lasiurus cinereus semotus)* may occur in this area on occasion to forage over the bay and roost in the thick hau and mangrove forests adjacent to the project site, the proposed development would not disturb any unique habitat resources important to native or protected birds and mammals and would not have any measurable impact on birds or mammals in this region of Kāne‘ohe.

3.7 Cultural, Historical and Archaeological Resources

The Proposed Action would not be expected to have significant impacts on cultural, historical and archaeological resources. The project site has been previously disturbed, and is not expected to contain any historical, archaeological or Native Hawaiian cultural resources. Surface survey and limited subsurface testing identified no significant archaeological remains, suggesting that no culturally-significant materials or deposits are present within the project site. The SHPD determined that the archaeological assessment was performed acceptably and that development of the Proposed Action would have no effect on significant historic or archaeological resources. In the event that any significant archaeological resources or deposits are found during the development of the project, construction would be halted and immediate consultation with the SHPD would be sought in accordance with applicable regulations.

Demolition of the Quonset hut and construction of the new facilities would have no foreseeable adverse effect on historic or archaeological resources. The Quonset hut does not retain the integrity of location, design, or association to be considered a significant historic resource, nor contribute to the archaeological significance of He‘eia Fishpond as nominated in the NRHP (Site 50-80-10-0327). The project site is within the official boundary of Site 50-80-10-0327 as listed in its nomination for the NRHP, but is outside the physical structure of the fishpond and does not contain any elements contributing to the significance of the site as listed in its NRHP nomination. Current construction plans would not create any adverse impact within the boundary of Site 0327, and the intended use of the new building would not be significantly different from established activities in the area. Siting of the new caretaker’s residence and the

use of appropriate design elements that complement the character of site would minimize any possible visual impacts within the boundary of Site 0327.

The restoration, preservation and long-term use of He'eia Fishpond is considered an indirect positive benefit of the Proposed Action. Recent advancements in the repair and preservation of the fishpond are attributable to the efforts of POH, a non-profit organization that is working in partnership with the landowner (KS). Development of the Proposed Action, which is intended to provide facilities that increase staff productivity and enhance fishpond management, would strengthen POH's organizational stability and economic viability, thereby ensuring the status of the fishpond as a pristine functional historic site. Ensuring the organization's long-term survival is essential because without an organization like POH to spearhead the preservation efforts, it is likely that the goals of fishpond restoration and preservation would remain unrecognized.

3.8 Air Quality and Noise

The Proposed Action would not result in significant long-term impacts to air quality or ambient noise levels. Since the proposed development provides facilities to support the existing aquaculture program and house a full-time caretaker, the Proposed Action would not introduce any new activities or facilities that serve as major sources of air or noise pollutants. As such, the air quality and noise level conditions associated with the Proposed Action would be expected to be similar to the present situation.

Temporary short-term construction-period noise and air quality impacts are expected due to the operation of heavy equipment and trucks and the production of fugitive dust and exhaust fumes. Contractors would be required to comply with the State DOH Air Pollution Control, Fugitive Dust regulations (Chapter 11-60, 1-33, HAR) to minimize dust emissions. Standard construction and erosion control techniques, such as the use of dust control measures, frequent watering of exposed soil, and the use of windscreens, could help to control the dust generated from the construction site. Earth-moving equipment, such as bulldozers and diesel-powered trucks, would be the dominant sources of noise during construction. With the noise level of typical construction equipment estimated to be approximately 85 dBA at a distance of 50 feet (USEPA, 1971), nearby homes would probably be impacted by the construction noise due to their proximity to the project site. Compliance with the State DOH Community Noise Standards (Chapter 11-46, HAR) would help to minimize potential off-site construction period noise impacts. The use of appropriate measures, such as scheduling demolition and construction activities during appropriate times and/or installing mufflers on construction equipment and vehicles with exhaust systems, would further minimize the noise impacts to surrounding neighbors.

3.9 Traffic and Roadways

The Proposed Action, which consists of a single family residential unit and support facilities for the existing aquaculture operations, would not significantly increase the total volume of traffic in the long-term. The proposed improvements would be designed to support the existing aquaculture program, and would not result in any operational changes to the present use of the site or the intensity of use. No foreseeable changes in staffing levels and visitation patterns are anticipated. Existing traffic patterns and volumes would be expected to continue, and additional traffic would be limited to residential traffic related to the caretaker's residence. Since transportation for staff and aquaculture program participants typically consists of school buses,

vans or private vehicles, no impacts to public transportation would be anticipated. Parking improvements, which would be planned to accommodate typical daily staff parking requirements (average 8 vehicles), would consist of 11 parking stalls (including one handicapped-accessible stall). Improvements would include a turnaround area (cul-de-sac) at the base of the driveway large enough for passenger vans to turn around. On-street parking would still be used for school buses and special community events, with continued consideration and increased sensitivity to the surrounding residential community.

Various management strategies are currently being used to minimize neighbors' concerns about traffic and on-street parking (see Section 2.9). In response to neighbors' complaints that disturbances from the current use of on-street parking, bus and visitor traffic, and general noise are still occurring, the Proposed Action would include additional strategies to address neighbors' on-going concerns. The strategies that are being considered would supplement existing management efforts, and would be developed in coordination with DPP during the CUP review process. Possible strategies, which were presented to the Kāne'ohe Neighborhood Board at its December 2006 regular meeting, may include the following:

- Limiting the number of cars that use on-street parking (5-7 cars) during Saturday events
- Negotiating use of an off-site parking area with shuttle service to the fishpond for community workdays and other Saturday events as funding is available
- Creating an on-site turnaround area for 15-passenger vans to minimize reversing
- Minimizing bus drop-offs to the extent possible, and
- Posting a staff person on 'Īpuka Street near the fishpond driveway to monitor logistics during Saturday events.

Construction period traffic would result in the addition of large trucks and construction equipment on 'Īpuka Street. Traffic impacts experienced during the construction period would involve the daily arrival and departure of construction workers at the start and end of the workday, the movement of construction equipment and materials, and the removal of demolition debris. Scheduling deliveries and transportation of equipment during non-peak hours (when traffic is expected to be less) would minimize potential conflicts and disruption for neighboring residences. Contractors would be responsible for providing traffic controls and precautions to maintain traffic safety along 'Īpuka Street.

3.10 Utilities

Water. The Proposed Action would not significantly impact existing potable water sources or transmission systems. Domestic water demand for the Proposed Action, which is estimated to have a peak flow demand of 35 gpm, would require replacement of the existing water meter and lateral with a larger 1½ inch water lateral and 1-inch water meter (Bow Engineering and Development Inc., July 2006) (see Appendix F for preliminary engineering report). Fire protection would be provided by installing a detector check meter, with the meter size determined by the fire flow demands associated with the proposed residence. A new fire hydrant may be required, depending on the specific project requirements. Design and

construction of the water system and fire protection system would be coordinated with and would meet all the requirements of the BWS and the Honolulu Fire Department. Such requirements and the availability of water to meet the project demands would be confirmed when building permits are submitted for approval. The applicable Water System Facilities Charges for resource development, transmission and daily storage would be paid when water is made available. The proposed development would be subject to BWS cross-connection control and backflow prevention requirements prior to BWS approval of the building permit.

Wastewater. The Proposed Action would not significantly impact existing wastewater collection or treatment systems. An existing cesspool that was used by the previous residence would be closed and inspected in coordination with the State DOH. DOH has confirmed that the project site is located in the Critical Wastewater Disposal Area where no new cesspools are allowed, and indicated no objection to the proposed cesspool closure and connection to the City's sewer system. Wastewater generated by the Proposed Action would be of typical domestic composition and would be collected and treated by the City's municipal wastewater system. Assuming a daily average of 50 persons at the fishpond, the average daily wastewater flow resulting from the Proposed Action would be approximately 1,250 gallons per day (gpd) (50 persons x 25 gpd per capita) (Bow Engineering and Development Inc., July 2006) (see Appendix F for preliminary engineering report). A new 6-inch sewer lateral would connect the project site to an existing sewer manhole on ʻĪpuka Street (SMH #E-1) approximately 25 feet *mauka* of the driveway. An on-site wastewater pump station would transfer wastewater uphill to the sewer lateral connection by way of a small diameter PVC pipe underground force main. The City and County of Honolulu Department of Planning and Permitting (DPP) Wastewater Branch has confirmed that the municipal sewer system is available and adequate for connection to the sewer line on ʻĪpuka Street, and also indicated that a Wastewater System Facility Charge may be assessed for the proposed wastewater system improvements.

Wastewater plans would conform to applicable provisions of the State DOH's Administrative Rules, Chapter 11-62, Wastewater Systems. A Site Development Division Master Application for Sewer Connection has been submitted to the City for review and approval, and is currently pending DPP response.

Solid Waste. Domestic solid waste collection is currently provided by the City and County of Honolulu and a private waste hauler. Construction waste generated by the demolition of the Quonset hut would be removed and disposed of in accordance with applicable Federal and State regulations.

Electrical Power and Telephone. Since the Proposed Action would not introduce additional utility demands, no significant impacts to existing utility systems would be expected. The project site is adjacent to a residential area with electrical power, telephone and cable service. Electrical and telephone service would continue to be provided by HECO and Hawaiian Telcom, Inc. from underground systems on ʻĪpuka Street. The respective utility providers would be consulted to coordinate installation and modification of the necessary utility connections and services.

3.11 Emergency, Fire and Police Protection

The Proposed Action would not adversely impact the operations, facilities or services provided by the City and County of Honolulu for emergency medical services, fire and police protection. Existing fishpond operations are currently served by the City and County of Honolulu, and local demands for such services would not be significantly affected as a result of the Proposed Action since the overall land use and existing intensity of use would be maintained. The presence of a permanent caretaker residing on the property, as well as the construction of permanent facilities to secure office equipment and aquaculture-related supplies and machinery, would increase on-site security and would minimize the likelihood of illegal activities such as trespassing and property theft.

Construction of the proposed project would include the necessary fire protection facilities to serve the property. The fire protection system would be designed and constructed to meet the requirements of the BWS and the Honolulu Fire Department.

3.12 Socio-Economic Factors

Population and Demographics. The Proposed Action would not significantly impact the population or demographics of He‘eia or the City and County of Honolulu. The Proposed Action would provide housing and employment for a local family that most likely already lives on O‘ahu, and would not result in island-wide population growth or changes to population density. A full-time caretaker at the fishpond would reduce the attractiveness for vandalism and other illegal activities, and relieve surrounding neighbors from providing surveillance.

Economic Factors. The Proposed Action would enhance the productivity and efficiency of the existing aquaculture operations and would support the longevity of the existing program, increasing the probability that POH continues as an economically viable organization. As described in Section 2.12, POH employs a total of 16 staff members that represent total annual earnings of approximately $380,000. The proposed improvements would sustain existing levels of use and the current employment and economic development standards would be maintained. Minor short-term economic benefits would result from the construction activities. Since no program expansion or growth is anticipated as a result of the Proposed Action, the improvements are not expected to yield revenues that will have a significant impact on the island’s economic base.

3.13 Traditional Customs and Practices

The Proposed Action would not adversely impact traditional customs or practices. The project site is adjacent to He‘eia Fishpond, considered to be of “important historical cultural value to an ethnic group” under Criterion E under Chapter 146 of the SHPD rules and regulations governing historic preservation. The proposed improvements would have no direct impact on the fishpond property, and there are no known existing historic or cultural sites within the project site. The fishpond is private property and is not accessible to the general public without permission from the fishpond operator. Significant traditional properties identified in the general vicinity of the project area are located a fair distance from the project site and will not be affected. Based on the conclusions presented in the CIA, the Proposed Action would have positive impacts on the traditional and modern Hawaiian cultural activities currently taking place at the fishpond. In

addition to recognizing the traditional custom of having a fishpond caretaker live on the property, the proposed improvements provide facilities to support the existing aquaculture program and promote the long-term viability of existing fishpond operations.

Some temporary, short-term impacts affecting accessibility to the fishpond may be expected as a result of construction-related activities. Programs using the project site during construction may experience difficulties accessing the fishpond or working at the project site due to the increased traffic, noise and dust. Construction activities would be closely coordinated with the current lessee to minimize such impacts, and could include such strategies as adjusting the construction activities to accommodate the principal programs and activities.

Given that there is no specific knowledge concerning burials within the project site, there is a very slight possibility that burials may be located close to the driveway that leads down to the fishpond. If any previously unknown archaeological resources are found during ground disturbance, construction would be halted and the SHPD would be contacted in accordance with applicable laws.

3.14 Cumulative Impacts

Cumulative impacts on environmental resources result from the incremental effects of the Proposed Action when evaluated in conjunction with other government and private, past, present and reasonable foreseeable future actions. There are no potential adverse cumulative impacts associated with the Proposed Action. The project site is adjacent to a developed residential area where the biological and natural topographic features serve to clearly define the range of possible land uses. Future development in the area is generally regulated by the limited availability of land and the community's desire to maintain the current pattern of land use and existing densities. No known present or future developments are planned, and the region is not expected to undergo significant development in the next ten to twenty years. Current levels of aquaculture operations and use of the fishpond are expected to remain unchanged for the foreseeable future. Although KS and POH have expressed long-term desires to eventually expand their operations, no specific plans for such expansion in the foreseeable future have been identified. In the near term, KS intends to complete a strategic visioning process to define shared goals and objectives for the fishpond, and identify possible future improvements and actions that would ensure the long-term productivity of the pond. As an outcome of the visioning process, KS would have a clear picture of the fishpond's future, allowing them to better manage the fishpond and its operations. Given that no developments or regional changes are anticipated in the foreseeable future, no potential adverse cumulative impacts are known. Irrespective of potential changes resulting from the strategic visioning process, the need for the Proposed Action to be constructed at the proposed site would not change, due to its unique location at the extreme southern corner of the pond.

4.0 CONFORMITY OF PROPOSED ACTION WITH EXISTING STATE AND COUNTY PLANS, POLICIES AND LAND USE CONTROLS

4.1 State of Hawai‘i

4.1.1 Hawai‘i State Plan

The Hawai‘i State Plan, established through the State’s legislative process, represents public consensus regarding expectations for Hawai‘i’s future. Chapter 226, HRS, as amended, describes the purpose of the State Plan as follows:

> *“[it] shall serve as a guide for the future long-range development of the State; identify the goals, objectives, policies, and priorities for the State of Hawai‘i; provide the basis for determining priorities and allocating limited resources, such as public funds, services, manpower, land, energy, water, and other resources; improve coordination of state and county plans, policies, programs, projects, and regulatory activities; and establish a system for plan formation and program coordination to provide for an integration of all major state and county activities.”* (Chapter 226-1, HRS; Findings and Purpose).

The goals, objectives, policies and guidelines of the Hawai‘i State Plan are, on occasion, in competition with one another. Because of this, the proposed development supports some of the goals, while is inconsistent with others. The following section analyzes project impacts with respect to relevant State Plan goals, objectives, policies, and priority guidelines.

Section 226-7 Objectives and policies for the economy-agriculture.

Section 226-7 (b)(1) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii’s economy.

Section 226-7 (b)(7) Increase the attractiveness and opportunities for an agricultural education and livelihood.

Section 226-7 (b)(8) Expand Hawaii’s agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.

> **Discussion:** The Proposed Action would provide facilities in support of an existing aquaculture program that was established to integrate fishpond revitalization and preservation with the delivery of hands-on educational programs. The proposed improvements would enhance program efficiency and productivity and promote the long-term success of the existing program, and improve the overall experience for participants of the aquaculture educational activities. He‘eia Fishpond is significant as one of the last intact fishponds remaining on O‘ahu. Given that fishpond restoration and preservation is relatively new and that very few of the remaining fishponds are in operational condition, the experiences and educational opportunities at He‘eia Fishpond provides aspiring fishpond practitioners with invaluable insights about traditional aquaculture practices and contemporary techniques.

Section 226-11 Objectives and policies for the physical environment – land-based, shoreline, and marine resources.

Section 226-11(a)(1) Prudent use of Hawaii's land-based, shoreline, and marine resources

Section 226-11(b)(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

Section 226-11(b)(8) Pursue compatible relationships among activities, facilities, and natural resources.

Discussion: The Proposed Action would maintain the current use of the project site for aquaculture. The proposed improvements would be designed and sited in a manner which would respect the natural topography and enhance unique cultural and historic attributes of the site. Consolidation of the proposed single-family residence with the aquaculture support facilities would allow the new facilities to be concentrated near the *mauka* boundary of the project site, thereby maintaining open areas along the shoreline for use by the aquaculture operations. Siting and design of the proposed facility improvements would complement the site's natural topography and would enhance the site's unique cultural and historic features.

Section 226-12 Objectives and policies for the physical environment - scenic, natural beauty, and historic resources.

Section 226-12(b)(1) Promote the preservation and restoration of significant natural and historic resources.

Section 226-12(b)(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.

Section 226-12(b)(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.

Discussion: Development of the proposed project would promote the preservation, restoration and long-term use of He'eia Fishpond, which is a significant historic and archaeological resource listed on the NRHP. The existing Quonset hut does not retain the integrity of location, design, or association to be considered a significant historic resource, and does not contribute to the archaeological significance of He'eia Fishpond. SHPD has determined that the Proposed Action would have no foreseeable adverse effect on historic or archaeological resources,and has concurred that no further historic preservation work is warranted in the project area. The Proposed Action would not impact important views and vistas, nor adversely impact the public's visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.

The location of the project site near the southernmost corner of the fishpond at the base of 'Īpuka Street is not visible from surrounding public roadways. Views of the project site from the *makai* side would remain largely unchanged, as the proposed two-story building

would appear partially obscured by nearby vegetation and structures and overshadowed by the panoramic Ko'olau view.

Section 226-13 Objectives and policies for the physical environment - land, air, and water quality.

Section 226-13(b)(1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.

Section 226-13(b)(7) Encourage urban developments in close proximity to existing services and facilities.

Section 226-13(b)(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures, and visitors.

Discussion: The Proposed Action supports a multi-faceted program that includes an educational component designed to foster a better understanding of ecological systems and environmental management principles and increase public awareness about the fishpond and its relationship with other natural resources found in the ahupua'a. The project site is easily accessible and is adjacent to an existing urbanized area with access to public facilities and services, including connections to municipal water, electrical power and telephone systems. The current fishpond operator, POH, values the attitudes and opinions of the surrounding residential neighborhood, and is committed to working with the community to address potential community issues.

Section 226-21 Objective and policies for socio-cultural advancement- education.

Section 226-21(b)(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.

Section 226-21(b)(4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.

Section 226-25 Objective and policies for socio-cultural advancement- culture.

Section 226-25 (b)(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs.

Discussion: Development of the Proposed Action promotes the advancement of educational opportunities by providing improvements that meet the immediate facility needs of POH. Working in conjunction with KS, POH envisions the restoration and preservation of the fishpond to perpetuate traditional Native Hawaiian cultural practices and knowledge, and has thus developed an innovative education program that provides a variety of cultural and environmental learning activities and projects for all types of groups and interests, including hands-on fishpond maintenance and repair, aquaculture production, environmental and biological studies, traditional cultural values and practices. The educational program, which serves approximately 2,500 participants

annually, consists of a wide range of school and service groups, area residents and families, Hawaiian language immersion communities, and other various community organizations.

Section 226-104 Population growth and land resources priority guidelines.

Section 226-104(b)(12) Utilize Hawai‘i’s limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.

Discussion: The proposed improvements would be constructed within a developed area that is currently being used to support aquaculture. Although the project site is adjacent to the shoreline, the proposed improvements would be at least 40 feet from the certified shoreline (outside the established 40-foot shoreline setback line). The project site does not include conservation lands, and other limited resources and activities on the site would not affect their availability for future generations.

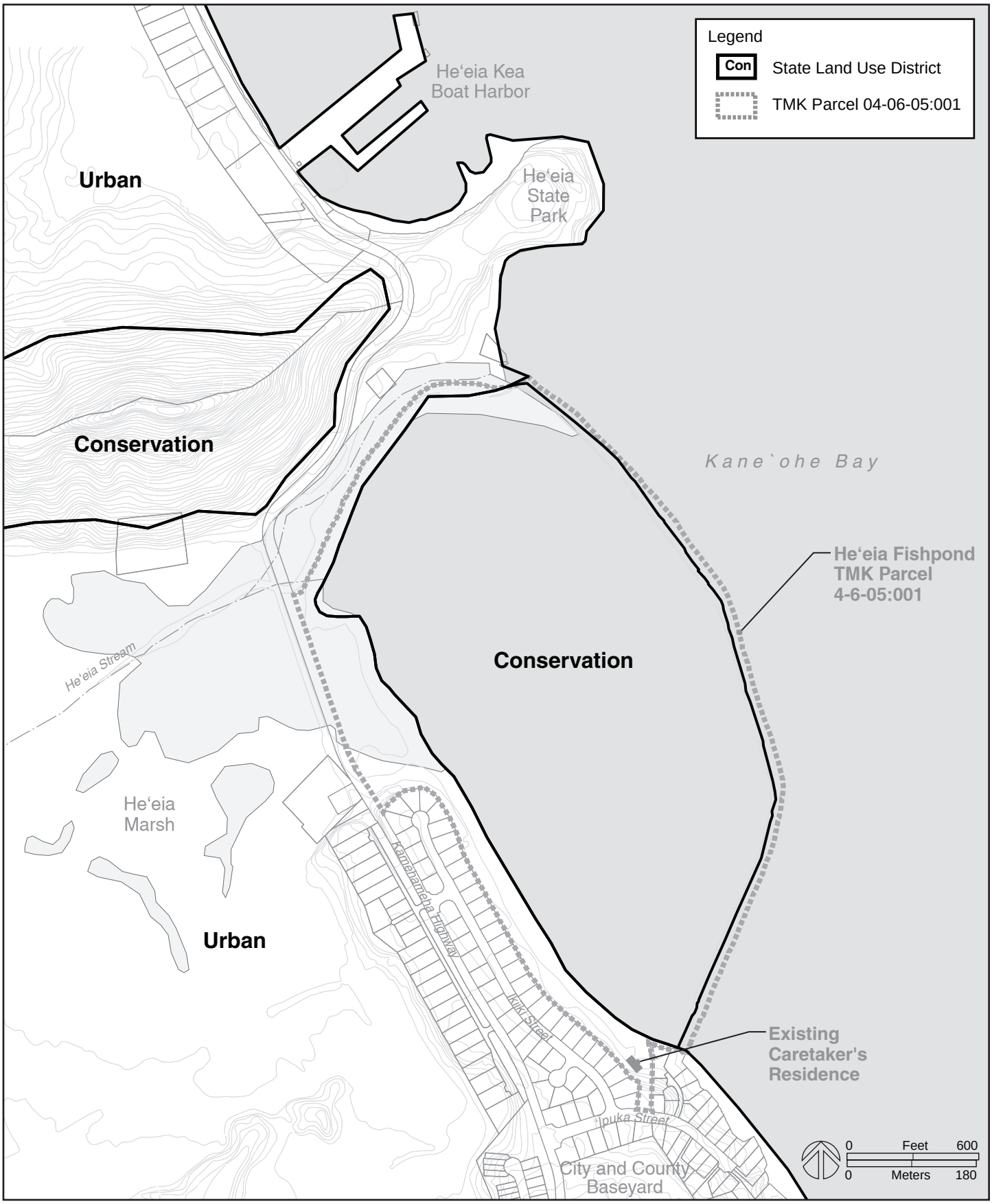
4.1.2 Chapter 205, Hawai‘i Revised Statutes (State Land Use Law)

All lands in the State of Hawai‘i have been classified into one of four land use districts (Urban, Rural, Agricultural and Conservation) by the State Land Use Commission, pursuant to Chapter 205, HRS. The fishpond *makai* of the shoreline (i.e., the inner fishpond wall) is classified as part of the State Conservation District, Resource subzone. The land area *mauka* of the shoreline is within the State Urban District (including the project site), and the shoreline is recognized as the boundary between the two districts. Figure 9 shows the State land use district boundaries in relation to the project site.

The Conservation District is administrated by the Board of Land and Natural Resources (BLNR) and use of Conservation District lands are regulated by rules promulgated by the DLNR (Title 5, Chapter 5, HAR, adopted September 1994). The BLNR approved a Conservation District Use Application (CDUA) for restoration of the fishpond for commercial aquaculture use on March 27, 1992 (CDUA OA-10/28/91-2530). Existing aquaculture operations and fishpond activities are conducted in accordance with the conditions prescribed in the Conservation District Use Permit.

4.1.3 State Environmental Policy

Chapter 343, HRS, the State of Hawai‘i Environmental Impact Statement Law, establishes a system of environmental review to ensure that environmental concerns are given appropriate consideration in decision making along with economic and technical considerations. Compliance with Chapter 343, HRS is required for any program or project that proposes one or more of eight land uses or administrative acts, including: (1) use of land within any historic site as designated in the NRHP or the Hawai‘i Register of Historic Places; and (2) use within the shoreline area as defined in Section 205A-41. The Proposed Action is subject to review under Chapter 343, HRS and requires approval by DPP (i.e., the approving agency) because He‘eia Fishpond, including a portion of the project site, is listed on the NRHP and because it is within the boundaries of the City and County of Honolulu Special Management Area.



State Land Use Districts **Figure 9**

He'eia Fishpond Aquaculture Support Facilities EA
Ko'olaupoko, O'ahu, Hawai'i
Helber Hastert & Fee, Planners

4.1.4 Coastal Zone Management

The objectives and policies of the Hawai‘i Coastal Zone Management (CZM) Program are described in Chapter 205A-2, HRS, Part I. The objectives of the program are intended to promote the protection and maintenance of valuable coastal resources. All lands in the State of Hawaii and the area extending seaward from the shoreline are classified as valuable coastal resources within the State’s CZM area.

Part II of Chapter 205A, HRS contains the general objectives and policies upon which all counties within the State of Hawai‘i, including the City and County of Honolulu, have established Special Management Areas (SMAs). The project site is within the City and County's SMA, and is therefore subject to the City’s SMA requirements (Chapter 25, ROH). The specific provisions of the county SMA are discussed in Section 4.2.4.

No impacts to the coastal zone are anticipated as a result of the Proposed Action. The following discussion assesses the Proposed Action’s conformance with the objectives of the State’s CZM Program.

Recreational Resources
Objective: Provide coastal recreational opportunities accessible to the public.

> **Discussion:** Although the project site is adjacent to the shoreline, the fishpond and the adjacent land area (including the project site) is private property and is not accessible to the general public without permission. The Proposed Action would maintain the current land tenure status. The fishpond would continue to be privately managed, with access and use of the pond coordinated by POH.

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

> **Discussion:** The Proposed Action would have no adverse significant impact on historic and prehistoric resources. The proposed improvements support ongoing community efforts to preserve and restore He‘eia Fishpond, which is a federally-recognized historic and cultural resource. The existing Quonset hut is not considered a significant historic resource and does not contribute to the hjstoric significance of the fishpond. An archaeological assessment was conducted for the project site by International Archaeological Research Institute, Inc. in June 2006. In response to SHPD’s concerns, the report was revised (December 2006) to include the results of additional subsurface testing and a completed architectural assessment of the Quonset hut. SHPD has accepted the revised report and indicated its concurrence that the Proposed Action would have no effect on historic or archaeological resources. The project site has been previously developed, and is not expected to contain any historical, archaeological or Native Hawaiian cultural resources. No culturally-significant materials or deposits were located during the subsurface testing. In addition, the Quonset hut was determined to be a non-contributing element to the fishpond’s historic significance.

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

Discussion: Development of the Proposed Action would not impact the quality of coastal scenic and open space resources. The caretaker's residence would be sited in the general vicinity of the existing Quonset hut, and would visually provide an aesthetic improvement over the derelict condition of the existing structure. The closest public vantage point that provides a view of the project site is more than one-half mile away at Kealohi Point. From this distance, the project site appears to blend in with the surrounding vegetation and neighboring structures.

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

Discussion: The proposed improvements are relatively minor in scope, and do not involve alterations to streams, water bodies or other water sources. The project site, which is currently occupied by POH, does not include any known rare, threatened or endangered species or sensitive natural habitats. Existing surface drainage patterns would be maintained, and the amount of runoff attributable to the project would be negligible. The shoreline fronting the project site is protected by the *mauka* wall of the fishpond and is relatively stable. The proposed improvements would be at least 40 feet inland of the certified shoreline (i.e., outside the established shoreline setback area), allowing adequate working area for aquaculture production. Appropriate best management practices would be employed during construction to minimize soil loss and control erosion and runoff discharged from the site.

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

Discussion: Between 2000 and 2004, total sales revenue attributed to Hawai'i's aquaculture industry and the number of operations statewide increased by about 20%, from $22.2 million sales and 85 operations in 2000 to $28.1 million sales and 100 operations in 2004. In 2004, Hawai'i County accounted for 75% of total sales ($21.2 million), with O'ahu contributing $5.2 million or 19% of the total (NASS, 2006). The Proposed Action would promote the economic viability of the existing aquaculture program by enabling a permanent caretaker to live on-site and provide security from poaching and theft. The Proposed Action demonstrates the landowner's commitment to maintaining a vibrant and comprehensive aquaculture program at the fishpond.

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

Discussion: The project site is outside of an identified flood hazard area or tsunami inundation zone. There are no known erosion or subsidence problems in the area or

pollution sources that would be significantly impacted by or associated with the Proposed Action.

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

Public Participation
Objective: Stimulate public information, education and participation in coastal management.

Discussion: The EA review process provides opportunity for public input at various stages, including the pre-assessment consultation process and a Draft EA 30-day public comment period during which the public has an opportunity to provide their input on the project. Forty agencies and organizations were consulted as part of the pre-assessment consultation (see Section 7.0). Copies of the Draft EA were distributed to more than 30 different agencies, organizations and individuals, and notice of the Draft EA’s availability was published in the August 23, 2006 edition of OEQC’s Environmental Notice (see Section 8.0). The project was also presented at the POH ‘Īpuka Street/Ikiiki Street Community Open House held in June 2006, and presentations were made to the Kāne‘ohe Neighborhood Board at its regular monthly meetings in July, November and December 2006 (see Appendix H). In addition, a special meeting with the Ali‘i Landing Community Association was conducted on January 31, 2007 to discuss the project and respond to questions. The Honolulu Star Bulletin also featured an article, “Moi Harvest Highlights He‘eia Pond Traditions (Leone, September 11, 2006),” highlighting the proposed project and the status of the Draft EA.

Beach Protection
Objective: Protect beaches for public use and recreation.

Discussion: There are no public beaches in the immediate area of the project site. The shoreline in the vicinity of the project site is a working environment used for aquaculture operations that does not present opportunities for public recreation. Development of the Proposed Action would not result in beach erosion or change shoreline processes.

Marine Resources
Objective: Promote the protection, use and development of marine and coastal resources to assure their sustainability.

Discussion: Activities associated with the Proposed Action would not impact marine or coastal resources. The presence of a full-time caretaker living at the fishpond would enhance security of the fishpond, and reduce the occurrences of poaching and thefts that threaten the viability of the aquaculture program.

4.2 City and County of Honolulu

4.2.1 City and County of Honolulu General Plan

The City and County of Honolulu General Plan was first adopted in 1977 and has been subsequently amended (most recently in 2003). The Plan is a comprehensive statement of the

long-range social, economic, environmental and design objectives for the general welfare and prosperity of the people of O'ahu, including broad policy statements that facilitate the attainment of the Plan's objectives. The growth policy presented in the Plan calls for full development of the Primary Urban Center (including lands between Kahala and Pearl City), development of the secondary urban center at Kapolei and the 'Ewa and Central O'ahu urban-fringe areas, and management of the physical growth and development in the remaining urban-fringe and rural areas to sustain their low densities. The Proposed Action is consistent with the following Plan objectives and policies:

II. Economic Activity

Objective D: To make full use of the economic resources of the sea.

Policy 2: Encourage the development of aquaculture, ocean research, and other ocean-related industries.

Objective E: To prevent the occurrence of large scale unemployment.

Policy 1: Encourage the training and employment of present residents for currently available and future jobs.

III. Natural Environment

Objective A: To protect and preserve the natural environment.

Policy 4: Require development projects to give due consideration to natural features such as slope, flood and erosion hazards, water recharges areas, distinctive land forms, and existing vegetation.

Policy 5: Require sufficient setbacks of improvements in unstable shoreline areas to avoid the future need for protective structures.

Policy 7: Protect the natural environment from damaging levels of air, water, and noise pollution.

Objective B: To preserve and enhance the natural monuments and scenic views of O'ahu for the benefit of both residents and visitors.

Policy 1: Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers and streams; shoreline, fishponds, and bays; and reefs and offshore islands.

Policy 2: Protect O'ahu's scenic views, especially those seen from highly developed and heavily traveled areas.

Policy 4: Provide opportunities for recreational and educational use and physical contact with O'ahu's natural environment.

VII. Physical Development and Urban Design

Objective A: To coordinate changes in the physical environment of O'ahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.

Policy 2: Coordinate the location and timing of new development with the availability of adequate water supply, sewage treatment, drainage, transportation, and public safety facilities.

Policy 9: Exclude from residential areas, uses which are major sources of noise and air pollution.

Objective E: To create and maintain attractive, meaningful, and stimulating environments throughout O'ahu.
Policy 5: Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas

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VIII. Public Safety
Objective A: To prevent and control crime and maintain public order.
Policy 1: Provide a safe environment for residents and visitors on O'ahu.
Policy 5: Establish and maintain programs to encourage public cooperation in the prevention and solution of crimes.

IX. Health and Education
Objective B: To provide a wide range of educational opportunities for the people of O'ahu.
Policy 1: Support education programs that encourage the development of employable skills.
Policy 2: Encourage the provision of informal educational programs for people of all age groups.

X. Culture and Recreation
Objective A: To foster the multiethnic culture of Hawaii.
Policy 1: Encourage the preservation and enhancement of Hawaii's diverse cultures.
Policy 2: Encourage greater public awareness, understanding, and appreciation of cultural heritage and contributions to Hawaii made by the City's various ethnic groups.

Objective B: To protect O'ahu's cultural, historic, architectural, and archaeological resources.
Policy 1: Encourage the restoration and preservation of early Hawaiian structures, artifacts, and landmarks.
Policy 2: Identify, and to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.
Policy 4: Promote the interpretive and educational use of cultural, historic, architectural, and archaeological sites, buildings, and artifacts.
Policy 5: Seek public and private funds, and public participation and support, to protect social, cultural, historic, architectural, and archaeological resources.

Discussion: He'eia Fishpond, which is listed on the NRHP, is valued as a significant historic and cultural resource. The Proposed Action would construct a replacement caretaker's residence with attached office, storage and sanitation facilities to sustain the current use of the fishpond. The proposed improvements would enhance productivity and contribute to the quality of the existing aquaculture program, supporting the long-term preservation and employment of the fishpond for cultural, educational and economic purposes. The existing use, intensity of use and current level of participation would not change as a result of the Proposed Action. The project site is surrounded by and accessed through an established urban residential area, and the proposed improvements would not impact the existing suburban character of the area. Design and construction of the utility system improvements system would be coordinated with and would meet all the requirements of the appropriate County agencies. The proposed improvements, which would be concentrated towards the *mauka* portion of the property, would be outside the established shoreline setback area (at least 40 inland of the certified shoreline). The Proposed Action would not alter or impact the existing

topography or drainage pattern of the project site, biological resources and natural ecological processes, or scenic public views.

4.2.2 Ko'olaupoko Sustainable Communities Plan

The City and County of Honolulu's Development Plan (DP) program provides a relatively detailed framework for implementing General Plan objectives and policies for the growth and development of O'ahu at a regional level. The DP program establishes eight geographical DP areas, including the Ko'olaupoko Sustainable Communities Plan (SCP) area where the subject property is located.

The Ko'olaupoko SCP area spans the windward areas of O'ahu from Makapu'u Point to Ka'ō'io Point at the northern end of Kāne'ohe Bay. The SCP, which was adopted in 2000 and codified as Ordinance No. 00-47, Revised Ordinances of Honolulu (ROH), articulates conceptual, long-range visions and policies for regional land use, public facilities and infrastructure investment, and includes land use maps intended to illustrate the policy statements articulated in the Plan. The SCP supports the General Plan and recognizes the region's urban fringe and rural areas as areas where growth will be managed so that an "undesirable spreading of development is prevented."

The Plan is shaped around two main vision concepts, including: (1) protection of the community's natural, scenic, cultural, historical and agricultural resources and the residential environment of existing neighborhoods; and (2) improvement and replacement, as necessary, of the region's aging infrastructure systems. Section 2.2 of the SCP identifies the following ten key elements of the vision for Ko'olaupoko:

1. Adapt the concept of *ahupua'a* in land uses and natural resource management
2. Preserve and promote open space throughout the region
3. Preserve and promote agricultural uses and define boundaries for these areas
4. Preserve and enhance scenic, recreational and cultural features that define Ko'olaupoko's sense of place
5. Emphasize alternatives to the private passenger vehicle as modes for travel
6. Adapt housing and public works standards to community character and changing needs
7. Protect residential neighborhoods
8. Define and enhance existing commercial and civic districts
9. Establish Urban Community, Rural Community Agriculture and Preservation boundaries
10. Maintain the predominately low-rise, low-density, single family character of the urban fringe and rural communities.

    Discussion: The Proposed Action is consistent with the Ko'olaupoko SCP vision elements to (1) adapt the concept of *ahupua'a* in land uses and natural resource management; (2) preserve and promote agricultural uses; (3) preserve and enhance scenic, recreational, and cultural features; and (4) protect residential neighborhoods. The Proposed Action also supports the general policy pertaining to historic and cultural resources which call for preserving significant historic features (Ko'olaupoko SCP Section 3.4.2), and the general policy pertaining to agricultural use which calls for the provision of supporting infrastructure, services and facilities to foster and sustain agricultural operations (Ko'olaupoko SCP Section 3.5.2). Development of the Proposed

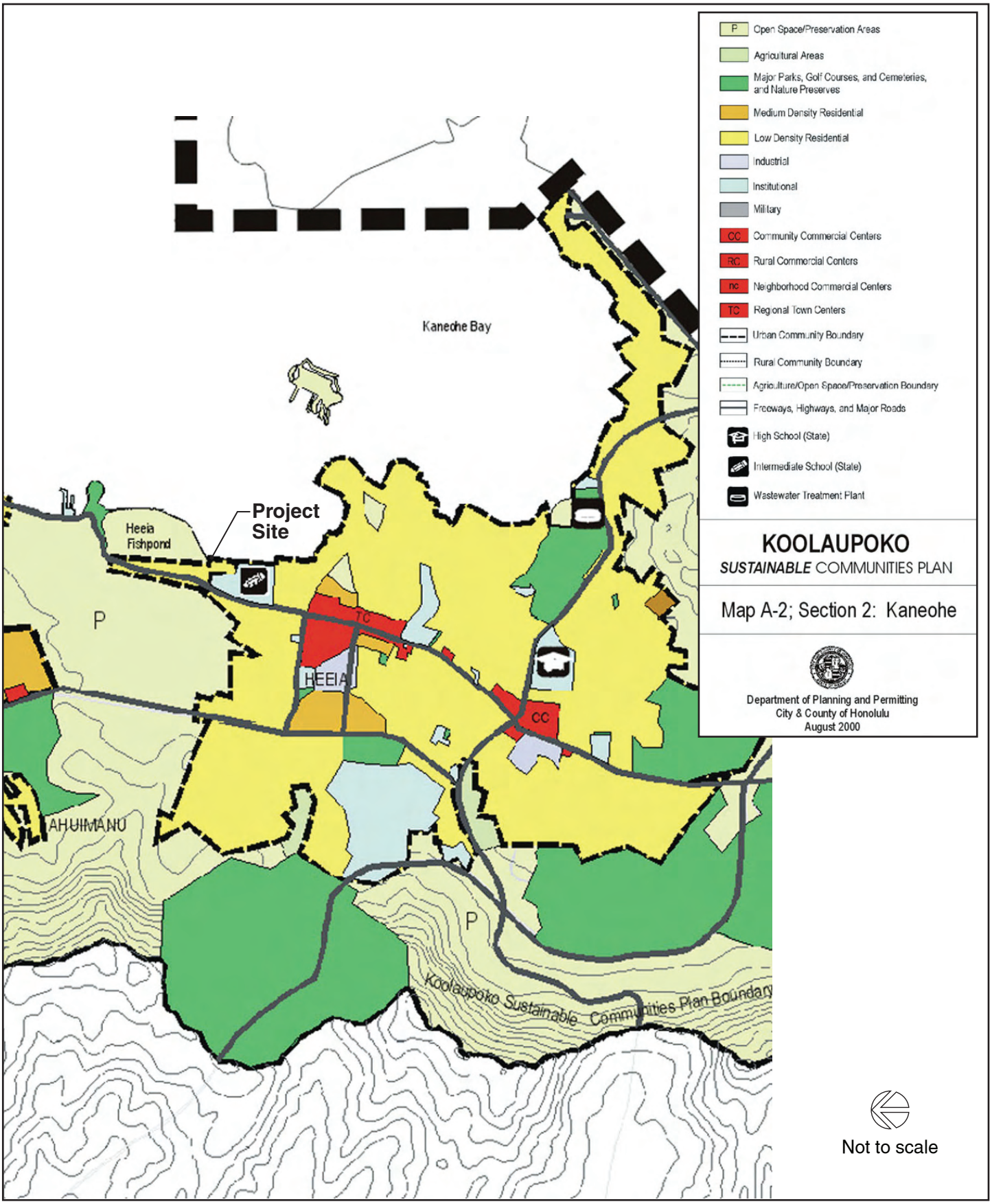
Action would have substantial benefit on the long-term preservation and protection of He’eia Fishpond, which is identified in the Plan as an important natural and cultural resource. The proposed project would indirectly promote the use of the fishpond for aquaculture and educational opportunities, resulting in increased community awareness and appreciation. The proposed improvements would accommodate the existing activity level at the fishpond, and no changes in the type or intensity of use, or the quality of the surrounding residential neighborhood would ensue as a result of the Proposed Action.

The Ko‘olaupoko SCP Land Use Map identifies the subject property as “Open Space/Preservation Areas,” outside the Urban Community Boundary. Such areas generally include undeveloped lands that are not valued for agriculture but are important to the region’s open space fabric. Lands within the State Conservation District are typically included in this designation.

The three maps appended to the SCP are intended to complement the vision and policy statements described in the plan and graphically demonstrate the desired long-range pattern for land use, open space and public facilities. The maps depict four specific boundaries around which land use is defined, including an Urban Community Boundary, Rural Community Boundary, Agriculture Boundary and Preservation Boundary. Lands within the Urban Community Boundary are typically considered the most appropriate for urban development, and contain “built-up” areas with established residential, commercial, industrial and mixed-use developments. Lands within the Preservation Boundary, which are generally undeveloped lands that are not valued primarily for agriculture but which form an important part of the region’s open space fabric, consist of important wildlife habitat, archaeological or historic sites, significant landforms or landscapes over which significant views are available, and development-related hazard areas.

Discussion: The Ko‘olaupoko SCP Land Use Map for the Kāne‘ohe area is shown in Figure 10. The Land Use Map identifies He‘eia Fishpond within the “Open Space/Preservation Area” beyond the Urban Community Boundary. The residential area *mauka* of the fishpond is identified as “Low Density Residential” within the Urban Community Boundary. The SCP Land Use Maps are general and conceptual in nature, and are intended to supplement the textual descriptions as illustrations of the written policies. The land use maps illustrate generalized categories or groups of land uses within the region, and are not parcel or site-specific. Given that the SCP is intended to guide the subsequent zoning district regulations and the mapping of such districts, the project site is identified as “Open Space/Preservation Area,” consistent with the underlying P-2 General Preservation zoning.

The Proposed Action is directly associated with the maintenance and use of He’eia Fishpond, and is an essential component to ensure the long-term preservation and operation of the fishpond. The project site is adjacent to an established residential area, and the Proposed Action is compatible with the guidelines for urban residential development that require protection for residential neighborhoods from incompatible uses and nuisance-producing activities. The Proposed Action would allow a full-time caretaker to once again live at the fishpond and monitor the fishpond when staff is not on duty, increasing the sense of security for neighbors. In addition, the Proposed Action would address public



Ko‘olaupoko Sustainable Communities Plan **Figure 10**

He‘eia Fishpond Aquaculture Support Facilities EA
Ko‘olaupoko, O‘ahu, Hawai‘i
Helber Hastert & Fee, Planners

health and sanitation concerns related to the existing portable and temporary facilities. The proposed improvements would be generally concentrated within the lower section of the project site and would not be noticeable from 'Īpuka Street, resulting in no impact to the visual character or the integrity of the aesthetic quality of the neighborhood. Utility improvements, which would be planned and coordinated with the appropriate agencies, would include a connection to the municipal sewer service system and closure of an on-site cesspool. Although no changes in staffing or visitation levels would occur, the project would provide various parking and traffic management strategies to minimize on-going noise, parking and general neighborhood conflicts. Continued sensitivity to the concerns of area neighbors would ensure a positive, lasting relationship.

4.2.3 Land Use Ordinance

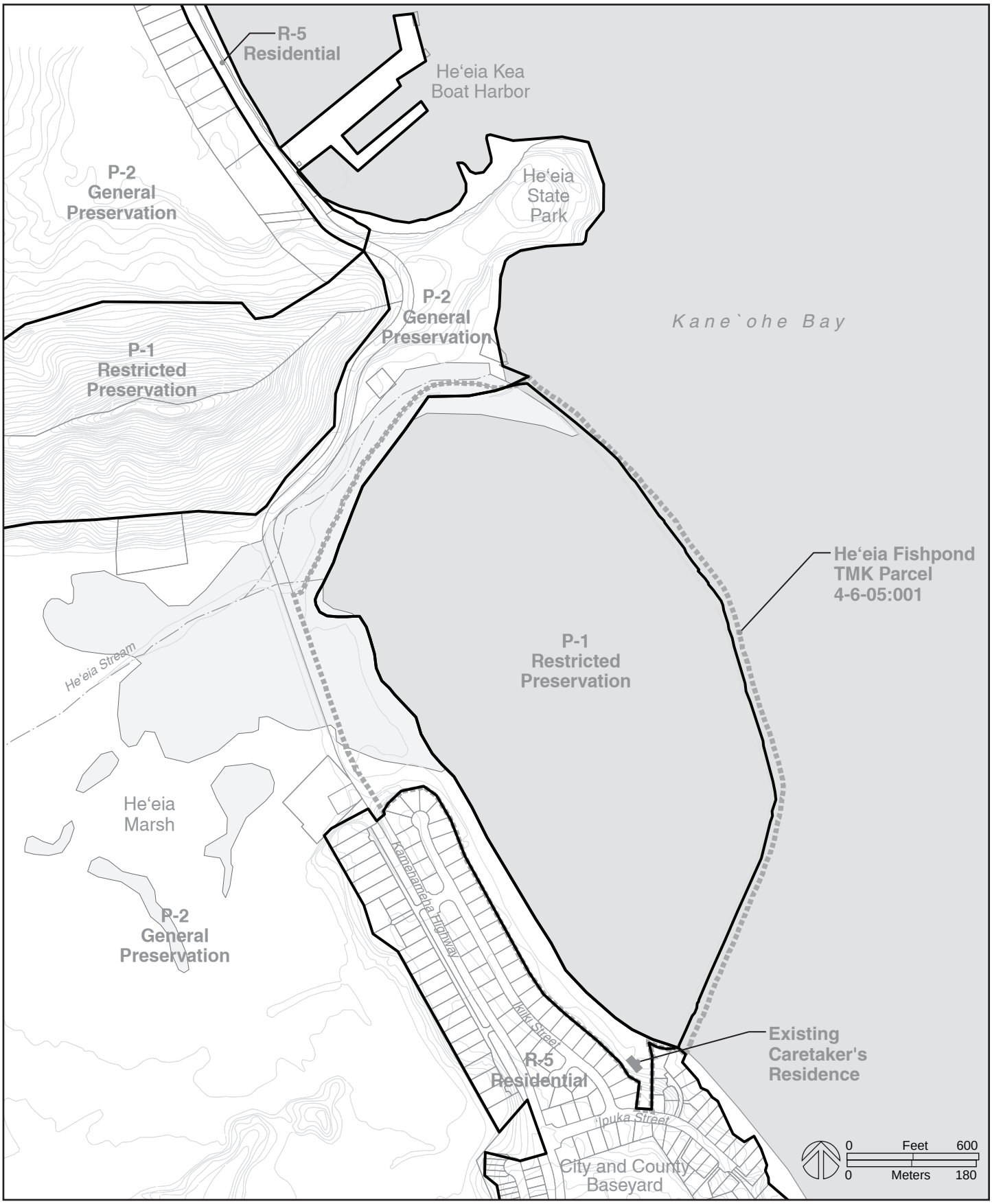
The City and County of Honolulu Land Use Ordinance (LUO) and accompanying maps define the allowable uses of land within the City and County of Honolulu. The LUO describes the various zoning districts, the uses allowed within each zoning district, and the applicable development standards for each district.

The Zoning Maps adopted under the provisions of the LUO indicate that the project site is zoned P-2 General Preservation (see Figure 11). According to Section 21-3.40(a) of the LUO, the purpose of the Preservation District is "to preserve and manage major open space and recreation lands and lands of scenic and other natural resource value." The intent of the P-2 General Preservation District is described as follows:

> *"It is also the intent that lands designated urban by the state, but well-suited to the functions of providing visual relief and contrast to the city's built environment or serving as outdoor space for the public's use and enjoyment be zoned P-2 general preservation district. Areas unsuitable for other uses because of topographical considerations related to public health, safety and welfare concerns shall also be placed in this district" (LUO, Section 21-3.40(e)).*

Under the provisions of this zoning district, permitted uses consist of aquaculture, agriculture, crop production, forestry, game preserves, livestock grazing, cemeteries and columbaria, and public uses and structures (LUO, Table 21-3 Master Use Table). Residential uses are not permitted, with the exception of dwellings for cemetery caretakers which are allowed as an accessory use.

> **Discussion:** The P-2 designation is an appropriate zoning district for the project site considering the property's function and relationship with the fishpond and its principal use for aquaculture. Given that accessory caretaker's dwelling are not permitted uses in the P-2 District, the Proposed Action would require approval of a conditional use permit (CUP) Major for use of a historic site. DPP has indicated that a CUP Major would be appropriate since the fishpond functions as both a cultural education and aquaculture production facility and the proposed accessory aquaculture facilities, including the accessory caretaker's dwelling, support the retention and preservation of the fishpond as a historic and cultural resource (see Appendix G for DPP correspondence).



City and County of Honolulu Zoning Designations **Figure 11**

He'eia Fishpond Aquaculture Support Facilities EA
Ko'olaupoko, O'ahu, Hawai'i
Helber Hastert & Fee, Planners

4.2.4 Special Management Area

The City and County of Honolulu, similar to other counties in Hawai'i, has adopted: (1) boundaries which identify the SMA; and (2) rules and regulations which are consistent with Chapter 205A, HRS that control development within the SMA. Proposed development within the SMA is subject to review in order to ensure adequate access to recreation areas and minimal adverse impacts to water resources, and scenic and recreational amenities. The project site is located within the SMA, requiring compliance with the County's SMA requirements. A Minor Special Management Area Use Permit (SMP) is required for any development valued at under $125,000 and which has no substantial adverse environmental or ecological effect. Any development within the SMA that exceeds $125,000 or which may have a substantial adverse environmental or ecological effect is required to obtain approval of a Major Special Management Area Use Permit (SMP) from the Honolulu City Council before other permits and project construction may begin.

The SMA rules and regulations are contained in Chapter 25, ROH. Pursuant to Section 25-1.3.(2) ROH, the definition of "development" for the purposes of SMA regulation specifically excludes "construction of a single-family residence that is not part of a larger development" and "the use of any land for the purpose of…aquaculture or mariculture of plants or animals, or other agricultural purposes…"

> **Discussion:** DPP has indicated that the Proposed Action is considered an accessory use to aquaculture and may be excluded from SMA permit requirements since accessory uses are generally subject to the same provisions applicable to the principal use and the principal aquaculture use would not require a SMP. Although the Proposed Action is currently exempt from a SMP, DPP would require a SMP if it is determined that the Proposed Action involves potential significant environmental or ecological effect on the SMA. DPP correspondence is presented in Appendix G.

Section 25-3.2, ROH, includes guidelines which are used by the Honolulu City Council of the City and County of Honolulu to review developments proposed within the SMA. The relationship between the Proposed Action and the SMA review guidelines in Section 25-3.2 ROH are discussed below.

(a) All development in the special management area shall be subject to reasonable terms and conditions set by the City Council to ensure that:
- *(1) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas and natural reserves is provided to the extent consistent with sound conservation principles;*
- *(2) Adequate and properly located public recreation areas and wildlife preserves are reserved;*
- *(3) Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources; and*
- *(4) Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.*

Discussion: There are no publicly-owned or used or beaches, public recreation areas, or natural reserves in the vicinity of the project site that would be affected by the Proposed Action. Wastewater would be treated by the City's municipal wastewater system via a new connection installed along 'Īpuka Street, and an existing on-site cesspool would be closed in compliance with applicable State and County regulations. Solid waste would be handled by either the City and County of Honolulu or a private disposal company. The proposed improvements would not involve extensive grading or ground disturbance, alter existing vegetated areas or increase soil erosion and siltation. The project site is in an area with minimal flood hazard risk and is inconspicuously located along a portion of Kāne'ohe Bay that has been enveloped by residential development.

(b) No development shall be approved unless the City Council has first found that:
- *(1) The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options;*
- *(2) The development is consistent with the objectives and policies contained in HRS Section 205A-26; and*
- *(3) The development is consistent with the county General Plan, the development plans and zoning.*

Discussion: Analysis presented in Section 4.1.4, Section 4.2.1, Section 4.2.2, and Section 4.2.3 demonstrates the Proposed Action's consistency with the objectives and policies contained in Chapter 205A-26, the City and County of Honolulu General Plan, the Ko'olaupoko SCP, and with the County Zoning regulations for the P-2 General Preservation District. As discussed in Section 3.0 and Section 6.0, there are no substantial, adverse environmental or ecological effects anticipated as a result of the Proposed Action.

(c) The City Council shall seek to minimize, where reasonable:
- *(1) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;*
- *(2) Any development which would reduce the size of any beach or other area usable for public recreation;*
- *(3) Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management area and the mean high tide line where there is no beach;*
- *(4) Any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast; and*
- *(5) Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.*

Discussion: The Proposed Action does not involve alterations to water bodies or any beach or other public recreation area. The project site is surrounded by private

residential development and is not visible from Kamehameha Highway. Views of Kāne‘ohe Bay are non-existent in this area due to the urban development along the highway that blocks the ocean views. There are no public coastal areas or streams in the immediate vicinity of the project site that would affected by the Proposed Action. Design and construction of the proposed improvements would comply with State and County development standards to ensure no adverse affects to water quality, fishing areas, wildlife habitats, or agricultural uses of land.

5.0 ALTERNATIVES CONSIDERED

Three alternatives were considered in addition to the Proposed Action: (1) No Action; (2) Construction along ʻĪpuka Street; and (3) Site Expansion.

No Action. Under the No Action Alternative, current conditions on the project site would continue. The existing Quonset hut, which is a remnant from World War II, is in inadequate condition to serve as a caretaker's residence and is alternately used for equipment storage and administrative office space. Portable toilets and temporary outdoor showers and rinsing stations are used. The No Action Alternative would not allow a permanent caretaker to live on-site and monitor against poaching and vandalism that are threatening the viability of fishpond operations. The sanitation and operational facilities needed to support the existing aquaculture program would not be recognized. In general, the No Action Alternative would hinder the productivity and efficiency of existing operations, ultimately jeopardizing the long-term viability of POH. The No Action Alternative was determined to be unacceptable for these reasons.

Construction Along ʻĪpuka Street. This alternative involves use of the level portion of the project site adjacent to ʻĪpuka Street. Under this alternative, the caretaker's residence and the aquaculture support facilities would be constructed as stand-alone structures, with components divided between the two (upper and lower) areas. This alternative was determined to be unacceptable for several reasons:

1. Visibility of the fishpond is limited from ʻĪpuka Street due to the difference in elevation.
2. This section of the project site is not large enough to accommodate the project.
3. Separating one part of the project program from another on the site is inefficient.
4. Development in this area would not be compatible with the surrounding residential character.

Site Expansion. This alternative would require the purchase of the single-family residence closest to the fishpond opposite the parking area. Purchase or lease of this property would provide additional land area for aquaculture operations, and the home could be used for the caretaker's residence. Although the front of the home is oriented towards ʻĪpuka Place and visibility from this location is not ideal, accessibility to the fishpond is good. Given that the property is currently occupied and is not available for sale, this was not considered to be an acceptable alternative.

6.0 ANTICIPATED DETERMINATION AND SUPPORTING RATIONALE

Based on the information and analysis presented in this document, the Proposed Action is not expected to result in a significant impact on the environment. In accordance with Chapter 343, HRS and Section 11-200, HAR, DPP has determined that a FONSI be issued for the proposed project. The proposed project would have no significant short-term, long-term or cumulative adverse impacts on the environment; therefore, preparation of an EIS is not required.

In determining whether an action may have a significant impact on the environment, the applicant or agency must consider all phases of the project, its expected primary and secondary consequences, its cumulative impact with other projects, and its short and long-term effects. The negative determination was based on review and analysis of the significance criteria specified in Section 11-200-12, HAR. An action shall be determined to have a significant effect on the environment if it meets any of the following criteria:

1. Involves an irrevocable commitment or loss of or destruction of natural or cultural resources

The project site encompasses lands that have been previously disturbed and is currently being used. Development would be concentrated near the *mauka* edge of the project site where the existing structures are located. There are no threatened or endangered species of plants or wildlife that inhabit the project site, and there would be no impact to coastal resources. No significant historic, archaeological or cultural resources are anticipated, and Native Hawaiian cultural practices would not be impacted. Consultation with the SHPD has determined that the Proposed Action would have no effect on historic or archaeological resources. The project site is not visible from surrounding public areas, and construction of the proposed facilities would not adversely impact scenic views.

2. Curtails the range of beneficial uses of the environment.

The Proposed Action represents a continuation of an existing use on a previously developed site with no additional clearing of land. The project site has always been used to access the fishpond, and the Proposed Action would ensure that the property will continue to be used for this purpose, resulting in the positive long-term public benefits associated with the fishpond. No significant adverse impacts to the natural environment would result from the proposed development. Construction and operation of the new facilities would be performed in accordance with applicable State and County regulations, thereby minimizing potential impacts to air and water quality and ambient noise levels.

3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;

The Proposed Action would be designed and constructed in conformance with appropriate environmental considerations, and is consistent with the State's long-term environmental policies established in Chapter 344, HRS. Consistency of the Proposed Action with the policies and guidelines specified in Chapter 343, HRS and Title 11, Chapter 20, HAR is demonstrated in this section and in Section 4.1.3.

4. Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;

The Proposed Action would have positive short-term direct and indirect economic benefits to the State and County through the generation of construction-related jobs and the induced effects of spending on the economy. Long-term benefits include restoration of an on-site caretaker at the fishpond, enhanced program efficiency and increased productivity in support of the existing aquaculture program, sustained employment levels, continuation of fishpond restoration and preservation activities, and the perpetuation of traditional cultural practices and knowledge. The Proposed Action would not adversely affect the social welfare or cultural practices and customs of the community or State.

5. Substantially affects public health;

The Proposed Action would not substantially affect public health. There would be some typical short-term construction-related impacts (noise, air quality, and traffic) in the area, but these would be temporary. Standard construction best management practices would be used to minimize the temporary impacts. Replacement of the existing portable toilets and temporary showers/rinsing stations with permanent sanitation facilities would result in long-term beneficial impacts to public health. Activities associated with the Proposed Action would remain consistent with the existing level and intensity of use. The project site would continue to be used to support the aquaculture program and its related activities. No commercial or industrial activities would take place on the property.

6. Involves substantial secondary impacts, such as population changes or effects on public facilities;

The Proposed Action would provide a home and employment opportunity for a local family, and would not result in island-wide population growth or changes to population density. No foreseeable changes in the use and intensity of use, staffing levels or visitation patterns are anticipated. Existing traffic patterns and volumes would be expected to continue, with the exception of minor short-term impacts construction period impacts. Since the project site is adjacent to an existing urban area served by existing public utilities and infrastructure, no significant impacts to public facilities are expected. The Proposed Acton would use existing utility connections (water, electrical and telephone service), and would require a new service connection to the City's wastewater system. Typical minor increases in utility demands would be expected.

7. Involves a substantial degradation of environmental quality;

The Proposed Action would not substantially degrade environmental quality. Design and construction activities would be conducted in accordance with applicable development regulations. Long-term impacts to air and water quality, noise levels, and natural resources would be minimal or non-existent. The use of standard construction and erosion control best management practices would minimize anticipated construction-related short-term impacts (i.e., noise, air quality, water quality and traffic).

8. Is individually limited and cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The Proposed Action, when considered collectively with future private and government actions planned in the area, would not have a significant cumulative impact on the environment and does not involve a commitment for larger actions. The Proposed Action would be designed to accommodate the existing aquaculture program and would not affect the existing use or level of use. The Proposed Action is not part of a larger program and does not require any supplemental future development. The Proposed Action would not result in any potential adverse cumulative impacts since no known foreseeable future actions or regional changes have been identified.

9. Substantially affects a rare, threatened, or endangered species, or its habitat;

The project site is an existing urbanized area that has been previously disturbed for development. There are no threatened, endangered or candidate listed animal or plant species or habitats found on the project site that require protection under Federal or State regulations. Although the endangered achyranthes *(Achyranthes splendens var. rotundata)* is found within the project site, it is considered to be a planted specimen that is not protected.

10. Detrimentally affects air or water quality or ambient noise levels;

The Proposed Action would not substantially affect air or water quality or ambient noise levels. The use of best management practices would minimize construction-related impacts, and the project would comply with applicable development regulations and standards. The proposed aquaculture-related uses would not be a significant source of air or noise pollutants. Temporary, short-term increases such as noise and dust would be would be expected during construction. Contractors would be expected to use standard best management practices to minimize construction-related impacts, and the project would comply with applicable State and County regulations and standards. Construction of the proposed improvements, which are limited in scope, would not significantly increase storm water runoff or impact surface water quality. The replacement of almost 2,300 square feet of permeable surfaces with impervious surfaces (about 7% of the project site) would marginally increase the amount and rate of stormwater runoff, with natural percolation and best management practices used to manage such flows.

11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a floodplain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

The project site is in an area with minimal flood hazard risk and is outside of the tsunami evacuation zone. There are no known erosion or subsidence problems, or geological hazards in the area. The shoreline bordering the project site is protected by the *mauka* wall of the fishpond and is relatively stable. The Proposed Action would be concentrated near the *mauka* portion of the project site and would not affect the *'aukai* near the shoreline, nor involve alterations to estuaries, water bodies or other water sources, or coastal waters

12. Substantially affects scenic vistas and viewplanes identified in County or State plans or studies; or

The Proposed Action would not obstruct or affect scenic vistas and viewplanes identified in County or State plans or studies. The project site is along a section of the coastline that is not clearly visible from surrounding areas.

13. Requires substantial energy consumption.

Construction and daily activities associated with the Proposed Action are typical of a single-family residence and small commercial office. The proposed project would not result in substantial increases in energy consumption due to the relatively small scale of the project.

7.0 PARTIES CONSULTED DURING PREPARATION OF THE DRAFT EA

An informational letter was sent on June 15, 2006 to 39 agencies and organizations to gather comments on the Proposed Action. A total of eight agencies and organizations provided written comments. The parties who responded during the pre-assessment consultation process are identified by an asterisk (*). The pre-assessment consultation letter, written comments received in response to the letter, and subsequent response letters addressing those comments are presented in Appendix I.

Federal
U.S. Fish and Wildlife Service
NOAA Fisheries Services
* U.S. Army Corps of Engineers

State
Department of Business Economic Development and Tourism (DBEDT),
Office of Planning
DBEDT, Coastal Zone Management
Department of Agriculture
Department of Education, Castle Complex Area
Department of Health, Environmental Planning Office
DOH, Office of Environmental Quality Control
Department of Land and Natural Resources, Chairperson
DLNR, Office of Conservation and Coastal Lands
DLNR, State Historic Preservation Division
* Office of Hawaiian Affairs
University of Hawai‘i Mānoa, Center for Hawaiian Studies
University of Hawai‘i Mānoa, Environmental Center
University of Hawai‘i Mānoa, Sea Grant College Program

City and County
* Board of Water Supply
* Department of Design and Construction
Department of Environmental Services
Department of Planning and Permitting
* Department of Transportation Services
* Honolulu Fire Department
* Honolulu Police Department

Utilities
Hawaiian Electric Company
* Hawaiian Telcom, Inc.

Community Organizations and Others
‘Aha Pūnana Leo
Ahupua‘a Restoration Council for He‘eia
Ali‘i Landing Community Association

Alu Like
Councilmember Donovan Dela Cruz
Friends of He‘eia State Park
Hakipu‘u Learning Center Public Charter School
Hālau Kū Māna Public Charter School
Kāne‘ohe Neighborhood Board No. 30
Kāne‘ohe Public Library
Ke Kula ‘o Samuel M. Kamakau Laboratory Public Charter School
Kualoa-He‘eia Hawaiian Civic Club
Oceanic Institute
Paepae o He‘eia

Additional efforts to identify community concerns regarding the Proposed Action include a presentation to the Kāne‘ohe Neighborhood Board No. 30 at its regular monthly meeting on July 20, 2006, and attendance at POH’s Ikiiki and ‘Īpuka Street Community Open House on June 24, 2006. Public notice of the Neighborhood Board presentation was provided in the Board’s meeting agenda. The Neighborhood Board was briefed on the general scope of the project, with no concerns or issues raised at the meeting (see Appendix H for meeting minutes). Participation at the Community Open House allowed for one-on-one dialogue with residents regarding the project. The 12-15 residents who participated in the event were largely supportive of the project and did not express any major concerns or issues, generally agreeing with the need for the facility improvements and re-establishing a permanent caretaker at the fishpond.

8.0 PARTIES CONSULTED DURING PREPARATION OF THE FINAL EA

Notice of the Draft EA was published in the August 23, 2006 edition of the *Environmental Notice,* with the deadline for public comments on September 22, 2006. Copies of the Draft EA were sent to the agencies and organizations listed below as part of the Chapter 343, HRS review process. A total of 14 agencies, organizations, and individuals provided written comments, including one that was not on the initial distribution list (as noted). Parties who provided written comments are identified by an asterisk (*). The notice of the Draft EA as published in the *Environmental Notice*, written comments, and the subsequent response letters are presented in Appendix J.

Federal
U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers

State
Department of Business Economic Development and Tourism (DBEDT), Office of Planning
Department of Education, Castle Complex Area
* Department of Health
* DOH, Office of Environmental Quality Control
DLNR, Chairperson
DLNR, Office of Conservation and Coastal Lands
* DLNR, State Historic Preservation Division
* Office of Hawaiian Affairs
University of Hawai‘i Mānoa, Center for Hawaiian Studies
University of Hawai‘i Mānoa, Environmental Center
University of Hawai‘i Mānoa, Hawai‘i Institute of Marine Biology

City and County of Honolulu
* Board of Water Supply
* Department of Design and Construction
Department of Environmental Services
* Department of Planning and Permitting
* Department of Transportation Services
* Honolulu Fire Department
Honolulu Police Department

Utilities
* Hawaiian Electric Company
Hawaiian Telcom, Inc.

Community Organizations and Others
* ‘Ahupua‘a Restoration Council for He‘eia
* Ali‘i Landing Community Association
Friends of He‘eia State Park
Kāne‘ohe Neighborhood Board No. 30
Kāne‘ohe Public Library

KEY Project
Komomua Ohana
* Ko'olaupoko Hawaiian Civic Club
Paepae o He'eia
William Claude and Maemae Jones Ohana
* Chris Cramer (not on original Draft EA distribution)

A follow-up presentation was made to the Kāne'ohe Neighborhood Board No. 30 at its regularly monthly meeting on November 16, 2006. Adjoining property owners were provided almost two weeks written notice of the presentation. The presentation included general background information about the fishpond and POH, a description of the proposed project, and a summary of the anticipated land use permits and project schedule. It is estimated that between eight and ten neighbors were in attendance. Comments raised during the meeting ranged from statements exalting the historical and cultural value of the fishpond, to concerns regarding the traffic and on-street parking resulting from the existing operations and questions about the process by which surrounding property owners were notified of the project.

Due to the Neighborhood Board's decision to continue the discussion, individuals from POH and the consulting firm representing the applicant attended the Board's regular monthly meeting held on December 21, 2006. Approximately 12-15 neighbors were present. At this meeting, the POH representative reviewed POH's efforts to foster relationships with residents of the surrounding neighborhood, presented various traffic management strategies that were being considered as possible ways to address the neighbors' traffic and parking concerns, and asked the neighbors' for their support. Several residents testified that the project would negatively impact the surrounding community and allow for program expansion, and expressed concerns that KS had not consulted with the community on its future plans for the fishpond or agreed to attend a meeting with the community to discuss the project. In addition to the verbal testimony, six letters of written testimony were submitted: four in support and two in opposition to the project. Following the discussion, the Board introduced a resolution requesting "that KS meet with residents and resolve the problems, …which impact on the adjacent residential neighborhood, and …that the DPP ensure that residents' concerns are duly addressed and resolved, prior to approving any CUP." The Board passed the resolution at its January 2007 regular meeting. Meeting minutes and the full text of the approved resolution are presented in Appendix H.

Concerns identified at the two Neighborhood Board meetings are summarized below.

Community Concerns

Concern	Response
What about noise and traffic impacts to the surrounding neighborhood?	The proposed improvements are intended to provide facilities for the existing program. There would be no changes in the existing program to affect existing traffic and noise conditions.
Neighbors' complaints about POH's current use of on-street parking	• Proposes to limit the number of cars using on-street parking (5-7 cars) during Saturday events Proposes to secure an off-site parking area and provide shuttle service as funds are available

Concern	Response
Neighbors' complaints about reverse alarm from buses and 15 passenger vans causing nuisance noise	• Proposes to create an on-site turnaround area for 15-passenger vans to minimize reversing • Proposes to minimize bus drop-offs to the extent possible
Neighbors' complaints about participants and volunteers creating nuisance noise	• Proposes to post a staff person on 'Īpuka Street near the fishpond driveway to monitor logistics during Saturday events • Visitors are asked to be respectful and courteous to neighbors
Facilities at He'eia State Park or another off-site location could be used to support POH's parking needs.	There are logistical problems to consider with having the parking on the opposite side of the fishpond (how do we get people from one side of the pond safely to the other?). This alternative, which would require the use of shuttle buses, would be explored further.
What is the relationship between POH and KS? How can the community be assured of KS commitment to the operating agreements that POH makes with the community? Where is KS at these community discussions?	POH is an educational program coordinator that receives financial compensation from some of the groups they service. POH operates on a memorandum of agreement with KS and has a license from KS to utilize the site. KS works through POH to develop social capital in an effort to maintain good relationships with the fishpond neighbors. The CUP would include legal conditions attached to the property for the proposed use.
Surrounding property owners have requested a meeting with KS and POH to discuss their concerns, which includes: (1) a lack of communication from KS; (2) concerns that there are significant impacts resulting from this project that have not been addressed; and (3) questions about future expansion plans at the fishpond.	The comment is noted.
How come only some of the neighbors received notification letters about the Neighborhood Board presentation? Who was notified? If the Draft EA was presented in August, why is this the first time that neighbors are learning about this project?	Only adjoining property owners were notified, per the CUP application requirements. Efforts to share the proposed project with the surrounding neighborhood include participation at the POH Open House in July 2006, a presentation at the July 2006 Neighborhood Board meeting, and consultation with the Ali'i Landing Community Association.

In addition to the NB meetings, a special meeting was conducted with the Ali'i Landing Community Association on January 31, 2007. Representatives of KS and POH together with the consultant were present to hear residents concerns and respond to questions. Meeting minutes or a summary of the meeting discussion is not included as part of this EA because this document was finalized before the meeting was held.

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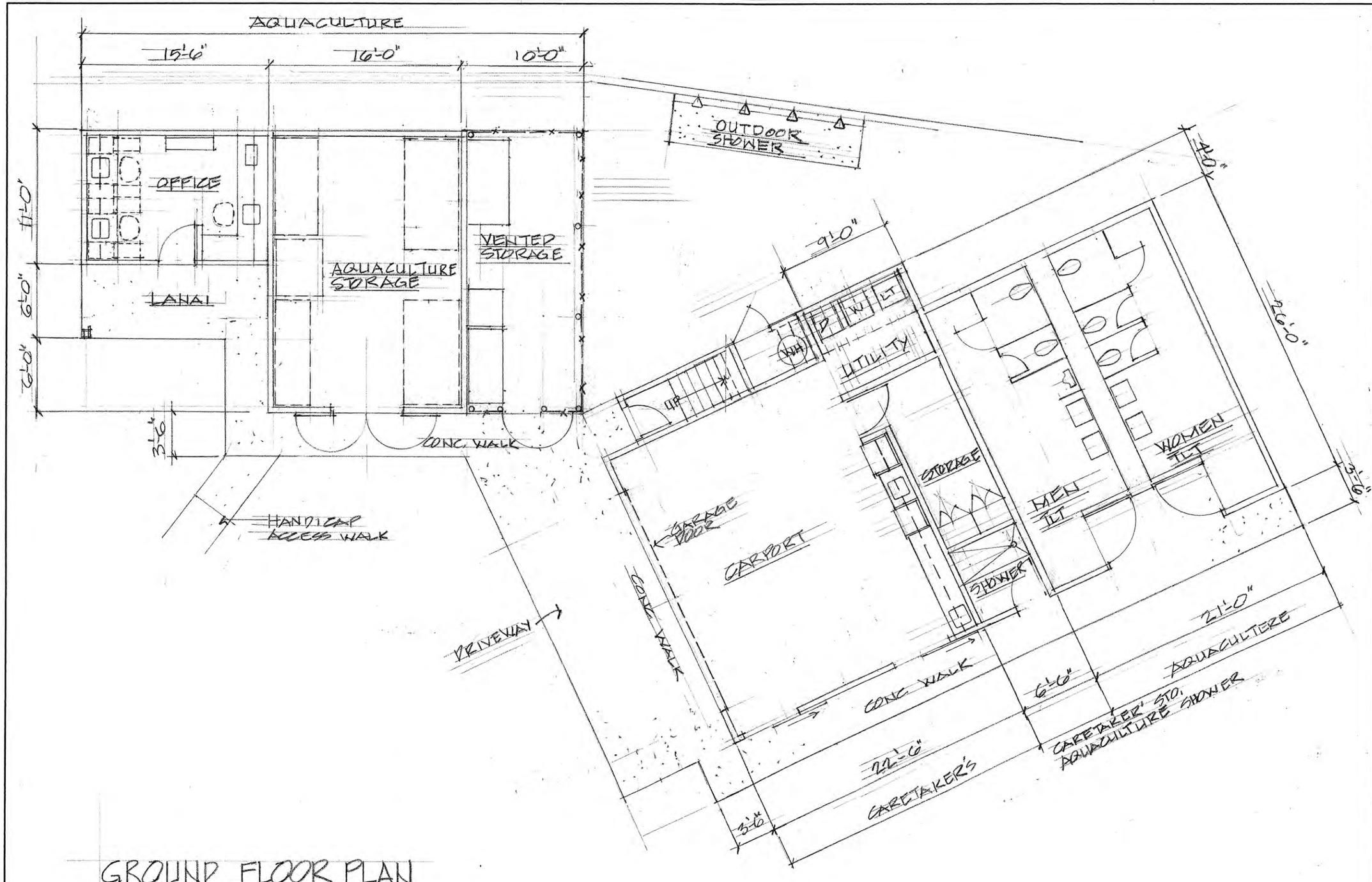
APPENDIX A
Architectural Drawings

166973



GROUND FLOOR PLAN

SCALE=1/8"=1'-0"

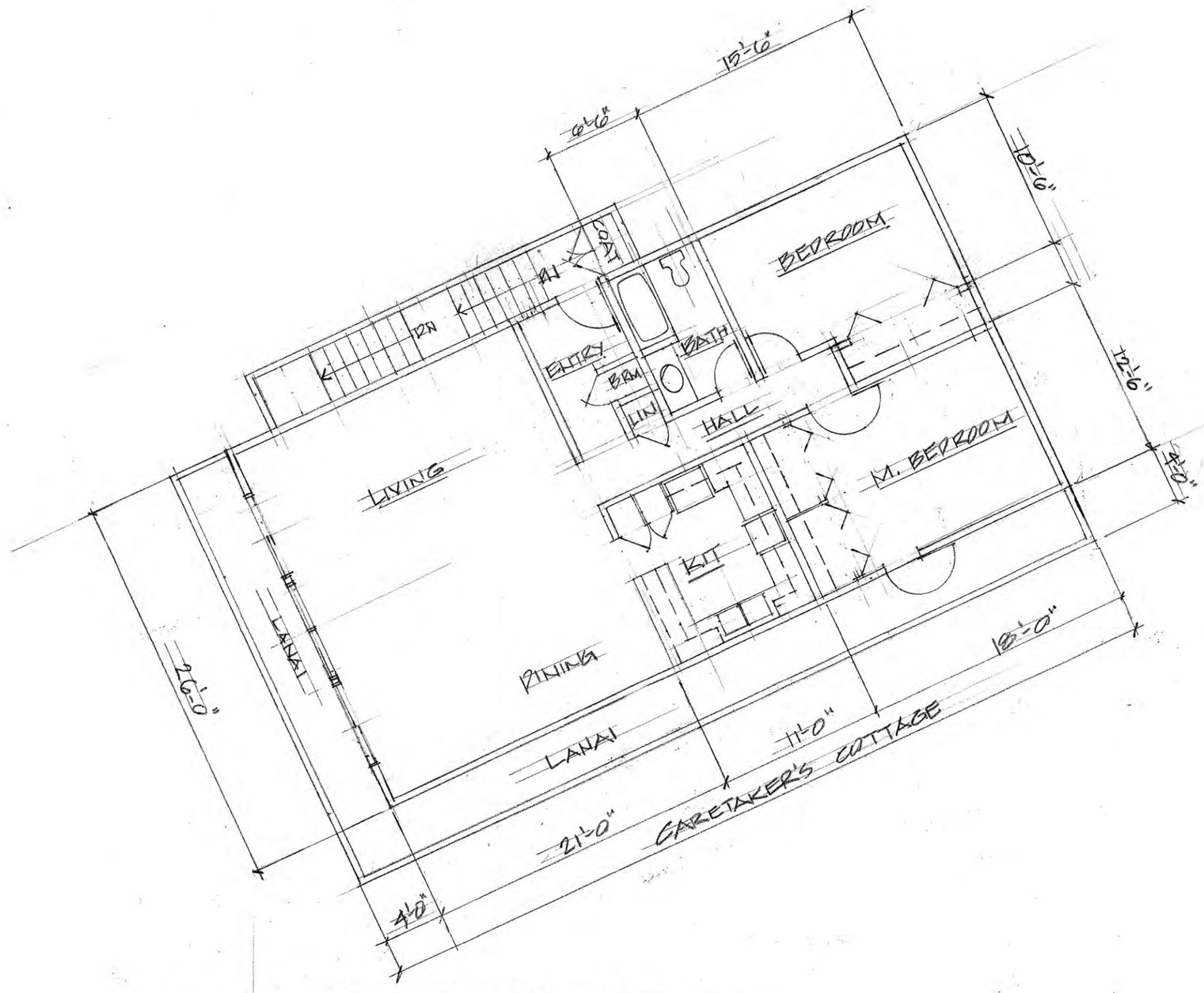
KAUAHIKAUA & CHUN / ARCHITECTS
Kawaiahao Plaza,
Hale Mauka
567 South King St.,
Suite 108
Honolulu, HI 96813
Ph: (808) 526-2283
Fax:(808) 599-4723

KAMEHAMEHA SCHOOLS
HE'E'IA FISHPOND
AQUACULTURE SUPPORT FACILITIES
KO'OLAUPOKO DISTRICT, OAHU

Date: AUG 2006
Job No.:
Sheet:
2

Of 5

166973



SECOND FLOOR PLAN

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KAUAHIKAUA & CHUN / ARCHITECTS
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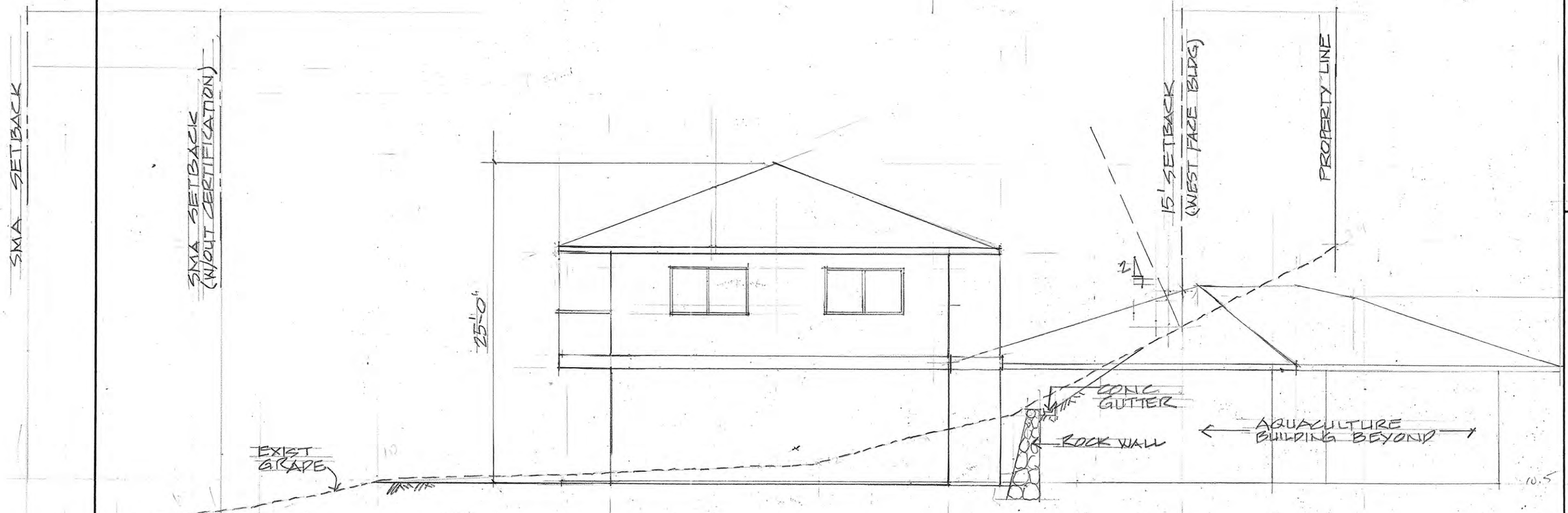
KAMEHAMEHA SCHOOLS
HE'EIA FISHPOND
AQUACULTURE SUPPORT FACILITIES
KOOLAUPOKO DISTRICT, OAHU

Date: AUG, 2006
Job No.:
Sheet:
3
Of 5

166973



WEST ELEVATION
SCALE = 1/8" = 1'-0"

KAUAHIKAUA & CHUN / ARCHITECTS
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567 South King St.,
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KOOLAUPOKO DISTRICT, OAHU

Date: AUG 2006
Job No.:
Sheet:
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166973

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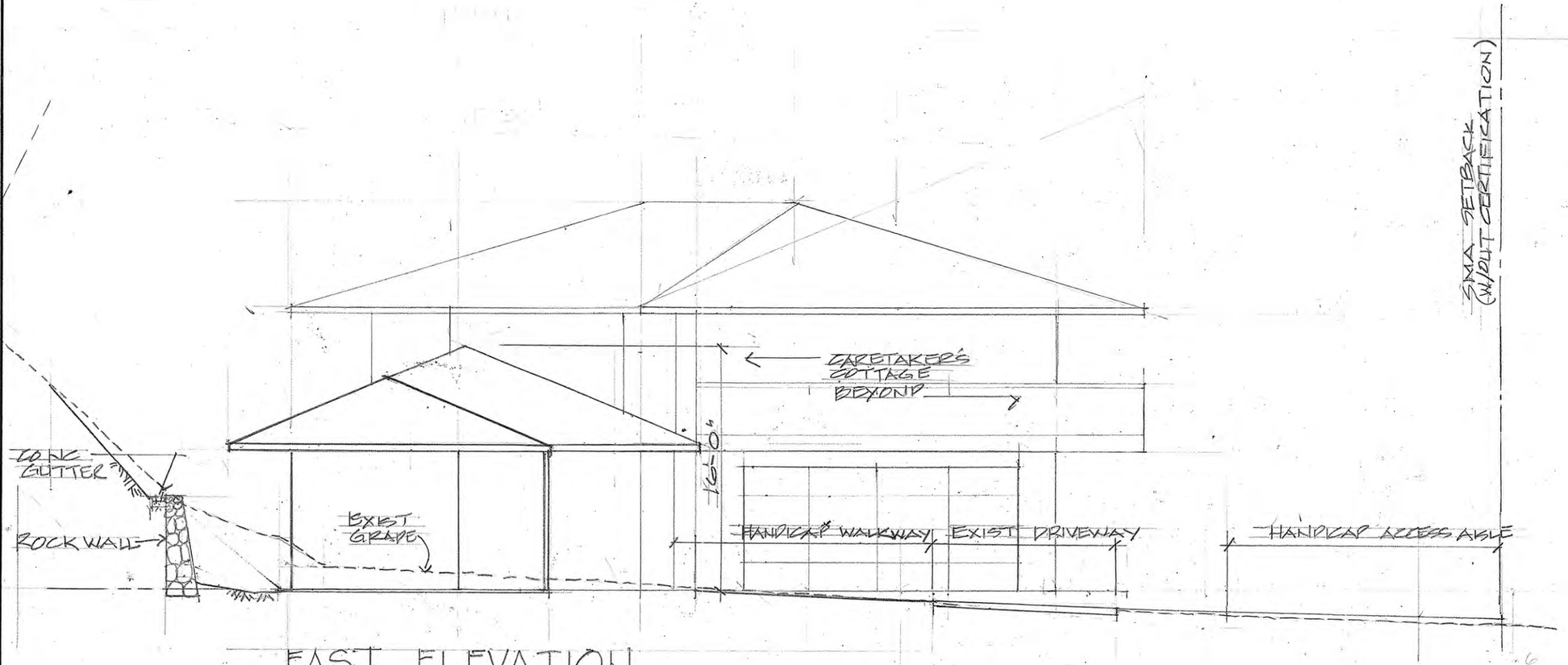
Of 5



EAST ELEVATION
SCALE = 1/8" = 1'-0"

APPENDIX B
Botanical Resources Assessment

BOTANICAL RESOURCES ASSESSMENT FOR THE PROPOSED HE`EIA FISHPOND CARETAKERS RESIDENCE KANE`OHE, OAHU, HAWAII

Prepared by:

Maya LeGrande
LeGrande Biological Surveys, Inc
68-310 Kikou Street
Waialua HI 96791

Prepared for:

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567 South King Street
Honolulu HI 96813

May 2006

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INTRODUCTION

This report was prepared for use in an Environmental Assessment for the He`eia Fishpond Caretaker's House Rebuild Project, a portion of TMK: 04-06-05:01 on the island of Oahu. LeGrande Biological Surveys, Inc. carried out a botanical field survey of the above location on April 27, 2006 for Kauahikaua & Chun Architects. The primary objectives of the field studies were to:

1) provide a general description of the vegetation on project site;
2) inventory the flora;
3) search for threatened and endangered species as well as species of concern;
4) identify areas for potential environmental problems or concerns and propose appropriate mitigation measures.

Federal and State of Hawai`i listed species status follows Federal Registers (1999a and 1999b, 2002, and 2004) and the Hawaiian Islands Plants: Updated June 15, 2004; Listed and Candidate Species, As Designated Under the U.S. Endangered Species Act.

GENERAL SITE DESCRIPTION

He`eia Fishpond is a Historic Location [80-10-327] located in Kaneohe on the windward side of the island of Oahu. The parcel has two City and County of Honolulu zoning designations: P-1 Preservation District (where all uses, structures, and development standards shall be governed by the appropriate state agencies) and P-2 General Preservation District (where permitted uses and structures shall be as provided for by the City and County of Honolulu's Land Use Ordinance). The proposed project development is restricted to the P-2 section. The main area that was surveyed was the half-acre parcel with the existing caretaker's house. The existing Caretakers Residence is located at the southern boundary of the parcel near the Ipuka Street access. Construction will be confined to the existing residence location within the P-2 zone.

SURVEY METHODS

Prior to undertaking the field studies, a search was made of the pertinent literature to familiarize the principal investigator with other botanical studies conducted in the general area. Topographic maps were examined to determine terrain characteristics, access, boundaries, and reference points.

A walk-through survey method was used. Transects included walking along all boundaries of the survey area and the interior of the project area. Notes were made on plant associations and distribution, disturbances, topography, substrate types, exposure, drainage, etc. Plant identifications were made in the field; plants which could not be positively identified, were collected for later determination in the herbarium, and for comparison with the recent taxonomic literature.

DESCRIPTION OF THE VEGETATION

The area of the parcel proposed for construction is dominated by a mosaic of ornamental landscaping and weedy plant species. The present study observed 56 plant species, native species making up 11% (6) of the total. Alien plant species were dominant, making up more than 73% (41) of the total plant species observed followed by Polynesian introductions with 16% (9) of the total.

In this study, two vegetation types are recognized on the project site; Ornamental landscaping and Mangrove Swamp. The main survey area consisted of the planted and partially maintained ornamental landscaping with the borders near the fishpond dominated by the mangrove swamp vegetation.

An inventory of all the plants observed in the survey area is presented in the species list at the end of the report.

Ornamental Landscaping

The vegetation is characterized by mowed or weedy grassy lawns with landscaped plantings either being actively taken care of or in various states of disrepair. Grassy areas between buildings and along roadsides consist mainly of manienie (*Cynodon dactylon*), swollen fingergrass (*Chloris barbata*), and West Indian dropseed (*Sporobolus indicus*). The weedy kili`o`opu (*Kyllinga nemoralis*) is found scattered throughout the grassy lawn areas. In and around dilapidated buildings larger grasses such as guinea grass (*Panicum maximum*) and California grass (*Brachiaria mutica*) were observed. Large trees of Java plum (*Syzygium cumini*) were observed growing on the sloping hillside behind the caretaker's cottage.

There are several plant species that have been intentionally planted and are being actively maintained on the property. The kalo (*Colocasia esculenta*) and `ahu`awa (*Cyperus javanicus*) are growing in and along the fresh water aukai near the banks of the fishpond. Coconut trees are found clustered near the southern end of the aukai. Several native plant species were observed planted near the tent at the northern end of the survey area. They include naupaka (*Scaevola sericea*), naio (*Myoporum sandwicense*), a`ali`i (*Dodonaea viscosa*), pohinahina (*Vitex rotundifolia*), and achyranthes (*Achyranthes splendens* var. *rotundata*). The achryranthes is the only endemic (native only to the Hawaiian Islands) species found within the survey site. The variety found on the site is listed as Endangered by the U.S. Fish & Wildlife Service, but because the individuals found on the property are obviously planted and provenance cannot be determined, the plants do not fall under the same protection status that wild extant plants fall under.

Mangrove Swamp

The fishpond bank directly in front of the established buildings is relatively open and a pier juts out into the fishpond about 60 feet. On the banks to the north and south of the pier, mangrove (*Bruguiera sexangula*) blankets the banks and extends out into a portion

of the fishpond. A hau (*Hibiscus tiliaceus*) thicket is growing in the interface between the wetter mangroves and the natural slope at the northern end of the survey area. Sections of the mangrove infestation are currently being managed by cutting and clearing.

DISCUSSION AND RECOMMENDATIONS

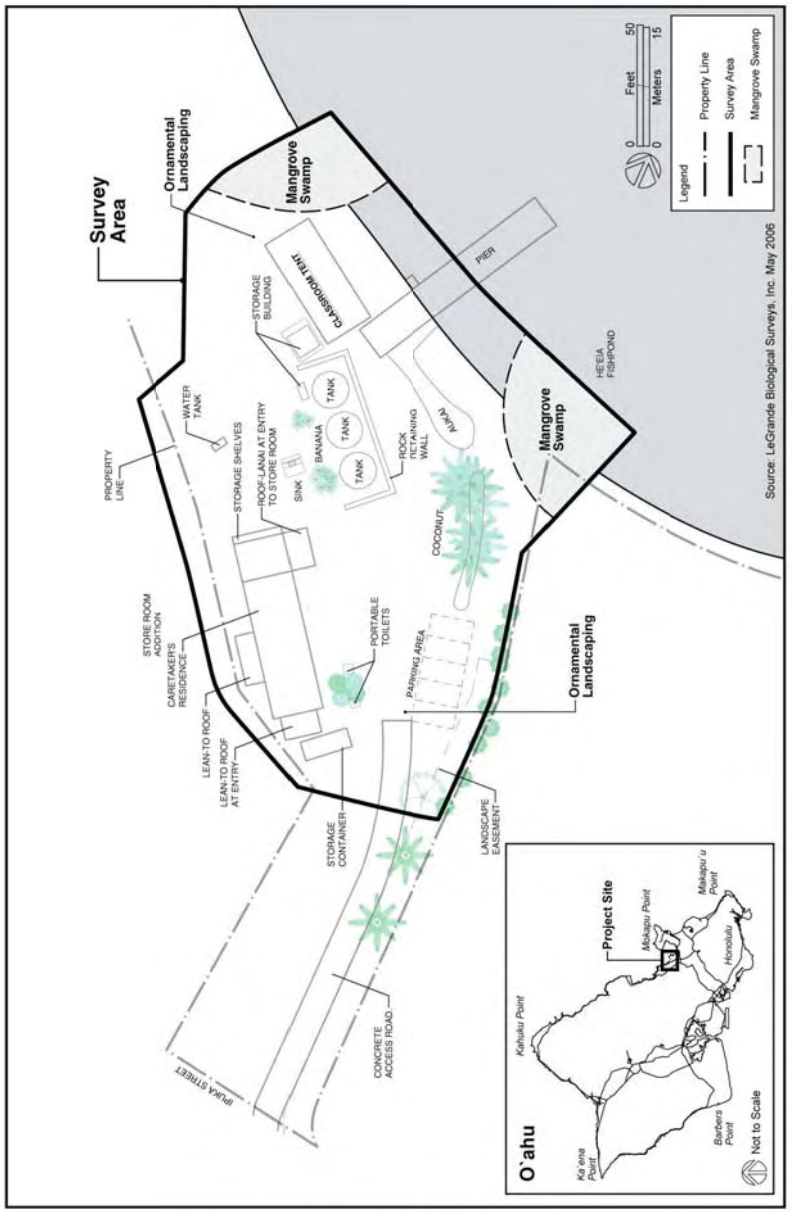
Two vegetation types are recognized on project site; Ornamental Landscaping and Mangrove Swamp. The majority of the site is ornamental landscaping with the edges of the fishpond dominated by a monotypic stand of mangrove.

None of the naturally occurring plants on the project site is a threatened and endangered species or a species of concern (U.S. Fish and Wildlife Service, 1999a, 1999b, 2004; Wagner et. al., 1999). Although an endangered plant variety was found during the survey of the project site (*Achyranthes splendens* var. *rotundata*), it is a planted specimen with no known provenance; therefore no protection measures are in place for these plants.

There were no wetlands observed at the proposed area of construction. The natural aukai and the banks of the man-made fishpond are the closest wetland habitat and are not expected to be impacted by the construction of the new caretaker's residence.

It is recommended that, if possible, native and Polynesian plant species found within the project site be retained for cultural and educational purposes. Future plantings should include additional native plant species that can be utilized by the education center for teaching.

The proposed He`eia Fishpond Caretaker's Residence Rebuild is not expected to have significant negative impacts on the botanical resources of the site or the general region. Due to the fact that the proposed site for the new caretakers residence is upslope and in close proximity to the fishpond, care should be taken during the clearing and rebuilding stages that exposed topsoil does not wash into the fishpond or fresh water aukai. Silt can damage the water ecosystems and take some time to recover.



Vegetation Types
He`eia Fishpond Caretaker's Residence
O'ahu, Hawai'i

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PLANTS SPECIES LIST – He`eia Caretaker's Residence, Oahu, Hawaii

The following checklist is an inventory of all the plant species observed on the existing caretakers residence near He`eia fishpond. The plant names are arranged alphabetically by family and then by species into each of four groups: Gymnosperms, Ferns and Fern Allies (Pteridophytes), Monocots, and Dicots. The taxonomy and nomenclature of the Ferns and Fern Allies follow Palmer (2002), while the flowering plants, Monocots and Dicots, are in accordance with Wagner *et al*. (1990), Wagner and Herbst (1999), and Staples and Herbst (2005). Recent name changes are those recorded in the Hawaii Biological Survey series (Evehuis and Eldredge, eds., 1999-2002).

For each species, the following name is provided:

1. Scientific name with author citation.
2. Common English and/or Hawaiian name(s), when known.
3. Biogeographic status. The following symbols are used:
   E= endemic= native only to the Hawaiian Islands.
   I= indigenous= native to the Hawaiian Islands and elsewhere.
   P=species that were introduced by the Polynesian migration to Hawaii, either intentionally or unintentionally, and are now naturalized.
   X=introduced or alien = all those plants brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact, that is Cook's arrival in the islands in 1778.
   X?= questionably introduced = date of introduction unclear or very soon after Western contact; may be indigenous or of Polynesian introduction.

HE`EIA PLANT SPECIES LIST
APRIL 2006

SCIENTIFIC NAME	COMMON NAME	STATUS
PTERIDOPHYTES		
NEPHROLEPIDACEAE		
Nephrolepis multiflora (Roxb.) F.M. Jarrett ex C.V. Morton		X
POLYPODIACEAE		
Phymatosorus grossus (Langsdorff & Fischer) Brownlie	laua`e, maile-scented fern	X
THELYPTERIDACEAE		
Christella parasitica (L.) Lev.		X
ANGIOSPERMS--MONOCOTS		
AGAVACEAE		
Cordyline fruticosa (L.) A. Chev.	ti, ki	P
ARACEAE		
Alocasia macrorrhizos (L.) Schott	ape	P
Colocasia esculenta (L.) Schott	Taro, kalo	P
ARACEAE		
Cocos nucifera L.	Coconut palm, niu	P
Dypsis lutescens (H. Wend) Been & J.Dran	Areca palm	X
CANNACEAE		
Canna sp. L.	canna	X
CYPERACEAE		
Cyperus javanicus Houtt.	`ahu`awa	I
Kyllinga nemoralis (J.R. Forst. & G. Forst.) Dandy ex Hutch. & Dalziel	Kili`o`opu	X
HELICONIACEAE		
Heliconia sp. L.	heliconia	X
MUSACEAE		
Musa acuminata x *M. balbisiana* Colla	Banana, mai`a	P
PANDANACEAE		
Pandanus tectorius Parkinson ex Z	Pandanus, hala	P

SCIENTIFIC NAME	COMMON NAME	STATUS
POACEAE		
Brachiaria mutica (Forssk.) Stapf	California grass	X
Chloris barbata (L.) Sw.	Swollen finger grass	X
Cynodon dactylon (L.) Pers.	manienie	X
Digitaria insularis (L.) Mez ex Ekman	sourgrass	X
Panicum maximum (Jacq.)	Guinea grass	X
Paspalum conjugatum P.J. Bergius	Hilo grass	X
Sporobolus indicus (L.) R BR	West Indian dropseed	X
DICOTS		
AMARANTHACEAE		
Achyranthes splendens Mart. Ex Moq. var. *rotundata* Hillebr.	achyranthes	E
Amaranthus viridis L.	Slender amaranth	X
APIACEAE		
Centella asiatica (L.) Urb	Asiatic pennywort	X
ARALIACEAE		
Schefflera actinophylla (End.) Harms	Octopus tree	X
ASTERACEAE		
Bidens pilosa L.	Ki, ki nehe	X
Pluchea indica (Jacq.) L.	Indian fleabane	X
Sphagneticola trilobata (L.) Pruski	wedelia	X
Youngia japonica (L.) DC	Oriental hawksbeard	X
BIGNONIACEAE		
Spathodea campanulata P. Beauv.	African Tulip tree	X
CONVOLVULACEAE		
Ipomoea triloba L.	Little bell	X
CUCURBITACEAE		
Coccinea grandis L.	Ivy gourd	X
Momordica charantia L.	Bitter melon	X
EUPHORBIACEAE		
Aleurites moluccana (L.) Willd.	kukui	P
Chamaesyce hirta (L.) Millsp.	hairy spurge, garden spurge	X
Chamaesyce hypericifolia (L.) Mill.	Graceful spurge	X
Codiaeum sp. L.	croton	X
Phyllanthus debilis Klein ex Willd.	niruri	X

SCIENTIFIC NAME	COMMON NAME	STATUS
Ricinus communis L.	Castor bean	X
FABACEAE		
Desmanthus pernambucans (L.) Thell.	Slender, virgate mimosa	X
Desmodium incanum DC.	Spanish clover	X
Mimosa pudica L. var. *unijuga* (Duchass. & Walp.) Griseb.	sensitive plant, sleeping grass	X
GOODENIACEAE		
Scaevola sericea Vahl	Naupaka	I
MALVACEAE		
Hibiscus tiliaceus L.	hau	P
MYOPORACEAE		
Myoporum sandwicense A. Gray	naio	I
MYRTACEAE		
Syzygium cumini (L.) Skeels	Java plum	X
NYCTAGINACEAE		
Boerhavia coccinea Mill.		X
OXALIDACEAE		
Oxalis corniculata L	Yellow wood sorrel	X
RHIZOPHORACEAE		
Bruguiera sexangula (Lour.) Poir.	mangrove	X
RUBIACEAE		
Morinda citrifolia L.	noni	P
Paederia foetida L.	Maile pilau	X
Spermacoce assurgens Ruiz & Pav.	buttonweed	X
SAPINDACEAE		
Dodonaea viscosa Jacq.	A`ali`i	I
SOLANACEAE		
Solanum americanum Mill.	Popolo	X?
Solanum torvum Sw.	Prickly solanum	X
VERBENACEAE		
Vitex rotundifolia L. f.	Pohinahina, beach vitex	I

APPENDIX C
Avifaunal and Feral Mammal Field Survey

AVIFAUNAL AND FERAL MAMMAL FIELD SURVEY OF PROPERTY INVOLVED IN THE PROPOSED NEW CARETAKER'S RESIDENCE AND AQUACULTURE SUPPORT BUILDING AT HE'EIA FISHPOND, KANEOHE, OAHU

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30 April 2006

INTRODUCTION

This report presents the findings of a one day (27 April 2006) field survey of birds and mammals at the site of a proposed new caretaker's residence and aquaculture support buildings at He'eia Fishpond, Kaneohe, Oahu. References to pertinent published sources are also included to provide a broader perspective of birds and mammals known from similar lands on Oahu. The goals of the field survey were to:

1-Document the species of birds and mammals presently found on or near the property.

2-Note any habitat on or nearby the area proposed for development that could support native or migratory species.

GENERAL SITE DESCRIPTION

This site is surrounded by residential properties. Habitats in this area include: dense forests of alien plants; rocky shoreline around the fishpond; and a large intertidal area to the east of the property. The actual lands where the proposed development will occur contain existing structures and landscaping.

METHODS OF THE FIELD SURVEY

The property was surveyed by walking the area of the proposed development as well as a portion of the fishpond east wall. The survey was conducted during the morning when birds are most active and detectable. All species of birds and mammals seen on the survey were recorded. Scientific and common (vernacular) names used in this report follow Honacki et al. (1982) and Pyle (2002).

RESULTS OF THE FIELD SURVEY

Native Land Birds:

No native land birds were recorded nor would any be expected in this area due to its location and available habitats (Pratt et al. 1987, Hawaii Audubon Society 2005).

Native Waterbirds:

No native waterbirds were observed on the survey. Black-crowned Night Heron or 'Auku'u (*Nycticorax Nycticorax*) are reported to forage along the edges of the fishpond (Mahina Duarte, Executive Director, Paepae O He'eia Fishpond License / Operator, pers. comm.). The endangered Black-necked Stilt or Ae'o (*Himantopus mexicanus knudseni*) are also seen during low tide on exposed mudflats around the fishpond (M. Duarte, pers. comm.).

Seabirds:

No seabirds were observed during the survey. I have seen Black Noddy or Noio (*Anous minutus*) foraging in Kaneohe Bay. Hawaii Audubon Society (2005) also report this species in this area. The Great Fregatebird or 'Iwa (*Fregata minor*) is also commonly seen overhead along theWindward Coast of Oahu (Hawaii Audubon Society 2005). M. Duarte (pers. comm.) noted 'Iwa visit the fishpond on occasion. Neither the Noio or 'Iwa are endangered or threatened.

Migratory shorebirds:

No migratory shorebirds were tallied on this survey. This was not entirely unexpected since the most common species, the Pacific Golden-Plover or Kolea (*Pluvialis fulva*), departs Hawaii for its arctic breeding grounds by the 25th of April (Johnson et al. 1981, 1989, 2001). This is the only migrant that would forage on the limited lawn habitat in the proposed development area. Two other migrants the Wandering Tattler or 'Ulili (*Heteroscelus incanus*) and Ruddy Turnstone or 'Akekeke (*Arenaria interpres*) would forage on the exposed reef / mud flats to the east of the fishpond. They migrate to the arctic around the same time as Kolea. None of these migrants are listed as endangered or threatened.

Alien (Introduced) Birds:

A total of nine alien species of birds were recorded on the survey. Table One gives the names of these birds. None are listed as threatened or endangered. The array of species found on the survey was typical of what might be expected at this location (Hawaii Audubon Society 2005).

Mammals:

One feral (?) cat (*Felis catus*) were seen near the current caretaker residence. Rats (*Rattus rattus*) likely occur on the property along with the House Mouse (*Mus musculus*) (Tomich 1986). The endangered Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) was not observed on the survey. They typically roost solitarily in trees and forage for insects in a wide variety of native and non-native habitats, including urban areas and over ponds and bays (Tomich 1986). Although this species is relatively rare on Oahu it still could occur in this area (Kepler and Scott 1990).

CONCLUSIONS

The typical array of alien birds found in this region of Oahu were discovered on the survey. No unexpected species were noted. The absence of migratory birds was due primarily to the time of year (most individuals depart Hawaii for the arctic on or before

the 25th of April. No native land birds would be expected on this property, and none were found. Black-crowned Night Heron and the endangered Black-necked Stilt have been observed around the fishpond by Mahina Duarte (Executive Director of this facility). The most likely seabirds found around this site are Black Noddy and Great Fregatebird. The only habitat resources important to native and migratory birds are the mud / reef flats exposed at low tide around the fishpond. The construction of new facilities to replace existing structures should have no measurable impact on birds in this region of Kaneohe. The only native land mammal is the endangered Hawaiian Hoary Bat. Although it was not recorded on the survey their use of ponds and bays over which they could forage and the dense forest of Hau and Mangrove for roosting would make this area suitable for this species. The proposed construction of replacement facilities should not have an impact on any bats that might on occasion occur in this area. They are quite capable of foraging and roosting even in highly developed urban areas (pers. observ.)

TABLE ONE

Alien (introduced) birds recorded on a one day (27 April 2006) field survey of lands involved with the proposed new caretaker's residence and aquaculture support buildings at He'eia Fishpond, Kaneohe, Oahu.

COMMON NAME	SCIENTIFIC NAME
Cattle Egret	*Bubulcus ibis*
Spotted Dove	*Streptopelia chinensis*
Zebra Dove	*Geopelia striata*
Red-vented Bulbul	*Pycnonotus cafer*
White-rumped Shama	*Copsychus malabaricus*
Japanese White-eye	*Zosterops japonicus*
Common Myna	*Acridotheres tristis*
Northern Cardinal	*Cardinalis cardinalis*
House Sparrow	*Passer domesticus*

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APPENDIX D
Archaeological Assessment

— Final Report —

Archaeological Assessment for Replacement of Caretaker's House at He'eia Fishpond within Boundary of Site 50-80-10-0327, He'eia, Ko'olaupoko District, O'ahu Island, Hawai'i

Portion of Tax Map Key (TMK) 04-06-05:01

Prepared by
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INTERNATIONAL ARCHAEOLOGICAL RESEARCH INSTITUTE, INC.

DECEMBER 2006

IARII 200608

— Final Report —

ARCHAEOLOGICAL ASSESSMENT FOR REPLACEMENT OF CARETAKER'S HOUSE AT HE'EIA FISHPOND WITHIN BOUNDARY OF SITE 50-80-10-0327, HE'EIA, KO'OLAUPOKO DISTRICT, O'AHU ISLAND, HAWAI'I

Portion of Tax Map Key (TMK) 04-06-05:01

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December 2006

ABSTRACT

At the request of Kauahikaua and Chun, Architects, International Archaeological Research Institute, Inc. (IARII) provides this archaeological assessment for planned demolition of a Quonset hut and construction of a new caretaker's residence in a portion of Tax Map Key (TMK) 04-06-05:01 in He'eia Ahupua'a of O'ahu Island, Hawai'i. The project area is within the official boundary of Site 50-80-10-0327 for He'eia Fishpond, but this specific location does not contain any elements contributing to the significance of the site as listed in its nomination for the National Register of Historic Places (NRHP). Surface survey and limited subsurface testing identified no significant archaeological resources in the project area. A dilapidated Quonset Hut was found to lack integrity of design, location, and association as a historical building. The planned construction activities will have no foreseeable adverse effect on historic or archaeological resources.

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INTRODUCTION

At the request of Kauahikaua and Chun, Architects, International Archaeological Research Institute, Inc. (IARII) provides this archaeological assessment for planned demolition of a Quonset hut and construction of a new caretaker's residence in a portion of Tax Map Key (TMK) 04-06-05:01 in He'eia Ahupua'a of O'ahu Island, Hawai'i (Fig. 1).

The project area is defined as the location of the Quonset hut and its adjacent vicinity. This area is within the official boundary of Site 50-80-10-0327 (He'eia Fishpond) as listed in its nomination for the National Register of Historic Places (NRHP), but it is outside the physical structure of the fishpond or any of its known contributing elements.

The planned demolition and construction activities will have no foreseeable adverse effect on historic or archaeological resources. Surface survey and limited subsurface testing identified no significant archaeological remains within the project area. The Quonset hut does not retain the integrity of location, design, or association to be considered a significant historic resource. Also, it does not contribute to the archaeological significance of He'eia Fishpond nominated in the NRHP as Site 50-80-10-0327.

This report reviews historical, archaeological, and other information relating to He'eia Fishpond, the Quonset hut, and the project area in order to evaluate possible adverse impacts of the proposed replacement of the caretaker's residence. The report includes seven major sections: 1) investigative procedures; 2) physical setting; 3) cultural and historic setting; 4) archaeological setting; 5) Quonset Hut observations; 6) archaeological observation; and 7) conclusions.

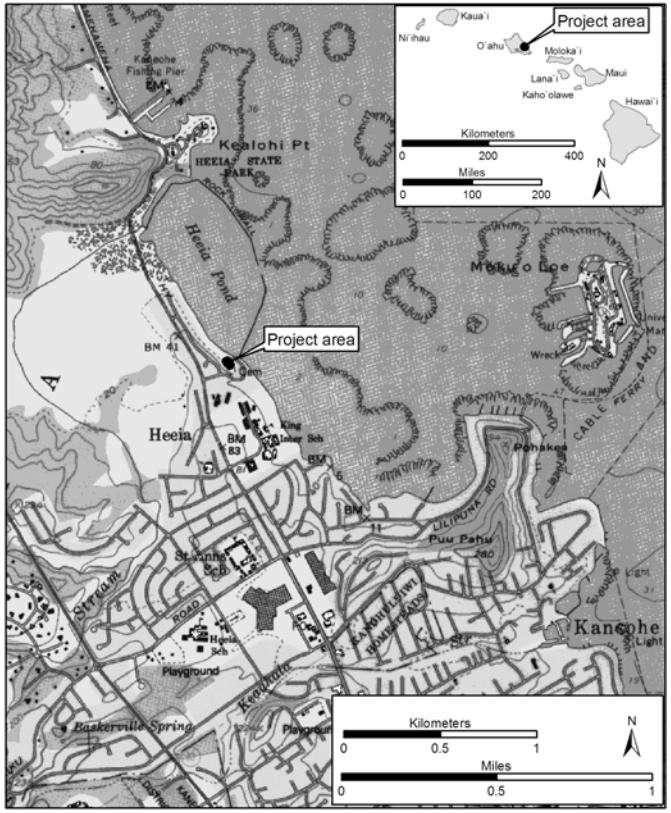

Figure 1. Project location in He‘eia, O‘ahu Island, shown on a portion of USGS 7.5-minute series Kaneohe Quadrangle topographic map.

INVESTIGATIVE PROCEDURES

Field observations included inspection of the ground surface, assessment of sediment origins, and documentation of the old caretaker’s residence in the project area. The documentation included a detailed plan map, two exterior elevation views, and a set of exterior and interior photographs. Supporting tasks included evaluation of the physical setting, cultural and historic setting, and archaeological setting.

The fieldwork was conducted by Mike T. Carson, Ph.D. as project director and Coral Rasmussen, M.A. as field supervisor in April 2006. J. Stephen Athens, Ph.D. acted as principal investigator. The mapping of the Quonset hut involved use of surveyor’s tape and compass. Photography was by both print film and digital film. Archaeological investigation involved surface survey of the project area and limited subsurface testing by three auger borings.

Supplementary architectural assessment was conducted by Kauahikaua and Chun Architects, resulting in a brief report attached as “Appendix A” with this report. The architectural assessment involved observations of construction techniques and modifications of the Quonset Hut, architectural plan and section maps of the building, and representative photography of key architectural elements.

In addition to notes, maps, and photographs, the only primary data for long-term storage include a few flecks of charcoal from one of the auger borings. These materials are temporarily archived at IARII facilities in Honolulu. However, all pertinent data are included in this report.

PHYSICAL SETTING

The He‘eia Fishpond Caretaker’s House is about 50 m (164 ft) inland of the present shoreline and 4 m (13 ft) above sea level, on the windward (east) coast of O‘ahu Island (Fig 2; see also Fig. 1). The project area is situated on artificial landfill in a coastal plain adjacent to Kāne‘ohe Bay.

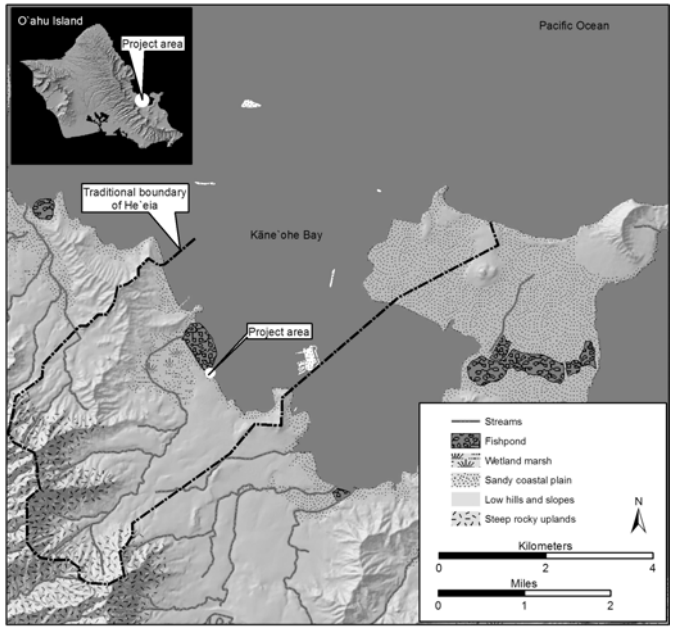

Figure 2. Major physiographic features of He‘eia.

Major landforms of He‘eia include: a) a coastal plain between the shoreline and 12 m (40 ft) above sea level; b) wetland marsh in a large part of the coastal plain; c) lowland colluvial and alluvial slopes between the coastal plain and 152 m (500 ft) elevation; and d) extremely steep mountainous uplands of exposed rocky formations, landward of 152 m (500 ft) elevation. Traditionally, He‘eia also includes the northwest tip of the Mōkapu Peninsula, consisting of a sandy coastal plain around a low hill known as Pali Kilo.

The geology, sediments, climate, water sources, vegetation, and fauna are typical of lowland windward settings in the archipelago. Each of these components is described, followed by an assessment of potential prehistoric and historic land use.

GEOLOGY AND SEDIMENTS

He‘eia is within the filled caldera of the now extinct Ko‘olau Volcano, formed between 1.8 and 2.6 million years ago (Macdonald et al. 1983:300-304, 433). The Ko‘olau Mountains represent the southwest border of a northwest-trending rift zone. Stream dissection and slope erosion of the mountains have contributed to filling of the lowland and coastal portions of He‘eia and much of windward O‘ahu.

A statewide soil survey identified two major soil series (with various sub-types discerned by percent slope) for the lowland slopes and coastal plain of He‘eia (Foote et al. 1972:Map sheets 59 and 60). Hanalei Silty Clays are found along major streams, described as “very deep” and well drained alluvium (Foote et al. 1972:38). Lolekaa Silty Clays are found almost everywhere else in the lowland slopes, described as well drained soils “on fans and terraces,” developed in “old, gravelly colluvium and alluvium” (Foote et al. 1972:83). Both soil series are suitable for plant growth, but the Hanalei Silty Clays appear to be most productive.

Along the shoreline, some calcareous material is mixed with the slope-derived silty clays. This portion of the O‘ahu coast is sheltered by Kāne‘ohe Bay, so it is not exposed to repeated high-energy marine deposition as in some other parts of the archipelago.

Much of the coastal plain includes wetland marsh, and some areas have been filled naturally or artificially. At one time, the project area was situated in a marshy or mucky setting, since then filled gradually by slope-eroded sediments.

The northwest tip of Mōkapu Peninsula is presently mostly artificial landfill, connecting Pali Kilo to the main part of the peninsula. A sandy coastal plain was formerly around Pali Kilo, separated from the main part of the peninsula by a bed of low-lying calcareous sand (less than 1 m above sea level) and wetland marsh. Prior to the artificial filling, Pali Kilo was for all practical purposes an offshore islet.

Fluctuations in sea level and stream flow undoubtedly affected the coastal morphology of He‘eia during the time range of human occupation. Global and regional sea-level changes during the last ca. 1000 years have been of short duration and low magnitude (Nunn 1998), but low-lying coastal areas are naturally sensitive to even minor fluctuations in environmental conditions.

At the time of human colonization of O‘ahu Island around 700 to 800 AD (Athens et al. 2002; Masse and Tuggle 1998; Tuggle and Spriggs 2001), the last stage of a major sea-level drawdown (a drop of 1.4 to 2.8 m to reach the present level) had ended at least a few centuries earlier (Fletcher and Jones 1996; see also Calhoun and Fletcher 1996; Grossman and Fletcher 1998; Jones 1992). Newly stabilized coastal plains began to accrete additional calcareous material, but some areas were exposed to erosion (Carson and Athens 2006a, 2006b).

In a sheltered portion of Kāne‘ohe Bay, the shores of He‘eia were largely unchanged by marine deposition or erosion during the span of human occupation. However, gradual calcareous accumulation occurred around Pali Kilo at the northwest tip of Mōkapu Peninsula.

The main land mass of He‘eia has been transformed primarily by stream flow and slope erosion, gradually filling the marshy coastal plain with alluvial and colluvial deposits. The upland mountains and lowland slopes were dissected by He‘eia Stream and its tributaries, transporting alluvial sediments to the coastal plain. Ongoing slope erosion contributed colluvial deposits toward the lowland slopes and coastal plain. These processes likely were intensified or accelerated by inland forest-clearing and other activities, and rainfall also was a key factor.

The project area is an area of slope-eroded clay, probably overlaying a former wetland marsh near the shoreline. A small amount of quarried road gravel has been scattered over the surface, reflecting an attempt to create a stable dry surface in an otherwise mucky setting. Surrounding land also was formerly wetland marsh, now filled naturally or artificially.

CLIMATE

The climate in He‘eia is similar to windward O‘ahu overall, typical of windward settings in the humid tropics. Temperatures are generally warm, and rainfall is plentiful. The windward setting receives frequent breezes and weather systems from the predominately northeasterly direction of the trade winds. Rainfall is ample year-round, but it is slightly greater from November through March (Giambelluca et al. 1986:139-150).

An orographic effect produces greater rainfall against the steeply rising Ko‘olau Mountains. For the main land mass of He‘eia, mean annual rainfall is 1000 to 200 mm (39 to 79 inches) at the coastal plain and in the lowland slopes, and it ranges 2000 to 3000 mm (79 to 118 inches) in the steep upland zone landward of 152 m (500 ft) elevation (Giambelluca et al. 1986:138). In the most seaward and driest portion of He‘eia and at the northwest tip of Mōkapu Peninsula, mean annual rainfall is about 500 to 1000 mm (20 to 39 inches).

WATER SOURCES

He‘eia receives ample rainfall, and this land contains abundant and reliable freshwater resources to support large-scale and long-term human settlement. He‘eia Stream and its tributaries flow from sources in the Ko‘olau Mountains, emptying into the ocean directly north of He‘eia Fishpond. The stream headwaters are in the far uplands, where mean annual rainfall approaches 3000 mm (Giambelluca et al. 1986:138).

VEGETATION

The present vegetation in He‘eia reflects historic and modern alterations, but anthropogenic transformation of local vegetation communities began roughly 1000 years ago. Paleoenvironmental investigations around O‘ahu reveal a consistent pattern of native lowland forest replacement very shortly after initial human colonization toward the end of the first millennium AD (Athens 1997; Athens and Ward 1993; Athens et al. 1992; Athens et al. 2002).

Historic land use involved industrial-scale sugarcane plantations in much of the coastal plain and lowland slopes, including land close to (but not including) the current project area. Within the last several decades, secondary vegetation growth favored various exotic grasses and trees. Mangroves have grown in some of the coastal wetland marsh areas.

Current plant taxa in and around the project area include coconut (*Cocos nucifera*), monkey pod (*Samanea saman*), mango (*Mangifera indica*), *koa haole* (*Leucana leucocephala*), California grass (*Brachiaria mutica*), and various exotic shrubs and grasses. Recent plantings of *kī* (*Cordyline fruticosa*) and banana (*Musa* sp.) also were observed.

FAUNA

The local fauna relevant for cultural and archaeological studies include birds, rats, shellfish, and fish. Specifically for the project area near the shoreline, shellfish and fish are the most significant resources, and He‘eia Fishpond at one time augmented stocks of mullet and possibly other fish. In the shallow offshore waters of Kāne‘ohe Bay, different varieties of fish frequently aggregate at coral reefs and isolated coral heads.

POTENTIAL LAND USE

The project area itself probably was of little direct use for Hawaiian settlement, but the nearby He‘eia Fishpond was an important focus of economic activity. Other nearby zones probably were attractive for residences and for growth of traditional tree and root crops.

The project area occupies a portion of the coastal plain in the main land mass of He‘eia, in a zone of former wetland marsh near the shore. Although the former marshy zone provided a variety of natural resources, it was not suitable for habitation until natural and artificial filling created a dry land area. The present ground surface consists of artificial fill material of 20th-century origin.

Until historic and modern filling, most of the He‘eia coast was unsuitable for habitation or for crop growth, but the lowland slopes and slightly elevated rocky landforms were more desirable and productive. Handy and Handy (1972:454) note that the extensive salt marshes in much of the He‘eia coastal plain “were not suitable for cultivation, but ... vast terraced lowland flats” were irrigated on both sides of He‘eia Stream.

Handy (1940:97) provides more detail about traditional croplands in He‘eia:

> The extensive salt marshes of Heeia inland from the fishponds were not cultivable, but fringing them on the south and flanking both sides of Heeia Stream, from which they are irrigated, lie the vast terraced lowland flats of this ahupua‘a, still largely planted in commercial taro. The southern portion of these terraces is irrigated from Kalimukele stream, which turns southward and flows into Kaneohe. The small stream named Puolena supplements Heeia Stream for irrigation on the north. The terraces extend up the main stream to the junction of Haiku Stream and Iolekaa. A small stream named Kaiwikee flows into Iolekaa from the southwestward in the Koolau Range. Up all these valleys are old terraces, now abandoned.

The alluvial deposits along He‘eia Stream and its tributaries are easily recognized as the most productive lands for traditional plant foods, about 1 to 4 km inland from the project area. Moreover, natural bends in the streams presented ideal conditions for artificial ditches to transport water for irrigation of the land areas partially circumscribed by the stream curvatures.

On the lowland slopes away from He‘eia Stream and its tributaries, colluvial deposits and rocky exposures were suitable for non-intensive crop growth and other activities, especially where the landforms are slightly elevated. A number of these landforms are present throughout He‘eia, but those closest to the project area are about 0.5 km to the south and southwest and also about 1.25 km to the northwest.

The steep upland slopes of the Ko‘olau Mountains disallow practical land use, but high landward-seaward ridges bound two valleys (Ha‘ikū in the south and ‘Ioleka‘a in the north) in the back reaches of He‘eia. These upland valleys and ridges receive nearly 3000 mm annual rainfall (Giambelluca et al. 1986:138), and they are most productive for traditional tree and root crops. Moreover, the depositional environment in the upland valleys likely generated thick alluvial and colluvial sediments within, between, and overlaying cultural occupation layers.

Caves may be present in the rocky volcanic formations of the inland mountains and ridges, and they likely include a range of small overhangs, rockshelters, and spacious caverns possibly with multiple chambers. Complex lava tubes are not expected in this part of the Ko‘olau Mountains. The smaller caves and rockshelters may have been useful as temporary shelters, and larger caves may have supported more large-scale or long-term use. These naturally protected environments are likely to contain well preserved cultural deposits, possibly with stratified occupation layers representing several centuries of use.

The project area is situated near a number of economically useful land areas and resource zones. The coast of course has been consistently important for access to littoral and marine resources, not the least of which included He‘eia Fishpond since its construction some time in the prehistoric era (before 1778). Prior to historic filling of the coastal marshes, lands productive for crop growth could be found a short distance (1 km) inland. Artificial filling increased the land area usable for sugarcane and pineapple plantations in the later historic period, including land close to the project area.

CULTURAL AND HISTORIC SETTING

The cultural and historic setting is discussed in terms of events that occurred in and around the project area, perceptions of the landscape, and possible archaeological or historic resources. The information is presented in two parts: 1) traditional cultural geography; and 2) historical overview.

TRADITIONAL CULTURAL GEOGRAPHY

In traditional Hawaiian cultural geography, place names refer to the origins of landforms and built sites, as well as to events that occurred there. Although He‘eia Fishpond is among the most obvious landscape features in He‘eia, many other natural features and artificial constructions comprise the local cultural geography. The role of any one place is best understood in relation to others.

A list of major He‘eia place names suffices to establish the project area in relation to a traditional cultural landscape (Fig. 3, Table 1), but a complete reconstruction is beyond the scope of an archaeological study for the He‘eia Fishpond Caretaker’s House. Traditional knowledge has been cumulative over multiple generations, subject to gain and loss from time to time.

The project area is along the shore of Kāne‘ohe Bay in He‘eia Ahupua‘a, part of the Ko‘olaupoko District of O‘ahu Island. In the immediate vicinity of the project area, major place names include He‘eia Fishpond, He‘eia Stream, Kiki welawela, and Lua mo‘o.

Ko‘olaupoko is the “short windward” district, compared to the Ko‘olauloa (“long windward”) district of O‘ahu (Pukui et al. 1974:117). The distinction refers to the “short” and “long” ways around the island during the annual *makahiki* procession that visited and collected tributes from the *ahupua‘a* (literally “pig altars”) of individual land communities.

He‘eia is an *ahupua‘a* in the sense that the land unit is recognized as a cohesive community territory. He‘eia Ahupua‘a satisfies the ideal model of an *ahupua‘a* supporting a variety of economic and other activities in a spectrum of ecological zones from the mountain to the sea (Lyons 1875:104). Indeed, He‘eia traditionally includes offshore islets such as Moku lo‘e (also known today as “Coconut Island”), and it includes the Pali Kilo portion of Mōkapu Peninsula. Clearly, He‘eia Fishpond is within the *ahupua‘a* boundary, and it was undoubtedly an important source of economic production for the local community. In addition to economic practicalities, an *ahupua‘a* like He‘eia carries implications for social and political organization (Malo 1951:142).

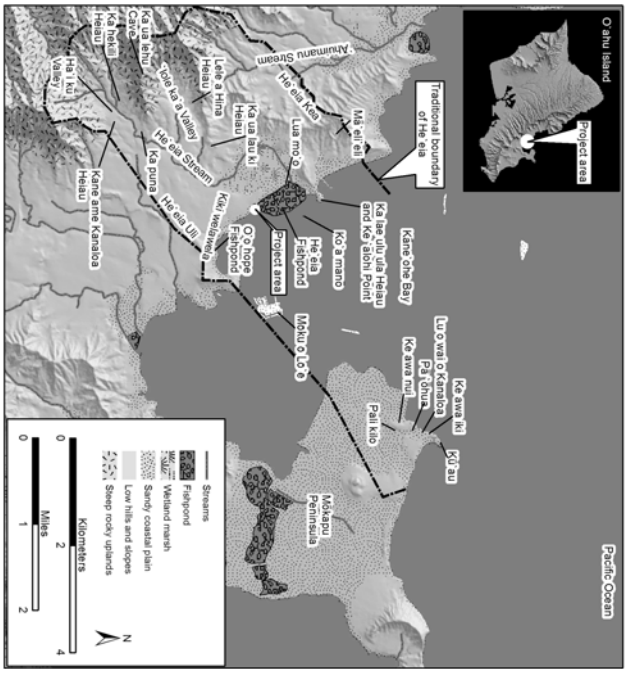

Figure 3. Traditional place names in He'eia. Descriptions are listed in Table 1.

Table 1. Summary descriptions of He'eia place names. Locations are shown in Figure 3.

Name	Description
ʻĀhuimanu Stream	Stream in a land area of the same name; stream drains north of He'eia in Kahaluʻu Ahupuaʻa, but its upper portion is within He'eia; literally "bird cluster," perhaps because "the birds from nearby Moku Manu were caught here and tied in bunches" (Pukui et al. 1974:6)
Haʻikū Valley	Valley at southwest side of He'eia; literally "speak abruptly" or "sharp break" (Pukui et al. 1974:34)
He'eia Fishpond	Fishpond offshore He'eia; Pukui et al. (1974:44) note that *he'e 'ia* translates probably as "washed," possibly referring to a tidal wave that washed people out to sea and back to shore
He'eia Ahupuaʻa	Traditional land division, bounding a community under supervision of a chief or sub-chief; Pukui et al. (1974:44) note that *he'e 'ia* translates probably as "washed," possibly referring to a tidal wave that washed people out to sea and back to shore
He'eia Kea	Northwest side of He'eia Ahupuaʻa; literally "light He'eia" (Pukui et al. 1974:44), perhaps referring to judgment of souls as either "light" or "dark" before leaping into the sea (Raphaelson 1925:22)
He'eia Stream	Major stream with tributaries in the middle of He'eia Ahupuaʻa; tributaries and main channel portions may have other specific names (Handy 1940:97); Pukui et al. (1974:44) note that *he'e 'ia* translates probably as "washed," possibly referring to a tidal wave that washed people out to sea and back to shore
He'eia Uli	Southeast side of He'eia Ahupuaʻa; literally "dark He'eia" (Pukui et al. 1974:44), perhaps referring to judgment of souls as either "light" or "dark" before leaping into the sea (Raphaelson 1925:22)
ʻIole kaʻa Valley	Valley in He'eia Ahupuaʻa, defined by ridges and steep cliff line; pool of water at base of steep cliff line; literally "rolling rat" (Pukui et al. 1974:57); refers to rats rolling down steep cliff line accidentally or after being shot by an arrow (McAllister 1933:176; Sterling and Summers 1978:200)
Ka hekili Heiau	Traditional Hawaiian religious site formerly "on the top of an oblong knoll" (McAllister 1933:176); Pukui and Elbert (1986:64) provide three glosses for *hekili* as 1) "thunder," 2) "variety of taro," and 3) "variety of sweet potato"

Table 1. Summary descriptions of He‘eia place names. Locations are shown in Figure 3. (Continued.)

Name	Description
Ka lae ula ula Heiau	Traditional Hawaiian religious site formerly at Ke ‘alohi Point (McAllister 1933:173); *lae* almost certainly refers to the “point” of Ke ‘alohi Point, wherein *lae* is glossed as “cape, headland, point, promontory” (Pukui and elbert 1986;189); *ula ula* appears to be a reduplication of *ula*, but perhaps the original word is *‘ula*; Pukui and Elbert (1986:367) gloss *ula* as either “spiny lobster” or “flame”; Pukui and Elbert (1986:367) provide multiple possible glosses for *‘ula*: 1) “red, scarlet,” 2) abbreviation for “*koa‘e ‘ula*, red-tailed tropic bird,” 3) “sacred; sacredness; regal, royal,” 4) “blood,” and others
Ka puna	A spring, reportedly where the gods Kāne and Kanaloa obtained drinking water (McAllister 1933:176); *puna* translates literally as “spring” (Pukui and Elbert 1986:355)
Ka ua lau kī Heiau	Traditional Hawaiian religious site on a ridge (McAllister 1933:173); literally temple of “the ti-leaf rain” (Pukui et al. 1974:91); possibly same as Apili or perhaps ‘Apili Heiau (McAllister 1933:198) as named by Thrum without other description (1915:90; 1938:134)
Ka ua lehu Cave	Cave in the steep cliff line at the back of He‘eia (McAllister 1933:176); literally cave of “the ash-rain” (Pukui et al. 1974:91)
Kāne ame Kanaloa Heiau	Traditional Hawaiian religious site with no surviving physical traces (McAllister 1933:178); literally the temple of the gods Kāne and Kanaloa
Kāne‘ohe Bay	Large embayment in windward O‘ahu, referring to major land area of same name; literally “bamboo husband” (Pukui et al. 1974:85) or “bamboo man,” perhaps referring to an account wherein “a woman compared her husband’s cruelty to the cutting edge of a bamboo knife” (Pukui et al. 1974:85)
Ke ‘alohi Point	Hill and point north of He‘eia Fishpond; literally “the shining” (Pukui et al. 1974:102)
Ke awa iki	Land on edge of small hill, overlooking water in Mōkapu Peninsula; literally “the small passage” (Pukui et al. 1974:104); probably refers to a story involving two brothers named Keawaiki and Keawanui (McAllister 1933:185)
Ke awa nui	Land on edge of small hill, overlooking water in Mōkapu Peninsula; literally “the big bay” (Pukui et al. 1974:104); probably refers to a story involving two brothers named Keawaiki and Keawanui (McAllister 1933:185)

Table 1. Summary descriptions of He‘eia place names. Locations are shown in Figure 3. (Continued.)

Name	Description
Kiki welawela	Land section in He‘eia; probably abbreviation for “*ikiiki welawela*,” glossed as “stifling hot” (Pukui et al. 1974:111)
Ko‘a manō	Oval-shaped reef, where sharks are frequently found in a number of caves (McAllister 1933:173); Pukui et al. (1974:114) report the name as *ko‘a mano*, glossed as “many shrines”; *ko‘a* in this case probably means “coral” or “coral head” (Pukui and Elbert 1986:156), and *manō* probably means “shark” (Pukui and Elbert 1986:239)
Ko‘olaupoko District	Traditional district of southern portion of windward O‘ahu, encompassing multiple *ahupua‘a*; literally “short windward” as opposed to “long windward” of Ko‘olauloa District (Pukui et al. 1974:117), referring to “short” and “long” ways around the island during the annual *makahiki* procession that visited and collected tributes from the various *ahupua‘a* (“pig altars”) of each land unit
Kū‘au	Rock at northwest end of Mōkapu Peninsula; literally “handle” (Pukui et al. 1974:119); “believed to have given birth to other stones” (Pukui et al. 1974:119); known today as “Pyramid Rock”
Lele a Hina Heiau	Traditional Hawaiian religious site near base of steep cliff line at back of He‘eia (McAllister 1933:173-175); literally “altar [made] for Hina” (Pukui et al. 1974:131); presumably refers to the pan-Polynesian goddess Hina or Sina
Lu o wai o Kanaloa	An “old brackish well in the gulley between Keawanui and Keawaiki” at northwest end of Mōkapu Peninsula (McAllister 1933:184); apparently associated with the god Kanaloa
Lua mo‘o	Locality inland of He‘eia Fishpond, reportedly the residence of Meheanu, the caretaker of the fishpond (McAllister 1933:173); literally “*mo‘o* pit” (Pukui et al. 1974:135), wherein *mo‘o* is a “water spirit” (Pukui and Elbert 1986:253); Meheanu reportedly took different forms at will, and she often became an eel (McAllister 1933:173)
Mā‘eli‘eli	Small hill or ridge at north end of He‘eia Ahupua‘a; literally “digging” (Pukui et al. 1974:137)
Mōkapu Peninsula	Peninsula in windward O‘ahu; the northwest portion is traditionally part of He‘eia Ahupua‘a; probably originally named Moku Kapu (Pukui et al. 1974:1153-154), literally “sacred district”
Moku o Lo‘e	Islet in Kāne‘ohe Bay; literally “island of Lo‘e,” referring to a woman who formerly lived on this islet (Pukui et al. 1974:156); known today as “Coconut Island”

Table 1. Summary descriptions of He‘eia place names. Locations are shown in Figure 3. (Continued.)

Name	Description
O‘o hope Fishpond	Fishpond with semi-circular wall enclosing water offshore He‘eia (McAllister 1933:176); literally “late maturity” (Pukui et al. 1974:171)
Pā ‘ōhua	A “low line of stones” offshore northwest end of Mōkapu Peninsula, where *ohua* fish were caught “during the spring months” (McAllister 1933:185); apparently refers to *pā* as “fence, wall, corral, pen sty, enclosure” etc. (Pukui and Elbert 1986:296) and *ohua* as a kind of fish (Pukui and Elbert 1986:278-279)
Pali Kilo	Hill or part of a hill at northwest end of Mōkapu Peninsula; literally “observation cliff” (Pukui et al. 1974:177)

The *ahupua‘a* and district names and boundaries necessarily refer to land units as recognized under the rule and management of chiefs and sub-chiefs, and this system likely developed over several generations of Hawaiian occupation in the region (Cordy 2004; Hommon 1976, 1986). Definitions of these and other land divisions probably were somewhat different in the past (Ladefoged and Graves 2006), yet the presently known names and boundaries bear historical relevance.

Pukui et al. (1974:44) propose that He‘eia was originally *he‘e ‘ia*, probably meaning “washed” in reference to traditions of a tidal wave that swept people out to sea and back ashore. Kelly (1973:1) notes that He‘eia was named for “the grandson of the demi-god Olopana, an uncle of Kamupua‘a.” The two traditions may in fact be related, wherein He‘eia was named in commemoration of Haumea and Wākea (progenitors of the Hawaiian people) being swept out to sea and then saved by the god Lono (Handy and Handy 1972:447-449). Being washed ashore safely bears obvious connotations of re-birth and cleansing, both physically and spiritually.

Henry (1993:18) suggests that He‘eia is “famous for *he‘e*, octopus, which swarm in the waters at a certain time of the year. When *wiliwili* trees were covered with their crimson, craw-like blossoms, the ancient Hawaiian fishermen knew that *he‘e* were running.”

Kelly (1973:1) relates that He‘eia met Ka‘ohelo in O‘ahu, where they fell in love. Ka‘ohelo was a sister of Pele, Hi‘iaka, and Malulani. When she died, Ka‘ohelo was buried at Kīlauea Volcano, where parts of her body became the *‘ohelo* plant (*Vaccinium reticulatum*) (Beckwith 1970:187-188). Also after Ka‘oheleo died, Beckwith (1970:188) relates:

> Kaoleho’s spirit forms a marriage with the spirit of the handsome Heeia on Oahu, who abandons her later for another woman. The little hills about the district of Heeia ... are formed by her from the body of Malulani, who has hanged herself out of grief for her sister.

He‘eia Ahupua‘a appears to be divided in two parts: 1) He‘eia Kea on the north side; and 2) He‘eia Uli on the south side. The names translate literally the “light” (*kea*) and “dark” (*uli*) parts of He‘eia (Pukui et al. 1974:44), alluding to the judgment of souls as “light” or “dark” before leaping into an afterlife in the sea (Raphaelson 1925:22). Raphaelson (1925:22) elaborates:

> Men died on Hawaii in the olden days, as they do now. And they went to the places where dead men dwell. But before they jumped into the sea, their lives were judged and their fates decreed. Some souls were judged white [*kea*] and some were judged black [*uli*], and here at Heeia, the dividing came. The black souls leaped this side of the point, and the fortunate whites found their haven beyond.

The dividing point of He‘eia Kea and He‘eia Uli appears to be Ke ‘alohi Point, also the site of Ka lae ula ula Heiau, just north of He‘eia Fishpond. *Ke ‘alohi* literally means “the shining” (Pukui et al. 1974:102). The *heiau* (traditional Hawaiian religious site) no longer exists (McAllister 1933:173), but its remembered name probably refers to the point or promontory (*lae*) associated with *ula* meaning “flame,” “sacredness,” or perhaps “blood” (Pukui and Elbert 1986:189, 367).

A number of other traditions in He‘eia involve “light” and “dark” oppositions or dualities, in the form of stones, brothers, visiting strangers, or gods. These traditions suggest that the division of souls as “light” and “dark” does not necessarily mirror the Christian connotation of “good” and “evil.” Perhaps most illustrative is a tradition of two brothers, Keawanui and Keawaiki (literally, large and small bay or water passage), who entertained two strangers near the Pali Kilo portion of Mōkapu Peninsula (McAllister 1933:185). According to this tradition, one of the strangers was lighter than the other, and they were later revealed as the gods Kāne (the lighter individual) and Kanaloa (the darker companion). At this place near Pali Kilo, the two brothers then made a shrine with a light stone and a dark stone to commemorate the godly visit. Possibly related, Kāne ame Kanaloa Heiau (literally, the temple of Kāne and Kanaloa) is said to be on the south side of Ha‘ikū Valley in the back reaches of He‘eia (McAllister 1933:176).

The coastal land very near the project area appears to be Kiki welawela, probably an abbreviation for *ikiiki welawela*, glossed as “stifling hot” (Pukui et al. 1974:111). Kiki welawela encompasses the land south of the He‘eia wetland marsh, extending from the shore and perhaps as far inland as the base of Ha‘ikū Valley. The project area appears to be near the north end of the land recognized as Kiki welawela.

The project area is most directly associated with He‘eia Fishpond, prominent in a number of Hawaiian traditions (Henry 1993; Kelly 1973, 1975, 1976; McAllister 1933:173). The ancient name of the pond is unclear, but its original caretaker (*kia‘i loko*) was Maheanu, a *mo‘o* (lizard-like water spirit) who lived slightly landward of the pond at a place named Lua mo‘o (literally, pit of the *mo‘o*) (Kelly 1973:2; 1975:2; 1976:1).

McAllister (1933:173) described Lua mo‘o:

> Here lived Meheanu, the *kiai* or watchguard of the Heeia fishpond (Site 327). Meheanu had supernatural powers and could change herself into many forms, as a frog or a lizard, but she was particularly fond of being an eel. About Luamoo there were formerly many sheltering *hau* trees beneath which this *moo* lived. When the *hau* was yellow, then the natives were certain of the presence of Meheanu, but when the *hau* was green, then she was more likely to be somewhere else in the form of an eel.

Kelly (1975:3) reported modern stories of a “mud hole” that may relate to the “pit” of Lua mo‘o:

> None of the present-day informants claimed to know anything about the *mo‘o* of Heeia pond, but some talked about a spot *mauka* [landward] of the long bridge that they described as a mysterious place where there is a mud hole that has no bottom -- a kind of quick-sand area. They warned against going near the spot, even today.

He‘eia Fishpond itself is defined by a large stone-walled enclosure, encircling about 88 acres (35.6 ha) just offshore the main land mass of He‘eia. The primary product of most fishponds presumably was mullet (Kikuchi 1973, 1976). Kelly (1975:33-40) reported late historic operation of the fishpond by the Hee family in the 1920s. The pond presumably was constructed prior to European contact in 1778.

The large and long-lasting physical properties of He‘eia Fishpond perpetuate its role as an important landscape feature, thereby accentuating its prominence in the general cultural perception of He‘eia. Moreover, the fishpond is known as a significant economic resource both prehistorically and historically.

Although more detail could be considered for a traditional cultural geography of He‘eia, the foregoing information provides some of the larger context and general sense of place related to He‘eia Fishpond. The pond is regarded as culturally significant not only for its physical structure but also for its role in a larger community.

HISTORICAL OVERVIEW

A number of historical events have shaped the character and cultural perception of He‘eia as it is known today, including re-distribution of land in the middle 1800s, conversion for sugarcane and pineapple plantations in the 1870s through1930s, Word War II defense and other transformations, and ongoing use of He‘eia Fishpond under changing circumstances.

Chief Abner Paki (Ku-ho‘oheihei-pahu Paki) was granted the land of He‘eia in 1848, apparently in recognition of allegiance to the Kamehameha Dynasty and also for a longer ancestral family interest in this land. Kelly (1975:4-5) reports that some of Paki’s ancestors can be traced to a Maui line of chiefs that had conquered Kahahana, the ruling chief of O‘ahu about 1785. Apparently, one of Paki’s uncles was charged with managing He‘eia under the Maui rulership. Kelly (1975:5) suggests: “At least part of Paki’s connection with the land of Heeia may stem from his uncle’s earlier residence in that land, and may have been the reason why Paki was made *konohiki* of Heeia.”

Within the land apportioned to Abner Paki in 1848, Hawaiian government land records of the middle 1800s indicate several family residences and cultivation plots in He‘eia, but none appear to be associated specifically with the project area (Table 2). These records provide a general picture of settlement and land use in the middle 1800s in He‘eia, evidently with emphasis on areas such as Kiki welawela and ‘Ioleka‘a.

Most of the coastal plain and lowland slopes of He‘eia was converted for sugarcane and pineapple plantations in the 1870s through 1930s, and the project area and vicinity likely were occupied at this time (Devaney et al. 1976:44, 61). Precisely the same date range was evident on headstones of graves at a Japanese cemetery (#11 in inventory by Purnell 1986) formerly less than 100 m southeast of the project area (Kennedy 1987:9).

Much of the filling of the coastal plain occurred during the historic plantation industry use of the He‘eia coast and lowlands. These activities greatly accelerated slope erosion and surface runoff, thereby increasing terrigenous sedimentation in and around the project area and elsewhere near the coast. Also, artificial filling was recognized as a means to create usable land in former wetland marsh zones near the coast.

Table 2. List of 19th-century government Land Commission Awards for He‘eia. Data are from Waihona ‘Aina (2006). Names are reproduced as entered in the government documentation, missing Hawaiian diacriticals and possibly including misspellings.

Record Number	Claimant	*‘Ili*
00043*O	Catholic Mission	Ahuimanu
01349	Paekane	Kikiwelawela
01970	Ainui	Kikiwelawela, Puuwauke
01971	Lihue	Iolekaa
01972	Pahia	Koaena
02158	Alotalio	Kikiwelawela
02159	Kamai	Koaena, Kikiwelawela, Kikiwelawela uka
02161	Kaiewewena	Kalimuloa
02162	Kalei	Pahele
02163	Kawahineai	Paheleloa
02370	Komomua	Koaena
02462	Kekeni	Kikiwelawela
02493	Nakoa	Kalaepaa, Kumupali, Kikiwelawela
02498	Ehuiki	Kalimaloa
02515	Makuahine	Kalimaloa
02562	Nauka	Koaena
02594	Pieba	Koaena, Keauume
02595	Poohina	Koaena
02608	Puhiki	Pahele
02608B	Puahiki	Pahele, Heeia
02622	Puupuu	Kalaepaa
03306	Makahelu	Kawahamano, Kawahamama
03307	Kamalalawalu	Pulama
03308	Makakehau	Kalimukele, Koaena
03369B	Kalehua	Kalimoaola
03393	Pueokahi	Kalimukele
03570	Kaauamoa	Pahale
03571	Kalehuna	Kalimukele

Table 2. List of 19th-century government Land Commission Awards for He‘eia. Data are from Waihona ‘Aina (2006). Names are reproduced as entered in the government documentation, missing Hawaiian diacriticals and possibly including misspellings. (Continued.)

Record Number	Claimant	*‘Ili*
03572	Kaniaa	Papala, Koaena
03573	Kailaa	Kalimaloa
03574	Kahuhu	Kalimukele
03579B	Naihepahee	Hoi
03949	Paaiea	Waipao
03883	Puhene	Hahai, Kaaukui, Heeia
04221	Kekua	Iolekaa
04222	Kohai	Koahamano, Koohamano
04238	Kanakaoo	Iolekaa
04240B	Kauhane, wahine	Waipao
04266B	Ehumakaweuweu	Koaena
04407	Kahalau	Ainaio, Waiola
04467	Keawe	Pahele
04468	Kana	Pahele
05435	Kahuaena	Kikiwelawela
05435B	Keau	Kikiwelawela
05530	Kauhane	Waipao, Iolekaa
05534	Kahikaumoku	Kaluahine
05537	Keliiwahanui	-
05541	Kekipi	-
05755	Kahauluakea	Wawae
05815	Kekohai	Kikiwelawela
05816	Kapai	Hoi
05828	Kapakai	Kalimaloa
05969	Moalea	Haiku
05984	Makaioulu	Kikiwelawela
06039	Elemakule	Hoi
06040	Ehu	Punawai

Table 2. List of 19th-century government Land Commission Awards for He‘eia. Data are from Waihona ‘Aina (2006). Names are reproduced as entered in the government documentation, missing Hawaiian diacriticals and possibly including misspellings. (Continued.)

Record Number	Claimant	*‘Ili*
06047	Wahine	Kumupali
06062	Uhuuhu	Kikauiki, Kumuhau, Mokapu
06097	Uinihepa	Iolekaa
07165	Kahaku	-
07241	Papa	-
07271	Hooulu	-
07510	Kauwauwa	Kikiwelawela
07511	Kuweloula	Hoi
07512	Kuakapiko	Kikiwelaawela
07513	Keu	Pahele
07514	Kupa	Waipao, Kumupali
07515	Kekuamanaole	-
07516	Kaailole	Kikiwelawelakai
07517	Kapule	Kikiwelawelakai, Kikiwelawela uka
07521	Keliikanakaole	Kikiwelawela, Kumupali
07527	Kupalii	Puulani
07528	Kimokeo	Kikiwelawela
07529	Kalaauhina	Puulani
07713*O	Kamamalu, Victoria	Lands in multiple *ahupua‘a*
07736	Wahahee	Hanaweke, Puulani
08143	Hoa	-
08193	Hina, wahine	Punawai, Pahalepoko
08194	Hoka	-
09920	Lula	Kikiwelawela
10192	Manuahi	Wawae, Pahelepo
10204	Mahi	Kikiwelawela kai
10423	Nahua	Puulani
10424	Naipu	Iolekaa

Table 2. List of 19th-century government Land Commission Awards for He‘eia. Data are from Waihona ‘Aina (2006). Names are reproduced as entered in the government documentation, missing Hawaiian diacriticals and possibly including misspellings. (Continued.)

Record Number	Claimant	*‘Ili*
10425	Nahuina	Kalimaloa, Pahelepoko
10613*O	Paki, Abner	lands in multiple *ahupua‘a*
10710	Paa	Kumupali
10711	Pa	Kalumuloa
10713	Poohiwi	-
10713B	Haalou	-
10743	Palaau	Kikiwelawela
10977	Wiwi	Pahele
11226	Naihe	Kikiwelawela kai

The surface of the project area appears to consist of 20th-century artificial fill, perhaps overlaying older artificial fill material and natural sediments. A 20th-century origin is suggested by uniformly sized gravel produced by a rock-crusher not available before the early 20th century.

During World War II, a number of military bunkers, gun emplacements, Quonset huts, and other features were constructed in various parts of O‘ahu, including He‘eia. No such features were in the project area or its immediate vicinity, but some were farther inland and also farther north and south along the coast (Carlson and Haun 1989a).

In the years after World War II, several Quonset huts (formerly used for barracks, officer’s quarters, or storage) were re-located elsewhere for other uses. Some were moved to the current project vicinity for storage and other uses in the 1960s, and one became a caretaker’s residence in the 1970s (Prasad 2006). The caretaker’s residence was remodeled several times.

ARCHAEOLOGICAL SETTING

Given the limited scope and findings of the present work, the archaeological setting is considered only in relation to the area directly around He‘eia Fishpond (Figs. 4 and 5, Tables 3 and 4). No archaeological studies have been conducted at the fishpond itself (Site 50-80-10-0327), but adjacent land areas have been subject to surface reconnaissance and survey, subsurface testing, and burial treatment.

For the portions of He‘eia more than 2 km inland and also in the Mōkapu Peninsula, the archaeological setting is not detailed here, but considerable work has been completed in those areas. Landward of 2 km in He‘eia, prior investigations have identified a cave shelter, a number of religious complexes, residential areas, and other sites (Carson 2003; Cleghorn and Rogers-Jourdane 1976; Dye 1977; McAllister 1933:173-176: Mills and Williams 1992; Sterling and Summers 1978: 200-201; Thrum 1906:48, 1915:90-91; Williams 1991, 1993a, 1993b; Williams and Nees 1992, 1993, 1994). In the He‘eia portion of Mōkapu Peninsula, archaeological investigations have documented several historic house ruins, a likely religious complex converted to a Christian church, widespread prehistoric cultural deposits, a number of burial features, and other sites (Anderson 1998; Barrera 1982; Drolet et al. 1996; Tuggle and Hommon 1986; McAllister 1933:184-185; O’Day 2006; Rosendahl 1999; Thrum 1906:48, 1915:90).

Immediately southeast of the project area, surface survey and subsurface testing revealed no archaeological features or deposits, but a historic Japanese cemetery was identified (Kennedy 1987). The cemetery (#11 in inventory by Purnell 1986) no longer exists, but it was less than 100 m southeast from the project area.

The individual graves of the Japanese cemetery were removed and re-located in the 1980s, and at least some appear to have been moved to the Valley of the Temples. Kennedy (1987:9) reported:

> A decision was made by the current landowner that the remaining graves would be disintered [sic] and reburied in Valley of the Temple Cemetery in Kaneohe. This process was monitored by the author [Joseph Kennedy in 1987]. The graves were all marked with Japanese headstones which had previously been translated. Name, birthdate and year of death of all removed individuals are on file at Valley of the Temples. The earliest grave dated to the 1870 [sic] and the last to the 1930’s [sic].

About 1.2 km southeast of the project area, near the south border of He‘eia, McAllister (1933:176) described “two small fishponds” with unknown names (Site 50-80-10-0336) and O‘o hope Fishpond (Site 0337). O‘o hope translates literally as “late maturity” (Pukui et al. 1974:171), perhaps referring to the growth pattern of fish in the pond at one time.

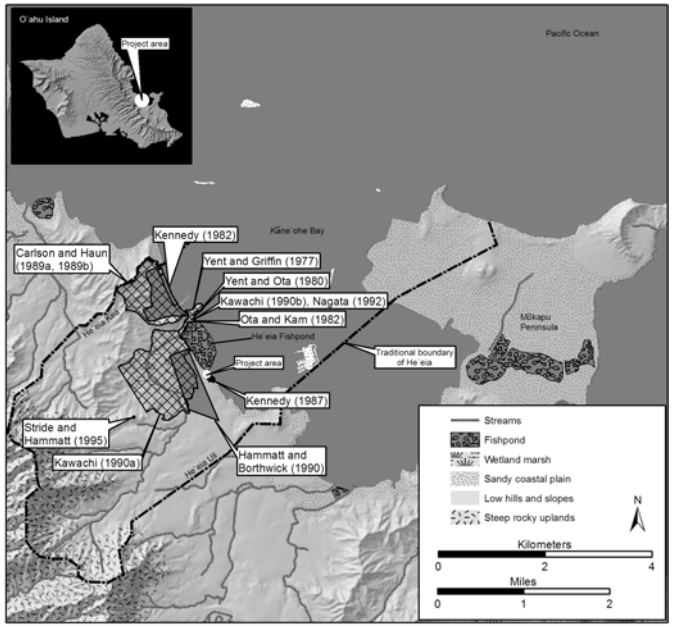

Figure 4. Locations of prior archaeological investigations in the project vicinity. Descriptions are listed in Table 3.

Table 3. General scopes and major findings of prior archaeological investigations in the project vicinity. Locations are shown in Figure 4.

Reference	General Scope of Work	Major Findings
Carlson and Haun (1989a)	Surface survey	Identification, mapping, and description of Sites 4135 through 4144
Carlson and Haun (1989b)	Subsurface testing	Modern debris recorded at Site 4137; subsurface cultural deposits beneath surface stonework ruins at Sites 4139 and 4142; radiocarbon dates for Sites 4139 and 4142
Hammatt and Borthwick (1990)	Surface reconnaissance	Identified presence of former taro and rice fields
Kawachi (1990a)	Surface reconnaissance	No surface sites identified
Kawachi (1990b)	Emergency removal of eroding human remains	Documentation of burial, listed as Site 4122, later considered within boundary of Site 4671
Kennedy (1982)	Surface survey	Identification, mapping, and description of Sites 4116 through 4120
Kennedy (1987)	Surface survey and subsurface testing; later monitoring of grave removal for re-location	No surface or subsurface sites identified; graves of historic Japanese cemetery removed
McAllister (1933)	Survey of major archaeological sites of O'ahu	Compilation list of major known sites; limited descriptions, notes of associated traditions, maps, and illustrations; list in He'eia includes Sites 0324 through 0337
Nagata (1992)	Emergency removal of eroding cultural deposit	Documentation of stratified historic and prehistoric cultural deposit, human burials, and dog burials within boundary of Site 4671
Ota and Kam (1982)	Emergency removal of eroding human remains	Documentation of burial, listed as Site 4109, later considered within boundary of Site 4671
Stride and Hammatt (1995)	Surface survey with limited subsurface testing	Identification of large stonework ruins complex, reportedly Site 0328; radiocarbon date

Table 3. General scopes and major findings of prior archaeological investigations in the project vicinity. Locations are shown in Figure 4. (Continued.)

Reference	General Scope of Work	Major Findings
Thrum (1906, 1915, 1938)	Archipelago-wide survey of traditional Hawaiian religious sites	Compilation list of major known temple sites; limited notes of associated traditions; list in He'eia includes Site 0328
Yent and Griffin (1977)	Surface reconnaissance	No surface sites identified
Yent and Ota (1980)	Emergency removal of eroding human remains	Documentation of burial within boundary of Site 4671

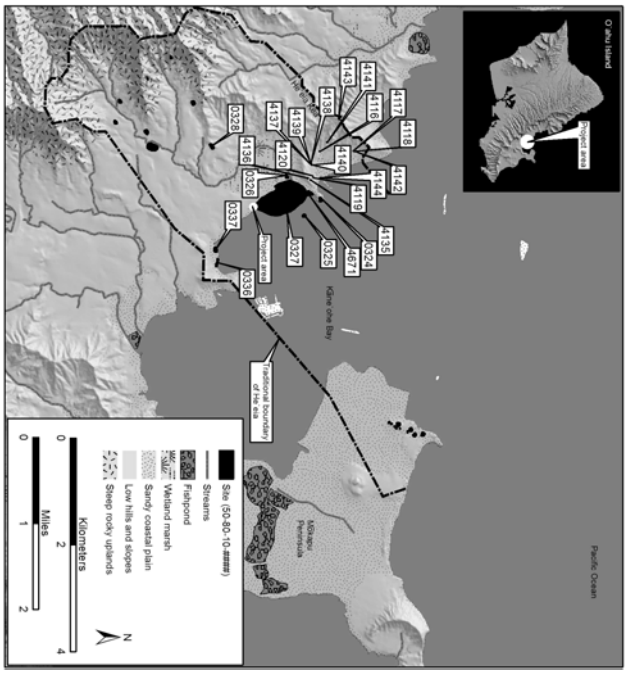

Figure 5. Locations of previously recorded archaeological sites in the project vicinity. Descriptions are listed in Table 4.

Table 4. Descriptions of previously recorded archaeological sites in the project vicinity. Locations are shown in Figure 5.

Site (50-80-10-####)	Description	Reference
0324	Ka lae ula ula Heiau	McAllister (1933:173)
0325	Koʻa manō, reef associated with sharks	McAllister (1933:173)
0326	Lua moʻo, residence of fishpond caretaker	McAllister (1933:173)
0327	Heʻeia Fishpond	Henry (1993); Kelly (1973, 1975, 1976); Kennedy (1987); McAllister (1933:173)
0328	Ka ua lau kī Heiau	McAllister (1933:173, 198); Stride and Hammatt (1995); Thrum (1915:90; 1938:134)
0336	Two small fishponds	McAllister (1933:176)
0337	Oʻo hope Fishpond	McAllister (1933:176)
4116	Mounded terrace, possibly for dryland cultivation	Kennedy (1982:8)
4117	Terrace, possibly for dryland cultivation	Kennedy (1982:8)
4118	Retaining wall	Kennedy (1982:8-9)
4119	Terrace, possible family shrine	Kennedy (1982:9-10)
4120	Stone-filled platform, possible small altar	Kennedy (1982:10)
4135	Terrace, possible habitation	Carlson and Haun (1989a, 1989b)
4136	Slope cut	Carlson and Haun (1989a)
4137	Mound	Carlson and Haun (1989a, 1989b)
4138	Two retaining walls	Carlson and Haun (1989a)

Table 4. Descriptions of previously recorded archaeological sites in the project vicinity. Locations are shown in Figure 5. (Continued.)

Site (50-80-10-####)	Description	Reference
4139	Mound	Carlson and Haun (1989a, 1989b)
4140	Terrace, possible habitation	Carlson and Haun (1989a)
4141	Terrace, agricultural	Carlson and Haun (1989a)
4142	Historic agricultural terraces and other features; basalt-flaking debris concentrations; possible habitation terraces	Carlson and Haun (1989a, 1989b)
4143	Bunkers, WW II	Carlson and Haun (1989a)
4144	Upright basalt stone, probable historic shrine	Carlson and Haun (1989a)
4671	Cultural deposit with human and dog burials,	Kawachi (1990b); Nagata (1992); Ota and Kam (1982); Yent and Ota (1980)

Directly landward of the project area and as far as 1.5 km inland, one surface reconnaissance survey reported no archaeological findings (Kawachi 1990a), and another described abandoned taro and rice fields (Hammatt and Borthwick 1990). Neither of these studies identified the site of Lua mo‘o (Site 50-80-10-0326), residence of the ancient caretaker of He‘eia Fishpond (McAllister 1933:173).

About 1.8 km inland from the project area, Site 50-80-10-0328 is described as Ka ua lau kī Heiau (McAllister 1933:173), translated as the temple of “the ti-leaf rain” (Pukui et al. 1974:91). It may be the same as Apili or ‘Apili Heiau recorded by Thrum (1915:90; 1938:134; see also McAllister 1933:198). In approximately the same location, Stride and Hammatt (1995) describe a large complex of disturbed stonework ruins, similar in some ways to McAllister’s (1933:173) site documentation. Organic material in the structural fill of a disturbed stone paving yielded a radiocarbon date of 10 ± 60 years BP (Stride and Hammatt 1995). The date is essentially modern, but the investigators erroneously interpreted it as potentially as early as the 1600s (Stride and Hammatt 1995).

Immediately north of He‘eia Fishpond, several archaeological investigations have occurred at He‘eia State Park. A surface reconnaissance of the entire park property identified no archaeological resources (Yent and Griffin 1977). After periodic erosional events exposed subsurface deposits, emergency archaeological work recorded historic and prehistoric occupation layers, human burials, and dog burials (Kawachi 1990b; Nagata 1992; Ota and Kam 1982; Yent and Ota 1980). Site 50-80-10-4671 appears to encompass this entire area, although individual burials have been listed as Sites 4109, 4122, and possibly others.

Toward the northwest end of the He‘eia coast, an archaeological reconnaissance survey (Kennedy 1982) and an intensive surface survey (Carlson and Haun 1989a) identified several surface features at the edges of individual land parcels, outside the limits of intensively disturbed historic plantations. These sites (50-80-10-4116 through 4120 and 4135 through 4144) included numerous historic agricultural and residential features, a few World War II features, some stonework ruins and artifact concentrations of probable prehistoric age, and isolated subsurface cultural deposits of variable age.

At Sites 50-80-10-4137, 4139, and 4142, excavations tested for the presence or absence of burials at three stone mounds (Carlson and Haun 1989b). The excavations revealed modern debris at Site 4137, a separate cultural deposit beneath the stone mound at Site 4139, and another cultural deposit beneath the stone mound at Site 4142. The two subsurface cultural deposits contained prehistoric artifacts and midden, but modern green bottle glass had infiltrated into the deposit at Site 4139. Based on bulk charcoal of unidentified specimens from these layers, radiocarbon dates include 960 ± 80 years BP for Site 4139 (calibrated AD 940 to 1020) and 210 ± 60 years BP for Site 4142 (calibrated AD 1530 to 1950).

About 200 m offshore from the seaward wall of He‘eia Fishpond, Site 50-80-10-0325 coincides with an area of coral in Kāne‘ohe Bay. McAllister (1933:173) describes this site as Ko‘a manō: “All about the reef are caves where a great number of sharks dwell [sic].” Pukui et al. (1974:114) report the name as *ko‘a mano*, glossed as “many shrines.” However, *ko‘a* in this case probably means “coral” or “coral head” (Pukui and Elbert 1986:156), and *manō* probably

means “shark” (Pukui and Elbert 1986:239). No archaeological work has been conducted at this site, but McAllister (1933:173) reported:

> The reef is oval in shape and not very large. All about the reef are caves where a great number of sharks dwell. If you listen from the reef today you can frequently hear them breathing heavily in sleep. Makanui, the keeper of these sharks, lived on the land on the northwest side of the pond. He spent most of his time feeding the sharks, which was quite an undertaking. For a long time it had been noticed that the bodies of the dead had been disappearing. After the death of a person, someone would be chosen to watch over the body, but as frequently happened, the watcher would fall asleep, and upon awakening the corpse would be gone. This happened for some time, until it was discovered that in the night the sharks of Makanui would come from the sea and carry off the dead to the caves of Koamano. The people were so enraged that they took revenge upon Makanui and fed his body to the sharks.

He‘eia Fishpond is registered as Site 50-10-80-0327, and McAllister (1933:173) provided the only archaeological description:

> The wall is approximately 5000 feet long with an inclosed area of 88 acres. There are now four watch-houses and several outlets (*makaha*). The walls of lava stone facing and dirt fill are 12 feet or more in width. The water is brackish.

Kelly (1975:24-29) compiled historic maps and text descriptions of the fishpond from 1815 through 1915. Kelly (1975:25) also noted:

> A careful investigation of the wall of Heeia fishpond today reveals many large pieces of coral among the lava rock and in the fill between the outer and inner faces of the fishpond wall.

One of the unusual characteristics of He‘eia Fishpond is its complete walled enclosure, including the landward side (Fig. 6). Most coastal fishponds include a semi-circular outer wall, using the shoreline as a natural landward barrier. He‘eia Fishpond, however, encloses a large area entirely offshore.

The landward boundary wall of He‘eia Fishpond prevents infiltration of surface runoff and flood waters, otherwise introducing mud and excessive fresh water. However, some freshwater flow may be desirable, and it likely was allowed to flow periodically though gates on the north side of the pond wall bordering He‘eia Stream. Control of water salinity could contribute to a diversity of fish-raising techniques.

Although no detailed archaeological documentation or paleoenvironmental investigation have been attempted at He‘eia Fishpond, the pond is likely to yield important scientific information. Sediment cores in other O‘ahu ponds have produced high-resolution chronological sequences of vegetation communities, sediment regimes, and other environmental factors in relation to human impacts on the environment (Athens 1997; Athens and Ward 1993; Athens et al. 1992; Athens et al. 2002).

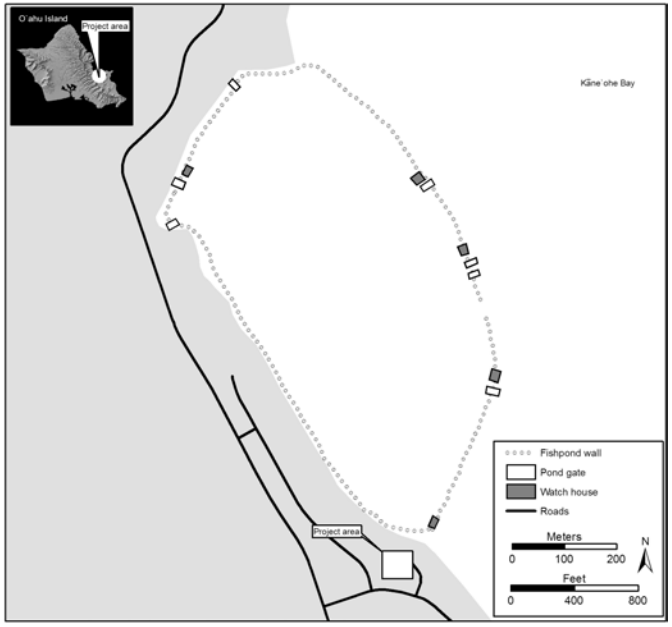

Figure 6. Plan illustration of He'eia Fishpond, Site 50-80-10-0327. Data based on Kelly (1975:29).

In general terms, Hawaiian fishponds exemplified chiefly power and related to the role of chiefs in changing Hawaiian food production economies (Kirch 1985:214, 1990:2334). Kikuchi (1976:299) proposed that fishponds "became symbols of the chiefly right to conspicuous consumption and to ownership of the land and its resources." Also remarking generally about Hawaiian fishponds, Carson (2005:66) notes:

> Indeed, the labor investment for grandiose-scale fishponds probably could not be accomplished without some sort of chiefly control or other special motivation. Also, the symbolic value is consistent with ethnographic and early historic accounts of Hawaiian chiefly society.

Encompassing about 88 acres (35.6 ha), He'eia Fishpond qualifies as a "grandiose-scale" fishpond almost certainly requiring "some sort of chiefly control or other special motivation" for its construction.

A date for the construction of He'eia Fishpond is unknown, but it is expected to have been before European contact in 1778. Hawaiian fishpond construction generally is thought to post-date AD 1400 (Kikuchi 1973, 1976). Results of coring at Halekou Fishpond in windward O'ahu suggest pond construction most likely in the range of AD 1400 to 1600 (Athens 2002). Similar coring in 'Alekoko Fishpond of Kaua'i indicates pond construction very close to AD 1400 (Burney 2002:23; Burney and Burney 2003:215; Carson 2005).

He'eia Fishpond was nominated in the National Register of Historic Places (NRHP) as an excellent example of its site type and for its artistic and engineering values (Watts 1971). The official site boundary is slightly larger than the fishpond itself, serving as an in-built "buffer" for resource management (Fig. 7).

The "buffer" area around the fishpond is considered a non-contributing element to the defined significance of Site 0327. The current project area is within this non-contributing area. Also, the Quonset hut re-located to the project area after World War II is considered a non-contributing element to the significance of Site 0327.

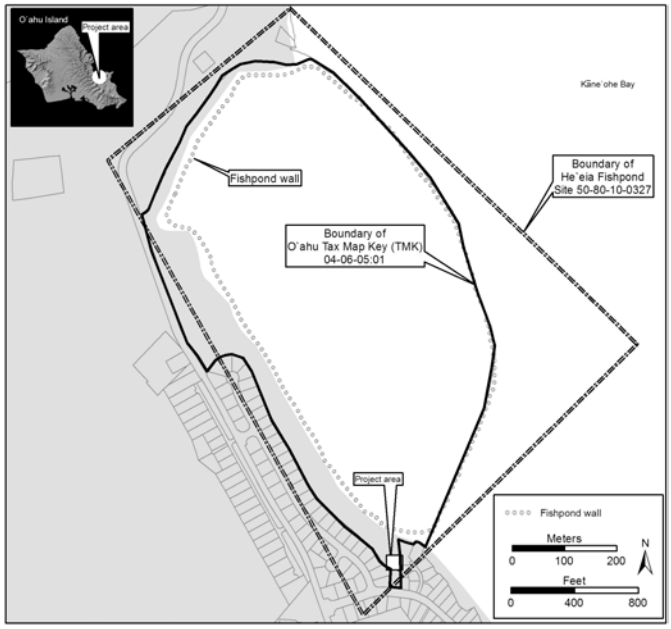

Figure 7. Official boundary of Site 50-80-10-0327, as depicted in National Register of Historic Places (NRHP) nomination form (Watts 1971).

QUONSET HUT OBSERVATIONS

A detailed architectural assessment by Kauahikaua and Chun Architects is attached as "Appendix A" of this report. The following summary is based on observations and field recording by the archaeological team.

The old caretaker's residence was documented by a series of contextual and detail photographs, a plan map, and two section view maps (Figs. 8 through 13). Informant interviews revealed that it was one of a number of Quonset huts moved to the project area after World War II, and this particular Quonset hut was used as a caretaker's residence since the 1970s (Prasad 2006).

Based on observations of other Quonset huts, the standard model includes a single entry at one end, but sometimes a secondary and smaller entrance is at the opposite end. Sizes of Quonset huts vary, but most are roughly 23 by 8.5 m (75.4 by 27.9 ft) in plan view and 3.5 m (11.5 ft) high. Windows are absent from original constructions, but they are often cut into the Quonset hut walls later. Walls and roofing are sheet metal, but flooring is made of wooden planks. Some Quonset huts are raised on concrete or wooden pilings or risers.

This particular Quonset hut is consistent with the general model, but it was remodeled several times after its re-location to the project area, including cutting of windows and doors, trimming and reshaping the roof curvature, adding new awnings, and adding an entirely new structural component. Throughout these remodeling episodes, the primary use was as a caretaker's residence, also used for equipment storage and general office support.

The original entrance to the Quonset hut was at the south end, now boarded to prevent access. Two windows were cut into the wall of the Quonset hut on either side of the old doorway. A three-stepped concrete entry is outside the boarded doorway, and a coral paving suggests a former outdoor patio area. Near one corner of the coral paving, a concrete post mold indicates that an awning probably covered the probable outdoor patio area.

Several windows of various sizes were cut into both seaward and landward sides of the Quonset hut, but the only new doors were added on the landward side. These doors are beneath an added sheet metal awning. The doors and some of the windows are now boarded closed.

An entirely new structural addition is at the north end of the Quonset hut. A doorway was cut through the Quonset hut wall to allow passage between the two structural components. The new addition serves as the latest entry.

The Quonset hut is located on artificial land fill of 20th-century origin, possibly overlaying older layers that have filled a former marshy shore zone. A 20th-century origin is suggested by uniformly sized gravel produced by a rock-crusher not available before the early 20th century.

Figure 8. Photograph of old caretaker's residence, panorama overview to southwest.

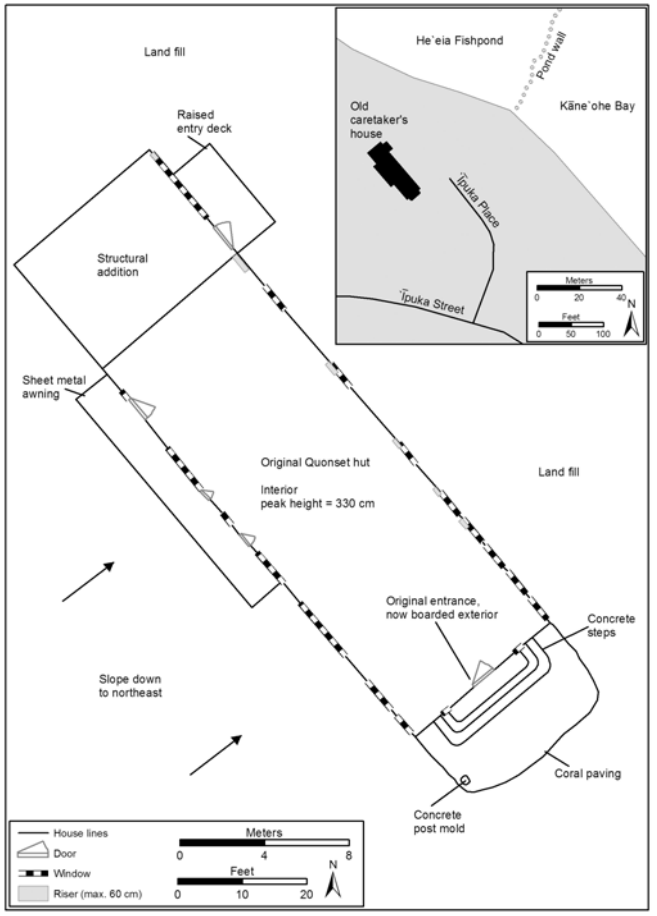

Figure 9. Plan map of old caretaker's residence.

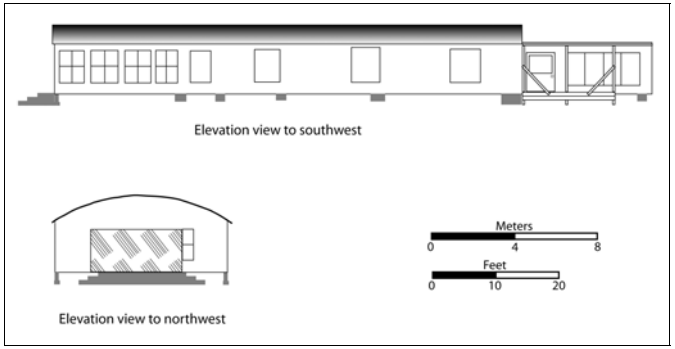

Figure 10. Exterior elevation views of old caretaker's residence. Top: view to southwest. Bottom: view to northwest.

Figure 11. Photograph of old caretaker's residence, exterior north end, view to south.

Figure 12. Photograph of old caretaker's residence, exterior south end, view to west-northwest. Scale bar is in 20-cm increments.

Figure 13. Photograph of old caretaker's residence, interior south end, view to southeast.

ARCHAEOLOGICAL OBSERVATIONS

Archaeological work in the project area included surface survey and limited subsurface testing, within an area based on a revised architectural plan for the new building project (Fig. 14). The surface survey included visual inspection of the ground surface and a 10 m radius buffer at the areas of planned construction and also beneath the raised old house to be demolished. The limited subsurface testing included three auger borings aligned east-west in the area of planned new construction.

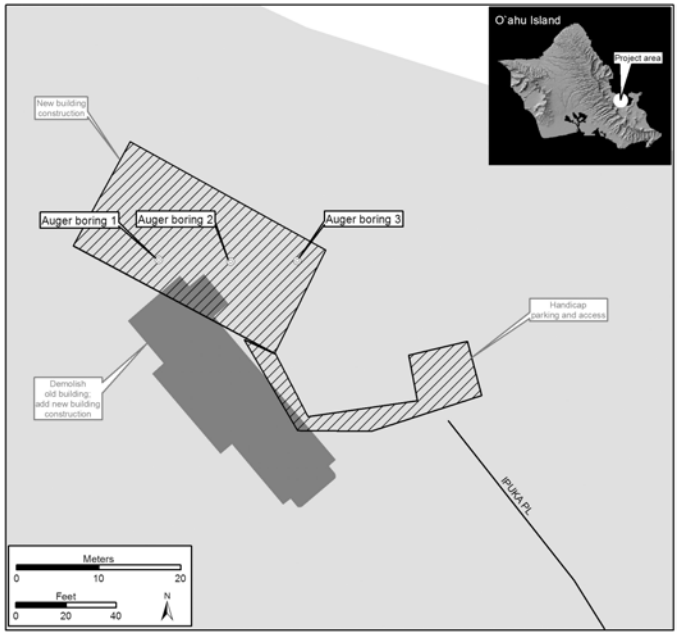

Figure 14. Location of archaeological survey and subsurface testing.

The surface survey identified no archaeological remains, but the Quonset Hut was documented in detail. Detailed observations are included in the "Quonset Hut Observations" section of this report and in "Appendix A."

Three auger borings ranged 2.1 to 2.7 m below the present ground surface, exposing a consistent stratigraphic sequence of three layers across the sampled area (Fig. 15). The uppermost layer (Layer I) is a moist, firm clay. The next layer (Layer II) is a wet, slightly sticky clay. The lowest layer reached by the auger borings (Layer III) is a wet, very sticky clay that extends below the present water table.

The three clay layers are consistent with slope-eroded volcanic sediments, gradually filling the shoreline at and near the project area. The clays originated an unknown distance farther landward (west), transported downslope (eastward). This process gradually filled and prograded the He'eia shoreline. The former shoreline apparently was at the present project area or slightly farther landward (west), as indicated by the slope-eroded volcanic clays beneath the water in auger borings 2 and 3 (see Fig. 15).

In all three auger borings, a small amount of quarried road gravel was found in the upper 2 to 8 cm of Layer I. The gravel appears consistent with the material scattered over much of the project area surface. Presumably, this material was used as land fill in this area that tends to be mucky at low elevation near the seashore.

In auger boring 3, a small amount of wood charcoal (less than 1 g) was observed in the uppermost portion of Layer III. The occurrence was immediately above the water table, within the range of 85 to 95 cm beneath the present ground surface.

The charcoal was identified as *Syzygium* sp. by wood anatomist Gail Murakami, B.A., at the Pacific Wood Identification Laboratory (WIDL) at IARII facilities in Honolulu. The species within the *Syzygium* genus could not be identified. These particular specimens could belong to a native species, a pre-Contact Polynesian introduction, or a post-Contact introduction.

The burning of the wood charcoal almost certainly is attributable to human activity, but the specimens in the present case appear to be part of the natural matrix of a slope-eroded sediment. The charcoal may have originated from land-clearing and burning at an unknown distance farther landward (west). Of note, no association is evident with any artifacts, midden, or cultural layer.

The results of the auger borings suggest that no significant archaeological deposits are present within the area and depth of planned construction activities. The planned construction activities mostly will intrude into Layer I. The most landward (west) portion of the construction likely will intrude into Layers I through III, farther landward than the apparent concentration of wood charcoal as documented in auger boring 3 (see Fig. 15; see also Fig. 14).

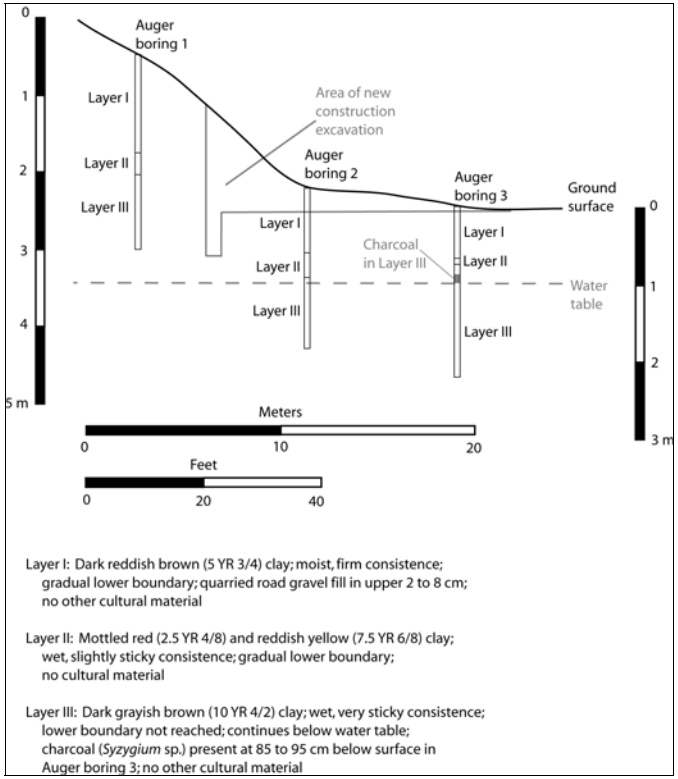

Figure 15. Profile of auger borings, view to north. Note exaggeration of vertical scale relative to horizontal scale.

CONCLUSIONS

Demolition of the Quonset hut and creation of a new caretaker's house in the project area will have no foreseeable adverse effect on historic or archaeological resources. Surface survey and limited subsurface testing identified no significant archaeological remains within the project area. The Quonset hut does not retain the integrity of location, design, or association to be considered a significant historic resource. Also, it does not contribute to the archaeological significance of He'eia Fishpond nominated in the NRHP as Site 50-80-10-0327.

Current construction plans will not create any adverse impact within the boundary of Site 0327. Also, intended use of the new building is not significantly different from established activities in the area.

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Appendix A:

Architectural Assessment of Quonset Hut at He'eia

ARCHITECTURAL ASSESSMENT
OF
QUONSET HUT AT HEEIA FISHPOND
November 30, 2006

The following report will summarize the on-site research and evaluation of the Quonset hut at Heeia Fishpond. I have provide an architectural assessment for its disposition.

FIELD RESEARCH

The Quonset hut is located on a portion of the land surrounding Heeia Fishpond. The project site is identified as Tax Map Key 4-6-05: portion 001. The address of the project is 46-077 Ipuka Street, Kaneohe, Island of Oahu, State of Hawaii. The entire fishpond and parts of the adjacent land-based area, including a portion of the project site, is listed on the National Register of Historic Places (State Historic Site Number 80-10-327).

The on-site documentation was carried out by Dwight Kauahikaua AIA, Architect of Kauahikaua & Chun/Architects. On-site work included recordation by field measurement for production of drawings depicting the existing caretakers residence, and black and white photographs of both the interior and exterior.

The typical standard model Quonset hut has been severely altered. While the building remains a single storey structure, the remaining Quonset hut building components are extremely limited and in poor condition. The building has served as a residence for a previous caretaker, and now functions as a storage building for pond equipment.

Once relocated to the Heeia Fishpond, the metal floor joists were re-posted using wolmanized 4X4 posts, pre-cast concrete foundation blocks and piers. Over time the continued rust to the steel joists has required a variety of additional make-shift piers. The floor deck has also deteriorated, and been replaced with plywood panels. The plywood is currently inadequate to act as an adequate floor, and a significant amount of deflection can be noted while walking across the interior. Due to this deflection, more than half of the building remains unused.

While many of the original wall-roof hoop joists remain, exposure to years of salt-laden tradewinds, have cause serious rusting. Only a portion of the original curved corrugated wall-roof panels remain at the ridge of the roof. The lower panels on both sides of the building have been re-built with conventional wood framing to allow the installation of wood framed double hung windows for exterior views and cross-ventilation. Some of the windows have been boarded up.

The end of the building has also been re-built with conventional wood framing, to accommodate a wood door (Now boarded shut) and two wood framed double hung

windows. The entrance at one time was protected by the addition of corrugate metal awning roof supported by wood framing. The awning and framing has since collapsed or been removed, the door is now protected by a blue plastic tarp. This end of the building is also the entry for overhead electrical power and telephone. Access to the door is provided by concrete steps with three risers. Coral paving indicates that this area may have been used as a covered patio at one time.

A wood framed addition has been constructed at the north end of the building. The new addition has access to the Quonset through a doorway cut into the end of the Quonset hut. The new addition includes an elevated covered wood deck.

The existing bank was graded to provide a level building pad for the Quonset hut. The fills of 20th century origins possibly overlay older layers that have filled a former marshy shore zone. The 20th century origin is suggested by uniformly sized gravel produced by a rock crusher not available before the early 20th century.

A set of drawings depicting the Quonset hut and its modifications is attached. A set of black and white photographs is also included as a record of the building.

CONCLUSIONS

Demolition of the Quonset hut will have no foreseeable adverse effect on architectural resources of the site. The Quonset hut does not retain the integrity of location, architectural design or association to be considered a significant historic resource. The Quonset hut also does not contribute architecturally to the significance of Heeia Fishpond in the NRHP as Site 50-80-10-0327.

Prepared and submitted by,

Dwight Pauahi Kauahikaua AIA
Registered Architect AR-4663

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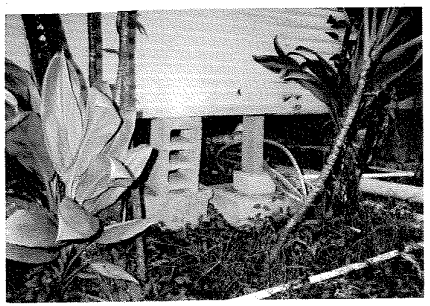
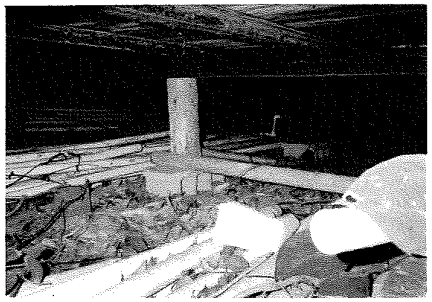
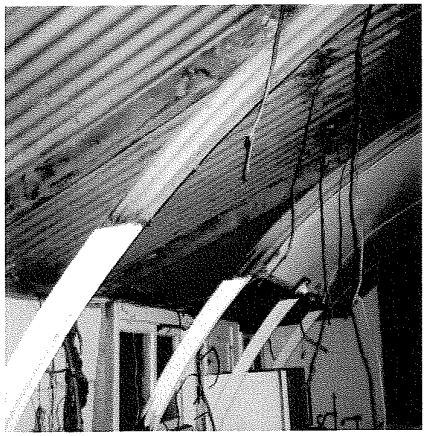


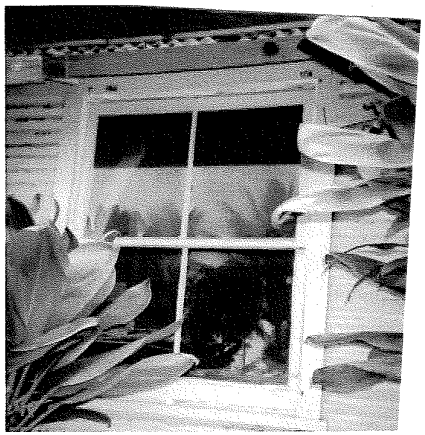
Quonset Hut Typical Foundation Post and Pier. Note due to severe rusting concrete masonry is being used to support steel girders.



Quonset hut floor framing: 6" deep steel girders and 1.5" X 2.5" joists.



Quonset hut interior framing. Note the existing 2" X 4" steel framing with wood framing.



Quonset hut double hung wood window

Heeia Fishpond
Architectural Assessment of Existing Quonset Hut
EXISTING PHOTOGRAPHS (November 2006)

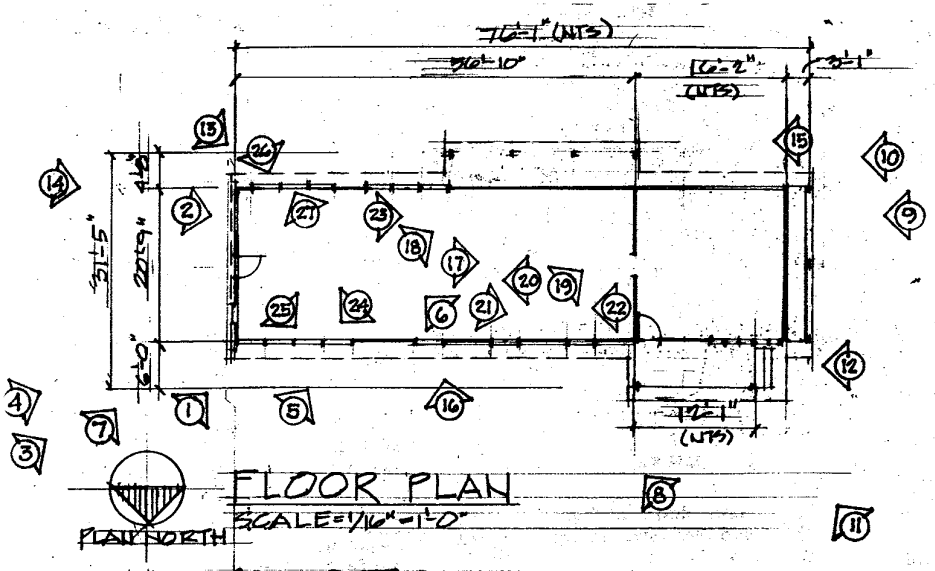


PHOTO LOG

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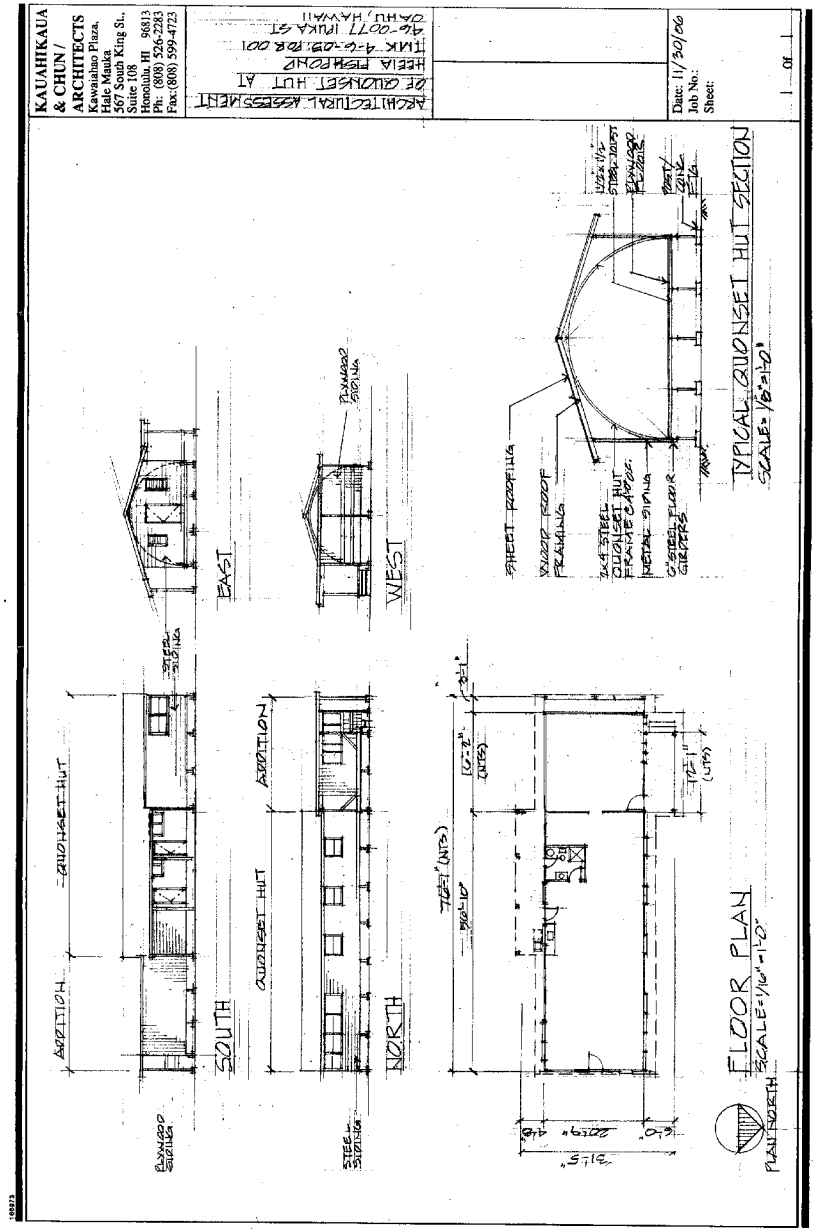
ARCHITECTURAL ASSESSMENT OF GUNSHOT HUT AT HEEIA PEARLOOP
TMK: 4-6-009: POR 001
46-0077 IUKA ST
OAHU, HAWAII

Date: 11/30/06
Job No.:
Sheet: 1 of 1



APPENDIX E
Cultural Impact Assessment Study

A Cultural Impact Assessment Study for the He‘eia Fishpond Caretaker’s Residence, Kāne‘ohe, O‘ahu

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INTRODUCTION

This Cultural Impact Assessment (CIA) was prepared for International Archaeological Research Institute, Inc. (IARII) by Social Research Pacific, Inc (SRPI), to assess possible cultural impacts associated with the "Heʻeia Fishpond, Caretaker's Residence: EA, Use Variance, SMA." The existing caretaker's residence has been deemed to be uninhabitable. The replacement structure, to be built in the same location, will continue to serve the purposes of Paepae O Heʻeia, the present caretaker of Heʻeia Fishpond.

Preparation of the CIA, as explained in the main CIA guidance document (Hawaiʻi, State of, Environmental Council 1997), involves collection of ethnographic and ethnohistorical information for the purpose of identifying impacts of a "proposed action on cultural practices and features associated with the project area." This study is based on ethnographic and documentary research collected between April 26 and May 22, 2006. Ethnographic information gathered from interviews, discussions, and site visits have helped to identify areas of traditional and historic significance in and around the Heʻeia Fishpond area. Information from archival research provides the traditional native Hawaiian and early historical context of the project area.

The documents and ethnographic accounts/observations clearly indicate the continued significance of Heʻeia Fishpond to the present generation of Hawaiians. The fishpond also has great value to many non-Hawaiians. Any efforts to improve and encourage use of the fishpond, as would result from renovating the caretaker's residence, will only enhance the traditional cultural value of the area.

This CIA study was prepared by Usha K. Prasad, Ph.D., of SRPI. It was completed with the assistance of various people, including Hawaiian *kūpuna,* long-term area residents, and previous caretakers of Heʻeia Fishpond. All of these individuals gladly contributed their knowledge and experience about the area. This report concludes the primary analysis for the CIA. The potential cultural impacts and areas/places of traditional [cultural] Hawaiian significance identified during the course of this study are presented here.

Project Goals

Articles IX and XII of the State Constitution of Hawaiʻi (Chapter 343, Hawaiʻi Revised Statutes) require government agencies to promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups. As such, environmental impact assessments and statements need to study the impacts of a proposed action on cultural practices and features associated with a project area. Act 50 (April 26, 2000), Section 343-2, of the Hawaiʻi Revised Statutes (HRS) further amends the definition of environmental impact statement to include 'effects of a proposed action on the economic [and] welfare, social welfare, and cultural practices of the community and State.' The "Guidelines for Assessing Cultural Impacts," adopted by the Environmental Council of the State of Hawaiʻi, on November 19, 1997, identifies the protocol for conducting cultural assessments (see Appendix A). This study follows the guidelines established by the Environmental Council (EC); its results are presented in accordance with the six protocols established by the EC guidelines.

This CIA is based on ethnographic and archival research completed for He‘eia Fishpond and the existing caretaker’s residence. While the EC protocol is followed in its entirety, the primary goals of this study were to (a) identify cultural resources and cultural practices in and around the project area[1], and (b) assess the potential for impacts to these as a result of the proposed replacement of the caretaker’s residence. (A separate report by IARII discusses the archaeological-historic properties identified in the project area.)

He‘eia Fishpond was designated as a historic site (State of Hawai‘i Historic Site Number 80-10-327) by Gilbert McAllister during his island-wide archaeology survey in 1930-31 (McAllister 1933). While its origins (age) remain unknown, traditional uses (cultural practices) continue at He‘eia Fishpond. Differing in content from earlier times when fish such as *awa, a‘anae, awa‘aua*, and *kaku* were more abundant, and when less urban-related damage had been done to the pond’s interior, present day efforts to use the pond continue. It remains a viable cultural resource for the Hawaiian community. (It has also served as an important economic resource for some non-Hawaiians.) A significant portion of this CIA study was devoted to identifying He‘eia Fishpond’s value as a cultural resource to the present Hawaiian society.

An important note regarding the guidelines for completing CIA studies in the State of Hawai‘i (see App. A) is the need ‘to promote and preserve the cultural beliefs, practices, and resources of native Hawaiians, as well as those of other ethnic groups.’ For much of the 20th century, He‘eia Fishpond was leased to and in use by non-Hawaiians. Two of these previous caretakers (lessees) contributed invaluable information about the history, use, and Hawaiian traditions associated with the pond. Along with interviews with previous caretakers, *kūpuna* (Hawaiian elders) who are knowledgeable about the area’s native Hawaiian cultural properties and practices were also sought. Interviews were also held with present and former residents of the project area, both of Hawaiian and non-Hawaiian ancestry. While historically He‘eia Fishpond has been used by both Hawaiians and non-Hawaiians, the present caretaker is a grass-roots native Hawaiian organization that is attempting to ‘restore’ some of the pond’s traditional uses.

Site visits were made during the entire study period, mostly for the purpose of conducting interviews, but also in an attempt to identify or locate cultural resources known from the general vicinity of the project area. At least one of these involved a walk-about with a former caretaker to identify features known and associated with the pond in the 1960s. Three separate site visits were made with *kūpuna* who pointed out some of the area’s features and landmarks they knew as children. One site visit was made with a long-term area resident to identify burial markers that once were visible (before clearing) in the housing development bordering the project area.

Project Location

The project area is located along Kāne‘ohe Bay, in windward O‘ahu (Fig. 1). The northern boundary of the fishpond borders on He‘eia State Park; He‘eia Kea Pier is a short

[1] Since cultural impacts generally address the larger cultural or traditional context in which a project area falls, this CIA includes the specific project site - caretaker’s residence—and the fishpond with which it is associated.

distance north of the park (Fig. 1). Like its namesake, He‘eia Fishpond is within the traditional land district (*ahupua‘a*) of He‘eia (Fig. 2). As shown in Fig. 1, the existing (and proposed)

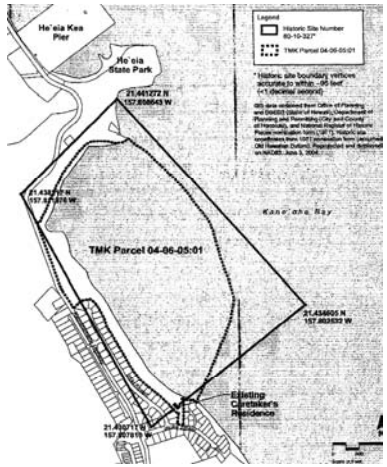

Figure 1. Map of the Project Area (Source: Helber Hastert & Fee, Sept. 2004)

caretaker’s residence is located at the southwestern end of the fishpond. Entrance to the fishpond is also located at the southwestern end of the site.

Traditional and Cultural Significance of the Project Area

He’eia Fishpond, *Loko i‘a O He‘eia*, is both a symbolic and living artifact of traditional Hawaiian culture. As mentioned earlier, the date of pond construction is unknown even though it is believed to be associated with several members of Hawaiian royalty (discussed below). But the origins of the fishpond become less important when looking at the purpose it served its original users as well as the modern, present-day Hawaiian community. The importance of the fishpond is also inherently tied to the land of He’eia, a place that has served many generations of Hawaiians.

Figure 2. The *Ahupua'a* of He'eia (Sterling and Summers 1978).

The *Ahupua'a* of He'eia

The *ahupua'a* of He'eia reaches from the Ko'olau Mountains to the Mōkapu Peninsula, and includes a significant portion of Kāne'ohe Bay (see Fig. 2). The name He'eia, translated literally, combines *he'e* = octopus and *i'a* = fish. The "…[*he'e*] swarm in the waters…when *wiliwili* trees were covered with their crimson, craw-like blossoms, the ancient Hawaiian fishermen knew that *he'e* were running" (Paki 1972 in Henry 1993:18). There are two legends associated with naming the land division of He'eia:

> **He'eia**. Land division and bay noted for surfing…probably the He'eia in the song composed for Ka-lā-kaua: *Aia i He'eia lā, ka nalu e he'e ai*, there at He'eia, the waves to surf on. A *holua* sled course ended here…During a battle with people from Leeward O'ahu, a tidal wave is said to have washed (*he'e 'ia*) the natives out to sea and back, after which they were victorious, thus fulfilling a prophecy. In ancient times, souls were judged here and divided into two groups; the white, who went to He'eia-kea, and the black, who went to He'eia-uli (Pukui et al. 1974:43-44).

> ….Haumea moved to Pali-ku [now called Kualoa]. She went to get Olopana's grandson to rear and named him Heeia, because they had been washed out to sea. The place adjoining Kaneohe was named for him (*Moolelo Kahikono Hawaii, Hoku o Hawaii*, March 12, 1928, in Sterling and Summers 1978:197).

There are several references to the two He'eia—the 'dark' (or black) and 'white'. The name He'eia-kea has been passed down to current times; it is how the area is presently known.

He'eia-uli, the dark He'eia is less known. Its legendary significance of being associated with 'souls of the dead,' as seen in the reference below, appears to have been lost over time.

> Heeia is the place where the souls of the dead leap into the sea. There are two Heeias, Heeia-uli, the dark Heeia, and Heeia-kea, the white Heeia. And there is all the difference between the two that there is in the regions of heaven and hell…Men died on Hawaii in the olden days, as they do now. And they went to places where dead men dwell. But before they jumped into the sea, their lives were judged and their fates decreed. Some should were judged white and some were judged black, and here at Heeia, the dividing came. The black souls leaped this side of the point, and the fortunate white found their haven beyond (Raphaelson, Kamehameha Highway, p.22, in Sterling and Summers 1978:197).

> Remember, o visitor, if you are a stranger to Heeia-kea, ..you will find it directly below Maelieli. That is the first sandy stretch you come to after you have reached the rise of Kealohi. Heeia-kea is the first sandy stretch you come to after leaving Heeia-uli. Heeia-uli is the first Heeia the visitor comes to after he leaves Kaneohe. That is the Heeia where the Catholic Church stands and where the old mill of Heeia sugar plantation stood (*Hiiaka-i-ka-poli-o-Pele, Hoku o Hawaii,* Jan. 5, 1926*,* in Sterling and Summers 1978:197).

In *Ruling Chiefs of Hawai'i*, Kamakau (1992) mentions He'eia as one of the places where the Maui chiefs were living after the death of Ka-hahana. (This appears to be one of the earliest references to He'eia). The following is found in the story of 'Ka-hahana Loses Oahu':

> After Ka-hahana's death a plot was laid to murder the chiefs of Maui, Ka-hekili was living at Kailua with most of the chiefs; Manono, Ka-ua-kapeku-lani, Ka'i-ana, Na-makeha', Nahi-olea, Ka-lani-ulu-moku, and others were at Kane'ohe and He'eia (Kamakau (1992:138).

The history of He'eia is best known from the mid 1840s, after lands had been divided following the Great Mahele. High Chief Abner Paki was the first known *konohiki* (land administrator) of the *ahupua'a* of He'eia (Kelly 1975). Paki was a close friend of King Kamehameha III and obtained the lands of He'eia at the time of the Great Mahele of 1848. Abner Paki's daughter was Princess Bernice Pauahi, who upon her father's death, received 5,800 acres of land including the *ahupua'a* of He'eia (Henry 1993:118-19). When she died, her estate passed on to her husband, Charles Bishop. To date, He'eia Fishpond remains under the jurisdiction of Kamehameha Schools/Bishop Estate.

Loko i'a O He'eia (He'eia Fishpond)

"A land with many fishponds was called a 'fat' land (*'aina momona*)" (Kamakau n.d., in Handy and Handy 1991:261). Construction of fishponds was a tremendous project and could only be undertaken by *ali'i* who had large numbers of workers at their command. Kamakau (ibid) goes on to add that:

> When the stonework was finished and the sturdy timbers for the sluice gate (*makaha*) had been put in place, with proper ceremonial of prayer offerings by the *kahuna* for increase (*ho'oulu 'ia*), then came the time of waiting for the coming-in of fish from the sea during the nights of full moon and high tides. On these nights the keeper (*kahu-kia'i-loko*) watched in a shelter beside the sluice gate to guard against thieves, "four footed and two footed." And after the fish had come

pouring in, the *kahu* would rejoice with his master, crying *Ola ka ʻaina!* ("Life [has come] to the land!").

According to Summers (1964), there were at least ninety seven fishponds on the island of Oʻahu; this number does not include the small 'inland ponds' (in Handy and Handy 1991:260). Henry (1993) identifies five basic type of fishponds that were found in Hawaiʻi (Table 1).

Table 1: Five Basic Types of Fishponds Developed by Prehistoric Hawaiians (from Henry 1993)

loko iʻa kalo	taro fishpond	agricultural plots irrigated for growing selected fish and taro (*kalo*), that were fed and drained through a system of ditches (*ʻauwai*)
loko wai	freshwater pond	natural inland ponds usually found close to the shore that Hawaiians called freshwater (*wai*) but they were actually brackish
loko puʻuone	coastal (brackish water) pond	connected to the inland by a ditch or a stream; often isolated from the open sea by a sand dune or coral
loko kuapā	body of sea water enclosed by a (built) stone wall	had at least one sluice gate (*mākāhā*) that opened to the ocean
loko ʻumeiki	similar in construction and shape to *loko kuapā*	had numerous stone-flanked lanes, some of which faced inward and some which faced outward

Heʻeia Fishpond is a *loko kuapā*—a fishpond that was enclosed by building a stone wall to create an enclosure. Figures 3 and 4 are photographs of Heʻeia Fishpond taken in the early 1900s. The first photograph (Fig. 3) includes a sketch that explains the main features (as seen in the photograph) of the pond. The second photograph, Figure 4, is an aerial view of the pond and its surrounding areas. Features such as the *mākāhā* and the small 'fry' enclosure (pond within the pond feature at the southwestern corner) are easily seen in this photograph. There is also no mangrove strand along any part of the inner wall along the coastline.

One of the earliest descriptions of Heʻeia Fishpond is by Whitman (1815), who resided in Hawaiʻi for about 2 years:

> This is a large district [Koʻolaupoko] on the NE extremity of the Island embracing a large quantity of taro land, many excellent fishing grounds, and several large Fish Ponds. One of which deserves particular notice for its size and the labour [sic] bestowed in building the wall which encloses it. This wall is about one mile in length and extends from the southern part of a small bay to a point of land [Lae O keʻAlohi] jutting out about one mile into the sea. It is wide enough on the top for 4 men to walk abreast, and over the wall, we passed several gates of strong wicker work through which the water had free passage. Here we observed thousands of fish, some of which were apparently three feet long. A small hut at one end of the wall is the residence of an old man who guards the fish. This pond is the property of the King [Kamehemeha I] and no fish are allowed to be taken out of it without his orders, and there had not at this time been any taken out for several years (in Henry 1993:19).

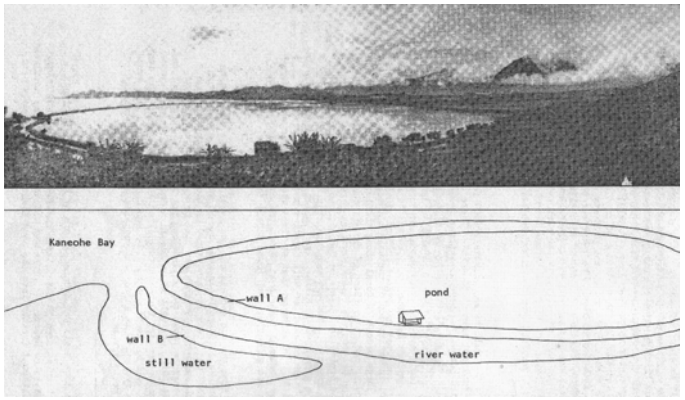

Figure 3. Heʻeia Fishpond. Photograph by A. Gartley c. 1910-1913, and Schematic Drawing of Fishpond Walls and River (wall A, fishpond wall with caretaker's house; wall B, dike wall between the river and land) (Source: Kelly 1975).

Figure 4. Aerial Photograph of Heʻeia Fishpond c. 1926 (Source: Henry 1993)

During his island-wide survey, McAllister (1933) described He‘eia Fishpond [Site 327] as being:

> …approximately 5000 feet long with an inclosed [sic] area of 88 acres. There are four watchhouses and several outlets. The walls of lava stone facing and dirt fill are 12 feet or more in width. The water is brackish (Sterling and Summers 1977:198).

McAllister’s description however, was incorrect. According to Henry (1993:20), the wall extends a total of 7,650 feet and completely encircles the fishpond. One of the most significant features of He‘eia Fishpond is its *mākāhā-nui*—a large opening built to control the flow of sea water. The *mākāhā-nui* is located at the apex of the *makai* wall, at the pond’s farthest point into Kāne‘ohe Bay (Henry 20-21). The guard house (*hale kia‘i*) was located on the Kāne’ohe side of the *mākāhā-nui*; it burned down in 1978.

According to Wally Choi, whose father was a former lessee of the fishpond, there were three guardhouses along the walls of the pond in the 1960s. The occupants (guards) were Filipino men who remained in the area after having worked on the sugar plantation. These men continued to live in the guardhouses as workers of the Choi family for the duration of the lease. The Choi family home was directly above the pond. Figure 5 is a photograph taken from the beacon tower located along the fishpond’s *makai* wall, showing the approximate location of the former Choi family home. The area or lot appears to be vacant, however, Wally believes the cement foundation for the home still remains.

Figure 5. Photograph from the *makai* wall of He‘eia Fishpond, showing the approximate location of the Former Choi Family Home.

Like the Choi family, there were at least two other Chinese families that leased He‘eia Fishpond. According to Auntie Naomi Wampler, Henry Ho Wong formerly owned all the lands up to the fishpond. HenryWong managed the cattle and beef operations for James B. Castle’s company, Kaneohe Ranch (Lota 2000:4). Born and raised in the area around He‘eia Fishpond, Henry Wong spent the rest of life in Kāne‘ohe. The home he built along Kāne‘ohe Bay is named “Kealohi,” in memory of the place where he spent his childhood:

> …[born] “on what is now the 50 yard line of Sam King Intermediate School, Henry H. Wong Athletic Field…Henry spent time with “Kuku Kelekia” (maternal grandmother who was part Hawaiian) at “Kealohi” (on the beach in the area near today’s Ulu Mau Village). Planted and harvested taro, pounded it into poi. Caught Kuhonu (the white crab) with a stick. Caught aholehole in the streams. “Kuku Kelekia” used the traditional “niau” broom (pulumi niau) made from the stems of the coconut leaves” (Lota 2000:5-6).

Henry Wong’s great great grandparents, Komomua and his young bride Koamokumoku, came from Kohala, Hawai‘i, around 1842, to establish a Catholic church in windward O‘ahu. Their first church was built on a *heiau* on Mōkapu Peninsula. In 1850, the church was moved across the bay to its present location as Saint Ann’s Catholic Church in Kāne‘ohe town (Hall 1999:95). From then on, Henry Wong’s ancestors remained in the town of Kāne‘ohe.

Uncle Sonny Naone who grew up in the Kea‘ahala area of Kāne‘ohe, remembers that most of his classmates at Benjamin Parker School were of Japanese, Okinawan and Chinese descent. Both he and Auntie Naomi have known each other since childhood, having grown up in the Kea‘ahala-Puohala area of Kāne‘ohe. According to Uncle Sonny, there was a ‘Japanese Fish Camp’ where King Intermediate School is now located[2]. Both he and Auntie Naomi referred to the area as the Japanese Fish Camp of ‘Japanese Fishing Village.’ Uncle Sonny described the camp as located *mauka* of where the pilings are behind King Intermediate School. Figure 6 shows one of the earliest photographs of He‘eia Fishpond, with He‘eia Plantation in the foreground. The houses toward the back (closer to He‘eia Fishpond) may be part of the Japanese Camp. Uncle Sonny added that the Luluku area was where the Okinawan families had their banana patches, piggeries, nurseries and vegetable gardens. Among the families who lived and farmed the Luluku area were the Unten, Orimoto, Tengan and Shiroma families.

The fishing camp or village may have formed in the aftermath of the sugar and rice plantations. There may have been a ‘transformation’ of sorts as the plantations ended the primary economic activity of the camp’s residents was directed to fishing. For many of the Asian settlers, fish for subsistence and fishing as a cash-crop were very important. Records indicate that after the fall of the monarchy, many Hawaiian families who owned fishponds leased or sold them (Markrich 1985:99)[3]. The two larger fishponds in Kāne‘ohe (He‘eia and Waikalua) were either leased or sold to Chinese immigrants. The Chinese, who came from a culture that

[2] The ‘Filipino Fish Camp’ was near Anoi Road, in the Kea‘ahala area. Although Uncle Sonny now lives in Kailua with his son, he still attends the “Door of Faith Church” on Anoi Road.

[3] The Waikalua Fishpond was acquired by Henry Wong in 1966 when it was put up for sale.

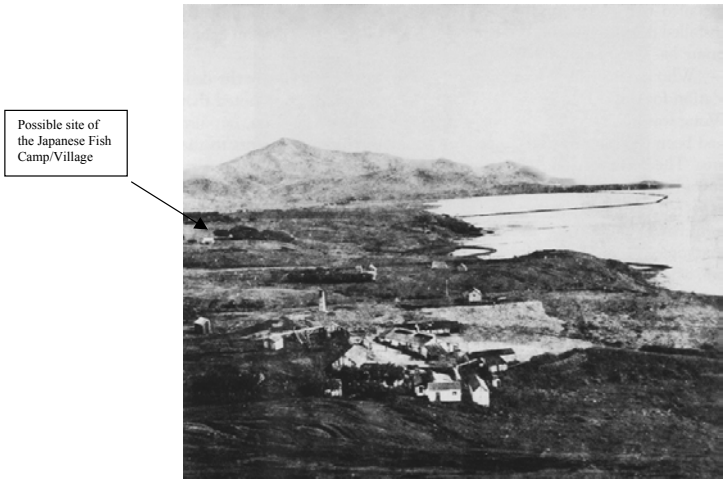

Figure 6. He'eia Plantation and He'eia Fishpond around 1890 (Source: Lota 2000).

stressed raising fish in ponds, easily moved into the role of caretaker. According to Monsignor Charles Kekumano, former pastor of St. Ann's Church in Kāne'ohe, many of the Chinese immigrants assumed the role of *konohiki* of the pond (Markrich 1985:100). Among these would be the Yee Hee family, believed to be the first lessee of He'eia Fishpond.

The fishing industry thrived on O'ahu. Two stores - the Honda Store in Kāne'ohe and Tamashiro Market in Kalihi—catered to the demands of the fish market. The shores of He'eia and Kāne'ohe became launching and landing sites for fishing boats. Wally Choi's father started 'Fishland,' a retail outlet inside grocery markets. Fish raised by the family at He'eia Fishpond were marketed at the Fishland outlets. Uncle Sonny recalls that the *aku* boats would come in with their catch, just *makai* of King Intermediate School, to be taken and processed at the Honda store. He often saw entire families helping in the fishing operation.

Prior to Paepae O He'eia, the fishpond was leased by Mary Brooks. Brooks believed that He'eia Fishpond could become an economically viable marine resource, and so in 1991 entered in to an agreement with Bishop Estate to restore the pond to its former use. Brooks' first task was to repair the *makai* wall segment broken during the Kipuka Flood of 1965. After repairs were made, Brooks began farming *limu* and *moi* in the pond. Both items, aimed for the retail market, though initially successful later met with mixed success due to increased temperatures resulting in loss of fish crop. Her lease agreement was not renewed in 1999.

Caretaker's Residence—Quonset Hut

Although Wally Choi was a young boy of 7 or 8 years old when his family took over the lease of He'eia Fishpond, he recalls that the existing caretaker's residence (Quonset hut) was not at its present location. According to Wally, the area was pasture land when his family arrived there in the early 1960s[4]. There were several Quonset huts in the general area, including a very large one that his family used for storage, but none in the location of the present caretaker's residence. After they were abandoned by the military, the huts appear to have been used by local residents for shelter and such.

In interviews with Uncle Sonny and Auntie Naomi, both of whom had visited and played near the pond, each were asked if they recalled where the Quonset huts were located. The first time Auntie Naomi knew of any sort of residential structure at the site of the current caretaker's Quonset hut was in the early 1970s. She remembers a woman who lived in a structure that would have been situated approximately at the same location of the caretaker's residence.

It is possible that the caretaker's residence Quonset hut is the same one that Wally Choi's family had used for storage until 1965. It is also possible that this is another hut altogether since several huts of unknown location were left behind by the military. According to M. Brooks, the Quonset hut was in its present location when she arrived in 1988. The hut became her principal place of residence. The 'common' mango tree[5] in front of the Quonset hut was frequented by many older Chinese and Japanese who valued the fruit for its 'pickling' qualities. Mary recalls there once had been a caretaker's house (guardhouse) that was situated on a small bridge (as seen in Fig. 7, below) stretching between the shoreline and the pond's *mauka* wall. The bridge and the caretaker's house were just *makai* of the Choi family residence. According to Henry (1993), the caretaker's house or guard house burned down in 1978.

He'eia Japanese Cemetery

The He'eia Japanese Cemetery, likely the burial place for members of the Japanese camp or village that once was in this area, used to be located at the end of Ipuka Street near the project area. According to Nanette Napolean, the burials from this cemetery were relocated to the Hawai'i Memorial Park in Kāne'ohe, in 1986. The burials which had only markers (with no names), were relocated to allow housing development in the area. Prior to moving the burials, newspaper advertisements were published to notify family members of the intended move. However, no one responded to the advertisements, and the burials were relocated.

Diane Shimabukuro was the first to build a home in this development (south of the fishpond) in 1989. She remembers seeing two burial markers on the empty lot adjacent to her

[4] The Choi family held the lease for He'eia Fishpond until 1965 when Bishop Estate reduced the lease terms to 'four-year periods.' Four years was a enough time to raise fish from 'fry' to adult stages.

[5] Beneath the mango tree was also the site for Marion Kelly's oral history with Mr. Hou Hee of the Yee-Hee family in 1990.

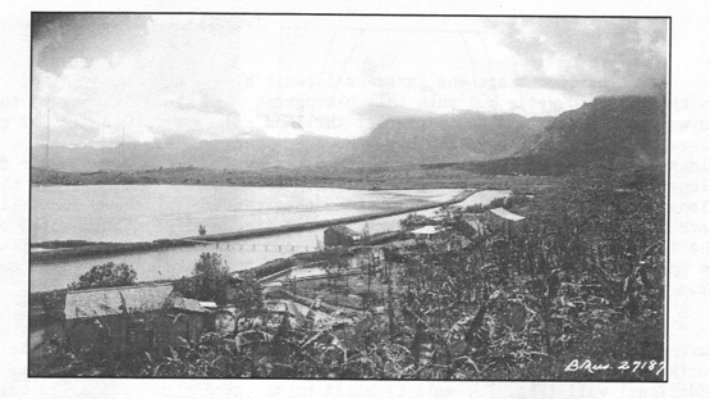

Figure 7. Photograph by R. J. Baker c.1915, looking southeast from the northwest wall of Heeia Fishpond; the Caretaker's House is located at the Entrance to the Small Bridge (in Kelly 1975).

property, and that the neighbor had to have these removed before building his house. Ms. Shimabukuro directed me to the location of the cement burial markers that remain on the grounds of King Intermediate School. According Auntie Naomi, these markers were not assigned to a burial; they were moved about during military and/or later activities on the school grounds. In Wally Choi's memory, there was a burial ground located very close to the entrance to He'eia Fishpond. He pointed to an area just southwest of the caretaker's residence. (He also recalled that in more recent times, this area was used for dumping urban waste).

While it is possible that there were burials in different locations (possibly belonging to different generations of area residents), the Japanese Cemetery would likely have had all the burials from the Japanese community that lived in this area. It is also possible that isolated burials may exist from the predecessors of the Japanese camp.

In the following section, a review is made of the Hawai'i state guidelines for conducting CIA's. The information gathered for this study and its relevance to the guidelines, is presented accordingly. Some of the information comes from documents, however, most of it is the result of interviews with *kūpuna*, area residents, former caretakers, and others involved or interested in He'eia Fishpond.

STUDY RESULTS: IDENTIFICATION OF POTENTIAL CULTURAL IMPACTS FOR THE PROPOSED CARETAKER'S RESIDENCE

The purpose of Articles IX and XII of the Hawai'i State Constitution is to "promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups." The goal of a CIA is to study the impacts of a proposed action on cultural practices and features associated with a project area. Included in these impacts are 'effects of a proposed action on the economic [and] welfare, social welfare, and cultural practices of the community and State.'

The Office of Environmental Quality Control (OEQC) guidelines (see App. A) identify several possible types of cultural practices and beliefs that are subject to assessment. These include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs. The guidelines also identify the types of potential cultural resources associated with cultural practices and beliefs that are subject to assessment. "The types of cultural resources subject to assessment may include traditional cultural properties [TCPs] or other types of historic sites, both man made and natural, including submerged cultural resources, which support such cultural practices and beliefs." (CIA Guidelines 1997:2).

For CIAs completed in the state of Hawai'i, it is very important to gather information from *kūpuna* about cultural practices and beliefs. The *kūpuna* are the bearers of traditional knowledge of Hawaiian culture. While the *kūpuna* provide knowledge about traditional Hawaiian culture, members of the community most directly affected by project related changes often will include non-Hawaiians. The ethnic or cultural background of these individuals differs from their host (Hawaiian) culture and they too are likely to be affected. An assessment of cultural impacts in Hawai'i, more often than not, will consider the effects of an undertaking on the culture(s) directly impacted. That being said, it is important to acknowledge that many of the people who were directly involved with He'eia Fishpond in the past one hundred years are not of native Hawaiian ancestry. There were, however, native Hawaiians and individuals of part Hawaiian ancestry in and around the general He'eia area during this time. Perhaps of greater importance is the fact that the non-Hawaiians who used the fishpond did so in a manner that respected the pond's spiritual essence, and also incorporated traditional Hawaiian fishing methods and techniques.

In brief, the information gathered for this study shows that:

1. Any potential cultural impacts that may result from the undertaking (renovation of the Quonset hut caretaker's residence) will not be negative. There is overwhelming support for the fishpond to be used and maintained. Making the structure physically 'sound' will better enable and encourage use of the fishpond.

2. There are both traditional and modern [Hawaiian] cultural activities taking place at the fishpond today. The work of Paepae O He'eia is in many ways an effort to revive use of the fishpond in ways that are meaningful to modern Hawaiian culture. He'eia Fishpond is of "important historical cultural value to an ethnic group" under Criterion E under Chapter 146 of the State Historic Preservation Division rules and regulations governing historic preservation.
3. There are likely to be long-term positive social and economic gains (impacts) as a result of the proposed project, but these are outside the scope of the present study.

Because a CIA study addresses the ethnic (human) community within and around a specific project area, its findings are specific to that given setting. The community which uses He'eia Fishpond differs significantly from the community that surrounds it. The former is a non-profit organization that is making an effort to revive and maintain the pond's potential as a traditional Hawaiian resource; the latter is a fairly new, multi-cultural urban community that has little direct contact with the fishpond. The remainder of this report addresses the results of the study, which are presented in accordance with the protocols established by the OEQC's guidelines for completing CIA studies in the State of Hawai'i. These guidelines, though not consistently applicable to each situation (or project), provide a means by which to organize and present the findings. The six OEQC protocols are as follows:

PROTOCOL 1: Identify and Consult with Individuals and Organizations with Expertise Concerning the Types of Cultural Resources, Practices and Beliefs Found within the Broad Geographical Area, e.g., District or Ahupua'a

A major objective of this CIA study was to identify individuals and organizations that could help identify the cultural resources, practices and beliefs of the He'eia-Kāne'ohe area. Particular effort was made to locate *kūpuna* who could share their knowledge about the past cultural uses of these lands; all of these *kūpuna* live in Windward O'ahu. Along with *kūpuna*, several groups and organizations (see Appendix B) provided important information about the cultural history of the fishpond[6]. General information about the area came from the following:

1. *Kūpuna*
2. Former and present native Hawaiian residents of He'eia and Kāne'ohe
3. Staff members of King Intermediate School in Kāne'ohe
4. Paepae O He'eia
5. Friends of He'eia

The *kūpuna*—Uncle Sonny Naone, Auntie Naomi Wampler and Auntie Josephine Ho'okano—shared their memories and experiences about the fishpond and life in Kāne'ohe. Uncle Sonny and Auntie Naomi have lived in Kāne'ohe since they were children. Uncle Sonny,

[6] Appendix B is a list of people who provided information directly relevant to the project area; it does not include the names of individuals who provided incidental information for the overall study.

now retired, maintains a *lo'i*[7] in back of King Intermediate School. Auntie Naomi is actively involved with *Ka Ua Kilihune Halau* and maintains the *hula* mound built at King Intermediate School. Also, information from Auntie Josephine Ho'okano, who was interviewed by this author for an earlier oral history of O'ahu, is included in this report. Auntie Josephine had spent her entire life in Kahalu'u area, and spent much time around Kealohi (He'eia State Park). It was Auntie Josephine who first talked about seeing a cave (that may have contained human burials) located along the coastline of Kealohi. More information about this feature could not be obtained since unfortunately, Auntie Josephine passed away shortly before this study began.

PROTOCOL 2: Identify and Consult with Individuals and Organizations with Knowledge of the Area Potentially Affected (APA)[8] by the Proposed Action

Appendix B provides a list of all individuals and organizations contacted and interviewed for this study. Along with *kūpuna* and individuals, listed are groups and their representatives that are within the immediate vicinity of the project area:

1. Current Residents of the area immediately surrounding the He'eia Fishpond
3. Former caretakers of the fishpond
2. Former residents (elders including *kūpuna*) of He'eia and Kāne'ohe
3. Paepae O He'eia
4. Friends of He'eia
5. Ahupua'a Restoration Council of He'eia
6. Ko'olaupoko Hawaiian Civic Club
7. Na Iwi 'Ola o He'eia Kea

Two things about the project area and area residents are worth noting: 1) many of the elders who were born and raised in the general Kāne'ohe area still live there; 2) the community that borders on the fishpond is fairly new and its members are primarily transplants from other areas, on and off island. (An exception to this is Uncle Bud Henry's residence, which is just *mauka* of the fishpond.) There is some knowledge of gravesites and activities related to fishing, but none that involve the Area of Potential Affect. (See discussion under Protocol 6).

PROTOCOL 3: Receive Information from or Conduct Ethnographic Interviews and Oral Histories with Persons Having Knowledge of the Potentially Affected Area

Information gathered from the ethnographic field studies came from the sources identified in Protocols 1 and 2. Both groups—those with knowledge about the cultural resources of the greater He'eia-Kāne'ohe area and those who know more directly about the [APA] project area—provided information that was used to determine the potential cultural impacts of the proposed project. Data directly pertinent to cultural issues are presented under Protocol 6.

[7] The *lo'i*, with sixteen varieties of taro, is used to educate students from King Intermediate School. Along with taro, Uncle Sonny also grows *ti*, banana, ginger and other Hawaiian plants.

[8] The Area Potentially Affected (APA) can be used interchangeably with 'Area of Potential Effect' (APE), which is defined in Section 106 of the National Historic Preservation Act, as amended, and relevant to federally based studies/projects.

PROTOCOL 4: Conduct Ethnographic, Historical, Anthropological, Sociological, and Other Culturally Related Documentary Research

Ethnographic research was the primary method for gathering data for this study. As is the nature of ethnographic studies, the information gathered is both anthropological and sociological in nature. The He'eia-Kāne'ohe area is a multicultural setting; there are some native Hawaiian families and there are many families of Chinese and Japanese descent who have lived in the area for several generations. Overall, this [He'eia] 'last' segment of Kāne'ohe reflects an urban, mixed Hawaiian 'local' community. Just a few miles north however, into the town of Kahalu'u begins a more rural community.

In addition to ethnographic research, documentary research was conducted throughout the duration of this study. The written work of Marion Kelly (1975; 1998), Bud Lehman Henry (1993), and Lota (2000) have been used extensively in this report.[9] The information presented in the earlier portions of this report combines the results of both oral (ethnographic) and documentary (written) data that were gathered. Neither the ethnographic study nor the documentary research is considered to be exhaustive[10]. However, it is considered to be appropriate for the needs of the current project. He'eia Fishpond has a very rich cultural history, some of which is clearly not found in written documents nor oral accounts. To fully address this history would involve considerable time and effort.

PROTOCOL 5: Identify and Describe the Cultural Resources, Practices and Beliefs Located within the Potentially Affected Area

The identification of cultural resources, practices and beliefs associated with the project area comes primarily from oral/ethnographic sources; some of these have been referenced in previous sections of this report. Written documents, as mentioned above, also provide valuable information on the cultural resources found in and around the immediate vicinity of the project area. He'eia Fishpond, though bordered by urban development along its south and west boundaries, is a remnant of Hawai'i's past. It is a living remnant—a cultural resource whose value is quite immense. Symbolically and pragmatically, this fishpond represents all things that are Hawaiian: stories and legends (App. C) associated with the pond tell of its place in Hawaiian mythology; its design and construction tell of the people's intimate connection to and care of the land and water; its use as a perpetual food source demonstrates its economic purposes. Although it appears to be a 'self-contained' unit, the original intent and use of the fishpond included the lands around it, the *lo'i* above it, and the streams that flowed into it. In short, even without the *lo'i* and the village, He'eia Fishpond serves as a living 'snapshot' of how Hawaiian communities once lived.

[9] A book by Mary Brooks on He'eia Fishpond is near completion. It addresses the significance and value of this traditional Hawaiian resource.

[10] There are other *kūpuna* and lineal descendants of these [Kailua-Kona] lands who were not located by the present study. While efforts were made to locate all individuals whose names are known or were referred, there are many who have not yet been identified.

A historic site number was assigned to He'eia Fishpond in 1930 by G. McAllister. McAllister (1933) identified two other unusual sites (see App. C) connected with He'eia Fishpond: 1) Koamano Reef (Site 325) where numerous sharks lived; and 2) *Luamo'o* (Site 326) the home of *Meheanu*, the *kiai* or guardian spirit of the fishpond (Sterling and Summers 1978:198). Site 324 was Kalaeulaula Heiau, a large structure on nearby Kealohi Point that was destroyed by the plantation (ibid). McAllister noted that of the six *heiau* known from He'eia, five had been destroyed by the sugar and pineapple plantations.

There were at least three sugar plantations in or near He'eia (Kelly 1998:4): the He'eia Sugar Plantation (1887-1903); Kea'ahala Plantation (187?-1879); and the Kāne'ohe Sugar Plantation (1865-1885). At least 650 acres were under sugar cultivation in He'eia (Kelly 1998:5). The pineapple operation, owned by Libby, McNeill and Libby, had 2500 acres under cultivation and extended from Kāne'ohe to Hakipu'u (Kelly 1998:6). Only one of these operations lasted into the 20th century, for a brief three years. But changes to the landscape and land use introduced by these operations were permanent (c.f. Kelly 1998).

During interviews completed for this study, most individuals were asked about the place names in the area. Of the names given, Kealohi[11] was the most commonly known and used. (Its interesting note is that elders still call the area 'Kealohi,' while younger people call it He'eia State Park). For Auntie Naomi, Kealohi is known because of its association with a cave along the shore and that once was used by Hawaiians, possibly for burials. Kealohi is also where Henry Wong spent time with his *tutu* (maternal grandmother), Kuku Kelekia, in the early 1900s. He played on the beach at Kealohi where he caught *kuhonu* (white crab) and *aholehole*. Wong had such fond memories of the times he spent at Kealohi with his grandmother that he named his home (on Kāne'ohe Bay Drive), "Kealohi Place."

Auntie Naomi has also spent time on Koamano Reef and the area adjacent to He'eia Stream as one enters present day He'eia State Park. The area adjacent to He'eia Stream is fairly close to where *Luamo'o* is located. For Auntie Naomi, this area is a 'place of calm and peace.' It's a place that is treated with respect and acknowledged for being special. A similar description of "feeling and sense of the place" was shared by two non-Hawaiian residents of Kāne'ohe.

The spiritual importance of the fishpond and its surroundings were not lost on the non-Hawaiians who lived and worked in the area. Wally Choi tells of the time that his father consulted with a Christian *kahuna*, Father Bray, about the 'lady in the white dress.' To those familiar with the fishpond, including the Filipino guards, the lady was also known as the 'spirit of the lake.' Wally tells that one of the guards who worked for his father met the lady when patrolling one night and 'talked story' with her. He had more than one encounter with the lady. At the same time, there were mishaps at the fishpond and things were going wrong (e.g., fish dying, more intruders getting in through the makaha, etc.). Wally's father was very sensitive to the ways of the Hawaiians, and chose to seek out the advice of a *kahuna*. The *kahuna* advised Mr. Choi to go find where the lady lives—a place 'where no more bottom' and make a *lua'u*, offering her Hawaiian gifts. The *kahuna* said this was necessary because Mr. Choi needed to

[11] Kealohi is also known as Ulu Mau Village, a tourist attraction that was located in the 1980s at the site of present day He'eia State Park.

repay the lady in kind, that he couldn't just take from her without honoring her back. According to Wally, once the *lua'u* was made everything at the pond went back to normal. Although the Filipino guards and Chinese caretakers of the pond refer to the spirit as 'lady in the white dress' and 'spirit of the lake,' this guardian spirit is likely *Meheanu*—the female guardian spirit known to Hawaiians.

Based on information gathered from interviews, field observations and written sources, the following conclusions can be made about cultural resources, practices and beliefs in the immediate vicinity of the project area:

1. Cultural resources in the project area include the fishpond and various features/sites associated with it.

2. Native Hawaiian cultural practices exist in the form of revival efforts by Paepae O He'eia. While there has been a fairly long stretch of the fishpond being used by non-Hawaiians, the methods and care given to the pond were similar to the Hawaiians who once built and used it.

3. Cultural beliefs associated with traditional uses of the area still exist. These are not exclusively associated with the pond, but also with other areas of traditional significance (e.g. *Luamo'o*) that are nearby.

4. The areas and features of cultural significance are both natural and human-made. The pond is an excellent example of a natural feature that was modified for human use. Other features of significance include Kealohi and *Luamo'o*. Historic structures that were associated with the plantation period are non-existent in the immediate vicinity of the project area. Remnants of historic structures associated with the military uses of the area, such as the caretaker's Quonset hut, are still seen.

PROTOCOL 6: Assess the Impact of the Proposed Action, Alternatives to the Proposed Action, and Mitigation Measures on the Cultural Resources, Practices and Beliefs Identified

The cultural impacts identified for the proposed caretaker's residence project presented in this section are primarily based on the information gathered from ethnographic interviews. No cultural impacts are likely to occur as a result of changes to be made to the existing caretaker's residence. In general, it appears that any potential impact will only be positive in nature. There may be some short-term negative impacts as a result of construction-related activities, but these will generally be social in nature.

Only one person raised some concern about the existing caretaker's residence Quonset hut. Mary Brooks, a previous caretaker of the pond who once lived at the residence, would like to see an effort to preserve some elements of the Quonset hut structure. She would like to see the 'skeletal framework' of the Quonset hut be preserved and possibly reused in the design and construction of the new caretaker's residence. Her interest is in preserving the 'historical character' of the various elements found at He'eia Fishpond. She feels that the Quonset hut,

though brought to this location sometime after the military's departure from the area, contributes to the natural landscape of the pond area.

Associated with cultural impacts is the issue of access to resources. It does not appear that access to the fishpond will be a concern. If access to the pond is restricted or closed, it is likely that this will be short-term only. Since the construction activities will be closely coordinated with the current lessee, Paepae O He'eia, these situations will likely be remedied beforehand (e.g., the schedule for students visiting the pond can be arranged for before and after construction activities).

There has been a mention of burial markers and a Japanese cemetery that once was located near the project area. The cemetery does not appear to have contained any Hawaiian burials, and of the burials found at the site, all have been relocated to Hawai'i Memorial Park. No burials have been identified in the immediate vicinity of the project area. Although Wally Choi thought there may have been some nearby. In the event that an inadvertent burial is found during construction, the police, the medical examiner, and either the Hawai'i office or the State office of the State Historic Preservation Division (SHPD) must be notified immediately. If the burial is more than 50 years old, then SHPD will be responsible for determining the proper disposition of the remains. Following consultation with appropriate parties, if the SHPD determines that removal of the remains is warranted, then the agency overseeing the caretaker's residence project will be responsible for developing a mitigation plan prior to removal of the remains.

Of the other significant traditional properties identified in the general vicinity of the project area, none will be impacted by the proposed project. Kealohi and *Luamo'o* are located at a fair distance from the caretaker's residence. Historic features such as remnants of military related structures are also well outside the project area.

NO CULTURAL IMPACTS: A SUMMARY

There are no known (existing) historic cultural resources within the immediate vicinity of the project area that may be adversely impacted as a result of the proposed project. Along with He'eia Fishpond, there are at least two known traditional Hawaiian and several historic features in the general vicinity of the project area. The project area, although adjacent to the fishpond, will not affect the fishpond directly. (The only effects may be to activities that currently take place at the fishpond, and will be short-term). The remaining sites are at a significant distance from the project area and will not be affected.

CONCLUSIONS

One way in which a conclusion can be offered for this CIA study is by looking at the letter written by a former caretaker of the fishpond. In 1991, M. Brooks entered into an agreement with Bishop Estate to restore the pond to its former use. Brooks believed that He'eia Fishpond could become an economically viable marine resource; 26 years after the last caretaker (lessee) had left, Brooks became the new lessee. By this time, the fishpond was in a serious state of disrepair, with damage to two areas in the walls, heavy silt build-up inside the pond, and a dense border of mangrove had formed around its southwestern end. In the efforts to restore the economic potential of the pond, M. Brooks sought out Hawaiian elders for guidance and found the following:

> There is no one you can go to and offer yourself as an apprentice and say "Teach me, I'll follow you around; I'll do what you say; I'll chant whatever." In a way you have to look back. You have to look at the physical hints that are there in the pond, and, maybe, from the construction you can pick up a lot and guess how the ponds were run. How the tides were best advantaged. How the fish behaved. The optimization of water quality. These things can only be learned with time and experience. Learning goes faster when you have the advice of some-one who's done it before. There are so few people with the knowledge of fishpond operations. In the time-span between when the fishponds declined, and now when they are coming back, a lot of knowledge was lost. It wasn't written down. Most of the people died and those few who do know quite a bit just don't like to talk that much. They are action-oriented (Proceedings of the Governor's Molokai Fishpond Restoration Workshop—September 6, 1991, in Henry 1993:36).

The proposed caretaker's residence at He'eia Fishpond is generally seen as an item of necessity, it's an improvement that has long been awaited. Current use of the pond and its immediate surroundings is of significant cultural value to the members and participants of Paepae O He'eia. As a non-profit organization, Paepae O He'eia seeks to keep advancing traditional and historic knowledge about the fishpond. Equally important is the 'hands on education' that young students in Hawaiian immersion programs experience. In short, He'eia Fishpond offers a chance of continuity…of [re]learning the traditions and ways of the Hawaiian culture. It is a means of perpetuating a part of Hawai'i that existed long before arrival of the non-Hawaiians. Any effort to encourage this growth of tradition can only have positive consequences.

In conclusion, no known or potential cultural impacts as a result of the proposed project were identified. There is a very slight possibility that burials may be located close to the roadway that leads down to the pond, but this could not be verified. (There is no specific knowledge that burials are in the project area.) If any burials do exist at this location, they will not be disturbed as a result of construction activities associated with the new caretaker's residence. There also are no known potential cultural impacts to the historic (archaeological) resources in the area. The archaeological report completed for the He'eia Fishpond Caretaker's Residence includes recommendations for treatment of these historic properties.

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APPENDIX A.

GUIDELINES FOR ASSESSING CULTURAL IMPACTS
ADOPTED BY THE ENVIRONMENTAL COUNCIL, STATE OF HAWAI'I
NOVEMBER 19, 1997

I. INTRODUCTION

It is the policy of the State of Hawaii under Chapter 343, HRS, to alert decision makers, through the environmental assessment process, about significant environmental effects which may result from the implementation of certain actions. An environmental assessment of cultural impacts gathers information about cultural practices and cultural features that may be affected by actions subject to Chapter 343, and promotes responsible decision making. Articles IX and XII of the State Constitution, other state laws, and the courts of the state require government agencies to promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups. Chapter 343 also requires environmental assessment of cultural resources, in determining the significance of a proposed project.

The Environmental Council encourages preparers of environmental assessments and environmental impact statements to analyze the impact of a proposed action on cultural practices and features associated with the project area. The Council provides the following methodology and content protocol as guidance for any assessment of a project that may significantly affect cultural resources.

II. CULTURAL IMPACT ASSESSMENT METHODOLOGY

Cultural impacts differ from other types of impacts assessed in environmental assessments or environmental impact statements. A cultural impact assessment includes information relating to the practices and beliefs of a particular cultural or ethnic group or groups.

Such information may be obtained through scoping, community meetings, ethnographic interviews and oral histories. Information provided by knowledgeable informants, including traditional cultural practitioners, can be applied to the analysis of cultural impacts in conjunction with information concerning cultural practices and features obtained through consultation and from documentary research.

In scoping the cultural portion of an environmental assessment, the geographical extent of the inquiry should, in most instances, be greater than the area over which the proposed action will take place. This is to ensure that cultural practices which may not occur within the boundaries of the project area, but which may nonetheless be affected, are included in the assessment. Thus, for example, a proposed action that may not physically alter gathering practices, but may affect access to gathering areas would be included in the assessment. An ahupua'a is usually the appropriate geographical unit to begin an assessment of cultural impacts of a proposed action, particularly if it includes all of the types of cultural practices associated with the project area. In some cases, cultural practices are likely to extend
beyond the ahupua'a and the geographical extent of the study area should take into account those cultural practices.

The historical period studied in a cultural impact assessment should commence with the initial presence in the area of the particular group whose cultural practices and features are being assessed. The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs.

The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, including submerged cultural resources, which support such cultural practices and beliefs.

The Environmental Council recommends that preparers of assessments analyzing cultural impacts adopt the following protocol:

(1) identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua 'a;

(2) identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;

(3) receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;

(4) conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;

(5) identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and

(6) assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

Interviews and oral histories with knowledgeable individuals may be recorded, if consent is given, and field visits by preparers accompanied by informants are encouraged. Persons interviewed should be afforded an opportunity to review the record of the interview, and consent to publish the record should be obtained whenever possible. For example, the precise location of human burials are likely to be withheld from a cultural impact assessment, but it is important that the document identify the impact a project would have on the burials. At times an informant may provide information only on the condition that it remain in confidence. The wishes of the informant should be respected.

Primary source materials reviewed and analyzed may include, as appropriate: Mahele, land court, census and tax records, including testimonies; vital statistics records; family histories and genealogies; previously published or recorded ethnographic interviews and oral histories; community studies, old maps and photographs; and other archival documents, including correspondence, newspaper or almanac articles, and visitor journals. Secondary source materials such as historical, sociological, and anthropological texts, manuscripts, and similar materials, published and unpublished, should also be consulted. Other materials which should be examined include prior land use proposals, decisions, and rulings which pertain to

the study area.

III. CULTURAL IMP ACT ASSESSMENT CONTENTS

In addition to the content requirements for environmental assessments and environmental impact statements, which are set out in HAR §§ 11-200-10 and 16 through 18, the portion of the assessment concerning cultural impacts should address, but not necessarily be limited to, the following matters:

1. A discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.

2. A description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.

3. Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.

4. Biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.

5. A discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.

6. A discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.

7. A discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area, affected directly or indirectly by the proposed project.

8. An explanation of confidential information that has been withheld from public disclosure in the assessment.

9. A discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.

10. An analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.

11. A bibliography of references, and attached records of interviews which were allowed to be disclosed.

The inclusion of this information will help make environmental assessments and environmental impact statements complete and meet the requirements of Chapter 343, HRS. If you have any questions, please call us at 586-4185.

APPENDIX B.

KŪPUNA * AND OTHERS CONSULTED FOR INFORMATION ABOUT TRADITIONAL BELIEFS AND LAND USES IN THE PROJECT AREA

Kūpuna Josephine Hoʻokano**
Kūpuna Sonny Naone
Kūpuna Naomi Wampler (nee Hoʻomana)

Bob Anderson
Mary Brooks (former caretaker of Heʻeia Fishpond)
Wally Choi (former lessee of Heʻeia Fishpond)
Mahina Duarte
Carol McLean (President, Friends of Heʻeia)
Jim Meyer
Nanette Napoleon
Richard Otsuji
Diane Shimabukuro
Mel Woo
Barbara Wright

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* Mr. 'Bud' Henry, who is very knowledgeable about the project area, was communicated with in writing only. He was not available during the study period.
** Auntie Josephine passed away soon before this study began.

APPENDIX C.

STORIES AND LEGENDS ASSOCIATED WITH HE‘EIA FISHPOND

1. *Meheanu*…the traditional *mo‘o* of He**‘**eia (from Henry, 1993)
2. *Mo‘o Akua*...water-spirit gods (from Henry 1993)
3. Ko‘amanō...‘shark reef’ (in Henry 1993)
4. *Lupe-Kia‘i-Nui*…the super-watching *hihimanu* (stingray) (in Henry 1993)
5. He‘eia, the Envious Challenge (Paki 1972 in Henry 1993)
6. He‘eia, a Chant (Paki 1972 in Henry 1993)
7. The Cultivation of Fish (Samuel M. Kamakau, “*The Works of the People of Old—Na Hana a ka Po ‘e Kahiko*”, in Kelly 1975).

LEGENDS OF HE'EIA FISHPOND

MEHEANU

The ancient and traditional *mo'o* of He'eia was *Meheanu*. She was the *kia'i* or watchguard of He'eia fishpond. *Meheanu* had supernatural powers and could change herself into many forms, such as a frog or a lizard, but she was particularly fond of being an eel. She lived at Luamo'o, (literally, pit of the *mo'o*), a small land adjacent to the pond. Growing around Luamo'o were many sheltering *hau* trees; this *mo'o* lived beneath these. When the *hau* leaves turned yellow, people knew that *Meheanu* was there, but when leaves were green, they knew she was more likely to be somewhere else in the form of an eel (McAllister, 1933). The leaves of the *hau* were supposed to turn yellow because of urine of the *mo'o* in the water (Kelly, 1975).

MO'O AKUA.

Mo'o akua. (water-spirit gods) were kept for the health and welfare of the people, and to bring them fish. Some people put all their trust in the *mo'o akua*. On O'ahu there were walled ponds *(loko kuapā)* and large fresh-water ponds *(loko wai nui)* like Uko'a, Ke'elepulu, Kawainui, and Maunalua, where some people depended entirely upon the *mo'o akua* . They were the guardians, the *kia'i*, of the ponds all around O'ahu (Kamakau, 1964).

In 1870, historian Samuel Kamakau wrote, "The *mo'o* that were chosen for worship were not the house or rock lizards *(mo'o kaula, mo'o ka'ala)* or any of those little creatures with which we are familiar. No indeed! One can imagine their shape from these little creatures, but these were not their bodies. The *mo'o* had extremely long and terrifying bodies, and they were often seen in the ancient days at such places as Maunalua, Kawainui, and Ihukoko at Uko'a. They were not seen just at any time, but when the fires were lighted on the *ko'a* (fishing shrine) altars beside their homes. There was no doubting them when they were seen. They lay in the water, from two to five *anana* [about 12 to 30 feet] in length. When given a drink of *'awa*, they would turn from side to side like the hull of a canoe in the water."

Mo'o did not always appear in their dragon-like bodies. Kamakau explained that: "They have places where they lay aside those wondrous *'e'epa* (extraordinary, as persons with miraculous powers) bodies, but their nests where they lay them aside are not known. That body is only one of the spirits in this form — they had many "angel" forms *(kino anela* - angel body). Some, it is said, often appeared in human form. Such an appearance foretells that some terrible event is to happen at that place.

Mo'o Akua in the dragon-like body appearance.

It is the usual form these wondrous beings show themselves in to reveal hidden things."

Present-day informants claimed to know nothing about the *mo'o* of He'eia Fishpond, but some talked about a spot *mauka* of the Long Bridge that they described as a mysterious place where there is a mud hole that had no bottom — a kind of quick-sand area. They warned against going near the spot, even today (Kelly, 1975). This is the area that archaeologist J. Gilbert McAllister reported was a small land to the right of the road near the He'eia concrete Long Bridge going toward Kāne'ohe.

KO'AMANŌ.

McAllister tells us the story about Ko'amanō (Shark reef) and Makanui (Big eye): "Ko'amanō reef is a short distance out from He'eia Fishpond. The reef is oval in shape and not very large. All about the reef are caves where a great number of sharks dwell. If you listen from the reef today you can frequently hear them breathing heavily in sleep. Makanui, the keeper of these sharks,

lived on the land on the northwest side of the Pond. He spent most of his time feeding the sharks, which was quite an undertaking. For a long time it had been noticed that the bodies of the dead had been disappearing. After the death of a person, someone would be chosen to watch over the body, but as frequently happened, the watcher would fall asleep, and upon awakening the corpse would be gone. This happened for some time, until it was discovered that in the night the sharks of Makanui would come from the sea and carry off the dead to the caves of Ko'amanō. The people were so enraged that they took revenge upon Makanui and fed his body to the sharks" (McAllister, 1933).

LUPE-KIA'I-NUI.

The *konohiki* (overseer) of He'eia Fishpond knew that he needed to solicit the help of a squadron of sting rays *(hīhīmanu)* that lived at Kekepa Island, near Mokapu, to watch over his pond. He paddled his canoe out to the island and prayed to the god of the *hīhīmanu*, "Oh, *hīhīmanu akua*, I need your guardian services. I need you to help save my crop of *'ama'ama*. The *kākū* (barracuda) and *'aihue loko* (pond robbers) are stealing me blind! I will do anything to get your help."

"Anything?" the voice from above bellowed as the *konohiki* bounced around in his little canoe.

"Yes, anything," he replied.

"I want you to promise me that your fishpond will always be a fishpond and will be a fishpond for your children and a fishpond for their children and their children to come forever," the voice resounded.

"'Ae, 'ae," the *konohiki* answered. "Yes, yes, my fishpond will be another monument to the genius of my people forever and ever and ever!"

With that, the water started to churn and spin the canoe around as hundreds of *hīhīmanu* in the water rushed and glided in a circle around him. The canoe spun around and around as he was dizzily sucked into the darkness of the *wiliwai* (whirlpool) that consumed him.

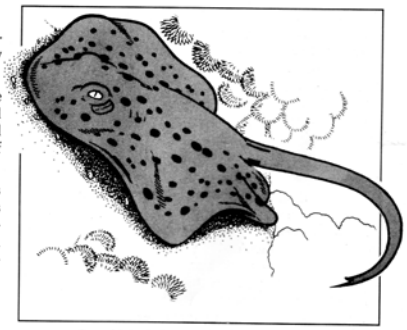
When he came out of the whirlpool, the *konohiki* was being pulled across the bay by a large *hīhīmanu* that was flying in the sky like a kite (which it resembled); the kite-string, made of *olonā*, was over a mile long. This special *hihimanu* was the legendary *Lupe-kia'i-nui*, the super-watching sting ray.

Because He'eia Fishpond was one of the largest ponds along the shore, it needed a special sting ray to dwell there. That is why *Lupe-kia'i-nui*, the super sting ray, was assigned to this Fishpond. At times, *Lupe-kia'i-nui* would visit his friends and family at Kekepa. He would wing his way between the reefs and coral heads. When returning, he would fly over the wall into the fishpond.

Lupe-kia'i-nui made his home near the *mākāhā-nui* (large water-control gate). From this advantageous spot, he could watch the fishpond walls and all that happened in the large body of the pond. He could swiftly fly to any spot when he sensed a predator or intruder. He would kill a predator and eat it; *kākū* were good eating too. Sometimes when there were many to be taken, he would call to his friends at Kekepa. At such times, the waters of the pond would sparkle and glow in the night as many *hīhīmanu* whipped and lashed out at the predators.

Lupe-kia'i-nui would slash human pond robbers to death with his whiplike tail and tow the human carcass to his *manō* (shark) friends that lived at Ko'amanō Reef, a short distance from the pond. After stripping the flesh from the bodies, the sharks would bury the bones of the *'aihue loko* in shallow holes along the sandy shore near the mouth of He'eia Stream. Fishermen knew that this area was a good source of human bones to make fish hooks.

To this day, the word of the *konohiki* has been kept to the *hīhīmanu akua*. He'eia Fishpond is still a fishpond. At times during the year, the waters of the pond will sparkle and glow in the night as it is whipped and lashed by the legendary *hihimanu* chasing the *kākū*. Sharks still live at Ko'amanō Reef. Bones of the *'aihue loko* are still being found at the mouth of He'eia Stream.



Lupe-kia'nui, the super-watching sting ray.

HE'EIA, THE ENVIOUS CHALLENGE

The figurative interpretation of the name He'eia is the Envious Challenge. The He'eia coastline of O'ahu is famous for He'e, or Octopus-fish, which swarm in these waters at a certain time each year. When the Wili-wili tree crimsons with its claw-like blossoms, fishermen know the He'e are running.

Once there were two brothers, both chiefs in this thriving community of He'eia. Both men were champions in the art of He'e-nalu, or wave-surfing, and both were handsome figures.

However, the older brother was shorter, and for this reason envied his younger relative. The neighbors contributed to the older one's feeling of inferiority and jealousy, by forever comparing the two men and praising the younger one's tall, erect figure, his mien of chiefly dignity. In those days, a chief should be able to look over and above the heads of others.

Finally, the envious brother challenged the younger favorite to a contest in surfing. As usual, the wager was large and included full title to all the family possessions and the loser's very life.

Surfing at that particular time was very dangerous. Often the monster octopus of the deep ocean depths swarmed with their smaller cousins. The He'e were running and the Wili-wili blossoms were clustered on the branches like jewels of blood. But the challenge made had to be accepted as was the custom of the times. Had the younger man refused to accept the duel, the people would have judged him to be cowardly. A chief's Mana or Power, should protect him even from any huge, man-devouring He'e of the depths.

The Kana-wai or Law, teaches that mortals should be content with their lot in life and make the best of it and feel truly thankful. Therefore, when the older brother broke this law he had to receive just punishment from the Akua, or Deity.

In punishment, the older brother was caught in the rip tide and taken down among the He'e-nui, the huge devils of the deep sea.

Today, at the swarming time of the He'e, each year, during the season of Fall-Into-Winter when the Wili-wili blossoms redly, you should listen carefully. You can hear, on the stillness of the night, the muffled voice of the older brother calling to his younger brother, his tones lamenting, "'He'eia! He..ee..i..a!" in the later October to December and January when the surf rides high upon the shores of He'eia.

Source: Paki, 1972

HE'EIA, A CHANT

There were, and are
Two place-names, He'eia.

One is He'eia-uli, The Dark He'eia;
The other, He'eia-kea, Fair He'eia.

There is all the difference
between these two,
He'eia-uli and He'eia-kea,
As is the difference Of Night and Day.

Men died in Old Hawaii. . .
They entered places
Where dead Men dwell.
But the difference here,
At He'eia,
The dead men entered
The Depths of the Seas.

Their lives were judged,
Their Fate decreed,
With some judged white
And some called black.

The black souls leaped
From the left-hand shore;
The white souls jumped
From the right-hand shore.
He'eia, here, the Dividing Line.

Now, if you will,
Look into the sea
Where sand-strip islands
Are close to shore.
Watch, for this is a mystery,
Now they appear;
Now they are gone.

You may judge it a trick
Of the Tide and the Sea,
But in reality,
It is the Shadows
Falling strangely
Upon the Sun-lit waves.

Neither the light,
Nor tide to be blamed,
For the Force that controls
Is the Will of the Gods,
A Decree that was made,
In the time of Antiquity.

How it happened,
So the story tells,
There were, and are,
On He'eia's shores,
Various fishing grounds,
Each with its own,
Its protective Gods.

Gods, like men,
Often disagreed,
Thus, two of the Gods
Who controlled these grounds,
Quarreled on a matter of
Right and Wrong.
As who should be fishing
He'eia's Shores!

The Man-god of He'eia-kea
Was fishing in Koolau Bay,
The Man-god of He'eia-uli
Became justly enraged.

He sent a challenge
To the poaching god,
Proposing a battle
For control of the shores.

They met and fought
'Till the righteous god won.
However, he proved himself to be
A god of kindly heart,
He made a pact with He'eia-kea,
White god of Koolau,
And, speaking gently, said,
From this time forth,
And forever more,
You White Gods of He'eia
Fish from Kualoa Shore;
And Dark Gods of He'eia-uli
Fish Kane'ohe shores;

He'eia is the Dividing line.

So it was settled and agreed,
The flat, sandy-strips
Be Deciding line.
Now, here is a warning
To men of today,
When the Sandstrip appears
Beneath the waves
It is time to turn
Your boats around.

Source: Paki, 1972

Ohe or Bamboo
– The bamboo had many uses for the Hawaii of old.

The Cultivation of Fish

Fishponds, *loko i'a*, were things that beautified the land, and a land with many fishponds was called a "fat" land *('aina momona)*. They date from very ancient times. Some freshwater ponds, *loko wai*, were made when the earth was made, but most of the *loko i'a* and the shore ponds, *loko kuapa*, were made by *ka po'e kahiko*.[25] The making of the walls *(kuapa)* of the shore ponds was heavy work, and required the labor of more than ten thousand men. Some of these fishponds covered an area of sixty or seventy acres, more or less. Walls had to be made on the seaward side sometimes in deep water and sometimes in shallow, and many stones were needed.

Many *loko kuapa* were made on Oahu, Molokai, and Kauai, and a few on Hawaii and Maui. This shows how numerous the population must have been in the old days, and how they must have kept the peace, for how could they have worked together in unity and made these walls if they had been frequently at war and in opposition one against another? If they did not eat the fruit of their efforts how could they have let the *awa* fish grow to a fathom in length; the *'anae* to an *iwilei*, yard; the *ulua* to a meter or a *muku* (four and one half feet); the *aholehole* until its head was hard as coral *(ko'a ka lae)*; and the *'o'opu* until their scales were like the *uhu*? Peace in the kingdom was the reason that the walls could be built, the fish could grow big, and there were enough people to do this heavy work.

While Kamehameha I ruled, he worked on the ponds of Kalepolepo and Haneo'o. All the men and women of East Maui worked at Haneo'o and all the men and women of West Maui at Kalepolepo. It was not Kamehameha, however, who made these ponds; they were made long before, by *ka po'e kahiko*. He only repaired them. When he saw that the stone wall on the south side of Kalepolepo pond had broken down, he mended that wall. It took several months of work. So also at Haneo'o and at Kiholo on Hawaii; it took some ten thousand men to rebuild them. Yet Kamehameha's work on these ponds was not more than a quarter of the work done by *ka po'e kahiko* who built them— and these were not large ponds like those of Oahu and Molokai.

The making of fishponds and their walls is very ancient. It is known which chiefs built some of them, but the majority of their builders is not

known. However, one can see that they were built as "government" projects by chiefs *(hana aupuni 'ia e na li'i)*, for it was a very big task to build one, and commoners could not have done it.

When the stone walls of the *kuapa* shore ponds were completed, then the task remained to find the proper wood for the sluice gate, the *makaha*. This was selected by the *kahuna* of the *'aumakua* who increased the fish in the ponds *(kahuna 'aumakua ho'oulu i'a loko kuapa)*. The wood was *'ohi'a 'ai* or *lama* or some other suitable wood. When the wood for the *makaha* was ready, and the proper day had arrived for its construction, the *kahuna* was fetched to set up the first piece of timber. For this important duty he offered a pig or a dog suitable to this work of inspiring the increase of fish, and prayers appropriate to this work. Then he reached for a timber and set it up for the *makaha* and offered the *pule ho'onoa* [the prayer that released the *kapu* and allowed the work to proceed]. Then the men built the *makaha*, binding it together with *'ie* cords.* After that they arranged *(ho'onohonoho)* foundation stones with the *makaha* and poured in pebbles. It was in this way that all *makaha* were made.

It was tabu for menstruating women to walk on the *kuapa* walls lest the walls be defiled. After five or six months fish would begin to be seen in the *loko kuapa*. During the high tides of 'Ole *('Ole kai nui)* the people who took care of the pond would rejoice to see the fish moving toward the *kuapa* walls, like waves of a rough sea, until the sluice, *makaha*, was filled with fish. If the depth of the water at the sluice were a yard or more, the width of the *makaha* an *anana*, and the thickness of the *kuapa* walls an *anana*, this area would be filled with fish, piled one over the other until the fish at the top were dry; if a stone were placed on them it would not sink.

The usual fishes *(kama'aina)* in the ponds were the *awa, 'anae, awa'aua, kaku, aholehole, 'o'opu, 'opae, puhi*, and other fishes accustomed to living in ponds. But as a result of the prayers of the *kahuna*, some fishes that were not accustomed to living in ponds came in; such fishes as *ulua, kahala, 'o'io, palani, kumu, uhu, manini, puwalu*, and some other kinds. The *loko kuapa* would be filled with all kinds of fish. They would cause ripples against the walls, like waves, and this made glad the "hearts" *(na'au)* of the keepers of the pond and of the chiefs whose pond it was *(na li'i nona ka loko)*. "The land has life," *Ola ka 'aina*, the keepers would say to them, and they would be as pleased as though they were victorious warriors. The caretakers of the pond could eat of the *aholehole, awa'aua, kaku, 'o'opu-hue, 'o'opu*, and the *'opae* openly—but the fishes reserved for the chiefs they would eat secretly.

On the nights of high tides every keeper slept by the *makaha* of which he had charge. It was the custom to build small watch houses from which to guard the fish from being stolen at high tide, or from being killed by pigs and dogs; when the tides receded the fish would return to the middle of the pond, out of reach of thieves. On these nights, the keeper would dip his foot into the water at the *makaha* and if the sea pressed in like a stream and

felt warm, then he knew that the sluice would be full of fish. The fish would scent the fresh sea and long for it. I have seen them become like wild things. Where the fish had been raised like pet pigs, they would crowd to the *makaha*, where the keepers felt of them with their hands and took whatever of them they wanted—*awa, 'anae, 'o'io*, or whatever. During certain months, when the sun was warm and the Kona wind—or the wind customary then at the pond—blew, the *makaha* would be filled with fish, for they persistently went into fresh winds. That was when the fish were taken to be eaten, for if they were left they would die, and a stench arise. That was the time the chiefs' fish were taken to them, and the time when fish were traded.

Pu'uone ponds and taro patch ponds, *loko i'a kalo*, belonged to commoners, land holders, and land agents, the *maka'ainana, haku*, and *konohiki*. The ponds cultivated for a chief, *pu'uone haku ko'ele*, belonged to the holder of the land, *haku 'aina*, as did the taro patch ponds [on *ko'ele* lands].

The *pu'uone* ponds near the sea *(loko kai pu'uone)* were much desired by farmers, and these ponds they stocked *(ho'oholo)* with fish. *Pu'uone* ponds were close to shore ponds, *loko kuapa*, or to the seashore, and next to the mouths *(nuku)* of streams. The farmer cleared away the *mokae* sedges, *'aka'akai* bulrushes, and the weeds, and deepened the pond, piling up the muck on the sides, until he had a clean pond. Then he stocked it with *awa* and fish fry, *pua i'a*—two or three gourds full—until the pond was full of fish. After two or three years the fish from the first gourd would have grown to a *ha'ilima* (18 inches) in length. The offering of sweet potatoes [made when the pond was first stocked] was a service to the *'aumakua (he hana 'aumakua)*. If there were no such service, the grubs of freshwater creatures, *mo'o*, and dragonflies would take over, and there would be either no fish at all or else maimed and sickly fish that would soon die. He who assumes he is superior to the *mana* of his gods shall be smitten with thistles—as was Auwae, who assumed he had such *mana* himself.

When the farmer saw that there were many fish in the pond, and that the water had become yellow, he went upland to fetch *lama* wood and *uluhe* ferns for a *makaha* grating. He made several bundles, tied them with *'ie* vines, and returned to the seacoast. Then he wove *(haku)* the sticks and ferns together, tying them with *'ie* vines, until he had a *makaha* a yard *(iwilei)* or more in width. If he had two or three *pu'uone*, he made as many *makaha*. When the high-tide days came he kindled a fire, and when that was done, he went to break down the dam in the outlet to the sea *(e wahi i ke kumano o ka 'auwai kai)*. First he set up the *makaha* securely, packing mud around it to hold it in place. When the sea washed in over the *'akulikuli, ilioha*, and the *hinahina* plants on the shore, and the *makaha* was found to be set firmly in place, he broke down the dam on the sea-washed side, and the sea water entered the *pu'uone*. As it entered, the fish scented the fresh sea, and the *awa* and the other fishes went toward it, crowding one over the other until the backs of some of them were exposed to the sun. The farmer's heart

rejoiced; he would take the fish in his hands and fondle them. Those with short tail sections, and backs humped and blunt with fat were most liked for eating, and he took what he wished of them.

This is how the farmers of old took care of the *pu'uone* fishponds. Some *pu'uone* had fish that reached to a yard and more in length. If sea water was made to enter the fresh water at times, the fish would grow more rapidly, and they would be delicious and full of fat.

On Oahu and on Kauai, and to some extent on other islands, it was customary to use taro patches as fishponds for such fishes as the *awa, 'anae, 'o'opu, aholehole,* and *'opae 'oeha'a.* Some were put in *(ho'oholo),* and some came up through the *makaha.* The taro in such ponds was planted in mounds, each separated from the other, leaving spaces and channels where the fish could swim about. They fed upon the ripened stalks of the taro, and quickly acquired size. Fish of the taro patch ponds gave life to the husband, the wife, the children, and to the whole family, *'ohana.* When anyone was hungry, the wife could get a few *'o'opu,* or *'opae,* or *aholehole,* and some taro leaves to relieve the hunger. If a *malihini* or the *haku 'aina* arrived in the dark of night, the dwellers were prepared; they could quickly get some of the fish *(mo'o mahi)* that had grown fully developed scales and hard heads and the storage container of poi. Then the poi, the *awa,* and the *'anae* were placed in front of the *malihini* or the *haku 'aina*—or friends, perhaps.

Thus they lived in the old days, and that is why the "native sons" *(keiki papa)* of places that had taro patches and *pu'uone* fishponds loved the lands where they dwelt. There would be salted fish, too, in containers of large taro leaves. When one awoke in the morning and was ready to eat, the fish was brought forth and the wrappings opened up; the taro leaves would have wilted and the fish would be shaped like pig tusks. They were laid in a food bowl and one ate until he was full. So too did the native sons love the lands where the freshwater ponds, *loko wai,* were, for they furnished them with fresh *'opae,* crisp *limu-kala-wai,* reddish *'o'opu* roe, and *lu'au.* The people of the old days who lived on such lands lacked nothing.*

APPENDIX F
Preliminary Engineering Report

Bow Engineering & Development, Inc.
1953 S. Beretania Street, PH-A
Honolulu, Hawaii 96826

Telephone (808) 941-8853
Fax: (808) 945-9299

Preliminary Engineering Report
For
Heeia Fishpond
Replacement of Caretaker Residence and Aquaculture Support Facilities

46-077 Ipuka Street
TMK: 4-6-5: 01

July 20, 2006

ACCESS TO SITE

The access to the project site is from a standard City driveway apron off of Ipuka Street. There is an existing 12' wide concrete driveway approximately 220' in length that leads to the fishpond and the existing caretaker's residence. The driveway has a steep grade with elevations ranging from 43.59' to 9.71'. The steepest section of the driveway is approximately 26%. The existing concrete driveway looks to be in good condition with no major distress cracking in the slab.

ADA accessible parking and walkway will be provided at the bottom of the driveway.

SITE GRADING

There is no major proposed site grading except for preparation work for the new caretaker's residence and the parking lot. There are three (3) paved parking stalls proposed for the project (See Concept Site Plan)

DOMESTIC WATER SYSTEM

The site is being served by an existing 5/8" water meter located to the west of the existing driveway apron. The maximum capacity for this meter is 20 gallons per minute (gpm).

An estimation of the domestic water demands for the project is shown on Table 1: Estimated Fixture Unit Information. The demands are based on the water supply fixture units from the 2000 Uniform Plumbing Code.

The total domestic water demand is 64 fixture units which translates to a peak flow demand of 35 gpm. Based on this peak flow rate, the existing water lateral and meter serving the project will need to be upsized to a 1-1/2" lateral and 1" meter.

There will be a water system facilities charge assessed for the upgrade of the meter based on the increase in fixture units (FU) and water meter size. The net increase in fixture units is 53 FU (64 FU – 11 FU). Based on the water system facilities charge for an agriculture type use (aquaculture), the fee would be approximately $7,080.00.

Table 1 – Estimated Fixture Unit Information
July 14, 2006

EXISTING CARETAKER'S RESIDENCE

Fixture Type	Quantity	Low Flow (FU)	Total (FU)	
Lavatory	1	1	1	
Toilet (Tank)	1	2.5	2.5	
Urinals	0	2	0	
Showerhead	1	2	2	
Kitchen Faucet	1	1.5	1.5	
Service Sink	1	1.5	1.5	
Hose Bib	1	2.5	2.5	
	6		11	= 8 gpm

PROPOSED CARETAKER'S RESIDENCE

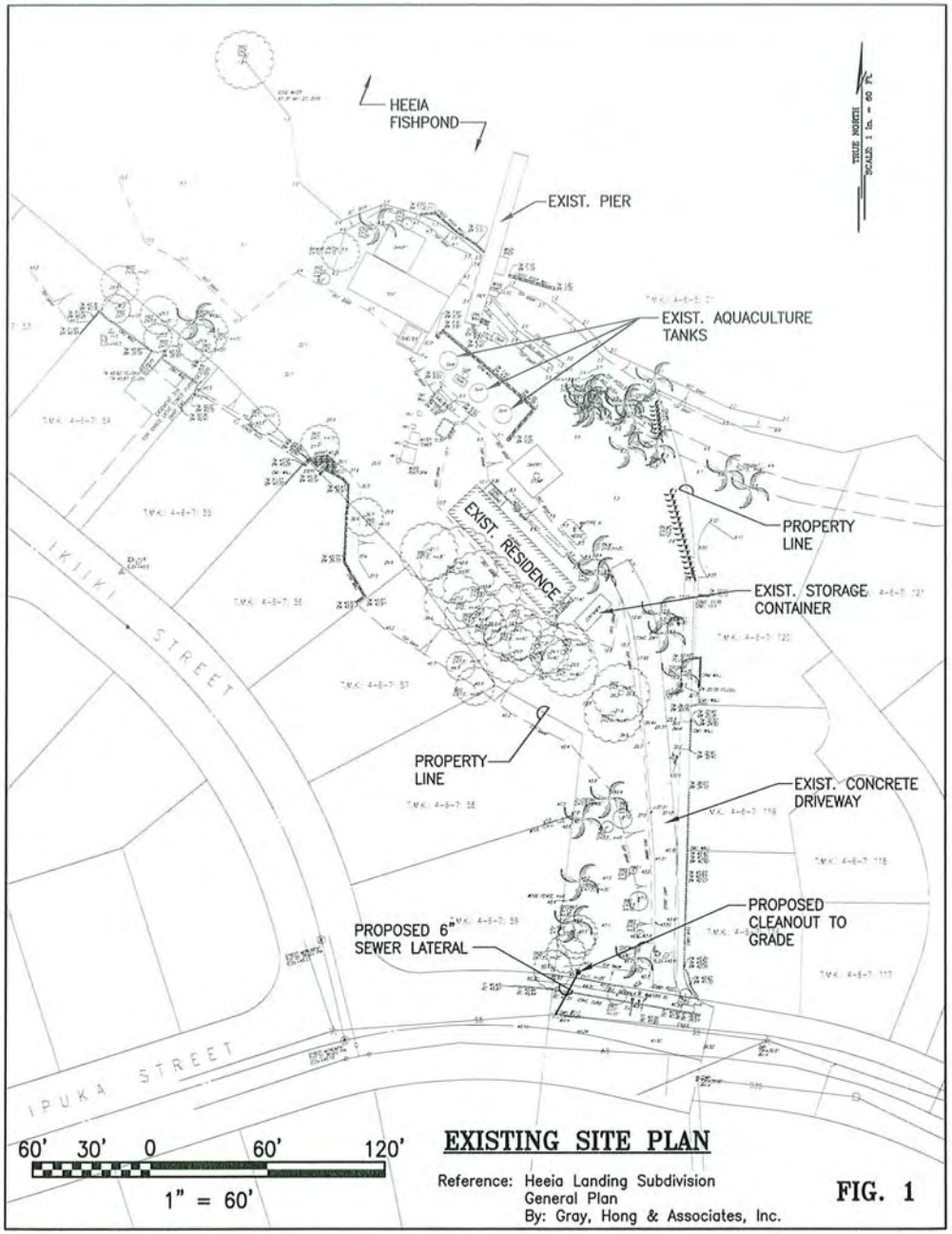
Fixture Type	Quantity	Low Flow (FU)	Total (FU)
Lavatory	1	1	1
Toilet (Tank)	1	2.5	2.5
Urinals	0	2	0
Showerhead	1	2	2
Kitchen Faucet	1	1.5	1.5
Service Sink	1	1.5	1.5
Hose Bib	1	2.5	2.5
	6		11

PROPOSED AQUACULTURE SUPPORT FACILITIES

Lavatory	6	1	6	
Toilet (Tank)	5	2.5	12.5	
Urinals (Tank)	5	2	10	
Showerhead*	8	2	16	
Kitchen Faucet	0	1.5	0	
Service Sink	2	1.5	3	
Hose Bib	4	5.5	5.5	
	30		53	
Total Caretaker's Residence + Aquaculture Facilities		=	64	= 35gpm
% FU in Caretakers Residence		=	17%	
% FU in Aquaculture Facilities		=	83%	
			100%	

Reference: Uniform Plumbing Code, 2000 Edition

* includes indoor and outdoor shower facilities



EXISTING SITE PLAN

Reference: Heeia Landing Subdivision
General Plan
By: Gray, Hong & Associates, Inc.

FIG. 1

SANITARY SEWER SYSTEM

Based on the As-Built plan and profile for Ipuka Street Extension by Gray Hong & Associates dated December 1987 for the Heeia Landing Subdivision, there is no sewer lateral serving the project site. The site is presently being served by portable latrine units ever since the cesspool system failed. It is not known if the existing cesspool has been backfilled.

The project architect has had discussions with Mr. Harold Yee of the State Department of Health, Wastewater Branch to discuss various options for the proposed project. The meeting minutes are attached in the Appendix. The preferred alternative is a direct connection to the City sewer system located along Ipuka Street.

The average number of daily visitors to the Heeia Fishpond is estimated to be 50 people. Based on the July 1993 Design Standards of the Department of Wastewater Management, the average design wastewater flow is 25 gallons per capita per day. Therefore, the average daily wastewater flow is approximately 1,250 gallons per day. (50 people x 25 gpcpd)

An application for approval to connect to the City sewer has been submitted but no response has been received from the City as of this submittal. The sewer connection will by a 6" sewer lateral to an existing sewer manhole (SMH #E-1) located on Ipuka Street, approximately 25' from the existing driveway. (See Figure 1: Existing Site Plan)

The onsite wastewater will be routed to a wastewater pump station and will be pumped up the hill to the sewer lateral connection by way of a small diameter PVC pipe underground force main. The proposed wastewater pump station is a low flow, high head grinder pumping system similar to an E/One Sewer System or approved equal.

FIRE PROTECTION SYSTEM

The nearest fire hydrant is approximately 160' west of the existing driveway apron. Another fire hydrant is located 200' to the west of the driveway apron. The distance from the driveway apron to the nearest corner of the proposed residence is 200'.

An onsite fire hydrant is not feasible because of the steepness of the existing driveway. The steepest grade acceptable for a fire truck access is 20% slope per the 2002 Water System Standards from the Honolulu Board of Water Supply, and the existing driveway exceeds this maximum slope. (existing driveway = 26%)

The project architect has had discussions with Captain Kishida of the Honolulu Fire Department (Plan Review) to discuss various options for the proposed project. The meeting minutes are attached in the Appendix. Further discussions with the Fire Department are needed when the project becomes more defined.

Building fire sprinklering may be a reasonable alternative to address fire protection. A detector check meter will be required for the project fire protection. The size of the meter will be determined by the fire flow demands to protect the Caretaker's Residence.

There will be a water system facilities charge assessed for the fire protection meter based on the meter size. For example the fee for a 4" meter which can accommodate a 500 gpm maximum flow rate is $5,600.00 and a 6" meter which can accommodate a 1,000 gpm maximum flow rate is $12,100.00.

STORM DRAINAGE

The existing project site shows no signs of storm water erosion. The site drainage consists of storm water sheet flowing toward Heeia Fishpond. The site is very well landscaped and there is a grass buffer area along the Heeia Fishpond that serves as a filter to the storm water runoff.

The proposed site improvements are minor and will not cause an adverse affect to the surrounding area.

Bow Engineering & Development, Inc. Civil Engineering and Planning

APPENDIX

PRELIMINARY ENGINEERING REPORT
HEEIA FISHPOND - CARETAKER'S RESIDENCE AND AQUACULTURE SUPPORT FACILITIES

Bow Engineering & Development, Inc. Civil Engineering and Planning

WATER & SEWER DEMANDS

PRELIMINARY ENGINEERING REPORT
HEEIA FISHPOND - CARETAKER'S RESIDENCE AND AQUACULTURE SUPPORT FACILITIES

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PLANNING & PERMITTING
650 South King Street, Honolulu, Hawaii 96813

SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

Additional data, drawings/plans, and fee requirements are listed on a separate sheet titled "Instructions for Filing" and are available at your request. All specified materials described in the "Instructions for Filing" and required fees must accompany this form. You are encouraged to consult with Site Development Division (SDD) staff in completing the application to avoid processing delays.

I. APPROVAL | **PERMIT** | **VARIANCE** | **AGREEMENT/LICENSE**

Check one or more as appropriate:

☐ Subdivision	☐ Grading	☐ Non-Standard Sidewalk Finish Variance	☐ Sidewalk Area Planting Strip Improvements Agreement
☐ Easement(s)	☐ Grubbing	☐ Surface Encroachment Variance	☐ Unimproved Sidewalk Area Agreement
☐ Lot Consolidation	☐ Stockpiling	☐ Non-Standard Driveway Variance	☐ Driveway Crossing Existing Retaining Wall Agreement
☐ Park Dedication	☐ Trenching	☐ Drainage Easement Variance	☐ Sewer Easement Agreement
☐ Site Development	☐ Dewatering	☐ Slope Easement Variance	
☐ Flood Determination	☑ Sewer Connection	☐ Flood Hazard District Variance	☐ Drainage Connection License

NOTE: Sections II & III must be filled in completely for all applications. Please type or print legibly.

II. LOT AND LAND USE INFORMATION

TAX MAP KEY(S): 4-6-05: 01 Lot Area: 97.036 ~~sq.ft~~/ac.

Zoning District: P-1 & P-2 Development Plan Designation: State Land Use District: Conservation / Urban

Street Address/Location of Property: 46-077 Ipuka Street
Kaneohe, Hawaii 96744

Present Use of Property/Building: Residental

Project Name (if any): Heeia Fishpond, Replace Caretakers Residence

Request/Proposal (describe the nature of the request, proposed activity or project):
Proposed Dwelling Unit and Aquaculture Facilities

III. APPLICANT INFORMATION

	Recorded Fee Owner/Applicant	**Engineer**/Architect/Surveyor	**Contractor**/Authorized Agent/Contact
Name (& title)	B P Bishop Trust Estate	Bow Engineering & Development	
Mailing Address	567 S. King Street, Suite 200	1953 S. Beretania Street, PH-A	
	Honolulu HI 96813 (City State Zip)	Honolulu HI 96826 (City State Zip)	(City State Zip)
Phone Number(s)	(808) 523-6200	(808) 941-8853	
Applicant	William H.Q. Bow (Print name of applicant)	President (Print title of applicant)	(Signature of applicant)

IV. FOR GRADING/GRUBBING/STOCKPILING INFORMATION ONLY

Estimated Dates: Start: _____ Completion: _____ Borrow Material: _____

Area of work (sf): _____ Borrow Site: _____

Dimensions of work: Length: _____ Width: _____ Height*: _____ Disposal Material: _____

Estimated Quantity (cy): Cut: _____ Fill: _____ (*Stockpile Only) Disposal Site: _____

AUTHORIZATION CLEARANCE

This statement of authorization is used in reference to the information provided for in sections I, II and III above.

I/We, _____ (Print name of person giving authority), hereby authorize _____ (Print name of person receiving authority) to act in my/our behalf in obtaining/closing the Grading/Grubbing/Stockpiling permit for the project.

_____
Signature of Owner/Developer giving authority

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

SEE REVERSE FOR APPLICATIONS FOR TRENCHING AND SEWER CONNECTION.

SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

(REVERSE SIDE)

V. FOR TRENCHING INFORMATION ONLY

Work to be performed for: _____ Work to be done: ☐ Service Connection ☐ Repair

Estimated Dates: Start: _____ Completion: _____ Other: _____

Estimated Value of work: $ _____ Dimensions: _____ ft/in (length) _____ ft/in (width) _____ ft/in (depth)

AGENCY CLEARANCES	SIGNATURE	DATE	ADDRESS	PHONE NO.
DPP, Waste Water Branch			650 So. King St., H.M.B., 1st Flr.	523-4429
DTS, Traffic Signal			650 So. King St., H.M.B., 2nd Flr.	523-4589
DDC, Street Lightning			650 So. King St., H.M.B., 9th Flr.	527-5002
Board of Water Supply			650 So. King St., H.M.B., 1st Flr.	527-6165
Hawaiian Electric Co., Inc.			820 Ward Avenue, 4th Flr.	543-5654
Verizon Hawaii (formerly GTE)			3239 Ualena St., 3rd Flr.	840-1444
Gasco., Inc.			515 Kamakee St., 1st Flr.	594-5575
Oceanic Cablevision			200 Akamainui St.	625-8443

DPP: Department of Planning and Permitting DTS: Department of Transportation Services DDC: Department of Design and Construction

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

VI. FOR SEWER CONNECTION INFORMATION ONLY

☑ Residential: No. of Proposed Units 1 (Provide breakdown below)

_____ Studios _____ 1 Bedroom X 2 Bedrooms _____ 3 Bedrooms _____ 4 Bedrooms _____ Other

☑ Non-Residential: (See attached sewer table for required category and quantity and provide any additional information in the remarks)

Category(ies)	Quantity(ies)	New Water Meter Size(s)
Aquaculture Facility	50 people @ 25 gpcd = 1,250 gpd	1"

Date of Connection: 06/20/2008 (approximate)

Connection Work Desired: ☐ Use Existing Lateral ☑ Other

Dimensions: 25 ft (length) 6 in (size) 4 ft (depth)

Existing Structures/Dwellings on Property: (Provide breakdown below)

Type (i.e. Single Family)	Quantity(ies)	Remain	Demolish
Single Family Dwelling	1	0	1

Remarks: (Provide any additional information on the lines provided)

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

\DPP\SDD\MASTER 4/02

Inch	mm
1/2	15
3/4	20
1	25

TABLE 6-4

Water Supply Fixture Units (WSFU) and Minimum Fixture Branch Pipe Sizes[3]

Appliances, Appurtenances or Fixtures[2]	Minimum Fixture Branch Pipe Size[1,3]	Private	Public	Assembly[5]
Bathtub or Combination Bath/Shower (fill)	1/2"	4.0	4.0	
3/4" Bathtub Fill Valve	3/4"	10.0	10.0	
Bidet	1/2"	1.0		
Clotheswasher	1/2"	4.0	4.0	
Dental Unit, cuspidor	1/2"		1.0	
Dishwasher, domestic	1/2"	1.5	1.5	
Drinking Fountain or Watercooler	1/2"	0.5	0.5	0.75
Hose Bibb	1/2"	2.5	2.5	
Hose Bibb, each additional[7]	1/2"	1.0	1.0	
Lavatory	1/2"	1.0	1.0	1.0
Lawn Sprinkler, each head[4]		1.0	1.0	
Mobile Home, each (minimum)		12.0		
Sinks				
Bar	1/2"	1.0	2.0	
Clinic Faucet	1/2"		3.0	
Clinic Flushometer Valve with or without faucet	1"		8.0	
Kitchen, domestic	1/2"	1.5	1.5	
Laundry	1/2"	1.5	1.5	
Service or Mop Basin	1/2"	1.5	3.0	
Washup, each set of faucets	1/2"		2.0	
Shower, per head	1/2"	2.0	2.0	
Urinal, 1.0 GPF Flushometer Valve	3/4"	See Footnote 6		
Urinal, greater than 1.0 GPF Flushometer Valve	3/4"	See Footnote 6		
Urinal, flush tank	1/2"	2.0	2.0	3.0
Washfountain, circular spray	3/4"		4.0	
Water Closet, 1.6 GPF Gravity Tank	1/2"	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Tank	1/2"	2.5	2.5	3.5
Water Closet, 1.6 GPF Flushometer Valve	1"	See Footnote 6		
Water Closet, greater than 1.6 GPF Gravity Tank	1/2"	3.0	5.5	7.0
Water Closet, greater than 1.6 GPF Flushometer Valve	1"	See Footnote 6		

Notes:

1. Size of the cold branch pipe, or both the hot and cold branch pipes.
2. Appliances, Appurtenances or Fixtures not included in this Table may be sized by reference to fixtures having a similar flow rate and frequency of use.
3. The listed minimum supply branch pipe sizes for individual fixtures are the nominal (I.D.) pipe size.
4. For fixtures or supply connections likely to impose continuous flow demands, determine the required flow in gallons per minute (GPM) and add it separately to the demand (in GPM) for the distribution system or portions thereof.
5. Assembly [Public Use (See Table 4-1)].
6. When sizing flushometer systems see Section 610.10.
7. Reduced fixture unit loading for additional hose bibbs as used is to be used only when sizing total building demand and for pipe sizing when more than one hose bibb is supplied by a segment of water distributing pipe. The fixture branch to each hose bibb shall be sized on the basis of 2.5 fixture units.

REFERENCE: 2000 UNIFORM PLUMBING CODE

CHART A-3
Enlarged Scale Demand Load

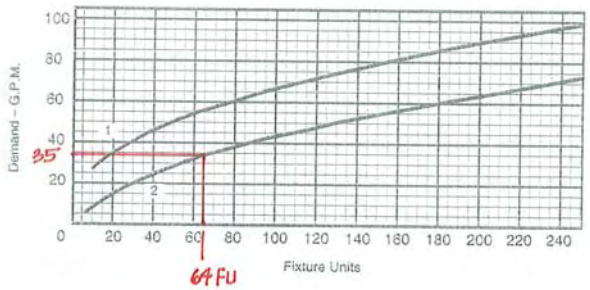
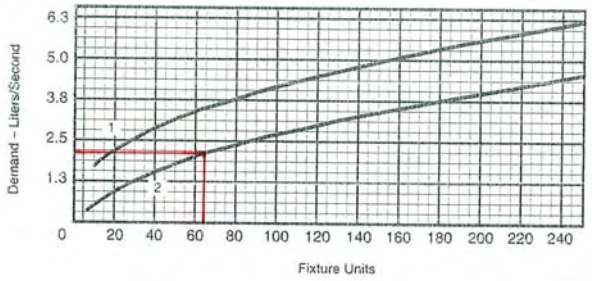
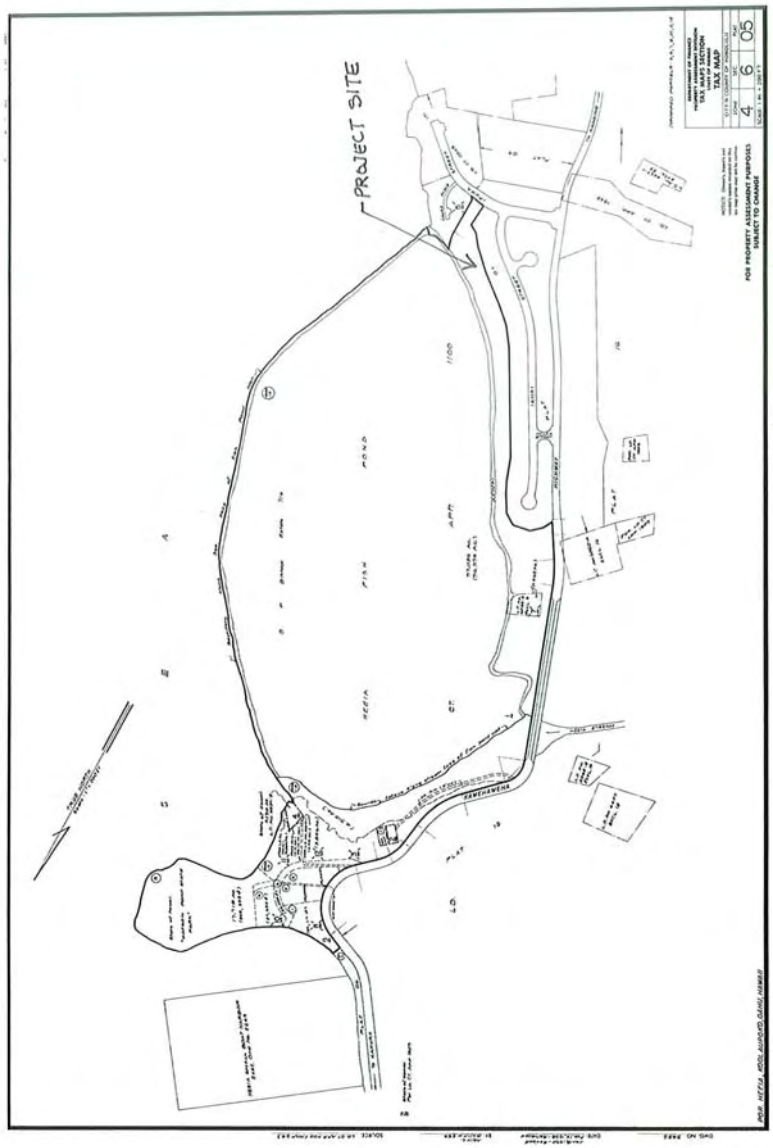


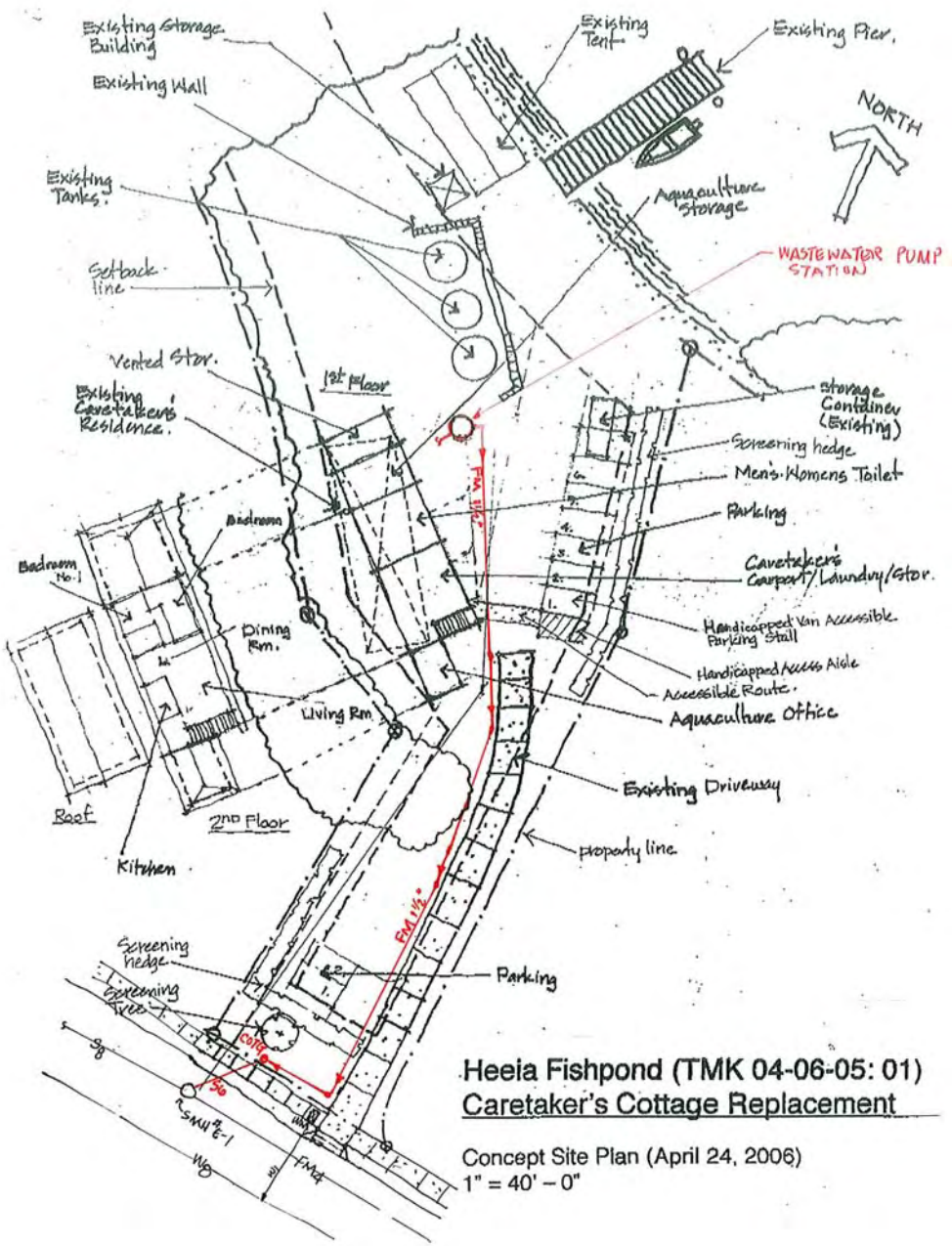
CHART A-3 (Metric)
Enlarged Scale Demand Load



REFERENCE : 2000 UNIFORM PLUMBING CODE

SITE PLANS


PROJECT SITE

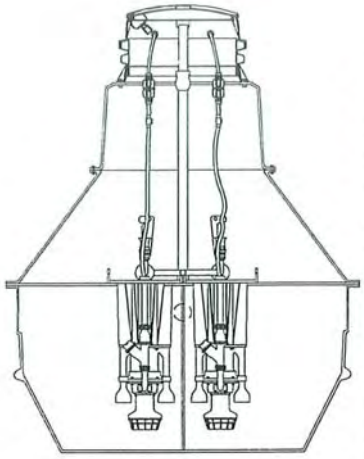

Existing Storage Building
Existing Wall
Existing Tent
Existing Pier
NORTH
Existing Tanks
Aquaculture storage
Setback line
WASTEWATER PUMP STATION
Vented Stor.
1st Floor
Existing Caretaker's Residence
Storage Container (Existing)
Screening hedge
Men's Womens Toilet
Parking
Bedroom
Bedroom No. 1
Caretaker's Carport/Laundry/Stor.
Handicapped Van Accessible Parking Stall
Dining Rm.
Handicapped Access Aisle
Accessible Route
Living Rm
Aquaculture Office
Existing Driveway
Roof
2nd Floor
Kitchen
property line
Screening hedge
Parking
Heeia Fishpond (TMK 04-06-05: 01)
Caretaker's Cottage Replacement
Concept Site Plan (April 24, 2006)
1" = 40' – 0"

Bow Engineering & Development, Inc. Civil Engineering and Planning

WASTEWATER PUMP STATION

PRELIMINARY ENGINEERING REPORT
HEEIA FISHPOND - CARETAKER'S RESIDENCE AND AQUACULTURE SUPPORT FACILITIES

GP2016



General Applications

The size, efficiency and operating economy of the GP 2016 make it an ideal choice for multiple dwellings, waterfront property, subdivision developments and marinas. The GP 2016 is ideally suited for both new and existing communities.

Features

The GP2016 Grinder Pump is a complete unit that includes: two grinder pumps with check valves, FRP (Fiberglass Reinforced Polyester) tank and controls. The GP2016 is packaged into a single complete unit, ready for installation.

All solids are ground into fine particles, allowing them to pass easily through the pump, check valve, and small diameter pipe lines. Even objects that are not normally found in sewage, such as plastic, rubber, fiber, wood, etc. are ground into fine particles.

The 1-1/4" inch discharge connection is adaptable to any piping materials, thereby allowing us to meet your local code requirements.

The tough, corrosion resistant tank is made of fiberglass reinforced polyester. The optimum tank capacity of 500 gallons is based upon computer studies of water usage patterns.

The internal check valve assembly, located in each Grinder Pump, is custom designed for non-clog, trouble-free operation.

The Grinder Pump is automatically activated. It runs infrequently for very short periods. The annual energy consumption is typically that of a 40 watt light bulb.

Units are available for indoor and outdoor installations. Outdoor units are designed to accommodate a wide range of depths.

Operational Information

Motor
1 HP, 1,725 RPM, high torque, capacitor start, thermally protected, 120/240 V / 60 Hz, one phase

Inlet Connections
4" inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.

Discharge Connections
Pump discharge terminates in 1-1/4" NPT female thread. Can easily be adapted to 1-1/4" PVC pipe or any other material required by local codes.

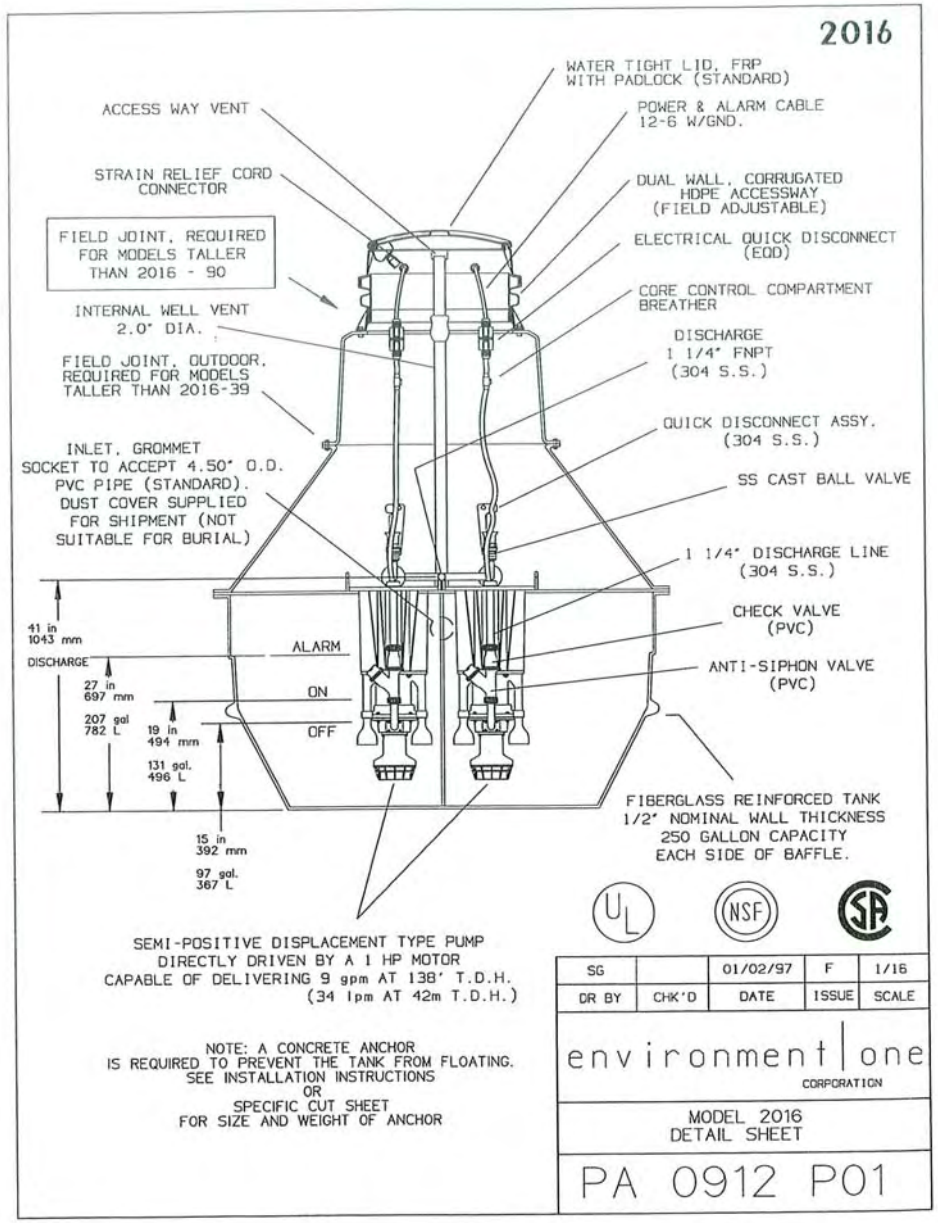
Discharge*
15 gpm at 0 psig (Per Pump)
11 gpm at 40 psig (Per Pump)
9 gpm at 60 psig (Per Pump)

Overload Capacity
The maximum pressure that the pump can generate is limited by the motor characteristics. The motor generates a pressure well below the rating of the piping and appurtenances. The automatic reset feature does not require manual operation following overload.

US & Foreign Patents Issued & Pending

* Discharge data includes loss through check valve, which is minimal.

Printed in USA, on Recycled Paper
PA1350P01 Rev. A, 4/97



MEETING MINUTES

KAUAHIKAUA & CHUN/ARCHITECTS **CONFIRMATION NOTICE**

PROJECT NAME: Heeia Fishpond **PROJECT NO.:** 04-03

MEETING LOCATION: State Department of Health (DOH) - Wastewater Branch **DATE OF CN:** 06/01/04

PURPOSE: To discuss sewer system possibilities for the Heeia Fishpond site.

DATE OF MEETING: 05/21/04

ATTENDEES: Harold K. Yee P.E. -Planning & Design Section, State DOH
Dwight P. Kauahikaua AIA, Kauahikaua & Chun/ Architects
Kekoa J. Cashman, Kauahikaua & Chun/ Architects

The discussion with an introduction of the project goals and a brief description of the existing conditions. The goals of the project were stated as: 1) Make the site livable for a caretaker, 2) To provide sanitation facilities for the workers - visitors, 3) Accomodate a meeting space.

Mr. Yee stated the existing cesspool is not currently required to be closed, if the existing house remains or is renovcated. If demolished, the cesspool must also be closed, and may not be used with a new residence.

Mr. Yee suggested the following alternatives: 1) Composting toilets, 2) Connection to the municipal sewer system (preferred). A pump will be required, and small systems are available (without storage capacity), 3) A package treatment plant and leach field. A leach field would be allowed since the discharge is treated. A septic system is not allowed since it would appear the minimum clearances above water could not be met.

DOH does not currently have rules governing grey water.

KAWAIAHAO PLAZA, HALE MAUKA
567 SOUTH KING STREET, SUITE 108
HONOLULU, HAWAII 96813

BY: Kekoa Cashman

KAUAHIKAUA & CHUN/ARCHITECTS **CONFIRMATION NOTICE**

PROJECT NAME: Caretaker's Residence, Heeia Fishpond **PROJECT NO.:** 04-03

MEETING LOCATION: HFD Plan review **DATE OF CN:** June 29, 2004

PURPOSE: HFD project requirements

DATE OF MEETING: June 29, 2004

ATTENDEES: Captain Kishida, Honolulu Fire Department (Plan Review)
Dwight Kauahikaua, Kauahikaua & Chun/Architects

Based on the project as described, an informal and unofficial discussion followed including the following:

1. If determined to be limited to a residence only, Board of Water Supply will establish the requirements, based on the existing spacing of street hydrants, and if determined to be adequate, will not be referred to HFD for plan review. If determined to be inadequate, the permit will be referred to HFD for plan review, and may be subject to HFD requirements for commercial projects (particularly in consideration of the distance to the structures form the street).

2. If determined to be a commercial permit, HFD will be included in the building permit review process, and HFD requirements will become applicable:
a. Provide fire truck access road and turnaround (including requirements of road width, load bearing capacity, slope, and configuration).
b. Provide a fire hydrant within 150' of the farthest point of the building.
c. The cost to provide these improvements could add significant cost to the project budget.

3. A less costly alternative to HFD requirements, which has been acceptable on other projects is fire sprinklering of the structure.

KAWAIAHAO PLAZA, HALE MAUKA
567 SOUTH KING STREET, SUITE 108
HONOLULU, HAWAII 96813

BY: Dwight Kauahikaua

APPENDIX G
DPP Correspondence

Helber Hastert & Fee
Planners, Inc.

May 18, 2006

Mr. Henry Eng, FAICP, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

Attention: Land Use Permits Division

Dear Mr. Eng:

He'eia Fishpond Aquaculture Support Facilities
He'eia , Ko'olaupoko, O'ahu
(TMK 4-6-05: 01)
Confirmation of Land Use Permits Required

On behalf of Kamehameha Schools (KS), the landowner of He'eia Fishpond, we respectfully request confirmation of the land use permits required for proposed aquaculture support facilities at He'eia Fishpond. This letter is in response to a meeting held with Mr. Bannister and Mr. Peirson of your staff on April 12, 2006.

Loko I'a o He'eia, or He'eia Fishpond, is located on the shoreline of He'eia, Ko'olaupoko, O'ahu. The fishpond and its adjacent land-based areas comprise about 97 acres (Exhibit 1). The land-based portions of the fishpond parcel, including the project site, lie within the State Urban District and are zoned P-2 (General Preservation) by the City and County of Honolulu (City). With the shoreline and mauka wall of the fishpond forming the State Urban District boundary, the fishpond parcel makai of the shoreline is in the State Conservation District (Exhibit 2). Most of the fishpond parcel, including a section of the project site, is listed on the National Register of Historic Places (State Historic Site Number 80-10-327) (Exhibit 3), potentially triggering the need for compliance with Chapter 343, Hawai'i Revised Statutes (HRS). Additionally, the entire fishpond parcel is located within the Special Management Area (SMA).

Existing and Proposed Facilities

Current fishpond operations are based along the southernmost corner of the fishpond, with access to the site provided from Ipuka Street. Existing land-based facilities in this area consist of a deteriorated single family dwelling previously used as a caretaker's residence, storage units and a canvas shelter, portable toilets and showers, aquaculture holding tanks, and a gravel parking area (Exhibit 4). With the exception of the vacant

733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

dwelling which is in poor condition, all other facilities function to support program staff, community volunteers and students/visitors participating in educational and cultural programs associated with the aquaculture operation. The site is currently served by electrical, water and telephone connections. Surrounding land uses include single-family residences that border the project site (Ali'i Landing) and the bluff overlooking the southwestern edge of the fishpond (Ali'i Bluffs), and He'eia State Park to the north.

KS proposes the construction of aquaculture support facilities to increase efficiency of existing aquaculture operations and promote the long-term productivity of the fishpond for cultural, educational, and economic purposes. The proposed improvements, which are essential for the continued success of the existing aquaculture program, include replacement of the existing caretaker's residence, construction of new accessory aquaculture facilities, and associated infrastructure improvements.

The attached conceptual site plan illustrates the proposed improvements (Exhibit 5). Replacement of the existing caretaker's residence would provide accommodations for a caretaker to remain on-site at all times and monitor against poaching and vandalism, which is an on-going problem that threatens viable fishpond operations. As proposed, the caretaker's residence would consist of two floors, including living quarters (two bedrooms, a large living room/dining room/kitchen area, and one bathroom) on the upper floor with an attached laundry, storage area and enclosed two-car garage on the ground floor. The existing caretaker's residence would be demolished, and replaced by the proposed two-story structure. Existing utility connections would be maintained, and a new connection to the City's sewer system along Ipuka Street would be installed. The total floor area of the caretaker's house would occupy nearly 2,700 square feet, with roughly 2,000 square feet of livable space and about 675 square feet for the laundry, garage, and storage areas.

The new aquaculture support facilities, designed to accommodate program staff and existing community support programs, would include an office, equipment and material storage, toilets and a shower/changing room, and related infrastructure and parking improvements. Proposed parking amenities, which are based on the parking requirements for aquaculture use, would consist of two paved parking stalls and one paved handicapped-accessible stall with access route. The proposed aquaculture support facilities would be consolidated with and attached to the single-family residence, allowing the new facilities to be concentrated within the southwestern corner of the property. An existing pavilion tent, metal storage container, and storage building would be retained. The total area of the aquaculture support facilities would be almost 1,600 square feet as summarized in the table below. The proposed facilities would be designed to accommodate existing uses, and no changes in overall land use or intensity of use are

anticipated. The estimated cost for the aquaculture support facilities (i.e., components unrelated to the single family residence) is less than $125,000.

Aquaculture Support Facilities
Proposed Uses and Approximate Floor Area

Proposed Use	Floor Area (sf)
Aquaculture Office	150
Toilets and Shower/Changing Room	575
Vented Storage	250
Aquaculture Storage	500
Sewage Pump Building	100
TOTAL (estimated)	1,575

Compliance with Chapter 343, Hawai'i Revised Statues

We request your recommendation on the applicability of Chapter 343, HRS in the scenario we have presented.

Special Management Area Permit

Conservation District Use Application (CDUA) #OA-2530 for restoration and use of He'eia Fishpond for commercial aquaculture was approved by the Board of Land and Natural Resources on March 27, 1992. In addition to fishpond wall repair/restoration, fish pen construction, and replacement of an existing pier, the applicant planned to construct an aquaculture support building with storage, office, lab, hatchery, and shop spaces. As part of the permit review process, the City Department of Land Utilization indicated that "the use of any land for the purpose of aquaculture is not a 'development' and is thus exempt from SMA regulations" (Exhibit 6 dated January 17, 1992).

Section 25-1.3(2)(H), Revised Ordinances of Honolulu, currently provides that development does not include:

> "the use of any land for the purpose of cultivating, planting, growing and harvesting of plants, crops, trees and other agricultural, horticultural or forestry products or animal husbandry, or aquaculture or mariculture of plants and animals, or other agricultural purposes subject to review by the authority in accordance with paragraph (3)."

Given that the proposed facilities generally conform to the uses described in CDUA #OA-2530 and that the City previously determined that the proposed aquaculture uses were exempt from the SMA regulations, we request your confirmation of the SMA permit requirements for the proposed improvements.

Shoreline Certification

The shoreline fronting the area is protected by the outer wall of the fishpond and is very stable. As will be indicated by an existing conditions survey, proposed development activities would be at least 55 feet inland of this shoreline. No development is proposed within the shoreline setback area as this is the main working area needed to support the marine operations of the fishpond. Based on these assumptions, please advise on the need to conduct a shoreline certification survey as part of the SMA Permit application process.

Zoning and Other Land Use Permits

A caretaker's residence for aquaculture purposes is not indicated as a permitted use within the P-2 General Preservation zoning district according to the Land Use Ordinance Master Use Table (Table 21-3). However, because the P-2 General Preservation District is appropriate for the aquaculture use and the proposed improvements would not change the existing land use or intensity, we request your determination on the appropriate zoning permit that should be pursued.

Thank you for considering our request to confirm the appropriate land use permits required for the proposed improvements. We look forward to reviewing your recommendations.

Sincerely,

Thomas A. Fee, AICP
Principal

Enclosures

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

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MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

June 9, 2006

2006/ELOG-1193(JP)

RECEIVED
JUN 12 2006
HELBER, HASTERT & FEE PLANNERS

Mr. Thomas A. Fee, AICP
Helber, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Fee:

Re: Heeia Fishpond Aquaculture Support Facilities
Heeia Fishpond - Heeia
Tax Map Key 4-6-5: 1

This responds to your inquiry, received May 19, 2006, concerning the permit requirements for the planned renovation of various Heeia Fishpond support facilities on the subject property. The fishpond is in the P-1 Restricted Preservation District; and, the area mauka of the fishpond is in the P-2 General Preservation District. The entire (97.036-acre) lot is within the Shoreline Management Area (SMA). The mauka edge of the fishpond was previously certified as the shoreline, and is considered stable. Specific permit requirements are addressed further, below.

We understand the existing on-site facilities include a currently vacant and deteriorated caretaker's dwelling, storage units, a canvas shelter, portable toilets and showers, aquaculture holding tanks and a small gravel parking lot. The proposed improvements are summarized in the table, below, and include replacing the caretaker's dwelling; building new aquaculture support facilities (which will be attached to the same structure as the dwelling), including an office, equipment and material storage, toilets and shower rooms; paving the parking lot and providing necessary associated infrastructure. No improvements are planned within 55 feet of the mauka edge of the fishpond; and, no change in the existing land use pattern and/or intensity of the use is anticipated.

Proposed Accessory Structures	**Floor Area (square feet)**	
Caretaker's dwelling (2nd floor living area)	2,000	
Garage, laundry, storage (ground floor)	672	
SUBTOTAL (dwelling)		2,672
Office	150	
Toilet/shower room	575	
Vented storage	250	
Aquaculture storage	500	
Sewage pump building	100	
SUBTOTAL (other support facilities)		1,575
TOTAL (estimate only)		4,247

Aquaculture is a permitted principal use in the P-2 District; however, the accessory caretaker's dwelling is a nonconforming use. On March 27, 1992, the Department of Land and Natural Resources (DLNR) granted a Conservation District Use Approval (No. OA-2430) for the commercial aquaculture use of the site; and, we understand the planned improvements were authorized by this approval. The entire lot is part of a registered historic site (No. 80-10-327). Accordingly:

Pursuant to Section 343-5(a)(4), HRS, any proposed use within a historic site, as designated in a historic registry, requires an Environmental Assessment (EA). The site is listed in the National Register of Historic Places; therefore, the project requires an EA The EA should specifically address SMA and other shoreline area issues (see below).

"Accessory caretaker's dwellings" are not permitted uses in the P-2 District (except where associated with principal cemetery uses). Therefore, either a use variance is necessary to retain, replace and/or expand the existing vacant accessory dwelling, or the applicant may apply for a conditional use permit (CUP) for use of the historic site, which may include the caretaker's dwelling. Under the circumstances, we strongly recommend that the applicant pursue a CUP (Major) for use of the historic site. The lot is on the historic register; and, the CUP is appropriate given that the fishpond functions as both a cultural education and commercial aquaculture facility, i.e., it functions as more than just a principal aquaculture use. The proposed accessory aquaculture facilities, including the accessory caretaker's dwelling, support the retention and preservation of the fishpond as a historic/cultural resource.

Pursuant to our "Rules Relating to Shoreline Setbacks and the Special Management Area," Section 13-6(a)(7)(A), we can waive the requirement for a certified shoreline survey when the proposed work will be "*inland of the presumed shoreline setback provided that . . . [the] shoreline is fixed by either a structure, such as a seawall or revetment, or naturally, as in the case of a rocky or coral shoreline.*" We will waive the requirement for [re]certification of the mauka edge of the fishpond as the shoreline, since its rocky edge functions as a fixed shoreline, provided the improvements associated with the project will be at least 55 feet away from the mauka edge. Note: The EA for the project should adequately disclose details concerning the earlier shoreline certification.

Pursuant to Section 25-1.3(2)(H), Revised Ordinances of Honolulu (ROH), "aquaculture" is explicitly excluded from the definition of "development" for purposes of SMA regulation. Therefore, the various proposed (minor) accessory uses and structures associated with the principal aquaculture use, including the accessory caretaker's dwelling, may similarly be excluded from Special Management Area Permit (SMP) requirements. Accessory uses are generally subject to the same provisions applicable to the principal use, unless otherwise explicitly provided. Section 25-1.3(2)(A), ROH further excludes a "*single-family residence that is not part of a larger development*"; and, the aquaculture use is not considered "development" for SMA purposes. Therefore, an SMP for the uses and structures that are accessory to operation of the aquaculture use do not inherently require an SMP. Nevertheless, Section 25-1.3(3), ROH provides that

an SMP can still be required if we find that the project may have "*significant environmental or ecological effect on the SMA.*" The EA should adequately address SMA issues, which will provide us ample opportunity to determine whether the project will involve significant SMA impacts; and, if so, an SMP would then be required.

I hope this clarifies the matter. Please contact Jamie Peirson of our staff at 527-5754 if you have any questions.

Very truly yours,

Elizabeth Chin

for Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:fm
cc: Kamehameha Schools
DLNR, State Historic Preservation Division
DLNR, Office of Conservation and Coastal Lands

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Helber Hastert & Fee
Planners, Inc.

December 20, 2006

Mr. Henry Eng, FAICP, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

Attention: Land Use Permits Division

Dear Mr. Eng:

He'eia Fishpond Aquaculture Support Facilities
He'eia, Ko'olaupoko, O'ahu
(TMK 4-6-05: 01)
Determination of Hardened Shoreline

This is in response to your letter of June 9, 2006 that describes the land use permits required for the proposed aquaculture support facilities at He'eia Fishpond. In the letter you advised that the proposed improvements will require: (1) an environmental assessment (EA) prepared in compliance with Chapter 343, Hawai'i Revised Statutes; and (2) a Conditional Use Permit (Major) for use of a historic site. Your letter also indicated that the proposed uses are considered accessory to the principal aquaculture use and can be excluded from the Special Management Permit requirements, as long as the project does not significantly impact the Special Management Area. In addition, the requirement to re-certify the *mauka* edge of the fishpond as the shoreline has been waived provided that the proposed improvements are located at least 55 feet from the previously certified shoreline.

We have recently learned that the current shoreline certification followed the face of the fishpond wall (see Exhibit A – Shoreline Certification, November 30, 1988). Considering that the inner wall along the land *(mauka)* side of the fishpond was previously used to establish the certified shoreline, we request your determination on an exemption from the shoreline certification requirement. The City and County of Honolulu "Rules Relating to Shoreline Setbacks and the Special Management Area" Section 13-5(a)(7) states that the requirement for a certified shoreline survey may be waived provided that: *"(A) the shoreline is fixed by either a structure, such as a sea wall or revetment, or naturally, as in the case of a rocky or coral shoreline."*

733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

Although most Native Hawaiian coastal fishponds were typically built with a semi-circular rock wall encircling the natural shoreline, He'eia Fishpond is unusual because the rock wall completely encircles the entire 88 acres of the pond, including along its land *(mauka)* side (Kelly, July 1973). *Some Legendary and Historical Aspects of He'eia Fishpond, Ko'olau, O'ahu: Manuscript 07-12-73,* prepared by Marion Kelly in November 1973 for the Bishop Estate, presents a map of He'eia Fishpond based on a 1913 survey completed by Monsarrat. The drawing (attached as Exhibit B) indicates that the fishpond wall encircled the entire pond, including on the inland side fronting the project site. Although fishpond shoreline hardening was not common practice, it was an invaluable construction technique that was used to control sedimentation in areas with mucky shorelines. The hardening was typically in the form of stonework retaining faces, perhaps combined with earthen material. The purpose of the shoreline hardening appears to be to minimize sedimentation runoff into the fishpond, which would have otherwise flowed into the pond and become trapped by the outer *makai* wall.

Your positive response on this matter would allow flexibility to accommodate additional parking. Comments raised during the Draft EA review process indicate a desire to provide additional on-site parking to reduce the current use and need for on-street parking. Due to the project site's distinct size and shape, it has been difficult to accommodate additional on-site parking while maintaining the 55-foot shoreline setback line. If permitted, the area between the 40 and 55-foot setback lines would be used for approximately 750 square feet of surface parking and aquaculture support activities. No structures are planned within the 55-foot shoreline setback area.

Thank you for considering our request to waive the requirement to recertify the shoreline. We look forward to reviewing your recommendation.

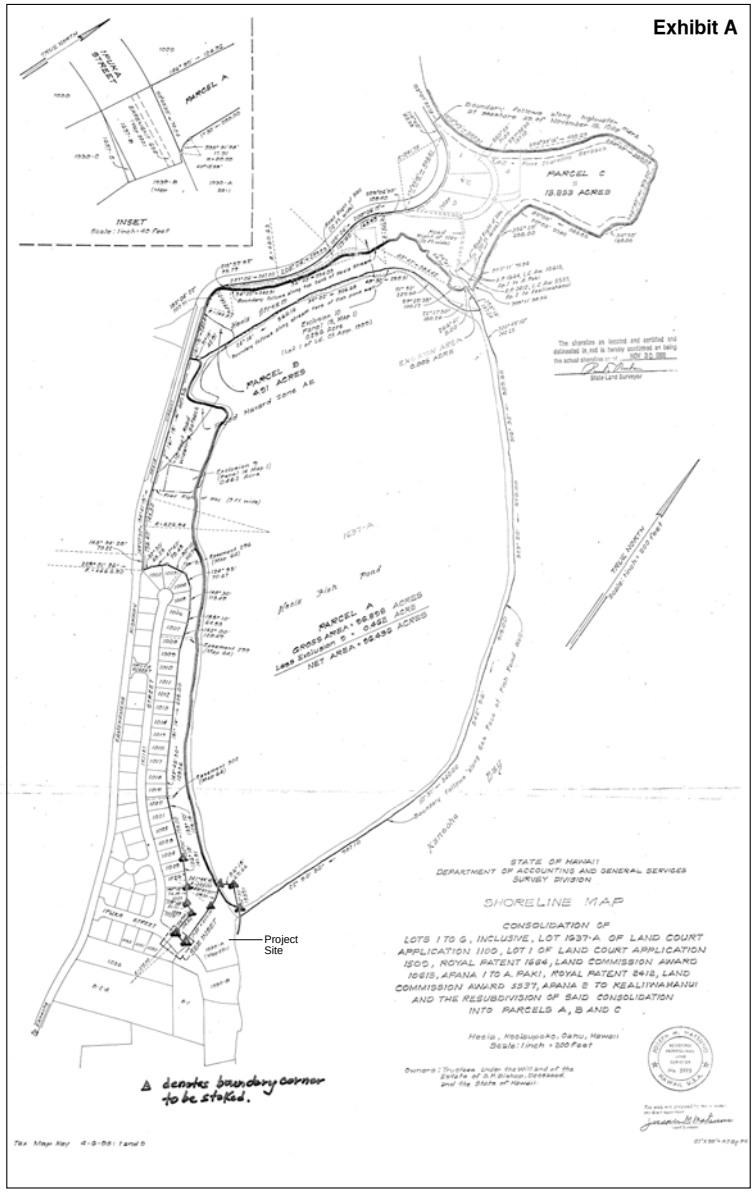
Sincerely,

Thomas A. Fee, AICP
Principal

Enclosures

cc via email: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Exhibit A



He'eia Fishpond Aquaculture Support Facilities
Helber Hastert & Fee, Planners
December 2006

Exhibit B

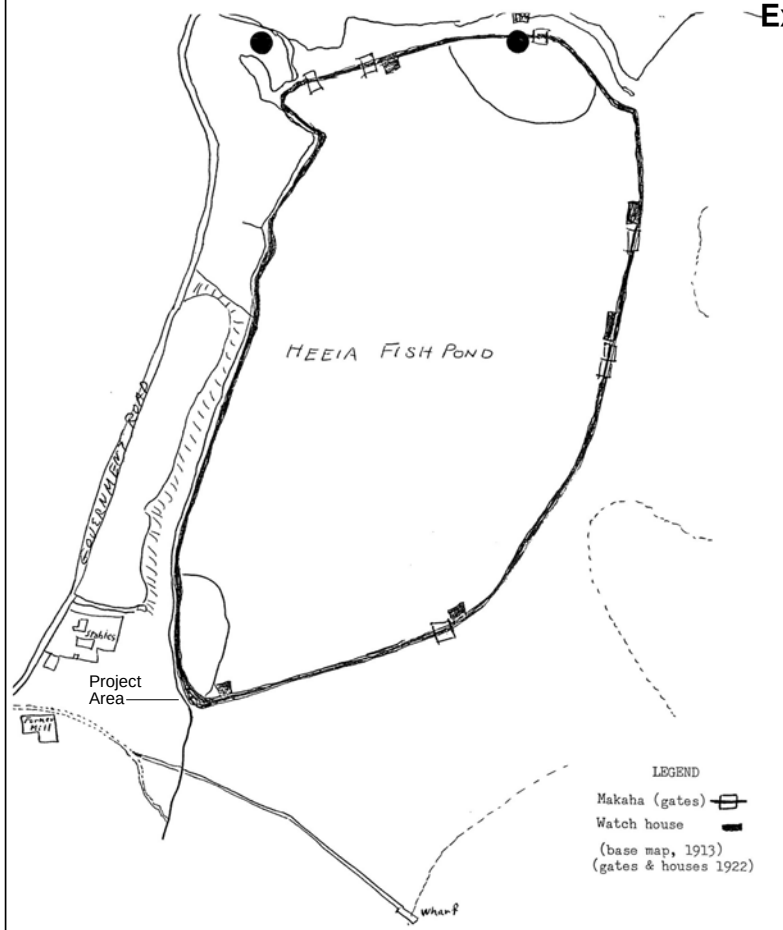


Figure 6. Copy of portion of map of Heeia Pond from a survey done in 1913. This map shows the presence of the wall completely around the pond and the water course along the inland wall.

Source: Kelly, Marion. *Some Legendary and Historical Aspects of Heeia Fishpond, Koolau, Oahu: Manuscript 07-12-73.* Prepared for The Bishop Estate. Honolulu, July 1973.

He'eia Fishpond Aquaculture Support Facilities
Helber Hastert & Fee, Planners
December 2006

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

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MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2006/ELOG-3357 (JP)

January 24, 2007

Mr. Thomas A. Fee, AICP
Helber Hastert and Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Fee

Subject: Shoreline Certification for Heeia Fishpond
46-077 Ipuka Street - Heeia
Tax Map Key 4-6-5: 1

This responds to your request, received December 22, 2006, for a determination that the mauka (inner) wall of the Heeia Fishpond is a "fixed shoreline" for purposes of Section 13-5(a)(7) of the "Rules Relating to Shoreline Setbacks and the Special Management Area."

On November 30, 1988, the rocky mauka (inner) wall of the fishpond was certified by the State Land Surveyor as the shoreline; and, its rock wall construction essentially constitutes a "hardened" shoreline. As such, we will consider the rocky mauka (inner) wall of the fishpond to be a shoreline that is naturally fixed by a rocky shoreline. Therefore, a new shoreline certification will not be necessary to utilize a portion of the above site for on-site surface parking that is less than 55 feet from the shoreline previously certified, but will not encroach into the 40-foot shoreline setback.

I hope this clarifies the matter. Please contact Jamie Peirson of our staff at 527-5754 if you have any questions.

Very truly yours,

for Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:fm

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APPENDIX H
Kāneʻohe Neighborhood Board No. 30 Correspondence

KANEOHE NEIGHBORHOOD BOARD NO. 30

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 400 • HONOLULU, HAWAII, 96813
PHONE (808) 527-5749 • FAX (808) 527-5760 • INTERNET: http://www.honolulu.gov

MINUTES OF REGULAR MEETING
THURSDAY, JULY 20, 2006
AKOAKOA HALE
WINDWARD COMMUNITY COLLEGE

CALL TO ORDER: Chair Yanagihara called the meeting to order at 7:00 p.m. A quorum was present.

MEMBERS PRESENT: Rick Karasaki, Clyde Morita, Patty Yamashiro-Hironaka, Niko Koga, Felipe San Nicholas, Wendell Lum, Roy Yanagihara, Paul Friel, L.C. Morris, Larry Bill Sager.

MEMBERS ABSENT: John Sabas, John Flanigan, Elizabeth Gaisthia, Glenn Ida, Larry Zdvoracek.

GUESTS: Tammy and Rico Rodriguez (HCDCH-Koolau Village), Lester Chang (Mayor's Office/Department of Parks and Recreation), Dianne English, Tom Perri, Sarah Fry (MCBH), Maya Leland, A. Desilva, and Brian Ross (Haiku Gardens Association), Ted Kanemori, Steve Cayetano (U.S. Congressman Ed Case's Office), Representative Pono Chong, Corlyn Orr (Helber Hastert & Lee), Jill Okuda, Captain George Kaopuiki (Honolulu Fire Department, Kaneohe Station), Scott Sunaoka (Hope Chapel, Kaneohe Bay), Jerry Jardin, Lt. R. Robinson (Honolulu Police Department, District 4-Kaneohe), Councilmember Barbara Marshall, Mr. Marshall, Venus Acoba (Councilmember Barbara Marshall's Office), Nola J. Frank (Neighborhood Commission Office staff).

FILLING OF VACANCIES: Subdistricts 1 and 11 – There were no interested persons present to fill the vacancies.

PUBLIC SAFETY AND MILITARY REPORT:

MARINE CORPS BASE HAWAII (MCBH) – Sarah Fry gave the following report:

- June 23 - July 27, 2006, Biennial "Rim of the Pacific" (RIMPAC) 2006 Exercise – There are eight nations participating in this year's RIMPAC exercises. Since 1971, this exercise occurs every two years.
- July 15-23, Castle High School MCJROTC Leadership Academy.
- The Windward Civilian-Military Council met this past Tuesday.
- The 2nd Battalion 2/3 will be deploying to Afghanistan replacing the 3/3 Marines. Squadrons are also deploying.
- Noise complaints received this past two weeks were from the Kailua area, where helicopters were flying over the residential area. The airfield contacted the ship from which the helicopters were taking off informing them it is prohibited to fly over the residential area.

Questions, answers and comments:

the meetings was circulated, and the next meeting for the Kaneohe will be in September.

Questions, answers and comments:

Lum commented the Kamehameha School pre-school structure was built before the public was notified. Councilmember Marshall replied Kamehameha Schools is seeking a zone change from preservation to residential. Lum asked why Kamehameha Schools is not using the nearby parking lot that they own. In response, according to Kamehameha Schools the selected site is most cost effective. A request was made to reopen Haiku Road. The Councilmember asked for community to submit input to her office as to what the community would like for the area.

U.S. Congressman Ed Case – Steve Cayetano reported that Congressman Case arrived in Hawaii tonight for Talk Story meeting on the Big Island. The Congressman's newsletter was circulated for interested persons to review.

Questions, answers and comments:

Relative to the Kailani Subdivision's by pass channel, Cayetano responded to Lum that there are two separate studies being conducted (State and City). Lum asked if the Congressman could get funding if needed for the projects.

Steve Cayetano was thanked for attending the meeting.

COMMUNITY GROUPS AND ORGANIZATIONS:

Hawaii Pacific University – No representative was present.

Hope Chapel – Scott Sunaoka gave the following report:

1) Hope Chapel has partnered with other churches collecting school supplies for needy children. This has occurred twice, and supplies are distributed door to door by church members.

2) The organization of food drives for the community is in the planning.

3) The church will also do three weeks of a "School Supply Drive". The church has a website with a wish list of what the schools needs are directly. There are ten schools on the wish list from the Kaneohe and Kahalu'u areas. The church plans to make this an annual event.

Scott Sunaoka was thanked for attending the meeting.

NEW BUSINESS:

Defend O'ahu Coalition – No representative was present.

Heeia Kea Restoration Project (Environmental Assessment) – Corlyn Orr reported the following: Kamehameha Schools Bishop Estate, owners of the Heeia Fishpond, is seeking an

An Environment Assessment for a caretaker's cottage, and to rebuild the eighty-eight acre farm wall, which is approximately one mile long and encircles the entire fishpond. The area is used for cultural resources and is on the National Historical Registry as Paepae O Hawai'i. Once complete the plan is to return its use to cultural practices.

The south portion of the property would access from Ipuka Street near Ali'i Landing subdivision and the Ali'i Bluffs. The existing facility consists of a Quonset hut, which is currently used for storage, due it being uninhabitable. It is proposed to demolish the Quonset hut and replace it with a two-story caretaker's facility attached to aquaculture. The utility system needs improvements, the cesspool closed, and a new system built and installed under the City's sewer system, and on-site security is needed. An Environmental Assessment (EA) is being done and a Conditional Use Permit (CUP) may be necessary. The fishpond is in the State's conservation district (P-1) and comes under the jurisdiction of the Department of Land and Natural Resources.

Questions, answers and comments:

1) Friel asked what is the timeframe for the project. Orr replied the project would proceed when the permits are issued. There is a 30-day process for the Environmental Assessment (EA). They are hoping the EA is completed in December followed by the Conditional Use Permit.

2) In response to Lum relative to the sewer system, work is being done with the engineer for a lift station. There is a 30% slope that the sewage must be pushed up to reach the City's sewer line.

3) In answer to Morita there will be no changes to the aquaculture program or use of the site.

4) For more information contact Corlynn Orr at 545-2055.

Corlyn Orr was thanked for attending the meeting.

COMMITTEE REPORTS:

Public Safety Committee – San Nicolas reported he is working with Civil Defense to do another Board presentation at a future meeting.

Felipe San Nicolas was thanked for his report.

Environmental Committee – Chair Sager reported he attended the Kaneohe Bay Regional Advisory Council meeting on July 5, 2006. There were approximately thirty people in attendance. Concerns were raised regarding the Ahu O Laka bill and opposition to the new or additional regulations at the sandbar. He noted, Peter Young, Director of the Department of Land and Natural Resources (DLNR), reported the legislature passed a bill, which would create a monument. However, according to the Attorney General, DLNR has the right to control large gatherings at the sandbar. Opinions expressed at the meeting of users of the sandbar are that they would like the area clean and safe. The Kaneohe Bay Regional Council (KBRC) reaffirmed from a previous meeting there was a unanimous vote in opposition to the

KANEOHE NEIGHBORHOOD BOARD NO. 30

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 400 • HONOLULU, HAWAII, 96813
PHONE (808) 527-5749 • FAX (808) 527-5760 • INTERNET: http://www.honolulu.gov

MINUTES OF REGULAR MEETING
THURSDAY, AUGUST 17, 2006
AKOAKOA HALE
WINDWARD COMMUNITY COLLEGE

CALL TO ORDER: Chair Yanagihara called the meeting to order at 7:06 p.m., a quorum was present.

MEMBERS PRESENT: Clyde Morita, John R. Sabas, Wendell Lum, Roy Yanagihara, Paul M. Friel, John Flanigan, Elizabeth Gaisthia, L.C.Morris, Glenn Ida, Larry Zdvoracek, Bill H. Sager.

MEMBERS ABSENT: Rick Karasaki, Patty Yamashiro-Hironaka, Niko Koga, Felipe San Nicolas,

GUESTS: Battalion Chief James Skellington (Honolulu Fire Department), Lani Almanza (American Cancer Society), Michael Lyman, Robert Akiu, Tammy Rodriguez (HPHA), Jeff Spencer (O'ahu Civil Defense), Steve Cayetano (U.S. Congressman Ed Case's Office), Major Janna Mizuo and Lt. Dave Eber (Honolulu Police Department), Representative Pono Chong, Watson and Sarah Goldsmith, Lester Chang (Mayor's Office/Department of Parks and Recreation Director), Representative Barbara Marshall, Mr. Marshall, Venus Acoba (Councilmember Barbara Marshall's Office), Katherine Thomason (Governor's Office), Sarah Fry (Marine Corps Base Hawaii), Nola J. Frank (Neighborhood Commission Office staff).

FILLING OF VACANCIES, Subdistrict 1 and 11 – There were no interested persons present to fill the vacancies.

APPROVAL OF THE JULY 2006 REGULAR MEETING MINUTES: The following corrections/additions were made:

Page 1, Guests should read, "...**Jill Tokuda**..."

Page 2, Questions, answers and comment 1) last sentence should read, "... Fry replied that the base has P-3 aircrafts and the Air Force, Marines, Navy, and planes with **deploying Marines and Sailors** use the airfield..." 2) Last sentence should read, "...Fry stated **that** is not alone, and that other complaints regarding the concerts were received..." 2) Second paragraph, second sentence should read, "...Fry answered each night of the event drew different crowds **due to different bands**..." 2) Paragraph five should read, "...Fry relayed **one of the initiatives MCBH to considering to the re-establishment of Mokapu Peninsula. The canoe regatta has not been held since 1966. She asked for public input**..."

Page 4, Questions, answers and comments 3) should read, "...**Lum** not Ho.";

Page 5, Questions, answers and comments should read, "...Follow up will be done regarding the **guardrail** on Lilipuna **Road**..."

Page 6, 5) should read, "...**Lilipuna Road**..." 6) delete, "...**Heeia**..." "...**The Kaneohe project received lump sum funding for bridge repair**..."

Page 7, Questions, answers and comments last sentence should read, "...**The Councilmember is looking into lands Kamehameha Schools owns across Haiku Road**...

Page 7, second Questions, answers and comments should read, "...**Kahelelani Subdivision**..."

Page 9, OMPO Citizen Advisory Committee, last sentence should read, " There will be one lane in each direction from **Nimitiz Highway and Miller Street. The deadline is September**..."

Corlyn Orr has requested (via email) the following additions:

Page 7, "...**He'eia Kea Restoration Project Environmental Assessment)..."**

Page 7, "... **He'eia Fishpond Aquaculture Support Facilities Project-Corlyn Orr (Helber, Hastert & Fee Planner) reported the following: Kamehameha Schools (KS), owners of the Heeia Fishpond is preparing an Environmental Assessment (EA) in support of proposed facility improvements at He'eia Fishpond. The fishpond, which measures 88 acres in size, is one of the last remaining fishponds on O'ahu. The fishpond wall, which is unique in that it encircles the entire pond, measures more than one mile in total length. The fishpond is a valuable cultural resource listed on the National Register of Historic Places. Paepae o He'eia, the current tenant at the fishpond, is a 501 (c)(3) non-profit organization that is working to restore and preserve the fishpond. In addition to re-introducing traditional aquaculture practices at the pond, Paepae o He'eia is also coordinating environmental and cultural learning programs for the community, using the fishpond as an outdoor learning classroom.**

The existing aquaculture operations are based along the southernmost corner of the fishpond. Access to the site is via Ipuka Street down a steep concrete driveway. The site, which is about 0.75 acres in size, is surrounded by single-family residences, including Ali'i Landing and Ali'i Bluffs subdivision that overlook the pond, and is not visible from the street. The fishpond area makai of the shoreline is within the State Conservation District, and the land area inland of the shoreline is in the State Urban District with County P-2 General Preservation zoning. The entire project is within the Special Management Area.

The proposed improvements include replacement of an existing Quonset hut that was used as a caretaker's residence, construction of permanent aquaculture support facilities, and utility system improvements. The new caretaker's residence would allow a caretaker to once again live on-site and provide security against poaching and vandalism, which are ongoing problems that threaten the long-term viability of the aquaculture program. Proposed aquaculture support facilities include an air-conditioned office space, showers and toilets, storage spaces, and parking improvements. Existing utility system connections, including water, electrical and telephone service, would be maintained. An existing cesspool would be closed, and a new connection to the City's sewer system along Ipuka Street would be installed. The improvements are being planned to accommodate the existing program and there would be no changes in the overall land use or intensity of use. The project, which is essential for the continued success of the existing aquaculture program, would enhance staff productivity, increase operational efficiency, and address sanitation needs and improve overall aesthetics and quality of the fishpond experience.

An Environmental Assessment is required because the project uses lands within a historic site. A Conditional Use Permit (CUP) from the City and County for use of a historic site is also required. HHF is in the process of preparing the Draft EA and anticipates publication of the Draft EA in August.

Questions, answers and comments: 1)"...**Orr replied that construction would proceed after all permits are issued.** The **Draft EA should be published in August, followed by a 30-day public review period. It is anticipated that the EA process would be completed by December, followed**

by the processing of the Conditional Use Permit. Construction could start by Summer 2007..." 2)"...In response to Lum relative to the sewer system, **the preliminary engineering study conducted as part of the Draft EA indicated that a sewer lift station would be needed. The slope that the sewage must be pushed up to reach the City's sewer line along Ipuka Street is almost a 30% grade**..." 4) "...For more information contact **Corlyn Orr of Helber, Hastert & Fee, Planners** at 545-2055..."

Zdvoracek moved and seconded by Morris to accept the July 2006 Regular Meeting Minutes as amended. The motion failed to carry 5-0-5. Aye: Lum, Yanagihara Friel, Morris, Sager; **Abstain:** Morita, Flanigan, Ida, Gaisthia, Zvoracek. A vote of 9 is needed for a motion to pass.

APPROVAL OF THE AUGUST AGENDA PLANNING AND COMMITTEES' MEETING MINUTES: Deferred.

PUBLIC SAFETY AND MILITARY REPORT:

Honolulu Fire Department (HFD) – Battalion Chief James Skellington reported the following:

1. Statistics for the month of July included 4 search/rescue, 4 accidents, 2 extractions, and 7 miscellaneous calls.

2. Fire Safety Tip – Have a regularly scheduled smoke detector check event on birthdays, anniversaries, or holidays.

3. Co-response protocol clarification – The fire department has been in co-response mode for the past 15 years that was created because there are 21 EMS sites and 42 fire stations, and has much faster response. HFD companies are on call 24-hours a day for fires and emergencies. HFD is dispatched to all medical emergencies when HFD response time is faster than EMS. These include respiratory problems, chest pains, diving accidents, drug overdose, childbirth, etc.

4. Regarding the use of sirens during the late night or early morning hours, the Fire Department is an emergency response and is exempt from the traffic code regulations.

Battalion Chief James Skellington was thanked for attending the meeting.

Honolulu Police Department (HPD) – Lt. Eber distributed July statistics report and highlighted the following:

1. Statistics for the month of July 2006 included aggravated assault 1, alarm calls 108, arguments 148, simple assault 18, attended death 3, auto theft recovery 12, burglary 9, drugs/narcotics 7, DUI 12, motor vehicle theft 16, graffiti 14, indecent exposure 2, identification theft 1, injured or sick cared for 7, property damage 34, MVA (motor vehicle accidents) 139, theft 45, rape 1, robbery 1, runaway 26, runaway cancelled (returned) 13, suspicious vehicle 31, threatening 12, and UEMV (unauthorized entry into motor vehicle) 51.

2. Monthly comparison July and June: murder/manslaughter 0/0, sex assault 0/5, robbery 6/8, aggravated assault 8/9, burglary 42/70 (down 40%), theft 130/168 (down 23%), UEMV 150/139, auto theft 38/32.

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REGULAR MEETING MINUTES
THURSDAY, NOVEMBER 16, 2006
WINDWARD COMMUNITY COLLEGE
AKOAKOA HALE

CALL TO ORDER: Chair Roy Yanagihara called the meeting to order at 7:00 p.m., a quorum was present.

MEMBERS PRESENT: Clyde Morita, Patty Yamashiro-Hironaka, John Sabas, Felipe San Nicolas, Wendell Lum, Roy Yanagihara, Paul Friel, John Flanigan, Glenn Ida, Larry Zdvoracek, Bill Sager, L.C. Morris, Kristopher DeRego (appointed tonight) (14 of 17).

MEMBERS ABSENT: Rick Karasaki**,** Elizabeth Gaisthia, (1 vacancy, Subdistrict 1)

GUESTS: Dave Underwood, Dan Munro, Daisy T. Payton (Kokokahi Community Association), Hazel Malmbeck, Jessica McDunn (Hawaii Pacific University), Caroldean Fischer, Raleigh Bailey, Lt. Dave Eber (Honolulu Police Department, District 4-Kaneohe), Jim Merrel, Carol Merrel, Mike Hinkley, Anna Hinkely, Brian Moriki, Leve K. Watson (Springboard), Keala Watson, Captain Robert Methered (Honolulu Fire Department, Kaneohe), Donna Rewick, Kathy Tyler, Delane Dewey, Ken Dewey, Bob Holihom, Carlyn Orr (HHF Planners), Jerry Kaluhiwa, Rocky Kaluhiwa, Donna Camuel (Paepae O Heeia), Representative Pono Chong, Senator Jill Tokuda, Art Machado, Jr. (Kaneohe Christmas Parade), Scott Ishikawa (Governor's Office/Department of Transportation), Nola J. Frank (Neighborhood Commission Office staff).

FILLING OF VACANCIES SUBDISTRICT 1 AND 11:

Subdistrict 11 – Kristopher DeRego expressed interest in filling the vacancy and gave a brief background about him. Chair Yanagihara called a two minutes recess for the swearing in of the newly appointed board member.

The meeting resumed at 7:05 p.m.

APPROVAL OF OCTOBER 2006 REGULAR MEETING MINUTES – The following corrections/additions were made: Pages 7 and 8, Kokokahi Place, Peter Cooper Property Follow up corrections/additions from resident Birdsong (see attached).

Morris moved and seconded by Flanigan to accept the October 2006 regular meeting minutes as corrected. The motion carried unanimously.

APPROVAL OF NOVEMBER AGENDA PLANNING AND COMMITTEES' MEETING MINUTES –Flanigan moved and seconded by Morris to accept the November agenda planning and committees' meeting minutes as circulated.

TREASURER'S REPORT: Patty Yamashiro-Hironaka reported expenditures for the month of October 2006 were $36.62, leaving a balance of $3,846.59 in the Operating and Publicity Accounts; the Refreshment Account remains at $120.00. The treasurer's report was accepted, subject to audit.

PUBLIC SAFETY AND MILITARY REPORT:

Honolulu Fire Department (HFD) – Captain Robert Methered gave the following report:

1. Follow up to questions asked at the last board meeting relative to the building fire in Kuliouou the night of the earthquake:

    - 11 Apparatus: 5 Engines, 2 Ladders, 1 Rescue, 1 Battalion Chief, and 2 Water Tankers.
    - One battery operated smoke alarm was found located on the dining room ceiling near the kitchen.

NEW BUSINESS:

Heeia Fishpond Planned Improvements Presentation – Corlyn Orr (Helber, Hastert & Fee) reported the following: Since her presentation in July, a Draft Environmental Assessment (EA) was prepared, published and circulated. Kamehameha Schools (KS) owners of the Heeia Fishpond is in the process of finalizing an Environmental Assessment viewing the public comments, and are preparing an Conditional Use Permit Major to be submitted to the City Department of Planning and Permitting. The project is accessed from Ipuka Street off of Kamehameha Highway. Heeia Fishpond is one of the last remaining in tact fishpond on Oahu, and is on the National Register of Historic Places. The landowner Kamehameha Schools is committed to preserving and restoring the fishpond. Working with a non-profit organization called Paepae O'Heeia is removing mangrove, removing the wall and trying to reintroduce aquaculture into the pond. Educational programs are run with groups such as Charter Schools, immersion programs, and the University of Hawaii and Kamehameha students.

The project being proposed is the replacement of an existing caretaker's residence and construction of permanent aquaculture support facilities and utility system improvements, including an air-conditioned office space, toilets and shower/changing area, equipment and material storage, and parking. The project is important to serve what is there now and not intended for expansion.

Questions and comments:

1. The estimated cost for the project is $200,000 for the two-story 2,200 square foot building.

2. The current facility has a cesspool on Ipuka Street.

3. Morita questioned why when the request was made to notify surrounding neighbors he did not receive a notice. Per the July presentation, does the EA address the impact on neighbors in the area regarding parking and visitors? Orr replied property owners adjacent to the fishpond were notified. The EA addressed a range of issues, traffic issues, land use, etc. On street parking is used for an event, with a maximum of two buss drop-offs kids at a time, and park on Ipuka Street. The project does not introduce any more visitors to the fishpond. They are working to add more parking on the site, which is a one-acre parcel. Morita asked if the EA addresses satisfying residents concerns. Orr answered it address the issue to a point, however if the concerns are not being addressed mitigation is proposed.

4. Chair asked if Kamehameha Schools own any property on the Heeia side of the fishpond. The answer was yes. He pointed out the bushy area on the may and asked if that area could be used for parking or the caretaker's dwelling. Orr replied it is a possibility.

5. Lum asked if there is a requirement for and Environmental Impact Statement (EIS). Orr responded not at this point. The thirty-day commitment ended in September. It was added they are not forcing the need for an EIS, and the EA is not finalized.

6. Resident Fred Lenchanko gave a brief history of the area. He also asked why he did not receive a notice. During events about 20 cars park (down) on Ipuka Street impacting the neighbors. Event notices are put up prior to the event for the neighbors. Last week a huge Matson container was parked in the fishponds existing driveway. Secondly, an alternative should be found, such as building the caretaker's dwelling on the Heeia State Park side. With the mini buses and visitors going to the site there is no street parking on weekends.

7. An audience member residing next to the fishpond expressed opposition.

8. Chair asked that written testimony be submitted.

9. To contact Corlyn Orr log on to: www.colsonorr@hhf.com.

10. This item will be placed on the December agenda for further discussion.

Corlyn Orr was thanked for attending the meeting.

Citizen of the Year Nominations – This item will be taken up at the December meeting.

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MINUTES OF REGULAR MEETING
THURSDAY, DECEMBER 21, 2006
WINDWARD COMMUNITY COLLEGE

CALL TO ORDER: Chair Yanagihara called the meeting to order at 7:00 p.m., a quorum was present.

MEMBERS PRESENT: Clyde Morita, Patty Yamashiro-Hironaka, Felipe San Nicholas, Roy Yanagihara, Paul Friel, John Flanigan, Elizabeth Gaisthia, L.C. Morris, Kristopher DeRego, Glenn Ida, Bill Sager.

MEMBERS ABSENT: Rick Karasaki, Niko Koga, John Sabas, Wendell Lum, and Larry Zdvoracek.

GUESTS: Corlyn Orr (Helber, Hastert & Fee), Don Munro, Mahina Duarte (Paepae o He'eia), Warren B. Ditch, Jr., Malcolm and Andrea Lee, Dr. Alan & Michele Papst, Tammy Rodriguez, Nelson Rodriguez, Mahealani Cypher (Koolaupoko Hawaiian Civic Club), JoAnne Hamada (KSBE), D, Underwood, J. Merrell, C. Merrell, Kamakana Kaimuloa, Keala Watson (U.S. Diving Club), Peyton & Dawn Daido, Leve K. Watson (U.S. Diving & AAU), D.M. Hinkley, Caroldean Fischer, Hi'ilei Kawelo (Paepae o He'eia), Senator Jill Okuda, Shannon Wood (Windward Homeless Coalition), Venus Acoba (Councilmember Barbara Marshall's Office), Les Chang (Mayor's Office), Nola J. Frank (Neighborhood Commission Office staff).

FILLING OF VACANCY, SUBDISTRICT 1 (1 seat) – There were no interested persons present to fill the vacancy.

APPROVAL OF NOVEMBER 2006 REGULAR MEETING MINUTES: Corrections and Additions:

Corlyn Orr, Pages 8 and 9 should read:

- "...Hee'ia Fishpond **Aquaculture Support Facilities** Presentation..."
- Line 5, The project **site** is accessed from Ipuka Street off Kamehameha Highway.
- Line 7, "...The landowner Kamehameha Schools is committed to preserving and restoring the fishpond **and is w**orking with a non-profit organization called Paepae **o** Hee'ia **to** removing mangrove, **repair** the **fishpond** wall and reintroduce the aquaculture into the pond. **Paepae o Hee'ia also provides e**ducational programs **for** groups such as **DOE** Charter Schools, immersion programs, and the University of Hawaii and Kamehameha School students..."
- Paragraph 2, last sentence, "... The project is important to serve what is there now and **is** not intended **to support** expansion.
- Questions, answers and comment:
  - " ...2. **There is an existing cesspool on-site that is no longer used. A new connection to the City's sewer system on Ipuka Street would be installed to service the new facilities**..."
  - "...3.Orr replied property owners adjacent tot he fishpond **parcel** were notified. **The project site is less than one acre, which makes it difficult to accommodate all**

parking needs on-site and makes on street parking for visitors necessary. School buses drop off students on Ipuka Street because of the steepness of the driveway and to minimize the impacts to neighbors that live next to the driveway. On street parking is used for fishpond visitors. During larger community events, arrangements have been made for off-site parking with shuttle service to the fishpond. Paepae o Hee'ia is sensitive o their neighbors, and tries to be a good neighbor..."

  - They are working to add more parking on the site, which is **less than a** one-acre parcel. Orr answered that the **EA addressed a range of issues, traffic issues, land use, etc. Each resource area is described in terms of the existing situation and the anticipated impact, with possible mitigation measures identified, if impacts are identified**..."
  - "...4. Chair asked if Kamehameha Schools own any property on the Hee'ia **State Park** side of the fishpond. He pointed out the bushy area on the map **next to Hee'ia State Park** and asked if that area could be used for parking or the caretaker's dwelling. Orr replied **there are logistical problems to consider with having the parking on the opposite side of the fishpond (how do we get people from one side of the pond safely to the other?), but it is a possibility that may be reconsidered**...'
  - "...5. The thirty-day **Draft EA comment period** ended in September. **The EA is not finalized yet, but an EIS is no anticipated**...'

Morris moved and seconded by Flanigan to accept the November 2006 Regular Meeting Minutes as corrected. The motion carried unanimously, 11-0-0.

APPROVAL OF DECEMBER AGENDA PLANNING AND COMMITTEES' MEETING MINUTES: Chair deferred this item.

TREASURER'S REPORT NOVEMBER 2006 – This item was deferred until the January 2007 meeting.

PUBLIC SAFETY AND MILITARY REPORT:

Honolulu Fire Department (HFD) – Acting Captain Sean Kamai reported statistics for the month of November included 1 structure and 5 vehicle fires, 86 medical, 2 search/rescue, and 31 miscellaneous calls. Holiday safety tips on Christmas tree safety and tip on tree decorating were given.

Questions, answers and comments: Follow up will be done if vandals caused the 5 vehicles fire.

Acting Captain Sean Kamai was thanked for his report.

Honolulu Police Department (HPD) – Lt Robinson reported:

- Statistics for the month of November included burglaries 20, graffiti 10, robbery 1, and UEMV (unauthorized entry into motor vehicle) 29.

pool area is fenced, there have been incidents of trespassers during the night. Concern is that an incident could occur, especially with the board there. There would be a need for extra lifeguards. Currently there is a shortage of lifeguards. Sager mentioned as a long time pool user, one of the basic rules was if another swimmer jumps into the pool and near another swimmer they would be ejected. Chang answered that he wished this was the day and age where people respected each other, but just kicking anyone out of the pool would be difficult. He added the letter referred to by Watson was sent prior to the opening of the multi-million Central Oahu Regional Diving Complex (designated exclusively for diving) for the island of Oahu. The purpose was to take away concerns of swimmers and focus on the diving. The number of high divers is small versus broader users, swimmers.

The resolution failed to carry by a vote of 7-1-3 (Aye: DeRego, Friel, Flanigan, Gaisthia. Morris, Sager, Ida; Nay: Yanagihara; Abstention: Morita, Yamashiro-Hironaka, San Nicholas). Chair announced the required votes to achieve a resolution/motion is nine.

He'eia Fishpond Improvements – Corlyn Orr introduced Mahina Paishon, Executive Director for Paepae o He'eia. Paishon addressed the following residents concerns with the short-term action plan (circulated):

- Apologized for any inconvenience caused to surrounding neighbors of the fishpond.
- Residential parking congestion –limit the number of cars permitted to park within the residential area (5-7) for Saturday events; secure an alternate overflow parking site; and provide shuttling services via 15 passenger vans, as funds are available.
- Noise generated by reversing buses and 15 passenger vans –per Monday to Thursday field trips and project-based activities, created on-site turn around area for 15 passenger vans to reduce noise generated by reverse motion alarm; minimize bus drop offs to the extent possible.
- Noise associated with participants and volunteers – Per a Saturday event, post a staff person at the pond entrance to monitor logistics and remind participants and volunteers to be courteous.
- Long term strategy development – solicit feedback from the community for future logistical planning for programs, i.e.: steering committee; collaborate with Friends of He'eia, State Parks – He'eia State Park, King Intermediate School.
- On-going activities to foster open communication within the resident community – hold annual open houses; and disseminate quarterly newsletters to communicate calendar of events and activities.

Questions, answers and comments:

1. Sager said to his understanding a turn around facility would be build to allow the buses to turn without having to backup because the backup alarm required by OSHA is objectionable. Paishon clarified it is actually a turn around area for 15 passenger vans. The access point road to the fishpond is too steep for buses to turn around.

2. Sager noted the plans include addressing the parking issues by having shuttles from established parking areas. Paishon replied yes as funds are available. It was not included as part of their budget for this coordination and is seeking other finance sources. The fishpond is owned by Kamehameha Schools.

3. Morita asked Paishon if she was aware of trespassing concerns, noise issues, etc., if so, is anything being done to address these concerns. In response, as of late noise concerns were raised by a few households. They intend to immediately address the noise caused by participants and volunteers by posting a staff person at the front entrance to oversee and monitor logistics and be courteous and mindful. Regarding the trespassing that concern has not been raised.

4. Morita noted if actions were agreeable with the concerned neighbors what relationship does Paepae o He'eia have with Kamehameha Schools such that her ongoing attention to these issues will be a continuing part of her stewardship. Paishon replied yes and reiterated the question is what part does Kamehameha Schools have in the process to address these issues. Morita asked the link between the Paepae o He'eia organization and the landowner. Paishon answered the organization operates through a memorandum agreement with Kamehameha Schools. Paepae o He'eia tries to foster open communication with the community as well as the landowner.

5. San Nicholas asked if events are public noticed? Paepae o He'eia newsletters are distributed three times a year with contact information. (Newsletters were available for interested persons to review).

6. San Nicholas asked who has the final say regarding issues, Paishon or Kamehameha Schools. The response was it depends on the issue. She makes decisions pertaining to her program. Contact for Kamehameha Schools would be Ulalia Woodside.

7. Chair announced receipt written correspondence. DeRego read the six letters of correspondence: (1) Support: Makana Paris of Chaminade University, Marion Ano, John Reppun ofKualoa-He'eia Ecumenical Youth Project (KEY) and Michael Kaihue of Malama 'Aina. (2) Against: asking for specific conditions to the permit and access from Ipuka Street eliminated, objection to traffic and noise -from Jim and Carol Merrell (Alii Bluff resident's) Clarification: A petition with 21 signatures asking for more details regarding the project. (3) One letter of correspondence was seeking project clarification.

8. Chair noted that all correspondence would be attached to the records and incorporated into the minutes. No board action would be taken, and that a presentation to the board is just another step to the permit process. Paishon reiterated to the resident community that they are more than willing to work with the neighbors and extended the organization's doors to them.

9. In response to Morita, Orr said the Conditional Use Permit (CUP) goes before the Department of Planning and Permitting (DPP) with a public hearing as part of the application process. The application is yet to be submitted. Morita noted that he would be presenting a resolution at the January meeting to DPP pertaining to the concerns raised by the resident neighbors. Chair explained that the written testimonies would be attached to the minutes. He added it has been the practice of DPP to review the minutes of the Neighborhood Board proceedings. So address Morita's concerns, normally DPP will look at what has transpired before coming to the DPP section. A resolution would not be necessary. However, Morita offered to present a resolution at the January 2007 meeting.

Comments from the community: Chair reminded everyone that the minutes are summarized.

1. Marie Manuele Gavigan: Speaking on behalf of the Alii Landing community raised major concerns about what the impact of the plans would have on the community. Orr has agreed to meet with the Alii Landing neighbors to discuss the concerns. They are hoping that a representative from Kamehameha Schools attends the meeting. Another concern is the lack of communication from Kamehameha Schools.

2. Don Munro asked what are the relationship and the other educational organizations, such as Chaminade, and others that come to the fishpond. What are they contributing to Paepae o He'eia? Paishon replied they are the program co-coordinators; develop the educational framework, curriculum activities for the general public. Not every organization provides financial backing, only those that can afford it. The aim of Paepae o He'eia is not to generate a profit, but just cover costs. The organization has a contractual relationship with Charter Schools and they provide a certain amount of dollars to compensate for services provided.

3. Mahealani Cypher: The Koolaupoko Hawaiian Civic Club took action at their December. A letter is forthcoming from the club's president. The club voted in favor of the curator's cottage. She thinks the problems are solvable in other ways. She stated good neighbor's is a two-way thing.

4. Don Munro relayed when his house was purchase Kamehameha Schools had a drivable road, which was all sold for cash and put in an inadequate road. He stated that it is unfair that Kamehameha Schools has taken money, got rid of the access road and making it the communities problem, which is not fair.

5. Bob Togood: Agree that the fishpond would be a great resource for educational and cultural awareness for learning. It needs to be done with respect for each other. He thinks the entire community feels that Kamehameha Schools went behind their backs, because he received no communication relating to this project. The only notice received was a picnic last summer at the fishpond. To be community friendly, they should be informed, give input and try to work with them as the project is developed. To this point communication has been non-existent to the area residents. They are looking for communication from Kamehameha Schools, and would like to see the process stopped to hear the exact plan and provide input.

6. Mike Hinkley (Vice President for the Alii Landing homeowners): Not mentioned is economic development of what the plan is going to be, such as aquaculture. Was unaware of a limu and fish sale. One concern is if an economic program is successful and expands then it will create more problems that are of concern now. He knows that the group is a non-profit organization, but the concerns are the economical expansion that is of concern is in terms of the long-term effects of the proposed development now.

7. Morita thanked the board for allowing the residents to express themselves.

8. Chair asked if Kamehameha Schools is bound by the agreements made with the residents. Orr replied that the Conditional Use Permit (CUP) has conditions. The applicant is Kamehameha Schools. Chair commented that there is no one from Kamehameha Schools here this evening to work out the agreement.

9. Lenchanko gave a brief history of the area.

NEW BUSINESS – None.

COMMITTEE REPORTS – There were no Committee reports.

ANNOUNCEMENTS:

- The next Planning & Committees' Meeting will be held on Tuesday, January 2, 2006, 7:00 pm., Kaneohe Community and Senior Center
- Next Regular Meeting will take place at Windward Community College, Akoakoa Room on Thursday, January 18, 2007, at 7:00 p.m.

ADJOURNMENT – Morita moved and seconded by Ida to adjourn the meeting. There were no objections. The meeting adjourned at 9:17 p.m.

Submitted by,
Nola J Frank
Neighborhood Assistant

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REGULAR MEETING AGENDA
JANUARY 18, 2007
AKOAKOA HALE 103~106
WINDWARD COMMUNITY COLLEGE
47-720 KEAALAHALA ROAD
7:00 P.M.

1. CALL TO ORDER – Chair Roy Yanagihara

2. FILLING OF VACANCIES, SUBDISTRICT 1 (See attached map, call for persons interested in filling Kaneohe Neighborhood Board No. 30 vacancies).

3. APPROVAL OF DECEMBER 2006 REGULAR MEETING MINUTES*

4. APPROVAL OF JANUARY AGENDA PLANNING AND COMMITTEE' MEETING MINUTES*

5. TREASURER'S REPORT – November and December 2006 – Elizabeth Gaisthia

6. PUBLIC SAFETY AND MILITARY REPORT
- 6.1 Honolulu Fire Department – Duty Officer
- 6.2 Honolulu Police Department – Duty Officer
- 6.3 Marine Corps Base Hawaii Liaison – Sarah Fry

7. PUBLIC INPUT & RESIDENTS' CONCERNS

9. ELECTED OFFICIALS' REPORTS
- 9.1 Mayor's Representative
- 9.2 Council Chair Barbara Marshall
- 9.3 Governor's Representative
- 9.4 U.S. Representative
- 9.5 Senator Elect Jill Tokuda
- 9.6 Senator Clayton Hee
- 9.7 Representative Ken Ito
- 9.8 Representative Pono Chong

10. COMMUNITY GROUPS AND ORGANIZATIONS
- 10.1 Hope Chapel
- 10.2 Hawaii Pacific University

11. UNFINISHED BUSINESS
- 11.1 Heeia Fishpond Resolution*
- 11.2 Celebrate Kaneohe Resolution*

12. NEW BUSINESS
- 12.1 Windwardside News

13. COMMITTEE REPORTS
- 13.1 Legislative
  - 13.1.1 State Legislature Committee – Chair Roy Yanagihara
  - 13.1.2 City & County Ordinance Committee – Chair Paul Friel
- 13.2 Public Health & Safety – Chair John Flanigan
  - 13.2.1 Mental Health Committee – Chair (vacant)
  - 13.2.2 Public Safety Committee – Chair Felipe San Nicolas

- 13.3 Planning Committee – Chair Clyde Morita
- 13.4 Transportation Committee – Chair (vacant)
- 13.5 Education Committee – Chair Patty Yamashiro-Hironaka; Vice Chair – Felipe San Nicolas
- 13.6 Environmental Committee – Chair Bill Sager
- 13.7 Windward Civilian/Military Committee – Chair John Flanigan
- 13.8 OMPO Citizen Advisory Committee – Chair Wendell Lum
- 13.9 Neighborhood Board Website Contact Committee – Chair Paul Friel
- 13.10 Publicity Committee – Chair John Sabas
- 13.11 Haiku Stairs Special Task Force – Chair L.C. Morris

14. ANNOUNCEMENTS
- 14.1 The next agenda Planning & Committees' Meeting will be held on Tuesday, February 6, 2007, Kaneohe Community and Senior Center, 7:00 p.m.
- 14.2 Next Regular Meeting will take place at the Windward Community College, Akoakoa Room on Thursday, February 15, 2007 at 7:00 p.m.

15. ADJOURNMENT

*** Voting Required**
**** Due to time constraints, presentation shall not exceed 10 minutes**

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PROPOSED RESOLUTION – KANE'OHE NEIGHBORHOOD BOARD

Related to He'eia Fishpond Planned Improvements

WHEREAS, Kamehameha Schools (KS), the owner of the He'eia Fishpond, is proposing improvements to the buildings at the fishpond site (TMK: 4-6-05: portion of 001 located at 46-077 Ipuka Street, Kane'ohe, Oahu, Hawaii), and

WHEREAS, KS proposes to remove an existing caretakers residence and construct permanent aquaculture support facilities, including an air-conditioned office building, toilets and shower/changing area, equipment and materials storage, and parking, and

WHEREAS, KS hired Helber Hastert & Fee, Planners (HHFP), to prepare and submit an Environmental Assessment to submit to various State and City agencies, and

WHEREAS, representatives of HHFP have presented various drafts of the Environmental Assessment to the Kane'ohe Neighborhood Board at its July, November and December 2006 meetings, and

WHEREAS, KS has a memorandum of agreement with Paepae O He'eia (POH), a not-for-profit organization established in 2004, to restore and preserve the fishpond and administer the fishpond as a cultural and educational resource, and

WHEREAS, residents of the adjacent neighborhood, including Alii Landing and Alii Bluffs, have been complaining to KS and POH about parking, noise, and trespassing problems for the past year, with little satisfaction, and

WHEREAS, KS through its agent HHFP, failed to properly notify its neighbors of its planned improvements and potential impacts, and

WHEREAS, residents of the adjacent neighborhood have requested that the permit application process be stayed until they have been properly notified of KS's proposal, and

WHEREAS, residents of the adjacent neighborhood have requested that authorized representatives of KS meet with them in early January 2007 to discuss the problems caused by the current operations and the proposed improvements, and

WHEREAS, this proposed resolution by the Kane'ohe Neighborhood Board was duly announced in its Agenda for the January 18, 2007 meeting,

NOW THEREFORE, BE IT RESOLVED BY THE KANE'OHE NEIGHBORHOOD BOARD THAT,

We support the concerns and alternatives raised by residents to reduce the impact of operations at the He'eia Fishpond on their residential neighborhood, and

We request that Kamehameha Schools meet with residents and resolve the problems caused by its authorized representatives, which impact on the adjacent residential neighborhood, and

We request that the Department of Planning and Permitting, City and County of Honolulu, ensure that residents' concerns are duly addressed and resolved, prior to approving any conditional use permit.

Copies of this resolution shall be sent to the Mayor of the City and County of Honolulu, Council Chairperson Barbara Marshall, the Director of the Department of Planning and Permitting, Kamehameha Schools, Helber Hastert & Fee, Planners, and Ms. Marie Manuele Gavigan (representative of residents from the Alii Landing neighborhood c/o 46-120 Ipuka Place, Kane'ohe, Hawaii 96744).

This resolution was duly adopted by the Kane'ohe Neighborhood Board at its regular meeting on January 18, 2007.

_____ _____

Roy Yanagihara, Chairperson Date

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 2, 2007

Mr. Roy S. Yanagihara, Chair
Kāne'ohe Neighborhood Board
45-139 Mahalani Circle
Kāne'ohe, HI 96744

Dear Chair Yanagihara:

Kāne'ohe Neighborhood Board Resolution
Related to the He'eia Fishpond Planned Improvements
He'eia, Ko'olaupoko, O'ahu

Thank you for the opportunity to present the He'eia Fishpond Aquaculture Support Facilities Project to the Kāne'ohe Neighborhood Board (Board) and its constituents at the November 2006 regular meeting, and for allowing us to participate in the Board's discussion on the project at the December 2006 regular meeting.

This letter is in response to the above-referenced resolution that was approved by the Board on January 18, 2007. The resolution incorrectly states that, "…KS through its agent HHFP, failed to properly notify its neighbors of its planned improvements and potential impacts…" We believe that the statement falsely and unfairly suggests that Kamehameha Schools and Helber Hastert & Fee Planners were negligent in their efforts to inform the surrounding neighbors of the project. We respectfully ask that the Board withdraw this accusation for the reasons listed in our letter dated January 5, 2007 to Ms. Marie Gavigan of the Ali'i Landing Community Association, which you were originally cced on (and is also enclosed).

Thank you for your consideration of this important matter.

Sincerely,

Thomas A. Fee, AICP
Principal

Enclosure

cc: Mayor Mufi Hanneman, City and County of Honolulu
Chairperson Barbara Marshall, Honolulu City Council
Director Henry Eng, Department of Planning and Permitting
Ms. Marie Manuele Gavigan, Ali'i Landing Community Association

cc via email: Jo Anne Hanada, Kamehameha Schools
Mahina Paishon, Paepae o He'eia
Jamie Peirson, Department of Planning and Permitting
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

APPENDIX I
Chapter 343, HRS Draft EA Consultation

Helber Hastert & Fee
Planners, Inc.

June 15, 2006

To: Distribution

Dear Sir or Madam:

He‘eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment Pre-Assessment Consultation
He‘eia , Ko‘olaupoko, O‘ahu (Tax Map Key Parcel 4-6-05: 001)

We have been contracted by Kamehameha Schools to prepare an environmental assessment (EA) in support of proposed facility improvements at He‘eia Fishpond. Proposed improvements include the replacement of an existing Quonset hut historically used as a caretaker’s residence and the construction of permanent aquaculture support facilities and associated utility system improvements. Proposed improvements are intended to reinforce the continued success of the existing aquaculture program and ensure the continuous, long-term use of the fishpond by providing facilities that promote the efficiency and productivity of existing operations. Replacement of the existing caretaker’s residence would provide accommodations for a caretaker to remain on-site at all times and monitor against poaching and vandalism, which are on-going problems at the fishpond. Proposed aquaculture support facilities include an air-conditioned office space, toilets and a shower/changing area, equipment and material storage, and parking improvements that would meet the needs of the permanent program staff and the various ecological, educational, and cultural programs that utilize the fishpond.

He‘eia Fishpond is one of the last intact fishponds remaining on O‘ahu. It is a seashore pond, or *loko kuapā*, located on the shoreline of Kāne‘ohe Bay on the windward side of O‘ahu. The approximately 0.75-acre project site is located near the southernmost corner of the fishpond, below Ipuka Street where the existing aquaculture operations are currently based. The entire fishpond and portions of the adjacent land-based areas, including part of the project site, is listed on the National Register of Historic Places (State Historic Site Number 80-10-327). The enclosed map shows the property location and the historic site boundaries.

An EA prepared in compliance with Chapter 343, Hawai‘i Revised Statutes is required because the proposed project involves use of land within a historic site. This pre-assessment consultation is intended to ensure that interested parties are notified of the forthcoming Draft EA, and that all relevant environmental, economic and technical issues and concerns are identified and addressed. A brief description of the project is enclosed for your consideration. Should you have any written comments, we invite you to submit them to the following address by June 30, 2006:

Helber, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, HI 96813
ATTN: Corlyn Orr

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Helber Hastert & Fee
Planners, Inc.

Thank you for your participation in this process. If you would like to receive a copy of the Draft EA and participate in the environmental review process, or if you have any questions or concerns, please contact Corlyn Olson Orr, project planner, at (808) 545-2055 or via e-mail at colsonorr@hhf.com.

Aloha,

Thomas A. Fee, AICP
Principal

Attachments

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

Regulatory Branch

July 24, 2006

File No. POH-2006-272

Ms. Corlyn Orr
Helber, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Orr:

This responds to your request on behalf of Kamehameha Schools for written comments to a draft Environmental Assessment (dEA) pre-assessment consultation for proposed improvements to the existing aquaculture facilities at the Heeia Fishpond at 46-077 Ipuka Street, Kaneohe, Oahu Island (TMK: (1) 4-6-5:001). The proposed improvements include the replacement of a caretaker's residence and the construction of permanent aquaculture support facilities and associated utility system improvements.

The dEA should indicate whether waters of the United States, as represented by perennial or intermittent streams, and wetlands are in, or adjacent to, or absent from, the proposed project area. The dEA should describe in appropriate sections the potential for waters of the U.S. to be impacted by construction of project structures and associated ground disturbing activities within, and adjacent to, the proposed improvement area. Upon our receipt of the dEA, it may be determined whether a Department of Army (DA) permit for Section 404 activities of the Clean Water Act may, or may not be, required for the proposed improvements.

Thank you for your consideration of potential impacts to the aquatic environment of the Heeia watershed. If you need further assistance, please contact Ms. Connie Ramsey by phone at 808-438-2039, by facsimile at 808-438-4060, or by electronic mail at Connie.L.Ramsey@usace.army.mil. Please reference the file number assigned to this project in any future correspondence with us.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Helber Hastert & Fee
Planners, Inc.

August 2, 2006

25th ANNIVERSARY 1980 - 2005

Mr. George P. Young, P.E.
Chief, Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, HI 96858-5440

Dear Mr. Young:

He'eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He'eia, Ko'olaupoko, O'ahu, Hawai'i

Thank you for your letter dated July 24, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge your response indicating that the Draft EA should indicate whether waters of the United States (U.S.) are present within the vicinity of the project site, and describe any potential impacts of the proposed project on such resources. We will consider your comments during preparation of the Final EA, and will revise the Draft EA as appropriate to address your comments.

Your letter and this response will be included in the Final EA within the section describing the "Parties Consulted During Preparation of the Draft EA." We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD06/2533

July 12, 2006

Corlyn Orr
Helber, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, HI 96813

RE: Request for Comment on the Proposed He'eia Fishpond Aquaculture Support Facilities, He'eia, O'ahu, TMK 4-6-05: 001.

Dear Corlyn Orr,

The Office of Hawaiian Affairs (OHA) is in receipt of your June 15, 2006 submission and offers the following comments:

Our staff has no comment specific to the above-listed submission at this time. Thank you for your correspondence.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck, Native Rights Policy Advocate, at (808) 594-0239 or jessey@oha.org.

Aloha,

Clyde W. Nāmu'o
Administrator

Helber Hastert & Fee
Planners, Inc.

July 31, 2006

25th ANNIVERSARY 1980 - 2005

Mr. Clyde W. Nāmu'o
Administrator
Office of Hawaiian Affairs
State of Hawai'i
711 Kapi'olani Boulevard, Suite 500
Honolulu, HI 96813

Dear Mr. Nāmu'o:

He'eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He'eia, Ko'olaupoko, O'ahu, Hawai'i

Thank you for your letter dated July 12, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge your response indicating that your agency has no specific comments at this time.

Your letter and this response will be included in the Draft EA. We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

BOARD OF WATER SUPPLY

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

June 28, 2006

RECEIVED
JUN 30 2006
HELBER, HASTERT & FEE PLANNERS

Ms. Corlyn Olson Orr
Helber, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Orr:

Subject: Your Letter Dated June 15, 2006 on the Draft Environmental Assessment
Pre-Assessment Consultation for the He'eia Fishpond Aquaculture Support Facilities
TMK: 4-6-5:1, He'eia, Ko'olaupoko, Oahu

Thank you for the opportunity to comment on the subject document.

The existing water system cannot provide adequate fire protection to the proposed development. Our standards require a fire hydrant to be located within 125 linear feet of the proposed development. Therefore, the developer will be required to install a fire hydrant along Ipuka Street, in the vicinity of the proposed development. This improvement will provide the necessary water system improvements to upgrade the fire protection and water service in accordance with our Water System Standards. The construction drawings should be submitted for our review. However, please be advised that this information is based upon current data and, therefore, the Board of Water Supply reserves the right to change any position of information stated herein up until the final approval of your building permit. The final decision on 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.

The on-site fire protection requirement should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

K. Shida

KEITH S. SHIDA
Principal Executive
Customer Care Division

Water for Life . . . Ka Wai Ola

Helber Hastert & Fee
Planners, Inc.

July 31, 2006

25th ANNIVERSARY 1980 - 2005

Mr. Keith S. Shida, Principal Executive
Customer Care Division
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawai'i 96843

Dear Mr. Shida:

He'eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He'eia, Ko'olaupoko, O'ahu, Hawai'i

Thank you for your letter dated June 28, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge your comments on water system issues including system improvements, plan approvals, and Water System Facilities Charges.

The proposed development will include the necessary water system improvements to meet current Water System Standards and comply with cross-connection control and backflow prevention requirements. Fire protection requirements will be coordinate with the Honolulu Fire Department, and construction drawings will be submitted for the Board's approval. The final decision on the availability of water will be confirmed when the building permit is submitted for approval, at which time payment of the Water System Facilities Charges will be required.

Your letter and this response will be included in the Draft EA. We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
ACTING DIRECTOR

DEPUTY DIRECTOR

June 29, 2006

RECEIVED
JUN 30 2006
HELBER, HASTERT & FEE
PLANNERS

Ms. Corlyn Orr
Helber, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Orr:

Subject: Heeia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment Pre-Assessment Consultation
Heeia, Koolaupoko, Oahu
TMK: 4-6-05:001

Thank you for giving us the opportunity to comment on the above Draft Environmental Assessment (DEA) Pre-Assessment Consultation.

The Department of Design and Construction recommends that since there is no sewer service to the existing parcel, a sewer connection application from the Department of Planning and Permitting should be submitted.

Should you have any questions, please call Jay Hamai, Assistant Chief of our Wastewater Division, at 527-5003.

Very truly yours,

Eugene C. Lee, P.E.
Acting Director

ECL:lt (159286)

c: DDC Wastewater Division

Helber Hastert & Fee
Planners, Inc.

July 31, 2006

25th ANNIVERSARY 1980 - 2005

Mr. Eugene C. Lee, P.E.
Acting Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, HI 96813

Dear Mr. Lee:

He'eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He'eia, Ko'olaupoko, O'ahu, Hawai'i

Thank you for your letter dated June 29, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge your comment that a sewer connection application should be submitted to the Department of Planning and Permitting.

Your letter and this response will be included in the Draft EA. We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jay Hamai, Department of Design and Construction Wastewater Division

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4529 • Fax: (808) 523-4730 • Internet: www.honolulu.gov

MUFI HANNEMANN
MAYOR

MELVIN N. KAKU
DIRECTOR

TP6/05-159294R

July 10, 2006

RECEIVED
JUL 12 2006
HELBER, HASTERT & FEE
PLANNERS

Ms. Corlyn Olson Orr
Helber Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Orr:

Subject: Heeia Fishpond Aquaculture Support Facilities

Thank you for the June 15, 2006 letter from Mr. Thomas Fee, requesting our pre-assessment comments on the subject project. We have the following comments for your consideration as you prepare the draft environmental assessment (EA):

1. The project's impact on the traffic on Ipuka Street and Kamehameha Highway should be discussed in the draft EA.

2. The draft EA should also address any effect that the project may have on public transit operations on Kamehameha Highway.

We look forward to reviewing the draft EA. Should you have any questions regarding these comments, please contact Ms. Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

Melvin N. Kaku

MELVIN N. KAKU
Director

Helber Hastert & Fee
Planners, Inc.

July 31, 2006

25th ANNIVERSARY 1980 - 2005

Mr. Melvin Kaku
Director
Department of Transportation Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, HI 96813

Dear Mr. Kaku:

He'eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He'eia, Ko'olaupoko, O'ahu, Hawai'i

Thank you for your letter dated July 10, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge receipt of your letter, and to confirm that the Draft EA will include a discussion on the potential traffic impacts and effects to public transit operations on Ipuka Street and Kamehameha Highway resulting from the Proposed Action.

Your letter and this response will be included in the Draft EA. We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

HONOLULU FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
636 SOUTH STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 723-7139 • FAX: (808) 723-7111 • INTERNET: www.honolulufire.org

MUFI HANNEMANN
MAYOR

KENNETH G. SILVA
FIRE CHIEF

ALVIN K. TOMITA
DEPUTY FIRE CHIEF

June 29, 2006

Ms. Corlyn Orr, Project Planner
Helber Hastert & Fee, Planners, Inc.
Suite 2590, Pacific Guardian Center
733 Bishop Street
Honolulu, Hawaii 96813

Dear Ms. Orr:

Subject: Draft Environmental Assessment Preassessment Consultation
Heeia Fishpond Aquaculture Support Facilities
Heeia, Koolaupoko, Oahu
Tax Map Key: 4-6-005: 001

In response to Helber Hastert & Fee, Planners, Inc.'s letter of June 15, 2006, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

1. Provide a fire apparatus access road for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet (45 720 mm) from a fire apparatus access road as measured by an approved route around the exterior of the building or facility. (1997 Uniform Fire Code, Section 902.2.1.)

2. Provide a water supply, approved by the county, capable of supplying the required fire flow for fire protection to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed or moved into or within the county.

   On-site fire hydrants and mains capable of supplying the required fire flow shall be provided when any portion of the facility or building is in excess of the 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building. (1997 Uniform Fire Code, Section 903.2, as amended.)

3. Submit civil drawings to the HFD for review and approval.

In addition, please note that our new address is:

Honolulu Fire Department
636 South Street
Honolulu, Hawaii 96813-5007

Should you have any questions, please call Battalion Chief Lloyd Rogers of our Fire Prevention Bureau at 723-7151.

Sincerely,

KENNETH G. SILVA
Fire Chief

KGS/SK:bh

Helber Hastert & Fee
Planners, Inc.

July 31, 2006

Kenneth G. Silva, Fire Chief
Honolulu Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawaii 96813

Dear Chief Silva:

He‘eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He‘eia, Ko‘olaupoko, O‘ahu, Hawai‘i

Thank you for your letter dated June 29, 2006 in response to the He‘eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge your comments on Honolulu Fire Department requirements for water availability, fire apparatus access and plan approvals.

The development will comply with Sections 902.2.1 (requiring fire apparatus access) and 903.2 as amended (requiring adequate water supply) and other applicable 1997 Uniform Fire Code requirements. Civil drawings will be submitted to Honolulu Fire Department for review and approval.

Your letter and this response will be included in the Draft EA. We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111
http://www.honolulupd.org
www.honolulu.gov

MUFI HANNEMANN
MAYOR

BOISSE P. CORREA
CHIEF

GLEN R. KAJIYAMA
PAUL D. PUTZULU
DEPUTY CHIEFS

OUR REFERENCE BS-DK

June 21, 2006

RECEIVED
JUN 23 2006
HELBER, HASTERT & FEE
PLANNERS

Ms. Corlyn Orr
Helber, Hastert and Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Orr:

This is in response to a letter from Mr. Thomas A. Fee, AICP of your agency, regarding a Draft Environmental Assessment Pre-Assessment Consultation for the He`eia Fishpond Aquaculture Support Facilities project.

This project should have no significant impact on the facilities or operations of the Honolulu Police Department.

If there are any questions, please call Major Janna Mizuo of District 4 at 247-2166 or Mr. Brandon Stone of the Executive Bureau at 529-3644.

Thank you for the opportunity to comment.

Sincerely,

BOISSE P. CORREA
Chief of Police

By
KARL GODSEY
Assistant Chief of Police
Support Services Bureau

Serving and Protecting with Aloha

Helber Hastert & Fee
Planners, Inc.

July 31, 2006

25th ANNIVERSARY 1980 - 2005

Mr. Karl Godsey
Assistant Chief of Police
Support Services Bureau
Honolulu Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, HI 96813

Dear Mr. Godsey:

He‘eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He‘eia, Ko‘olaupoko, O‘ahu, Hawai‘i

Thank you for your letter dated June 21, 2006 in response to the He‘eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge your comment that the proposed project should have no significant impact on the facilities or operations of the Honolulu Police Department.

Your letter and this response will be included in the Draft EA. We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Hawaiian Telcom

July 6, 2006

Helber, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Attention: Corlyn Orr

Subject: Draft Environmental Assessment Pre-Assessment Consultation
He'eia Fishpond Aquaculture Support Facilities

Dear Corlyn:

Thank you for consulting with us for the preparation of the Draft Environmental Assessment for the He'eia Fishpond Aquaculture Support Facilities. Hawaiian Telcom has existing facilities located along Kamehameha Hwy, Iki'iki St. and Ipuka St. that border the project. We do not anticipate any conflicts with the proposed project. Our office would review plans for the project if there are any proposed changes to the telephone service at the site.

Should you have any questions, please call Garret Hayashi at 840-1438.

Sincerely,

Jill Z. Lee
Section Manager - OSP Engineering

cc: Planning (A-5)
File (Kaneohe)

1177 Bishop Street • Honolulu • Hi 96813

Helber Hastert & Fee
Planners, Inc.

July 31, 2006

25th ANNIVERSARY 1980 - 2005

Ms. Jill Z. Lee
Section Manager
OSP Engineering
Hawaiian Telcom, Inc.
1177 Bishop Street
Honolulu, HI 96813

Dear Ms Lee:

He'eia Fishpond Aquaculture Support Facilities
Pre-Assessment Consultation
He'eia, Ko'olaupoko, O'ahu, Hawai'i

Thank you for your letter dated July 6, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA) pre-assessment consultation. This letter is to acknowledge your comment that no conflicts are anticipated with the proposed project. If any changes to the existing telephone service facilities are proposed, such plans would be submitted to Hawaiian Telcom for review and approval.

Your letter and this response will be included in the Draft EA. We appreciate your participation in this review process, and look forward to any additional comments you may have on the Draft EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
President

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

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APPENDIX J
Chapter 343, HRS Final EA Consultation

The Environmental Notice

A Semi-Monthly Bulletin (Under Section 343-3, HRS) of the Office of Environmental Quality Control

August 23, 2006

Linda Lingle
Governor

Genevieve Salmonson,
Director
Office of Environmental Quality Control (OEQC)
Leiopapa A Kamehameha
235 South Beretania Street,
Suite 702
Honolulu, Hawai'i 96813
Telephone (808) 586-4185
Facsimile (808) 586-4186
email address:
oeqc@doh.hawaii.gov

The Environmental Notice Reviews the environmental impacts of projects proposed in Hawai'i

Other Resources available online:

- *June 2004 Guidebook for Hawai'i's Environmental Process*
- *Environmental Assessments in Adobe Acrobat PDF Format Contact OEQC for logon instructions*
- *Environmental Council Annual Reports*

Moloka'i/Lana'i:1-800-468-4644 ext.64185
Kaua'i: 274-3141 ext. 64185
Maui: 984-2400 ext. 64185
Hawai'i: 974-4000ext. 64185

Heeia Fishpond Restoration

Kamehameha Schools has submitted a draft EA for new facilities to support existing aquaculture operations and to promote restoration and preservation of Heeia Fishpond. See page 3.

Ke'ehi Lagoon Memorial

The Dept. of Land & Natural Resources has submitted a draft EA for the Ke'ehi Memorial Organization for improvements to the DAV Park at Ke'ehi Lagoon.

The existing deteriorated Kakesako Rehab Center will be demolished and a health/day care center will be constructed to house adult and child care programs.

After the fact approvals are also being sought for the seawall, drainage channel, pavilion, 2 picnic shelters and 3 barbecue pits.

See page 6 for more.

Waikiki Wedding Chapel

Good Luck International has submitted a draft EA for the construction of a wedding chapel at the corner of Kuhio Ave. and Kai'olu Street in Waikiki. An existing 2-story concrete building and carport will be demolished and a 2-story wedding chapel will be constructed. The wedding chapel will occupy less than half the parcel, which will be heavily landscaped. It will accommodate parties up to 28 people. The Department of Planning & Permitting will issue a Waikiki Special Design District major permit. See page 4 for more details.

Campbell Industrial Park Generating Station FEIS

The Department of Planning & Permitting accepted this final EIS August 10th, 2006. See page 8.

He'eia Fishpond Aquaculture Support Facilities (HRS 343 DEA)

District:	Ko'olaupoko
TMK:	(1) 4-6-05:01 (por.)
Applicant:	Kamehameha Schools 567 S King St., Honolulu, HI 96813 Contact: Jo Anne Hanada (534-3977)
Approving Agency:	C & C, Department of Planning and Permitting 650 S King St., 7th Flr., Honolulu, HI 96813 Contact: Jamie Peirson (527-5754)
Consultant:	Helber Hastert & Fee, Planners 733 Bishop St., Ste. 2590, Honolulu, HI 96813 Contact: Corlyn Orr (545-2055)
Public Comment Deadline:	September 22, 2006
Status:	Draft environmental assessment (DEA) notice pending 30-day public comment. Address comments to the applicant with copies to the approving agency, consultant and OEQC.
Permits Required:	Conditional Use Permit, Construction and Building Permits

Kamehameha Schools (KS) proposes to construct new facilities at He'eia Fishpond to support existing aquaculture operations and promote the restoration, preservation and long-term use of the fishpond. The entire fishpond and portions of the adjacent land-based areas, including part of the project site, is listed on the National Register of Historic Places (State Historic Site Number 80-10-327). The proposed improvements would be concentrated within approximately 0.75 acres near the southernmost corner of the fishpond where existing aquaculture operations are currently located. Access to the project site is provided from 'Ipuka Street via a steep concrete driveway. Land uses surrounding the project site are primarily residential in nature, including the Ali'i Landing subdivision to the east and south, and the Ali'i Bluffs subdivision to the west.

Proposed improvements include the replacement of an existing Quonset hut historically used as a caretaker's residence and the construction of permanent aquaculture support facilities and associated utility system improvements. Replacement of the existing caretaker's residence would provide accommodations for a caretaker to remain on-site at all times and monitor against poaching and vandalism, which are on-going problems at the fishpond. Proposed aquaculture support facilities include an air-conditioned office space, toilets and a shower/changing area, equipment and material storage, and parking improvements. Existing utility system connections, including water, electrical and telephone service, would be maintained, and a new connection to the City's sewer system along 'Ipuka Street would be installed.

Development of the proposed project would not have significant environmental impacts based on the significance criteria specified in Section 11-200-12, HAR. Improvements and activities associated with the proposed project would be concentrated near the *mauka* boundary of the project site where the existing structures are located. The project site does not include any known rare, threatened and endangered species or sensitive natural habitats. Although the project site is associated with the fishpond, no significant archaeological, historical or cultural resources are expected within the project site. The proposed project would be designed to accommodate the existing aquaculture program, and no changes in the overall land use or intensity of use, staffing or visitation patterns are anticipated. Existing traffic patterns and volumes would be expected to continue. Although typical short-term, temporary construction-related impacts would be expected, the project would have no adverse significant impacts on the following resources: land use compatibility, topography and soils, surface waters, natural hazards, scenic and visual resources, biological and cultural resources, air quality, noise, infrastructure and public services, demographics and economics, and traditional customs and practices.

Aerial of project site.

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
EPO-06-144

September 14, 2006

Mr. Henry Eng, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Mr. Eng:

SUBJECT: Draft Environmental Assessment for Kamehameha School Heeia Fishpond Aquaculture Support Facilities at 46-077 Ipuka Street, Kaneohe, Oahu, Hawaii
TMK: (1) 4-6-005: 001 (portion)

Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have the following Wastewater Branch comments.

Wastewater Branch

We have reviewed the subject document which proposes the replacement of an existing caretaker's residence and construction of permanent aquaculture support facilities and utility system improvements, including an air-conditioned office space, toilets and shower/changing area, equipment and material storage, and parking.

The subject project is located in the Critical Wastewater Disposal Area (CWDA) as determined by the Oahu Wastewater Advisory Committee where no new cesspools will be allowed.

As the project will close and render an existing cesspool safe and connect to a new 6-inch sewer lateral to the City's municipal sewerage system, we have no objections to the project. We appreciate any cesspool system that can be abandoned and upgraded to sewer connection.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater System." We reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at (808) 586-4294.

We strongly recommend that you review all of the Standard Comments on our website: www.state.hi.us/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this project should be adhered to.

If there are any questions about these comments please contact Jiacai Liu with the Environmental Planning Office at 586-4346.

Sincerely,

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
WWB
Ms. Corlyn Orr, Helber Hastert & Fee, Planners

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Mr. Kelvin H. Sunada, Manager
Environmental Planning Office
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96801-3378

Dear Mr. Sunada:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letter dated September 14, 2006 to Mr. Henry Eng, Director of the City and County of Honolulu Department of Planning and Permitting, in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). We note the specific comments submitted by the Wastewater Branch, and that we should refer to the Department of Health's Standard Comments for additional guidance.

We have revised Section 3.10 Wastewater of the Final EA to note that the subject property is located in the Critical Wastewater Disposal Area where no new cesspools will be allowed. A statement indicating that the Wastewater Branch has no objections to the proposed cesspool closure and connection to the City's municipal sewer system has also been added to this section.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control

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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 11, 2006

Henry Eng
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Attn: Jamie Peirson

Dear Mr. Eng:

Subject: Draft Environmental Assessment (EA), **Heeia Fishpond Support Facilities**

We have the following comments to offer:

State Historic Preservation Division, DLNR: In the final EA enclose documentation from this office showing its concurrence with your planned improvements for this historic district.

Aquaculture: What will be cultivated in the fishpond? Some species of flora or fish are considered undesirable because of the possibility of nearshore contamination. Discuss this in the final EA.

Acronyms list: Add POH to this list in the final EA.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,

GENEVIEVE SALMONSON
Director

c: Corlynn Orr, Helber Hastert & Fee

Helber Hastert & Fee
Planners, Inc.

February 12, 2007

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

Dear Ms. Salmonson:

He‘eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He‘eia, Ko‘olaupoko, O‘ahu

Thank you for your letter dated September 11, 2006 to Mr. Henry Eng, Director of the City and County of Honolulu Department of Planning and Permitting, in response to the He‘eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). We have reviewed your comments and offer the following responses:

1. The State Historic Preservation Division (SHPD) has determined that the proposed project would have no effect on historic or archaeological resources. Documentation of SHPD’s concurrence is included in the Final EA.

2. A variety of marine species are currently growing in the fishpond, including pualu, moi, 'awa, kaku, papio, crabs and limu (gracilaria salicornia and acantophera spicifera). On-going fishpond restoration and maintenance efforts strive to remove the invasive alien species and encourage the growth of native species. The proposed project would provide facilities to address sanitation, public health and security concerns, and would improve aesthetics and enhance the overall experience for individuals involved with the fishpond. No changes to the existing aquaculture use of the fishpond or the products cultivated would occur as a result of the Proposed Action. The aquaculture activities conducted in the fishpond and cultivation of products are outside the scope of this project, and are therefore not analyzed as a resource area in the EA.

3. Paepae o He‘eia (POH) has been added to the list of acronyms presented in the Final EA.

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
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COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR - LAND

DEAN NAKANO
ACTING 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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

October 12, 2006

Henry Eng, FAICP, Director
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

LOG NO: 2006.3350
DOC NO: 0609aj06
Archaeology

Dear Mr. Eng:

SUBJECT: Chapter 6E-42 Historic Preservation Review – Draft Environmental Assessment – He'eia Fishpond Aquaculture Support Facilities
He'eia Ahupua'a, Ko'olaupoko District, Island of O'ahu
TMK: (1) 4-6-005:por. 001

Thank you for the opportunity to comment on the aforementioned project, which we received on August 9, 2006. The proposed undertaking involves demolition of an existing caretaker's residence and construction of a new two-story building, which will function as the caretaker's permanent residence. Aquaculture support facilities including an office, shower and changing areas, and equipment and materials storage will also be constructed. Two paved parking stalls and one paved handicapped-accessible area with an access aisle will be installed. The proposed undertaking will be concentrated at the southernmost corner of the fishpond.

Archaeology Concerns

He'eia fishpond, listed on both the State and the National Historic Registers (SHIP # 50-80-10-327), is a historically and culturally significant site. Various reports, on file at the State Historic Preservation Division, indicate prehistoric and historic sites and burials are located in the vicinity of the area of potential effect (APE). Numerous prehistoric burials have been uncovered at the northern end of the fishpond *(Inventory of Human Burials, Skeletal Remains, and Dog Burials, He'eia State Park, memo to Don Hibbard from Ralston Nagata, 1992)*. Although a historic Japanese cemetery located adjacent to the area of potential effect (APE) was removed *(Archaeological Report Concerning the Ali'i Landing Subdivision, Joseph Kennedy, 1987)*, it is unknown whether additional remains are present in or adjacent to the APE.

Also, based on the provided architectural site plans for the proposed improvements, there will be substantial excavation below the existing grade associated with the proposed undertaking. Therefore, we are concerned that the proposed undertaking may have an adverse effect on unidentified historically-significant resources.

We believe that any adverse effect may be mitigated through precautionary monitoring. Therefore, we recommend the following conditions be attached to the subject permit, should it be approved.

1) A qualified archaeological monitor shall be present during all ground-altering activities conducted in the project area in order to document any historic properties which may be encountered during the proposed undertaking and to provide mitigation measures as necessary. An acceptable archaeological monitoring plan will need to be submitted to the State Historic Preservation Division for review, prior to the commencement of any ground-altering activities. An archaeological monitoring plan must contain the following nine specifications: (1) The kinds of remains that are anticipated and where in the construction area the remains are likely to be found; (2) How the remains and deposits will be documented; (3) How the expected types of remains will be treated; (4) The archaeologist conducting the monitoring has the authority to halt the construction in the immediate area of the find in order to carry out the plan; (5) A coordination meeting between the archaeologist and construction crew is scheduled, so that the construction team is aware of the plan; (6) What laboratory work will be done on remains that are collected; (7) A schedule of report preparation; (8) Details concerning the archiving of any collections that are made; and (9) An acceptable report documenting the findings of the monitoring activities shall be submitted to the State Historic Preservation Division for review following the completion of the proposed undertaking.

2) The State Historic Preservation Division (O'ahu office) shall be notified via facsimile upon the on-set and completion of the proposed undertaking.

Should initial excavation reveal that all of the new digging is in previously disturbed stratum; the monitoring program may be suspended through consultation with SHPD.

Architectural Concerns

The State Historic Preservation Division is unable to concur with conclusions presented in the archaeological assessment of the caretaker's residence. An architectural assessment of the residence needs to be conducted not an archaeological assessment. An architectural assessment examines aspects of design, materials, historic eligibility; which are not functions within an archaeological survey. Several areas need to be addressed to answer questions in regards to an architectural assessment of the caretaker's cottage. These comments are not all inclusive, yet should provide a basis for which to begin a proper architectural assessment.

Is the caretaker's cottage eligible for listing on the National Register of Historic Places? If yes, under which criterion/criteria? If not, why.
Is the caretaker's cottage a unique architectural style or type or is it common? Quonset huts, traditionally are temporary military buildings, though after World War II were in some cases adapted for civilian use as residences or commercial buildings, thus taking on a permanent role.

- When were the additions put on? Do they compliment or contrast the rest of the residence? Are they of a particular style? What are their materials of construction?
  There needs to be more photographs. The few photographs do not depict the overall character of the cottage, the evolution of the cottage or its relationship to the setting.

Please contact Mr. Adam Johnson or Mr. Brian Flower at (808) 692-8015 if you have any questions about this letter.

Aloha,

Melanie Chinen, Administrator
State Historic Preservation Division

AM:aj

cc: Ms. Corlyn Orr

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

January 8, 2007

Dr. J. Stephen Athens
International Archaeological Research Institute, Inc.
2081 Young Street
Honolulu, Hawai'i 96826-2231

LOG NO: 2007.0009
DOC NO: 0701amj07
Archaeology
Architecture

Dear Dr. Athens:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –**
Revised Archaeological Assessment for Replacement of Caretaker's House at He'eia Fishpond within Boundary of Site 50-80-10-0327
He'eia Ahupua'a, Ko'olaupoko District, Island of O'ahu
TMK: (1) 4-6-005:001

Thank you for submitting the revised report by Carson (2006), which we received on December 28, 2006. It describes the results of an archaeological assessment and architectural documentation of a Quonset hut, which will be demolished to increase the space available for a new caretaker's residence. Although the hut is located within the boundaries of the He'eia Fishpond site (50-80-10-0327), it is not a contributing element.

In a previous letter (LOG NO: 2006.3350, DOC NO: 0609aj06) dated October 12, 2006, we recommended additional fieldwork in order to (1) evaluate the possibility that historically-significant deposits may be located within the proposed footprint of the new caretaker's residence, and (2) more adequately assess and document the architectural significance of the extant Quonset hut.

In response to our request, you conducted subsurface testing in the form of three (3) soil borings, all of which went below 2.0 m in depth, and all of which yielded clay layers and no culturally-significant materials or deposits. Additional architectural assessment and documentation was conducted by Kauahikaua and Chun, Architects, and included as Appendix A in your report.

We thank you for conducting the additional fieldwork and we now concur with your original recommendation that no further historic preservation work is warranted in the project area. The report is now accepted in accordance with HAR 13-284 and 13-276.

Please contact Mr. Adam Johnson (O'ahu Assistant Archaeologist) or Mr. Bryan Flower at (808) 692-8015 if you have any questions or concerns regarding this letter.

Aloha,

Melanie Chinen, Administrator
State Historic Preservation Division

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Ms. Melanie Chinen, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
State of Hawai'i
601 Kamokila Boulevard, Room 555
Kapolei, HI 96707

Dear Ms. Chinen:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letters dated October 12, 2006 to Mr. Henry Eng, Director of the City and County of Honolulu Department of Planning and Permitting, and January 8, 2007 to Dr. J. Stephen Athens of International Archaeological Research Institute, Inc in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). This response is to recognize your concurrence that no further historic preservation work is warranted in the project area, and to acknowledge your determination that the proposed project will have no effect on historic or archaeological resources.

We appreciate your participation in this review process. Your letters and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control

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PHONE (808) 594-1888

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

FAX (808) 594-1865

RECEIVED
SEP 15 2006
HELBER, HASTERT & FEE PLANNERS

HRD06/2533

September 4, 2006

Corlyn Orr
Helber Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, HI 96813

RE: Draft Environmental Assessment for Heeia Fishpond Aquaculture Support Facilities, Kamehameha Schools, TMK: 4-6-005:001 (portion).

Dear Ms. Orr,

The Office of Hawaiian Affairs (OHA) is in receipt of your August 9, 2006 submission and offers the following comments:

We would first like to commend you for this important cultural and educational project, which will provide multiple, long-term benefits to the Hawaiian community for years to come. Our staff recommends you contact Mahealani Cypher (Ko'olaupoko Hawaiian Civic Club) and John Reppun (Key Center) in order to expand the consultation component of your DEA. We also recommend you consider conducting archaeological monitoring in association with the planned demolition and new construction of the caretaker's residence, in light of the overall historic significance of the He'eia Fishpond environs.

OHA further requests your assurances that if the project goes forward, should iwi or Native Hawaiian cultural or traditional deposits be found during ground disturbance, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck, Native Rights Policy Advocate, at (808) 594-0239 or jessey@oha.org.

Aloha,

Clyde W. Nāmu'o
Administrator

Helber Hastert & Fee
Planners, Inc.

February 12, 2007

Mr. Clyde Nāmuʻo, Administrator
State of Hawaiʻi
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaiʻi 96813

Dear Mr. Nāmuʻo:

Heʻeia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
Heʻeia, Koʻolaupoko, Oʻahu

Thank you for your letter dated September 7, 2006 in response to the Heʻeia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). We have reviewed your comments and offer the following responses.

Community Consultation
We thank you for your suggestion to include the Koʻolaupoko Hawaiian Civic Club and the KEY Project as parties that should be involved in the Draft EA review process. We have sent both organizations a copy of the Draft EA for their review and comment. Neither has submitted comments as of today.

Cultural, Historical and Archaeological Resources
We understand your concerns regarding ground disturbing activities, and agree that Native Hawaiian cultural resources such as iwi or Native Hawaiian cultural or traditional deposits should be protected in accordance with applicable laws to protect cultural, historical and archaeological resources. All construction activities and ground disturbance will be conducted accordingly. As noted in Section 3.7 of the Draft EA, "In the event that any significant archaeological resources or deposits are found during the development of the project, construction would be halted and immediate consultation with the State of Hawaiʻi DLNR SHPD would be sought in accordance with applicable regulations."

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Sincerely,

Thomas A. Fee, AICP
Principal

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

Helber Hastert & Fee
Planners, Inc.

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawaiʻi Office of Environmental Quality Control

BOARD OF WATER SUPPLY

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

August 17, 2006

TO: HENRY ENG, FAICP, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

ATTENTION: JAIME PEIRSON

FROM: for CLIFFORD P. LUM, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE HEEIA FISHPOND AQUACULTURE SUPPORT FACILITIES, TMK: 4-6-005: POR. 001

Our comments dated June 28, 2006, which are included in the assessment, are still applicable.

If you have any questions, please contact Robert Chun at 748-5443.

cc: Ms. Corlyn Orr, Helbert Hastert & Fee, Planners

RECEIVED
AUG 22 2006
HELBER, HASTERT & FEE
PLANNERS

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Mr. Clifford P. Lum
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 Beretania Street
Honolulu, HI 96843

Dear Mr. Lum:

He‘eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He‘eia, Ko‘olaupoko, O‘ahu

Thank you for your letter dated August 17, 2006 to Mr. Henry Eng, Director of the City and County of Honolulu Department of Planning and Permitting, in response to the He‘eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). This letter is to acknowledge that the written comments submitted as part of the pre-assessment consultation process and published in the Draft EA (letter dated June 28, 2006) are still applicable.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai‘i Office of Environmental Quality Control

Pacific Guardian Center • 733 Bishop Street, Suite 2590 • Honolulu, Hawaii 96813
Tel. 808.545.2055 • Fax 808.545.2050 • www.hhf.com • e-mail: info@hhf.com

DEPARTMENT OF DESIGN AND CONSTRUCTION
C T Y AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

September 5, 2006

Ms. Corlyn Orr, Project Planner
Helber, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Orr:

Subject: Heeia Fishpond Aquaculture Support Facilities
Heeia, Koolaupoko, Oahu, Hawaii
TMK 4-6-05: por. 001

Thank you for giving us the opportunity to submit our comments regarding the above Draft Environmental Assessment (DEA).

The Department of Design and Construction has no comments to offer at this time

Very truly yours,

for Eugene C. Lee, P.E.
Director

ECL:lt (167715)

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Mr. Eugene C. Lee, P.E.
Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, HI 96813

Dear Mr. Lee:

He‘eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He‘eia, Ko‘olaupoko, O‘ahu

Thank you for your letter dated September 5, 2006 in response to the He‘eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). This letter is to acknowledge your response indicating that your agency does not have any comments to offer at this time.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai‘i Office of Environmental Quality Control

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DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

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MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2006/ED-17(JP)

September 20, 2006

Ms. Corlyn Orr
Helber Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Ms. Orr:

Re: Draft Environmental Assessment
Heeia Fishpond Aquaculture Support Facilities
46-077 Ipuka Street - Heeia
Tax Map Key 4-6-5: 1

The following are our comments concerning the draft Environmental Assessment (EA).

1. Civil Engineering Branch: Our Civil Engineering Branch has no comments. Please contact Mr. Don Fujii at 527-7320 if you have any questions concerning the Civil Engineering Branch's response.

2. Wastewater Branch: The municipal sewer system is available and adequate for connection to the sewer line on Ipuka Street. The proposed project will require submittal and approval of a Site Development Division Master Application for Sewer Connection. This project may be liable for payment of a Wastewater System Facility Charge. Please contact Ms. Tessa Ching at 523-4956 if you have any questions concerning the Wastewater Branch's comments.

3. Traffic Review Branch: Our Traffic Review Branch has no comments or objections to the proposed replacement of an existing caretaker's residence and construction of permanent aquaculture support facilities and utility system improvements. Please contact Mr. Mel Hirayama at 523-4119 if you have any questions concerning the Traffic Review Branch's response.

4. Planning Division: The following are the comments from our Planning Division.

   a. The proposed action is consistent with the key elements in the Koolaupoko Sustainable Communities Plan (KSCP) relating to its vision, which calls for adapting the concept of "ahupuaa" in land use and natural resource management; and, for preserving and enhancing scenic, recreational and cultural features that define Koolaupoko's sense of place (KSCP Section 2.2).

   b. The proposed action supports the general policy pertaining to historic and cultural resources, which calls for preserving significant historic features (KSCP Section 3.4.2).

   c. The proposed action supports the general policy pertaining to agricultural use, which calls for the provision of supporting infrastructure, services and facilities to foster and sustain agricultural operations (KSCP Section 3.5.2).

   d On page 2 ("*Project Summary*") of the draft EA, the KSCP designation should be changed from "Preservation" to "Low Density Residential." The final EA should also note that the subject property's current KSCP land use designation is not a site-specific designation, but rather merely an illustration of written policies.

   e. Draft EA Section 1.1 ("*Technical Characteristics*") states that there is an existing gravel parking area that currently serves the aquaculture operations. The final EA should discuss how many vehicles can be accommodated by this gravel lot and its location should be shown on Figure 4 ("*Proposed Site Plan*").

   f. Draft EA Section 2.9 ("*Traffic and Roadways*") states that a maximum of two (2) full-size school buses for visiting school and community groups currently load/unload and park on Ipuka Street near the driveway entrance. The final EA should address whether buses could possibly be accommodated on-site if the gravel parking is reconfigured, or if there is alternate loading space for bus elsewhere on the project site.

   g. Draft EA Section 2.9 ("*Traffic and Roadways*") states that arrangements are made for off-site parking at neighboring properties (e.g., *Heeia State Park, King Intermediate School*) on those occasions when large groups of visitors are expected. The final EA should discuss approximately how often such arrangements are needed. And, the final EA should further note if past arrangements for off-site parking were able to sufficiently accommodate related parking demand, i.e., was on-street parking still needed, and if there were any resulting negative impacts.

   h. Draft EA Section 3.9 ("*Traffic and Roadways*") also states that on-street parking will continue to be used for school buses and special community events, with continued consideration and sensitivity to the surrounding residential community. The final EA should:

      Approximate the frequency for special events requiring on-street parking;

      ii. Explore ways of accommodating more vehicles on-site, e.g., reconfiguring space on the gravel parking, and adding more spaces as part of the proposed action; and

iii. Disclose whether on-street parking generated by activities and events at the fishpond have and/or will negatively impact the surrounding residential community; and, what mitigation measures, if any, are necessary.

Please contact Ms. Dina Wong at 527-6073 if you have any questions concerning the Planning Division's comments.

5 Land Use Permits Division (LUPD): Based on our review of the draft EA, we concur that a Special Management Area Permit will not be necessary for the project, since it involves accessory uses and structures to a principal (exempt) aquaculture use that are not anticipated to have a significant impact on shoreline resources. A final EA should be submitted to the LUPD for the issuance of a Finding of No Significant Impact (FONSI) prior to our accepting an application for the required Conditional Use Permit (Major) for use of an historic site. Please contact Mr. Jamie Peirson at 527-5754 if you have any questions concerning the LUPD comments.

Enclosed are copies of the written comments from various other agencies and/or individuals that we have received to date (Board of Water Supply, Honolulu Fire Department, Office of Environmental Quality Control, Hawaiian Electric Company, and Mr. Chris Cramer). Please include these, along with your written responses, in the final EA.

Very truly yours,

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:pl
Encl.

G:\LandUse\PosseWorkingDirectory\jpeirson\2006ED-17 agency comments.doc

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Mr. Henry Eng, FAICP
Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Eng:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letter dated September 20, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). We have reviewed your comments and offer the following responses.

1. Civil Engineering Branch

We note that the Civil Engineering Branch has no comments on the proposed project.

2. Wastewater Branch

Your concurrence that the municipal sewer system is available and adequate to accommodate the proposed connection to the existing sewer line on 'Īpuka Street is noted. We understand that the proposed project will require submittal and approval of a Site Development Division Master Application for Sewer Connection. Section 3.10 Wastewater of the Final EA has been revised to indicate that a Wastewater System Facility Charge may be assessed for the proposed wastewater system improvements.

3. Traffic Review Branch

We note that the Traffic Review Branch has no comments or objections to the proposed project.

4. Planning Division

a. The project's consistency with the Ko'olaupoko SCP is addressed in Section 4.2.2 of the Draft EA. This section of the Final EA has been revised to indicate that the project is consistent with the key elements in the Ko'olaupoko Sustainable Communities Plan (SCP) vision, which calls for adapting the "ahupua'a" concept in land use and natural resource management and for preserving and enhancing scenic, recreational, and cultural features that define Ko'olaupoko's sense of place.

b. We have revised the discussion in Section 4.2.2 of the Final EA to indicate that the proposed project supports the general policy in the Ko'olaupoko SCP to preserve significant historic features.

c. The discussion in Section 4.2.2 of the Final EA has been revised to note that the proposed project supports the general policy in the Ko'olaupoko SCP that calls for the provision of supporting infrastructure, services and facilities to foster and sustain agricultural operations.

d. Thank you for your pointing out the discrepancy between the Ko'olaupoko SCP land use designations referenced on Page 2 (Project Summary) and in Section 4.2.2 of the Draft EA. The Project Summary section of the Draft EA describes the project site as "Preservation," while the discussion in Section 4.2.2 of the Draft EA describes the project site as "Low Density Residential." We have revised Section 4.2.2. of the Final EA to describe the project site's designation as "Preservation," which is consistent with the underlying P-2 General Preservation zoning.

   We have added your suggested language to Section 4.2.2 of the Final EA to indicate that the SCP land use maps are intended to be general and conceptual illustrations of the written policies, and are not parcel-specific.

e. Section 1.1 and Figure 4 (Proposed Site Plan) of the Final EA have been modified to describe the number and location of parking stalls associated with the proposed project.

f. We have revised Section 2.9 of the Final EA to clarify the reasons for the full-size school buses loading/unloading on 'Īpuka Street near the driveway entrance. The school buses use 'Īpuka Street to load/unload because the steepness of the driveway and the limited turn-around space at the bottom of the driveway make it difficult for the buses to maneuver, and because the neighbors that live adjacent to the driveway have previously complained about the noise and exhaust from the bus engines.

g. The discussion in Section 2.9 of the Final EA has been enhanced to describe how often off-site parking arrangements at neighboring properties are typically needed. The discussion also indicates whether such past parking arrangements have adequately accommodated the related demand for on-street parking along 'Īpuka and Ikiiki Streets. Special public events, such as fundraisers or community workshops where large turnouts are expected, are generally planned between four and six times per year. Although most event attendees will follow instructions to use the off-site parking location and shuttle service, a handful of attendees will typically use the public parking available along 'Īpuka and Ikiiki Streets.

h. We understand your concerns about the project's use of on-street parking and have revised the Final EA accordingly. In addition to inserting a statement in Section 2.9 about the frequency of special events that require on-street parking, Section 3.9 of the Final EA has been revised to describe the community's concerns regarding the current

use of on-street parking and possible strategies to mitigate the traffic and noise concerns experienced by the surrounding community.

In response to your suggestion, we have explored ways to accommodate more vehicles on-site. Figure 4 (Proposed Site Plan) has been reconfigured accordingly, with a total of 11 on-site parking spaces and a turnaround area for shuttle buses to turn around on-site.

5. Land Use Permits Division

Your concurrence that the proposed project will not require a Special Management Area Permit is acknowledged. We are aware that a Conditional Use Permit (Major) (CUP Major) for use of an historic site will be required, and that the CUP Major application cannot be accepted until the Final EA and Finding of No Significant Impact are issued.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
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MUFI HANNEMANN
MAYOR

MELVIN N. KAKU
DIRECTOR

TP9/06-167599R

September 25, 2006

RECEIVED
SEP 28 2006
HELBER, HASTERT & FEE
PLANNERS

MEMORANDUM

TO: HENRY ENG, FAICP, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: MELVIN N. KAKU, DIRECTOR

SUBJECT: HEEIA FISHPOND AQUACULTURE SUPPORT FACILITIES

Thank you for your August 7, 2006 letter, requesting our review of and comments on the draft environmental assessment for the subject project. We have the following comments regarding the document:

1 The second sentence in Section **2.9 Traffic and Roadways** (Page 21) that states that off-street parking is located within the 55-foot right-of-way (ROW) of Ipuka Street should be clarified. The stated ROW of Ipuka Street is not correct; it varies. Also, the roadway width of Ipuka Street should be noted.

2. The description of the on-site parking in the second complete paragraph on Page 22 is not consistent with the Figure 4, Site Plan (Page 11).

3. As much as possible, the parking requirements described in Table 3 on Page 22 should be accommodated on site and not on street.

Should you have any questions regarding these comments, please contact Ms. Faith Miyamoto of the Transportation Planning Division at Local 6976.

for MELVIN N. KAKU

cc: Ms. Corlyn Orr
Helber Hastert & Fee, Planners

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Mr. Melvin Kaku, Director
Department of Transportation Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, Hawaii 96813

Dear Mr. Kaku:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letter dated September 25, 2006 to Mr. Henry Eng, Director of the City and County of Honolulu Department of Planning and Permitting, in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). We have reviewed your comments and offer the following responses:

1. Section 2.9 of the Final EA has been revised to include your suggested clarifications. The reference to the 'Īpuka Street right-of-way has been corrected to indicate that the roadway width tapers towards the end of the cul-de-sac. A statement describing the roadway width of 'Īpuka Street has also been added.

2. We recognize that the description of the on-site parking in Section 2.9 is not consistent with Figure 4 Proposed Site Plan. These sections are distinct and unrelated to each other, as Section 2.9 presents a description of the affected environment (i.e., existing conditions) and Figure 4 illustrates the conceptual layout of the proposed improvements.

3. We are in agreement that the parking requirement described in Table 3 of the Draft EA should be accommodated on-site as much as possible. In response to the comments raised during the Draft EA review process to reduce the current use and need for on-street parking, several alternative site plan configurations were considered to increase on-site parking capacity. The Final EA has been modified to address concerns regarding the use of on-street public parking, including: (1) reconfiguring the proposed site plan (Figure 4) to accommodate additional on-site parking and a turnaround area for 15-passenger vans; and (2) revisions to Section 2.9 and Section 3.9 to describe the community's concerns about the current use of on-street parking and identify possible management strategies to mitigate the traffic and noise concerns experienced by the surrounding community.

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Helber Hastert & Fee
Planners, Inc.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control

HONOLULU FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
636 SOUTH STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 723-7139 • FAX: (808) 723-7111 • INTERNET: www.honolulufire.org

MUFI HANNEMANN
MAYOR

KENNETH G. SILVA
FIRE CHIEF

ALVIN K. TOMITA
DEPUTY FIRE CHIEF

August 16, 2006

TO: HENRY ENG, FAICP, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: KENNETH G. SILVA, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
CHAPTER 343, HAWAII REVISED STATUTES
REFERENCE NUMBER 2006/ED-17 (JP)
PROJECT NAME: HEEIA FISHPOND AQUACULTURE SUPPORT FACILITIES
APPLICANT: KAMEHAMEHA SCHOOLS
LOCATION: 46-077 IPUKA STREET - HEEIA
TAX MAP KEY: 4-6-005: PORTION 001

In response to your letter of August 7, 2006, regarding the above-mentioned project, the Honolulu Fire Department (HFD) reviewed the material you provided and requires that the following be complied with:

Provide a fire apparatus access road for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet (45 720 mm) from a fire apparatus access road as measured by an approved route around the exterior of the building or facility. (1997 Uniform Fire Code, Section 902.2.1.)

2. Provide a water supply, approved by the county, capable of supplying the required fire flow for fire protection to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed or moved into or within the county.

On-site fire hydrants and mains capable of supplying the required fire flow shall be provided when any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building. (1997 Uniform Fire Code, Section 903.2, as amended.)

3. Submit civil drawings to the HFD for review and approval

Should you have any questions, please call Battalion Chief Lloyd Rogers of our Fire Prevention Bureau at 723-7151.

KENNETH G. SILVA
Fire Chief

KGS/SK:jl

cc: Corlyn Orr, Helber Hastert & Fee, Planners ✓

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Chief Kenneth G. Silva, Fire Chief
Honolulu Fire Department
City and County of Honolulu
636 South Street
Honolulu, HI 96813

Dear Chief Silva:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letter dated August 16, 2006 to Mr. Henry Eng, Director of the City and County of Honolulu Department of Planning and Permitting, in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). This letter is to acknowledge that your comments regarding Honolulu Fire Department requirements for water availability, fire apparatus access and plan approvals are the same as your June 29, 2006 comments submitted in response to the Draft EA pre-assessment consultation.

We note that Section 3.10 and Section 3.11 of the Draft EA address fire protection requirements. Section 3.10 of the Final EA has been clarified as follows, "Fire protection would be provided by installing a detector check meter, with the meter size determined by the fire flow demands associated with the proposed residence. A new fire hydrant may be required, depending on the specific project requirements. Design and construction of the water system and fire protection system, would be coordinated with and would meet all the requirements of the BWS and the Honolulu Fire Department. Such requirements and the availability of water to meet the project demands would be confirmed when building permits are submitted for approval."

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control

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Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001

August 30, 2006

RECEIVED
'06 SEP -5 P2:58
DEPT OF PLANNING & PERMITTING
CITY & COUNTY OF HONOLULU

Mr. Jamie Peirson
Land Use Permits Division
Department of Planning & Permitting
City & County of Honolulu
650 South King Street - 7th Floor
Honolulu, HI 96813

Dear Mr. Peirson:

Re: He'eia Fishpond Aquaculture Support Facilities
He'eia, Ko'olaupoko, Oahu
TMK: (1) 4-6-05:001

Thank you for the opportunity to comment on the above-referenced project. Hawaiian Electric Company, Inc. (HECO) has no objections at this time. The following pre-assessment comments were received from the Transmission & Distribution Division of our Engineering Department:

1) Although HECO has existing underground facilities (covered by R/W #67-37) within the subject parcel, our facilities do not appear to be impacted by the project. We would appreciate your efforts to keep us informed of any changes in the project plans.

(2) Should it become necessary to relocate HECO's facilities, please submit a request in writing and we will work with you so that construction of the project may proceed as smoothly as possible. Please note that there may be costs associated with any relocation work, and that such costs may be borne by the requestor. Because redesign or relocation of HECO's facilities may cause lengthy delays, upon determination that HECO facilities will need to be relocated, HECO should be notified immediately in order to minimize any impacts on the project schedule. HECO will not responsible for any delay or damage that may occur as a result of insufficient notice to relocate our facilities.

Our point of contact for this project, and the originator of these comments, is Dustin Nakamoto, Transmission & Distribution Division, Engineering Department (543-7763). I suggest dealing directly with Dustin to coordinate HECO's continuing input in this project.

Sincerely,

Kirk S. Tomita
Senior Environmental Scientist

cc: Ms. Genevieve K.Y. Salmonson (OEQC)
D. Nakamoto

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Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Mr. Kirk S. Tomita
Senior Environmental Scientist
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, HI 96840-0001

Dear Mr. Tomita:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letter dated August 30, 2006 to Mr. Jamie Peirson of the City and County of Honolulu Department of Planning and Permitting in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). This letter is to acknowledge your comments on electrical facilities, including that Hawaiian Electric Company, Inc. (HECO) has no objections to the proposed project at this time and that the proposed project does not appear to impact existing underground facilities located within the project boundary.

Kamehameha Schools will be responsible for installing the electrical system improvements necessary to serve the proposed project, and will coordinate the proposed project with HECO, as required. We note that the specific requirements for HECO's facilities will be identified during review of the proposed construction plans.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control
Dustin Nakamoto, HECO Transmission and Distribution Division

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Corlyn Olson Orr

From: Donna Camvel [iolekaa@hawaii.rr.com]
Sent: Monday, September 18, 2006 7:42 AM
To: Corlyn Olson Orr
Subject: Re: Heeia Fishpond Aquaculture Support Facilities - pre-assessment consultation

Aloha Kaua e Corlyn Orr:

Are you related to Ka'imi Orr? Just wanted to ask as I know her and we are on the same committee of historic preservation for hawaiian civic clubs.

Anyway, I have reviewed the report and would like to make one correction.

Page twenty seven, 1st paragraph, second sentence. Please change entire sentence to read as follows:

In 1989 Mary Brooks, an aqua culturist with the State of Hawai'i, leased the pond as a sole proprietor. She repaired the broken wall and the pond became productive. She grew limu and fish in moderate yet significant commercial quantities. In the late 1990's during a period of increased water temperature she lost a large crop fish. Her lease agreement was not renewed in 2001.

Please respond to confirm that the change request has been received. Thank you so very much.

A Hui Hou, E Malama Pono
Donna A.K. Camvel

> ----- Original Message -----
> **From:** Corlyn Olson Orr
> **To:** Donna Camvel
> **Sent:** Friday, June 30, 2006 8:21 AM
> **Subject:** RE: Heeia Fishpond Aquaculture Support Facilities - pre-assessment consultation
>
> Aloha Ms. Camvel,
>
> Thank you for your interest in this project. We will add your organization to our mailing list for the Draft Environmental Assessment distribution. We only have an email address. Please forward a mailing address where you receive postal mail.
>
> Mahalo, Corlyn

From: Donna Camvel [mailto:iolekaa@hawaii.rr.com]
Sent: Thursday, June 29, 2006 6:01 PM
To: Corlyn Olson Orr
Subject: Re: Heeia Fishpond Aquaculture Support Facilities - pre-assessment consultation

Aloha Kaua:

Yes please send information as appropriate. Mahalo.

Donna Camvel

> ----- Original Message -----
> **From:** Corlyn Olson Orr
> **To:** iolekaa@hawaii.rr.com
> **Sent:** Thursday, June 15, 2006 4:05 PM
> **Subject:** Heeia Fishpond Aquaculture Support Facilities - pre-assessment consultation
>
> Ms. Donna Camvel

Ahupua'a Restoration Council for He'eia

Dear Ms. Camvel,

We got your contact information from Mahina Paishon Duarte, Executive Director of Paepae o Heeia. We are sending this letter to you via email because it was the only address we were able to locate for the Ahupua'a Restoration Council of He'eia.

If you would like your organization to be included in future communications for this project, please send us a current address where you receive postal mail.

Please feel free to call me if you have any questions or concerns.

Aloha,

Corlyn Orr

Senior Planner

Helber Hastert and Fee, Planners

Pacific Guardian Center, Makai Tower

733 Bishop Street, Suite 2590

Honolulu, Hawaii 96813

Telephone 808.545.2055

Facsimile 808.545.2050

<<pre-assessment consultation June 15, 2006.pdf>>

Donna Ann Kāmeha`ikū Camvel
46-522 Ha`ikū Plantations Drive
Kāne`ohe, Hawai`i 96744
Tel: 358-1354 Email: iolekaa@hawaii.rr.com

Helber, Hastert & Fee, *Planners, Inc.*
Pacific Guardian Center
Corlyn Orr, Project Manager
733 Bishop St., Ste. 2590
Honolulu, Hawai`i 96813

November 14, 2006

Aloha Corlyn:

I realize that the time for submittal of additional information for the draft EIS has passed by. I would ask that you include the following if possible, to the EIS. The additional information is pertinent to the CIA.

1. Page 34, 3rd paragraph, last line should include after agencies...(DLNR, OHA, OIBC) *and organizations such as the Ko'olaupoko Hawaiian Civic Club, Na Iwi `Ola o He`eia Kea who...*

2. Appendix E, Cultural Impact Assessment Study, 4th page, section marked as page 10, last paragraph, last line should include from success...*due to increased water temperatures resulting in loss of fish crop. Her lease agreement was not renewed in 2001.* **Delete "By 1998, Brooks abandoned the fish raising venture.**

3. Same appendix, 5th page, section marked as page 15, under Protocol 2: Add to listed groups the following: *Ahupua`a Restoration Council of He`eia as number five (5), Ko`olaupoko Hawaiian Civic Club as number six (6), and Na Iwi `Ola o He`eia Kea as number seven (7).*

I thank you for your inclusion of the above revisions and the opportunity with which to do so.

Sincerely,

Donna A. K. Camvel
Donna A. K. Camvel
Paepae o He`eia Board Vice President

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Ms. Donna Camvel
Ahupua'a Restoration Council of He'eia
46-522 Ha'ikū Plantations Drive
Kāne'ohe, Hawai'i 96744

Dear Ms. Camvel:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your e-mail dated September 18, 2006 and your letter dated November 14 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). We have reviewed your comments and offer the following responses.

1. We have considered your suggested revision to Section 2.13 Traditional Customs and Practices regarding the aquaculture operations run by Ms. Mary Brooks, and have revised the Final EA as follows:

   "After remaining idle for more than 25 years, KS entered into an agreement in the early 1990s with Ms. Mary Brooks who planned to restore the fishpond to its former working condition and establish a commercial aquaculture farm at the pond. Operating as a sole proprietorship, Ms. Brooks partially repaired the fishpond wall and raised limu and fish in moderate commercial quantities until 1999 when the tenancy agreement was not renewed. The decision to discontinue the agreement was due to significant labor and economic constraints and losses that resulted from poaching and environmental conditions (such as increased water temperatures and/or decreased salinity)."

2. Your comment to identify the various agencies (Department of Land and Natural Resources, Office of Hawaiian Affairs, O'ahu Island Burial Council, Ko'olaupoko Hawaiian Civic Club and Na Iwi 'Ola o He'eia Kea) in paragraph 3 of Section 3.13 Traditional Customs and Practices is noted. The Final EA has been revised to indicate that the State Historic Preservation Division would be contacted in accordance with applicable laws if any previously unknown archaeological resources are found during ground disturbance.

3. We note that page 10 of the Final Cultural Impact Assessment (CIA) has been revised to read, "Both items, aimed for the retail market, though initially successful later met with mixed success due to increased temperatures resulting in loss of fish crop. Her lease agreement was not renewed in 1999."

4. The list of community groups that are within the immediate vicinity of the project area (page 15 of the Final CIA) has been revised to include the Ahupua'a Restoration Council of He'eia, Ko'olaupoko Hawaiian Civic Club and Na Iwi 'Ola o He'eia Kea.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control

46-120 Ipuka Place
Kaneohe, HI 96744-4000
December 19, 2006

VIA FACSIMILE TRANSMISSION
TO 808-545-2050 AND U.S. MAIL

Helber Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Attention: Tom Fee/Corlyn Orr

Re: He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment

Dear Mr. Fee and Ms. Orr:

This letter is written on behalf of a group of concerned citizens from the Alii Landing neighborhood which encompasses the residents of Iki Iki Street, Ipuka Street and Ipuka Place. Attached hereto is a list of the names of some of the concerned citizens of our community.

Our community is aware of the Draft Environmental Assessment regarding the proposed construction of new facilities at the He'eia Fishpond (only one copy of the report was provided to us). From the limited information that we have reviewed, we have concerns about the continued use of the property after the permit is issued and the facilities have been constructed. Our specific concerns relate to the impact on our community by the construction and use of the new facilities. Although you made a brief presentation at the November, 2006 Neighborhood Board Meeting, and we anticipate that you will make another presentation at the December, 2006 Neighborhood Board Meeting, we believe that these presentations are inadequate to properly inform our community as to the proposal and the anticipated impact on our community.

Therefore, we request the following:

- That the permit application process be stayed until our community has been properly informed with regard to the proposal
- That you meet with our community in early January, 2007, to discuss the proposal and respond to our questions
- That a representative from Kamehameha Schools attend the meeting with our community
- That we be provided with at least 15 more copies of the Draft Environmental Assessment

Tom Fee/Corlyn Orr
Helber Hastert & Fee, Planners
Page 2 of 2
December 19, 2006

If you have any questions, please do not hesitate to contact me at 779-7078. Thank your for your anticipated cooperation and response in this matter.

Very truly yours,

Marie Manuele Gavigan

Enc.: a/s

cc: Kamehameha Schools

Department of Planning and Permitting
City and County of Honolulu

Honorable Barbara Marshall
Councilmember, Honolulu City Council
City and County of Honolulu

Kaneohe Neighborhood Board

E-MAIL OVER

12/18/06

NAME	ADDRESS	PHONE #:
Judy + Ed Kotaka	46.057 Ipuka Pl	247-5419
Miles Shimabukuro	46-040 Ipuka St.	235-3766
Summer Keliipio	46-301 Ikiiki St	722-7812
Paul & Joan Graham	46-043 Ipuka Pl	247-8413
Joel & Sandy Kurosaki	46-317 Ikiiki St.	235-4424
Tom Hinderleider	46-271 Ikiiki St.	235-3432
Mike Hankee (Hanna Hankee)	46-114 Ipuka Place	234-1378
Robert Mihara	46-325 Ikiiki St	247-4507
Maleda & Andrea Lee	46-241 Ikiiki St.	235-2018
Caroldean Fischer	46-263 Ikiiki St.	247-5242
Karen Gavigan	46-120 Ipuka Pl	247-2084
Marie	"	
Ed	"	"
[illegible] Pagel	46-25 Ikiiki	235-1191
Ed White	46-108 Ipuka Pl	235-2241
Michael Watanabe	"	"
Don Munro	46-251 Ikiiki	235-1124
Bob + Kathy Toyoda	46-094 Ipuka	235-3449
Peyton & Dawn Daido	46-056 Ipuka St.	235-3698
David P. Underwood Sr.	46-076 Ipuka St	236-2044
John Heidtke	46-287 Ikiiki St.	247-1805

Helber Hastert & Fee
Planners, Inc.

January 5, 2006

25th
1980 06

Ms. Marie Manuele Gavigan
President
Ali'i Landing Community Association
46-120 'Īpuka Place
Kāne'ohe, Hawai'i 96744-4000

Dear Ms. Gavigan

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letter dated December 19, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA). We have considered your comments and offer the following responses.

1. Potential Impacts on the Surrounding Community

We understand that you are concerned about the proposed project and its potential impacts to the surrounding community. The proposed project involves construction of a new caretaker's residence and support facilities to accommodate the existing aquaculture program, including an office, secured storage areas, toilets, and parking improvements. The proposed improvements are intended to address sanitation, safety, and security deficiencies related to the substandard condition of the existing facilities, and would be planned to accommodate the existing aquaculture program. Although typical construction-period impacts are anticipated, it should be emphasized that development of the proposed project would not result in any significant long-term impacts to the surrounding community. The existing use of the site and the current level of activity would remain unchanged, and no new activities or programs would be introduced as a result of the proposed improvements. There are presently no known plans for future program expansion or growth involving this site.

2. Community Consultations

Your request to postpone the permit application process on the grounds that the community has not been properly informed of the proposed project, along with your request for a meeting with Kamehameha Schools, is noted. Representatives of Kamehameha Schools and Paepae o He'eia have indicated their interest in participating in a meeting to discuss concerns about the proposed project. We welcome the opportunity to meet face-to-face with your organization, and kindly request a written statement identifying the specific concerns and questions for discussion before accepting your invitation. A written statement would help to define the discussion points for the meeting, allow us to prepare accordingly, and facilitate a more efficient, orderly meeting.

In response to your concern about inadequate notification to residents of the Ali'i Landing neighborhood, we note that the Ali'i Landing Community Association has been continuously

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Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

included in our community outreach efforts. Given the size of the residential community surrounding the fishpond and the presence of a functioning community association, we felt it was highly impractical and inefficient for us to maintain direct communications with each property owner. By involving the Ali'i Landing Community Association early on in the overall process, we assumed that the Association's leadership would consult with its members and represent their views in the environmental review process – exactly what you are now doing. While we regret that association members were only recently informed of the proposed project, we continue to believe that our efforts to inform the surrounding community of the proposed project were conducted in a fair and efficient manner. The following summarizes our efforts to inform the community of the proposed project prior to the presentations given to the Kāne'ohe Neighborhood Board at its past two regular meetings held in November and December 2006:

(1) Prior to preparing the Draft EA, we circulated notification about the proposed project to various government agencies and community organizations. The letter (dated June 15, 2006), which included a description of the proposed project, was sent to nearly 40 different groups, including the Ali'i Landing Community Association.

(2) The project was presented at the Paepae o He'eia 'Īpuka Street/Ikiiki Street Community Open House held in June 2006. Corlyn Orr, project planner, was in attendance to talk casually with residents about the project and learn about their concerns. The 12-15 residents who participated in the event were largely supportive of the project and did not express any major concerns or issues, generally agreeing with the need for the facility improvements and re-establishing a permanent caretaker at the fishpond.

(3) A presentation of the proposed project was made to the Kāne'ohe Neighborhood Board at its regular meeting on July 20, 2006. The Neighborhood Board remained impartial to the proposed project, and did not raise any concerns or issues. The Kāne'ohe Neighborhood Board meeting agendas and minutes are distributed widely through the Kāne'ohe area via postal mail and e-mail, and are posted on the City and County of Honolulu Neighborhood Commission Office website.

(4) A copy of the Draft EA was sent to the Ali'i Landing Community Association on August 4, 2006. The Draft EA was accompanied by a separate letter dated August 7, 2006 that provided instructions and contact information for submitting comments. Legal notification of the Draft EA's availability was published in the August 23rd edition of the *Environmental Notice* issued the State Office of Environmental Quality Control.

(5) The *Honolulu Star Bulletin* September 11, 2006 edition featured an article, "Moi Harvest Highlights He'eia Pond Traditions," written by Diana Leone that highlighted the proposed project and the status of the Draft EA.

We note your request to postpone the permit application process, and submit that such action is not necessary at this time. In addition to the EA process, the proposed project requires approval of a Conditional Use Permit - Major (CUP - Major) from the City and County of Honolulu Department of Planning and Permitting (DPP). DPP acceptance of the CUP-Major application can only take place after the Final EA is published and a Finding of No Significant Impact (FONSI) is issued (anticipated for early-February 2007). Community concerns regarding the proposed project are addressed through participation in the Draft EA public review process, as well as by DPP's review of the CUP - Major application, which includes a public hearing where concerned citizens are encouraged to testify. In addition, Paepae o He'eia will continue to hold one-on-one meetings with interested individuals and conduct open house forums at the fishpond.

3. Request for Additional Copies of the Draft EA
We are unable to fulfill your request for an additional 15 copies of the Draft EA, and ask that you accept the two copies of the Draft EA that we have enclosed with this letter. In the event that your constituency requires additional copies of the Draft EA, the document is available at the Kāne'ohe Public Library. An electronic copy can be downloaded (.pdf format) from the State of Hawai'i's Office of Environmental Quality Control's website at:
http://www.state.hi.us/health/oeqc/notice/index.html

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

HELBER HASTERT & FEE, Planners

Thomas A. Fee, AICP
Principal

Enclosure

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Honorable Barbara Marshall, Council Chair, Honolulu City Council
Roy Yanagihara, Chair, Kāne'ohe Neighborhood Board
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control
Mahina Duarte, Paepae O He'eia

46-120 Ipuka Place
Kaneohe, HI 96744-4000
January 12, 2007

VIA FACSIMILE TRANSMISSION
TO 808-545-2050 AND U.S. MAIL

Helber Hastert & Fee, Planners
733 Bishop Street, Suite 2590
Honolulu, HI 96813

Attention: Thomas A. Fee, AICP

Re: He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment

Dear Mr. Fee:

Thank you for your letter of January 5, 2006 [sic]. We appreciate your commitment to meet with us as well as the commitment of Kamehameha Schools and Paepae O He'eia to meet with us as well.

In response to your letter, following are the concerns of our community:

- Traffic and vehicle parking in the community – we would like to discuss alternatives
- Increased noise in the community
- Trespassing/poaching in the pond area – with an increase in the number of people visiting and freely using the driveway access down past community homes, the more exposure we have to trespassers, thefts and security breaches in general
- The lack of communication from Kamehameha Schools to our community
- The potential and risk of the fishpond being used as a commercial venture

These are the main concerns noted by our community. Other concerns may arise as the result of our discussions.

As you know, the Kaneohe Neighborhood Board meeting is scheduled for January 18, 2007. It would be good if you, Kamehameha Schools, and Paepae O He'eia could meet with our community on January 16th or 17th. Windward Community College has a room that would be available either day for our meeting, however, if we are going to meet on Tuesday, the facility would need to be reserved today. Also, due to requirements to reserve the room, we would ask that your company reserve the room.

Please feel free to contact me today at 779-7078. Thank you for your consideration in this matter and we look forward to the requested meeting.

Very truly yours,

Marie Manuele Gavigan

cc: Jo Anne Hanada, Kamehameha Schools
Jamie Peirson, City and County of Honolulu, Department of Planning and Permitting
Honorable Barbara Marshall, Council Chair, Honolulu City Council
Roy Yanagihara, Chair, Kaneohe Neighborhood Board
Mahina Duarte, Paepae O He'eia

KO`OLAUPOKO HAWAIIAN CIVIC CLUB

December 5, 2006

Ms. Corlyn Orr, Project Planner
Helbert Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawai`i 96815

Re: He`eia Fishpond Aquaculture Support Facilities Draft EA
and Conditional Use Permit Application, TMK 4-6-05:001

Dear Ms. Orr:

The Ko`olaupoko Hawaiian Civic Club's Board of Directors has voted to support the proposed construction of a caretaker's facility at the He`eia Fishpond in He`eia Ahupua`a, moku Ko`olaupoko.

We urge the property owners, the fishpond caretakers, and neighbors of the facility to work together in harmony and respect to resolve outstanding concerns and find the pono solutions. It is our belief that such solutions lie in a mutual aloha among all parties.

It is from this perspective that we offer our mana`o and support for a facility that would make it possible to continue educational, cultural and related activities at this important community resource.

Mahalo for this opportunity to comment. If you need further information, please contact Mahealani Cypher, chair of our historic preservation committee, at malamapono@aol.com.

Me kealoha pumehana,

Elizabeth C. Lau

ELIZABETH C. LAU
President

cc: Kane`ohe Neighborhood Board
Kahalu`u Neighborhood Board
Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects

P. O. BOX 664
KANE`OHE, HAWAI`I 96744
Ko`olaupokohcc@hotmail.com

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Ms. Elizabeth C. Lau
President
Ko'olaupoko Hawaiian Civic Club
P.O. Box 664
Kāne'ohe, Hawai'i 96744

Dear Ms. Lau:

He'eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He'eia, Ko'olaupoko, O'ahu

Thank you for your letter dated December 5, 2006 in response to the He'eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA).

Your letter indicates that the Ko'olaupoko Hawaiian Civic Club supports the proposed construction of a caretaker's facility at He'eia Fishpond to continue educational, cultural and related activities at the pond. In addition, you letter urges cooperation and mutual aloha among the property owners, fishpond caretakers, and neighbors to address outstanding differences. We value your organization's support for this important project, and agree that the concerned parties need to work together towards resolution.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai'i Office of Environmental Quality Control

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Corlyn Olson Orr

From: Cindy Gamiao
Sent: Monday, September 11, 2006 11:53 AM
To: Corlyn Olson Orr
Subject: FW: Attention: Corlyn Orr

From: Chris Cramer [mailto:chris.cramer@maryknollschool.org]
Sent: Monday, September 11, 2006 11:11 AM
To: hhf
Subject: Attention: Corlyn Orr

Aloha Ms. Orr,

I wanted to add my input to your proposal to add a caretaker cottage at the Heeia Fish Pond. I have not seen any pictures of the proposed structure circulated yet. It is a wonderful idea and I hope that the new structure be in a Hawaiian architectural style as opposed to a cinderblock square fortress style. Heeia Fishpond is a beautiful area and it is important to keep any new structures in line with historical, visual and cultural considerations. Attached is a link to some beautiful designs from the Maui Planning department of indigenous designs. http://www.co.maui.hi.us/departments/Public/pdf/IHAStructures.pdf

Mahalo,

Chris Cramer
808-382-0847

Helber Hastert & Fee
Planners, Inc.

25th ANNIVERSARY 1980 - 2005

February 12, 2007

Mr. Chris Cramer
chris.cramer@maryknollschool.org

Dear Mr. Cramer:

He‘eia Fishpond Aquaculture Support Facilities
Draft Environmental Assessment
He‘eia, Ko‘olaupoko, O‘ahu

Thank you for your e-mail dated September 11, 2006 in response to the He‘eia Fishpond Aquaculture Support Facilities Draft Environmental Assessment (EA).

We have reviewed Maui County Chapter 15-110, Department of Public Works and Environmental Management "Rules Pertaining to Indigenous Hawaiian Architecture Structures", which establishes procedures for permitting and constructing traditional Native Hawaiian grass huts (*hale)*. Upon closer examination, we found that the rules prohibit specific uses and activities from occurring in and near *hale,* including cooking and the use of open flames, indoor plumbing, and the use of electrical fixtures and tools. Considering the numerous restrictions imposed by Maui County, we are concerned that a traditional *hale* does not meet the facility and service criteria desired for the caretaker’s residence and may not be a practical alternative for the proposed caretaker’s residence.

We note your concern that the new structure will be a cinderblock square fortress that is not in line with historical, visual and cultural considerations. He‘eia Fishpond is listed on the National Register of Historic Places, and the proposed facility improvements will be sited and designed with respect for the cultural and historic integrity of the site.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EA.

Sincerely,

Thomas A. Fee, AICP
Principal

cc: Jo Anne Hanada, Kamehameha Schools
Dwight Kauahikaua, AIA, Kauahikaua and Chun Architects
Jamie Peirson, City and County of Honolulu Department of Planning and Permitting
Genevieve Salmonson, State of Hawai‘i Office of Environmental Quality Control

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