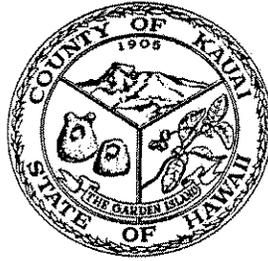


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**AN EQUAL OPPORTUNITY EMPLOYER**  
**COUNTY OF KAUA'I**  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUA'I, HAWAII 96766-1340

December 7, 2006

Ms. Genevieve Salmonson, Director  
Office of Environmental Quality Control  
Department of Health  
State of Hawaii  
235 South Beretania Street, Suite 702  
Honolulu, Hawai'i 96813

RECEIVED  
06 DEC 11 AM 1:16  
OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

Dear Ms. Salmonson:

Subject: **KAPA'A SOCCER PARK PROJECT**  
TMK: (4) 4-05-015: 036  
Kapa'a, Kaua'i, Hawai'i  
Final Environmental Assessment / Negative Declaration Determination

The County of Kaua'i, Department of Public Works, has reviewed the comments received during the 30-day public comment period which ended on October 9, 2006. The agency has determined that this project will not have significant environmental effects and has issued a Negative Declaration, also referred to as a Finding of No Significant Impact (FONSI). Please publish this notice in the December 23, 2006 issue of the OEQC's *The Environmental Notice*.

We have enclosed a completed OEQC Publication Form, two (2) hard copies of the Final EA, and one (1) CD containing the Final EA and project summary. If you have any questions on this matter, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671. Thank you.

Sincerely,

  
DONALD M. FUJIMOTO  
County Engineer

# FINAL

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# ENVIRONMENTAL ASSESSMENT

## FOR

# KAPA'A SOCCER PARK



December 2006

Prepared For:



County of Kauai  
Dept. of Public Works  
Parks Division

Prepared By:



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## TABLE OF CONTENTS

<b>CHAPTER</b>	<b>PAGE</b>
<b>CHAPTER 1 INTRODUCTION</b>	<b>1</b>
<b>1.1 PURPOSE FOR ENVIRONMENTAL ASSESSMENT</b>	<b>1</b>
<b>1.2 LAND USE CLASSIFICATIONS AND DESIGNATIONS</b>	<b>4</b>
<b>CHAPTER 2 PROJECT DESCRIPTION</b>	<b>9</b>
<b>2.1 PROJECT LOCATION AND VICINITY</b>	<b>9</b>
2.1.1 Existing Surrounding Land Uses	9
2.1.2 Property Information and Existing Site Conditions	12
<b>2.2 PROJECT NEED AND OBJECTIVES</b>	<b>14</b>
<b>2.3 DESCRIPTION OF PROJECT</b>	<b>15</b>
2.3.1 Existing Site Assessment	15
2.3.2 Basis of Design Criteria	18
2.3.3 Conceptual Site Plan	21
<b>2.4 DEVELOPMENT SCHEDULE AND ESTIMATED COSTS</b>	<b>25</b>
<b>2.5 LISTING OF REQUIRED PERMITS</b>	<b>25</b>
<b>2.6 ALTERNATIVES CONSIDERED</b>	<b>26</b>
<b>CHAPTER 3 PHYSICAL AND BIOLOGICAL ENVIRONMENT</b>	<b>31</b>
<b>3.1 CLIMATE, TOPOGRAPHY, AND SOILS</b>	<b>31</b>
3.1.1 Topography	32
3.1.2 Soils	32
3.1.3 Impacts on Soils and Topography	32
<b>3.2 NATURAL HAZARDS</b>	<b>34</b>
<b>3.3 AIR QUALITY</b>	<b>37</b>
<b>3.4 NOISE</b>	<b>39</b>
<b>3.5 VISUAL RESOURCES</b>	<b>40</b>
<b>3.6 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES</b>	<b>41</b>
3.6.1 Previous Archaeological Research and Findings	42
3.6.2 Results of Fieldwork	44
3.6.3 Summary of Impact on Archaeological Resources	44
3.6.4 Cultural Resources Assessment	45
<b>3.7 BIOLOGICAL ENVIRONMENT</b>	<b>46</b>
3.7.1 Botanical Resources	46
3.7.2 Hydrogeological Resources	47

---

---

3.7.3	Streams and Water Quality	48
3.7.4	Avifauna and Fauna	49
<b>CHAPTER 4</b>	<b>ECONOMIC AND SOCIAL FACTORS</b>	<b>50</b>
4.1	EXISTING SOCIAL AND ECONOMIC CONTEXT	50
4.2	ECONOMIC AND FISCAL FACTORS	51
4.3	SOCIAL IMPACT FACTORS	52
4.4	SECONDARY AND CUMULATIVE IMPACTS	52
<b>CHAPTER 5</b>	<b>INFRASTRUCTURE FACILITIES</b>	<b>54</b>
5.1	WATER FACILITIES	54
5.2	WASTEWATER FACILITIES	56
5.3	DRAINAGE FACILITIES	57
5.4	SOLID WASTE	58
5.5	TRANSPORTATION FACILITIES	58
5.5.1	Existing Conditions	58
5.5.2	Projected Traffic Conditions and Impacts	60
<b>CHAPTER 6</b>	<b>PUBLIC FACILITIES AND UTILITIES</b>	<b>62</b>
6.1	ELECTRICAL AND COMMUNICATION FACILITIES	62
6.2	RECREATIONAL FACILITIES	62
6.3	EDUCATIONAL FACILITIES	63
6.4	POLICE PROTECTION	64
6.5	FIRE PROTECTION	65
6.6	MEDICAL FACILITIES	65
<b>CHAPTER 7</b>	<b>CONFORMANCE WITH PLANS AND POLICIES</b>	<b>66</b>
7.1	STATE LAND USE DISTRICT	66
7.2	CHAPTER 344, STATE ENVIRONMENTAL POLICY	66
7.3	COUNTY OF KAUA'I GENERAL PLAN	69
7.4	COUNTY ZONING DISTRICT	76
<b>CHAPTER 8</b>	<b>AGENCY AND PUBLIC CONSULTATION</b>	<b>77</b>
8.1	PRE-ASSESSMENT CONSULTATION (DRAFT EA)	77
8.2	DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS	79
8.3	PUBLIC INFORMATIONAL MEETING	80

---

---

<b>CHAPTER 9</b>	<b>FINDINGS AND DETERMINATION</b>	<b>85</b>
<b>9.1</b>	<b>FINDINGS</b>	<b>85</b>
<b>9.2</b>	<b>DETERMINATION</b>	<b>89</b>
<b>CHAPTER 10</b>	<b>REFERENCES</b>	<b>90</b>

## LISTING OF FIGURES

---

---

<b>FIGURE</b>		<b>PAGE</b>
Figure 1.1	Project Location Map	2
Figure 1.2	State Land Use District Map	5
Figure 1.3	Kawaihau Planning District Land Use Map	6
Figure 1.4	Kaua'i County Zoning Map	7
Figure 2.1	Project Vicinity Map	10
Figure 2.2	Physical Environment Conditions	17
Figure 2.3	Conceptual Site Plan	22
Figure 2.4	Conceptual Perspective View of Kapa'a Soccer Parkn	23
Figure 2.5	Alternative 1	28
Figure 2.6	Alternative 2	29
Figure 3.1	Soil Survey Map	33
Figure 3.2	Flood Insurance Rate Map	36
Figure 3.3	Archaeological Site Map	43

## LISTING OF TABLES

---

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<b>TABLES</b>		<b>PAGE</b>
Table 1.1	Summary Information	3
Table 3.1	Summary of National and State Ambient Air Quality Standards	37
Table 3.2	Summary of Consultation Efforts	46
Table 5.1	Average Daily Water Demand	55
Table 5.2	Trip Generation Summary for Proposed Project	61

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## LISTING OF EXHIBITS

<b>APPENDIX</b>		<b>PAGE</b>
Exhibit 1	Kapa'a Wailuā Planning Area Development Plan	8
Exhibit 2	Tax Map Key of Project Site	13
Exhibit 3	State DOH Noise Classifications	39

## LISTING OF APPENDICES

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<b>Appendix A</b>	<b>Photos of Project Site and Surrounding Areas</b>
<b>Appendix B</b>	<b>Consultation Efforts</b>
<b>B1</b>	<b>Pre-Assessment Consultation Comment Letters and Responses</b>
<b>B2</b>	<b>Draft Environmental Assessment Comment Letters and Responses</b>
<b>B3</b>	<b>Chapter 6E-42 Historic Preservation Review Letter</b>
<b>Appendix C</b>	<b>Archaeological Inventory Survey for an Approximately 11.5 Acre Parcel Proposed as a Soccer Park at Kapa'a Ahupua'a, Kawaihau District (Puna Moku), Island of Kaua'i</b> Prepared by Cultural Surveys Hawai'i, Inc. (August 2006)

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## CHAPTER 1 INTRODUCTION

### 1.1 PURPOSE FOR ENVIRONMENTAL ASSESSMENT

The County of Kaua'i (County), Department of Public Works, Parks Division is proposing a new capital improvement project to benefit the residents and visitors of the Kawaihau District on the island of Kaua'i. This project involves the development of a new soccer park and related amenities. This project is referred to as the "Kapa'a Soccer Park Project."

The proposed Kapa'a Soccer Park Project will provide an additional recreational resource for the soccer community in the historic Kapa'a Town. The primary purpose of this soccer park is to alleviate the shortage of soccer fields within this area of Kaua'i. The recreational use of this park will not be limited to only soccer, but will also be open to the public for other leisure and sport related activities. The development of this project will include park related amenities such as a new comfort station, jogging/ walking path, and paved parking lot. This new soccer park will be publicly owned and operated by the County Department of Public Works, Parks Division. Figure 1.1 shows the project's location on the island of Kaua'i and within Kapa'a Town.

The proposed site for the Kapa'a Soccer Park Project will be situated on an approximately 11.5-acre parcel identified as Tax Map Key (TMK): (4) 4-05-015: 036. The triangular-shaped project site is bordered by Mō'ikeha Canal to the south, a cane haul road to the north, and existing residences and businesses to the east. The TMK boundary is shown on Figure 1.1. A summary of pertinent project related information is provided in Table 1.1 on page 3 of this document.

This document identifies basis for design components that assisted in the development of the project's conceptual site plan configuration and accessory amenities being provided. These design components were used to develop and evaluate practical park configurations in efforts to make appropriate use of available space given existing constraints and site conditions.

This Final Environmental Assessment (Final EA) was prepared to address the probable impacts on the surrounding environment resulting from the proposed improvements associated with the new Kapa'a Soccer Park. This document was prepared in conformance to the regulatory and documentation requirements prescribed under Chapter 343, Environmental Impact Statements, Hawai'i Revised Statutes (HRS), otherwise referred to as the "Hawaii Environmental Impact Statement Law" or HEISL, and Title 11, Chapter 200 (Environmental Impact Statement Rules) of the State Department of Health's Administrative Rules (HAR).



**PROJECT LOCATION MAP**

**Figure 1.1**

*Kapaa Soccer Park  
County of Kauai, Department of Public Works*

*Source:  
(Aerial) NOAA,  
Delorme 3-D Topo Quads*



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**Table 1.1 Summary Information**

<b>Project Name:</b>	Kapa'a Soccer Park Project
<b>Proposing Agency:</b>	Parks Division Department of Public Works County of Kaua'i 4444 Rice Street Mō'ikeha Building, Suite 275 Līhu'e, Kaua'i, Hawai'i 96766-1340 Contact: Mr. Mel Nishihara, Park Administrator
<b>Authorized Agent:</b>	SSFM International, Inc. 501 Sumner Street, Suite 620 Honolulu, Hawai'i 96817-1308 Contact: Mr. Ronald Sato, AICP
<b>Approving Agency:</b>	Department of Public Works, County of Kaua'i
<b>Project Description:</b>	Development of a new soccer park complex in the town of Kapa'a, Kaua'i. The project will involve the construction of two soccer fields along with related park amenities such as a comfort station, drinking fountains, jogging / walking path, and paved parking area.
<b>Project Location:</b>	This project site is located in the Kawaihau Planning District along the east shore of the island of Kaua'i. The park site is approximately 11.5 acres which includes the areas for the parking lot and comfort station.
<b>Existing Use:</b>	Currently undeveloped and vacant.
<b>Land Ownership:</b>	The land for this project is currently owned by the State of Hawai'i, but jurisdiction of the parcel has been transferred to the County of Kaua'i. A section of this property is planned to be acquired by the State Department of Transportation for right-of-way (ROW) purposes involving the proposed Kapa'a Relief Route (Permanent Bypass Road).
<b>Tax Map Key:</b>	(4) 4-05-015: 036
<b>Land Use Designations:</b>	State Land Use: Urban District County Zoning: R-20, Residential District and Open District General Plan: Urban Center SMA District: The project site is not located within the SMA. Kapa'a-Wailuā Development Plan: STA-C, Special Treatment Area C

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A Draft Environmental Assessment (Draft EA) was published in the September 8, 2006 issue of State Office of Environmental Quality Control's *The Environmental Notice* in conformance to these regulatory requirements. The 30-day public comment period for the review of that Draft EA ended on October 9, 2006. Subsequently, this Final EA was prepared based upon the comments received on the Draft EA, and a Negative Declaration, also referred to as a Finding of No Significant Impact (FONSI), is consequently being issued for this project.

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## 1.2 LAND USE CLASSIFICATIONS AND DESIGNATIONS

### **State Land Use Districts**

Under Chapter 205, HRS, all lands in the State of Hawai'i are classified into four major land use districts (State Land Use Districts) which are the Urban, Rural, Agricultural, and Conservation districts (State of Hawai'i, 2000). The boundaries of these districts are shown on maps referred to as State Land Use District Boundary Maps. For each land use district classification, there are defined uses or activities permitted which are described under §205-2, HRS, and regulated by the State Land Use Commission.

The Kapa'a Soccer Park site and surrounding areas are classified as "Urban District" on the State's Land Use District Boundary Map. Figure 1.2 shows the project area in relation to the State's land use district boundaries. Activities or uses permitted within the Urban District are provided by ordinances or regulations of the county within which the Urban District is situated. Thus, the project site along with other Urban District lands on the island of Kaua'i are regulated by the ordinances and regulations of the County of Kaua'i.

### **County of Kaua'i General Plan**

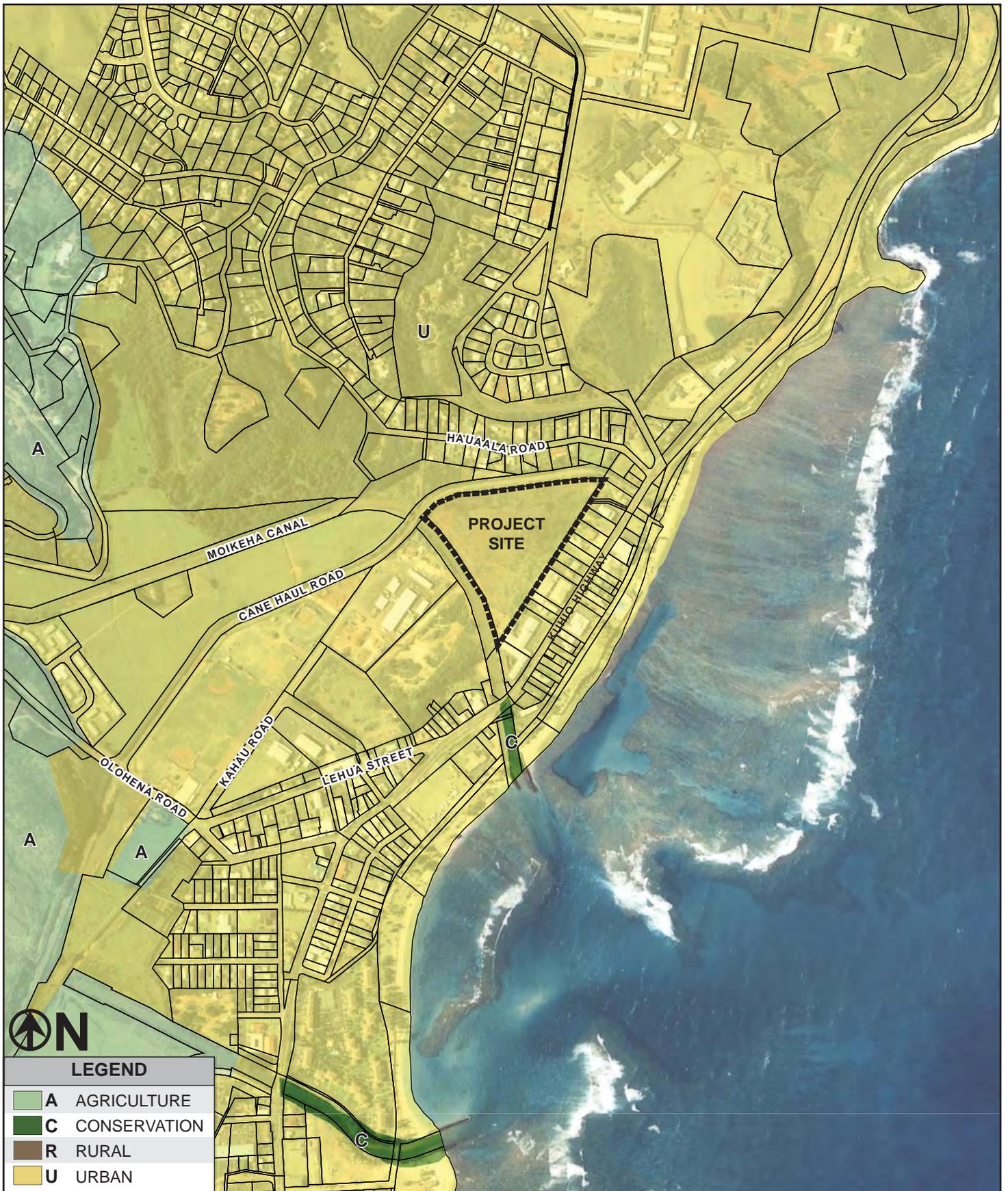
The *County of Kaua'i General Plan* was revised and adopted by the County in 2000 (adopted under Ordinance No. 753, November 30, 2000), and serves as a document providing guidance for land use regulations, locations and characteristics of new developments and facilities, and planning for County and State facilities and services (County, 2000). Under the *General Plan's* Land Use Maps for the Kawaihau Planning District, the Kapa'a area containing the project site is designated as "Urban Center." Figure 1.3 shows the project site in relation to the Kawaihau Planning District Map land use designations.

### **County of Kaua'i Zoning**

The County of Kaua'i zoning map for the area was reviewed to identify current zoning classifications for the project site and surrounding areas. Based upon this zoning map, the majority of the project site is zoned R-20, Residential District with a maximum density of twenty (20) dwelling units per acre. A portion of the project site is also zoned Open District. Figure 1.4 shows the project site in relation to County zoning designations.

### **Special Management Area**

Under Chapter 205A (Coastal Zone Management), HRS, the County is given authorization to regulate land uses located within the established Special Management Area (SMA) for the island of Kaua'i. Review of Kaua'i's SMA Map for the Kapa'a Soccer Park Project site and immediate surrounding area determined that the entire project site is situated outside of the SMA boundary, and thus not subject to these regulations.



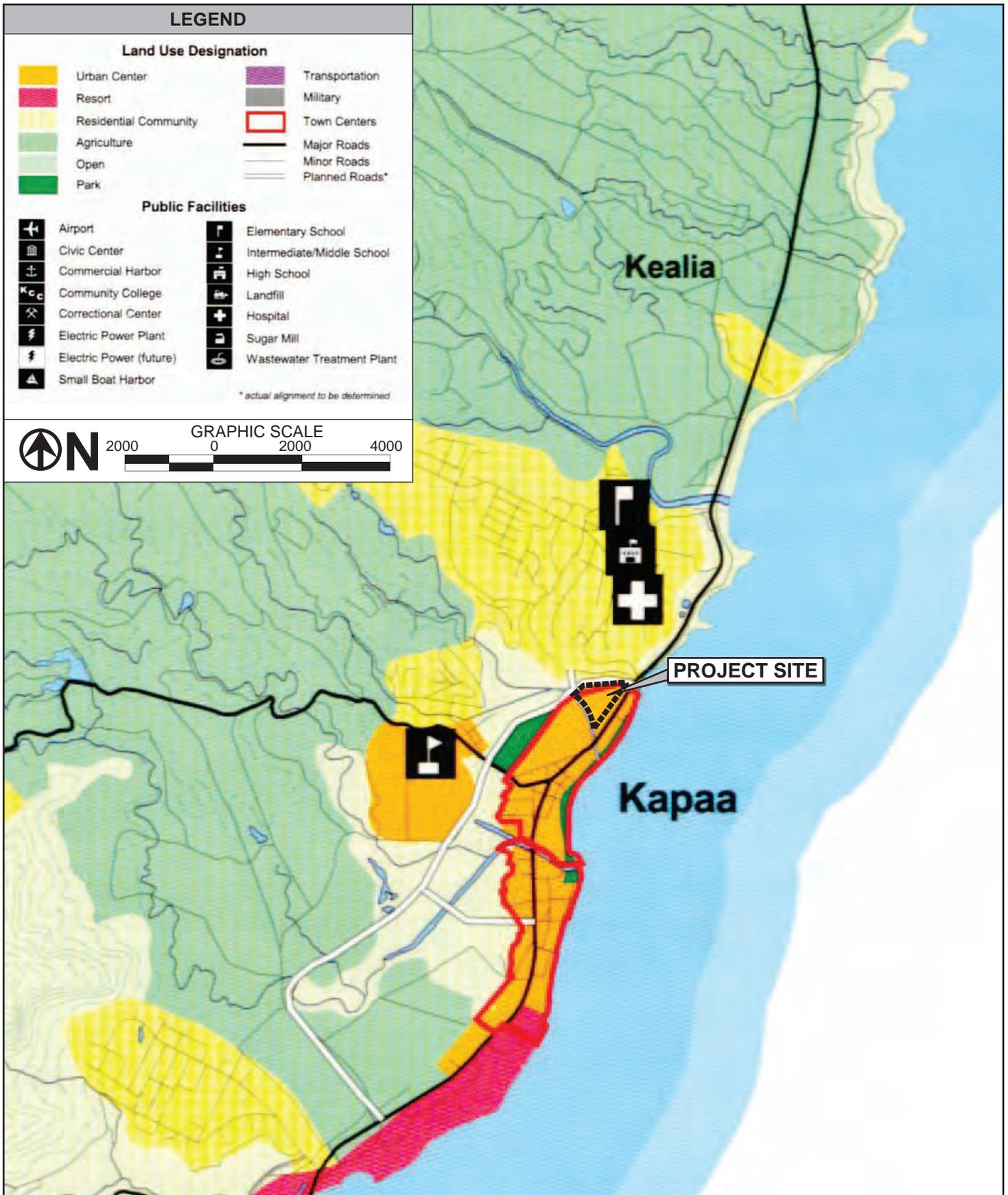
# STATE LAND USE DISTRICT MAP

Figure 1.2

Kapaa Soccer Park  
 County of Kauai, Department of Public Works

Source:  
 (Aerial) NOAA,  
 (GIS Data) State Office of Planning





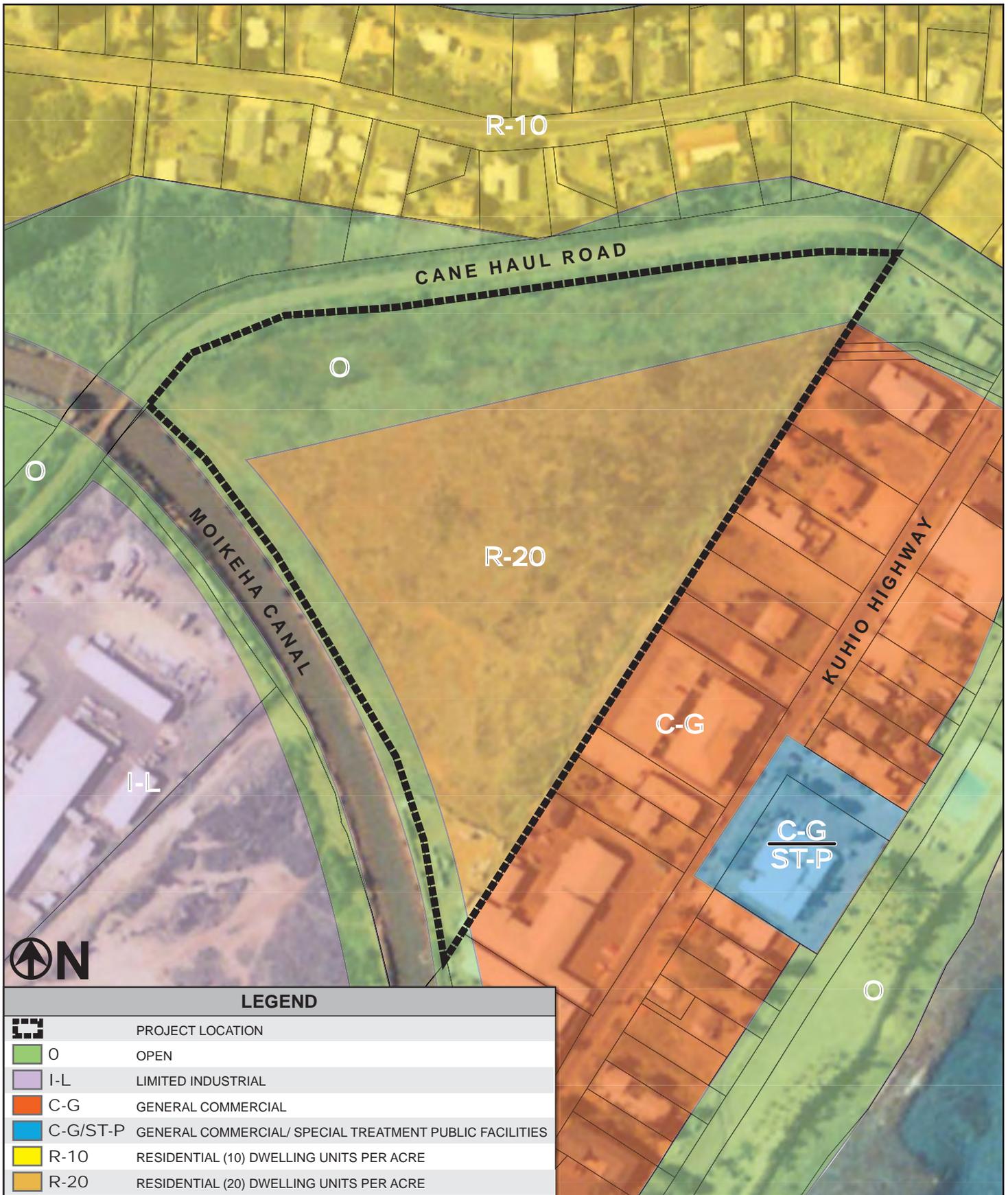
**KAWAIHAU PLANNING DISTRICT  
 LAND USE MAP**

*Kapaa Soccer Park  
 County of Kauai, Department of Public Works*

**Figure 1.3**

*Source:  
 Kauai General Plan (Nov. 2000)*





LEGEND	
	PROJECT LOCATION
	O OPEN
	I-L LIMITED INDUSTRIAL
	C-G GENERAL COMMERCIAL
	C-G/ST-P GENERAL COMMERCIAL/ SPECIAL TREATMENT PUBLIC FACILITIES
	R-10 RESIDENTIAL (10) DWELLING UNITS PER ACRE
	R-20 RESIDENTIAL (20) DWELLING UNITS PER ACRE

# COUNTY OF KAUAI ZONING MAP

Figure 1.4

Kapaa Soccer Park  
 County of Kauai, Department of Public Works

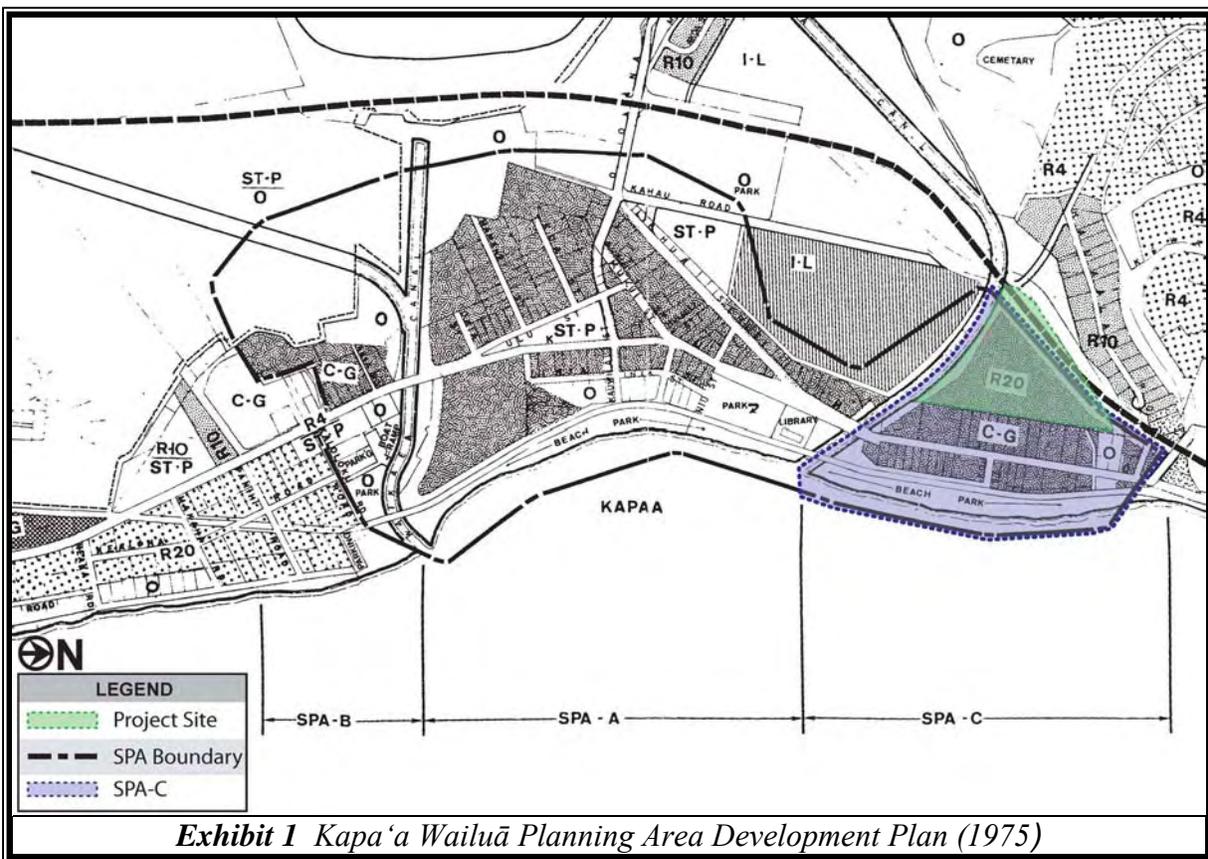
Source:  
 (Aerial) NOAA,  
 County of Kauai Planning Dept.



### **Kapa'a-Wailuā Development Plan**

The Kapa'a-Wailuā Development Plan was adopted by the County in 1975 (adopted under Ordinance No. 254, June 4, 1975) and serves as a guide for the community and government in the attainment of the economic, social, cultural and environmental goals of the study area. Its purpose is to both protect the natural beauty of the subject area and provide framework for the organized growth of the community.

According to this development plan, the proposed site for the Kapa'a Soccer Park is located within the SPA-C, Special Planning Area – C designation. The boundary for this special area designation begins north of Mō'ikeha Canal, flanks both sides (mauka and makai) of Kūhiō Highway, and stretches up to the existing Cane Haul Road (see Exhibit 1 ▼). Special Planning Areas A and B are also shown on the map provided below.



The Kapa'a-Wailuā Development Plan projected future uses for each Special Planning Area. In 1975, SPA-C was originally intended to become the future site of a marina and shopping center. However, these plans were developed according to community and private landowner plans in the early 70's. Since then, landowners' plans and the community's needs have changed along with development patterns in the area. Therefore, this site is now owned by the County and proposed for the soccer park project.

## CHAPTER 2 PROJECT DESCRIPTION

### 2.1 PROJECT LOCATION AND VICINITY

The Kapa'a Soccer Park project site is located on the eastern coastline of Kaua'i in the County's Kawaihau Planning District. This district stretches along the east coast of Kaua'i covering the coastal areas between the Wailuā River and Moloa'a Bay including the communities of Wailuā, Kapa'a, Keālia, and Anahola. This district has an established urban corridor beginning from Haleilio Road in Wailuā to Kawaihau Road, at the northern edge of Kapa'a Town. The area includes inland (mauka) properties from the shoreline up to the Līhu'e-Kōloa and Keālia Forest Reserves.

Throughout this planning district corridor, the shoreline is a dominant feature. This coastline is the location of many public parks where residents and visitors enjoy various types of recreational activities. Running parallel to this shoreline corridor is Kūhiō Highway which serves as the primary north-south thoroughfare for vehicles along the entire eastern coast of Kaua'i.

The proposed soccer park project site is situated within Kapa'a Town's main urban corridor. This area consists of several urban developments such as resorts, residences, and community facilities as well as one of the island's largest commercial areas situated along Kūhiō Highway. Kapa'a town has a rich history and today is a major urban/resort area on the eastern coastline of Kaua'i.

#### 2.1.1 Existing Surrounding Land Uses

A discussion of the existing uses present around the project site area is provided in this section. Several photographs of the existing property and surrounding land uses close to the project site area are provided in Appendix A of this document. Figure 2.1 shows the project's site in relation to Kapa'a Town and existing uses in the immediate vicinity.

The soccer park project site is surrounded by residential, commercial and State-owned properties. As shown on the vicinity map, Mō'ikeha Canal forms the southern border of the project site. Adjacent to the southern side of Mō'ikeha Canal are properties owned by the State of Hawai'i and State Department of Hawaiian Home Lands. The northern border is created by and existing privately-owned cane haul road which lies between the project site and a string of single-family residences. The eastern border is lined by a mixed variety of residences and commercially owned properties situated along Kuhio Highway which among them are Kojimas Inc., South Pacific Bistro Inc. and Jasper Properties LLC.



# PROJECT VICINITY MAP

Figure 2.1

Kapaa Soccer Park  
 County of Kauai, Department of Public Works

Source:  
 (Aerial) NOAA



Along Kūhiō Highway, existing uses consist of a greater urbanized mix of both residences and commercial businesses making up the town center. There are several recreational and community facilities along this corridor as well, and a brief description of these is provided.

- Lihī Park. This is a County-owned park of about 2.6 acres located on the southern end of Waika'ea Canal. This park is undeveloped, but has a few picnic tables and trash cans. This park is used for various recreational activities such as fishing in the canal or along the beach, picnicking, etc. Visitors access this park from either Kaloloku Road or Moana Kai road. People also use a dirt path through this park to access the shoreline area along Moana Kai Road which includes Baby Beach.
- Kapa'a Town Park. This County-owned park of 2.8 acres is located along Niu Street, and is used for soccer league games and other recreational activities. Park facilities include one soccer field, parking lot, two pavilions, and a comfort station next to a police substation along Niu Street.
- Kapa'a Beach Park. Adjacent to Kapa'a Town Park and located along the Kapa'a shoreline, this 17-acre beach park features pavilions and picnic areas for beach users. This coastline is the location of many recreational activities including various types of fishing, surfing, windsurfing or kite-surfing, beach activities as well as bicycling and hiking/walking along an existing cane haul road.
- Kapa'a New Park. This 18-acre district park features a little league field, baseball field, football field, lighted softball field and tennis courts, lighted roller hockey rink, basketball court, and comfort stations. The County of Kaua'i sponsors regular weekly farmers markets called "Sunshine Markets" throughout the island allowing local farmers to sell a full range of locally-grown produce and flowers. A Sunshine Market is held every Wednesday at 3:00 p.m. at the Kapa'a New Park.
- Kapa'a High School and Elementary School. On average, Kapa'a Elementary School serves about 950 to 970 students in grades Kindergarten thru 5<sup>th</sup> grade. Kapa'a High School serves students from Wailua House lots, Wailua Homesteads, Kapa'a, Kapa'a Homesteads, Waipouli, Kealia, Anahola, Kilauea, Kalihiwai, Wainiha, Princeville, Hanalei, and Haena.
- Kapa'a Public Library. This is a State public library located adjacently north of the Kapa'a Beach Park.
- Mō'ikeha Canal Bridge. This County-owned bridge crossing the canal has been improved for bicycles and pedestrians using the path. This bridge is also used for shoreline fishing ('oama) within the canal by the public. People presently park

along the canal at open areas near the highway or along the shoreline makai of the library parking lot.

- Kapa'a Neighborhood Center. This is a community center located along Kou Road and is used for various community activities and meetings.
- Smokey Louie Public Swimming Pool. This County-owned pool is located along the shoreline across from the neighborhood center at the end of Kou Road.

### 2.1.2 Property Information and Existing Site Conditions

The Kapa'a Soccer Park Project site consist of a triangular-shaped parcel that is currently undeveloped (see photo ▼). The topography for the area is generally flat with slopes ranging between 0 to 3 percent. The entire project site is situated at about 20 feet above mean sea level. Present vegetation consists of overgrown California grass approximately four feet in height to smaller brushes over the majority of the property with larger vegetation on the outer edges of the site. Other items present on the project site are discarded materials such as scrap wood, and mounds of earth and rock piles.

Approximately half an acre of the 11.5-acre project site is being leased to Aloha Lumber Co. Inc. whom currently uses their portion of the site to store lumber material in barge containers. This area is located in the southern tip of the triangular-shaped project site (not shown in the photo below).



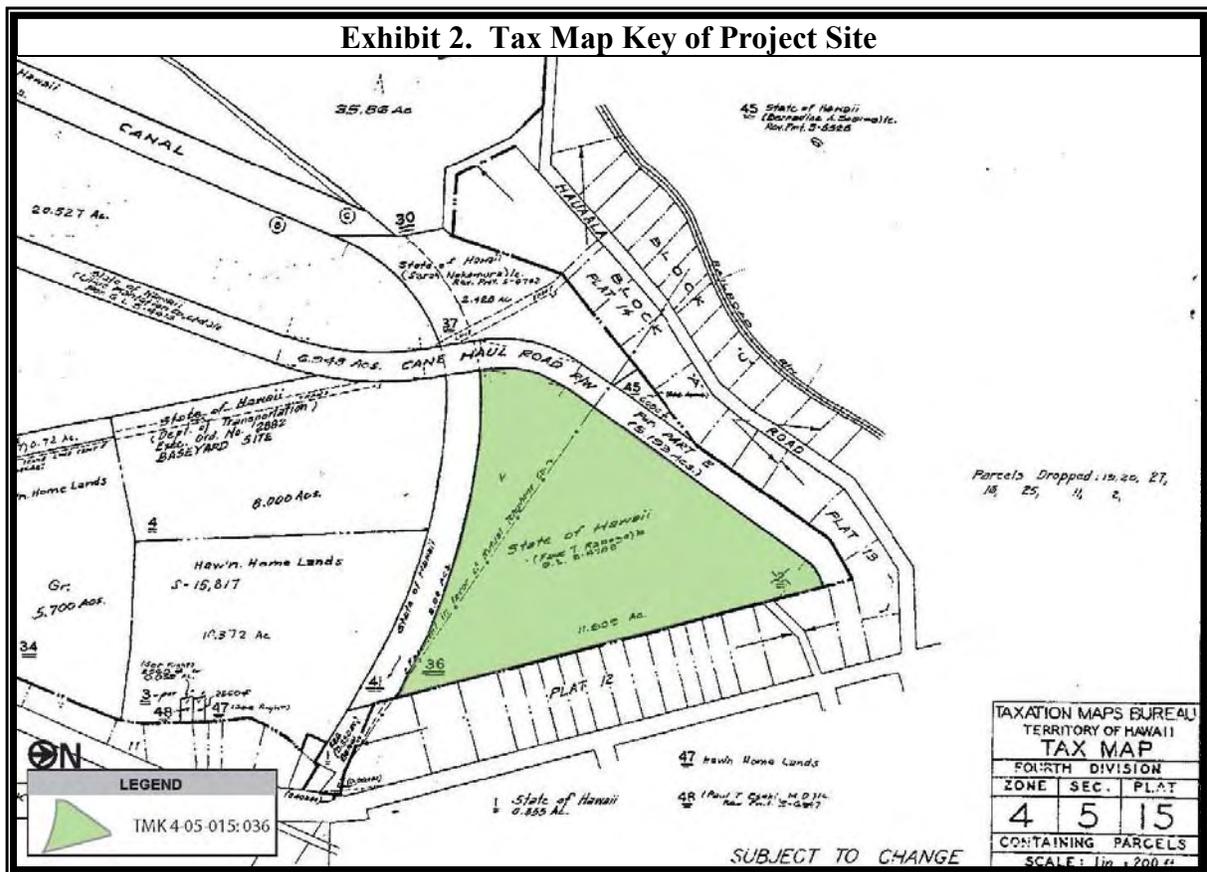
**Vehicular Access**

There is presently no roadway providing public vehicular access to the project site. Consequently, this property is presently land-locked. The existing cane haul road running along the western mauka border of the project site is privately-owned and not open to the general public.

However, this cane haul road is currently being improved by the State Department of Transportation (DOT) to serve as an extension to the existing temporary Kapa'a Bypass Road available in this area to alleviate traffic congestion. This bypass road extension will be a one-way westbound thoroughfare from Kuhio Highway to Olohena Road, and should be completed by the end of 2006. With this extension, vehicle access to the proposed soccer park would now be available, however, it will be limited to only a left-turn into the property and a left-turn out.

**Property Information**

The proposed site for the Kapa'a Soccer Park consists of one property totaling 11.5 acres. This property is currently owned by the State of Hawai'i, but is under the jurisdiction of the County of Kaua'i, and is identified as Tax Map Key (TMK) 4-05-015: 036. The exhibit below graphically shows the TMK designation for the soccer park site.



In 1999, County of Kaua'i assumed jurisdiction over the subject parcel through State Board of Land and Natural Resources' (BLNR) approval to set aside State lands to the County of Kaua'i for public park and recreational purposes which included TMK's 4-05-013: 002 & 028; 4-06-014: 034, 036, 090; and 4-05-015: por.036. The Board's "Recommendation B" authorized the issuance of an immediate right-of-entry (ROE) for planning management, site control, and/or maintenance purposes to the County of Kaua'i, meaning that the County had full control of the property in effect as of that date.

The inclusion of an immediate ROE was used as a mechanism which permitted occupancy and use of the property, and was set to expire on the date the official Executive Order document is completed. However, the issuance of the Executive Order from the Department of Land and Natural Resources is still being processed and delayed due to a backlog of other work involving other State departments.

## **2.2 PROJECT NEED AND OBJECTIVES**

There has been a strong demand for increased recreational facilities in the Kapa'a area to serve the existing and growing resident population and overall community. There are several County park sites in the area from Wailuā to Kapa'a, however, the use of these facilities is immense resulting in the need for more facilities. The General Plan identified the Lydgate Park and Kapa'a New Park as having "extremely high use", and Kapahi Park and Wailuā Houselots Park as having "high use" (County, 2000). Thus, of the five park sites with facilities available for "active" recreational use in the Wailuā to Kapa'a area, four of them are already experiencing considerable usage.

The Kapa'a area lacks sufficient soccer fields to adequately support the growing interest in soccer. Of these park sites, only three of them have soccer fields and none of them qualify as a regulation full size soccer field (120 yards by 80 yards). Therefore, there is a need for more soccer fields in this area to support both youth and adult leagues along with related activities. There is also a need to establish a "home" field for Kapa'a High School to serve their soccer team which has been using the small soccer field at Kapa'a Town Park thus far.

There are plans to construct a few new soccer fields at Lydgate Park in Wailuā to help address this demand for the region. However, there is still a need for regulation sized fields in the town of Kapa'a, and to serve the needs for that growing community.

Consultations with representatives from Kaua'i soccer organizations (AYSO and HYSA) also identified and confirmed the need to establish more soccer fields in this area. Consultation with the Kapa'a Business Association also confirmed the need for more fields to support soccer leagues, and identified the potential opportunity for the community to hold larger soccer tournaments for possibly State, national, or international teams. Other considerations identified was to allow the concept for the new soccer park to be flexible enough to accommodate other types of recreational or community activities to occur there.

## **Project Objectives**

Recognizing these needs, the County Department of Public Works, Parks Division has initiated this project for the Kapa'a community. Jurisdiction of the project site was recently transferred from the State to the County for their use; therefore, this property was identified as a suitable site to provide new soccer fields. It was determined that this facility would serve as a district level park complementing the nearby Kapa'a New Park site.

As a result, the purpose of this project is to address the need for additional regulation sized soccer fields to support the existing and growing demands for such facilities in the Kapa'a town area and surrounding communities. This project will also provide a future home field for Kapa'a High School's soccer teams, and accommodate other recreational and community activities occurring within this community.

Based upon consultation with the County Parks Division, the following major design objectives for this project were identified to address the community's needs for this facility.

- At least one regulation size soccer field (120 yards by 80 yards) should be provided as a top priority. The Kapa'a Soccer Park should try to accommodate as many fields as possible.
- Pedestrian and vehicular access across the Mō'īkeha Canal should be incorporated into the conceptual plan to access parking spaces at the nearby Kapa'a New Park to the extent possible.
- Restroom facilities serving a regional park facility should be provided.
- Shade should be provided by wide-span trees preferably along the perimeter of the park rather than providing other permanent facilities such as pavilions and tables in order to keep the site flexible for multiple uses by the community.

## **2.3 DESCRIPTION OF PROJECT**

The conceptual site plan for the project was developed based upon an assessment of the existing site and the establishment of design parameters and criteria.

### **2.3.1 Existing Site Assessment**

An assessment of the property's existing conditions, resources, and physical features were conducted to identify potential opportunities and site constraints. Based upon this site assessment and the design objectives, three conceptual alternative site plans were developed.

The physical location and environmental characteristics of the project site were important factors in determining the field layouts for the alternate site plans. Some of the area's characteristics used in the site assessment were factors such as sun direction throughout the day, wind patterns, flood zones, vehicular access, and the future location of the permanent Kapa'a

Relief Route. The unusual triangular shape of the parcel was also a factor that limited arrangements for multiple fields.

A site visit was conducted in April 2006 along with research of plans and references in order to assess the existing site conditions and identify site constraints. Consultation was also conducted with the State Department of Transportation (DOT) concerning their plans for the future permanent Kapa'a Relief Route (Bypass Road).

The following site constraints were identified based upon the field visit, preliminary research and assessment, and consultation with State DOT. Figure 2.2 graphically summarizes the existing site constraints associated with this property.

- The triangular shape of the project site creates unusable areas to serve as a soccer field. However, such areas could be used for practice or staging areas, or picnic areas.
- There is no existing roadway providing vehicular access to the project site. However, the existing cane haul road is being improved by the State DOT to serve as a one-way temporary bypass road while the permanent Relief Route is being planned.
- The preliminary right-of-way proposed for the future Kapa'a Relief Route will acquire a significant portion of the northern boundary of the project site.
  - A proposed location for the site's driveway access with the new Relief Route has been designated.
  - A future extension of Kahau Road with bridge crossing the Mō'īkeha Canal connecting to the project site is planned as part of the highway project. This would be constructed by the State DOT as part of the Kapa'a Relief Route's construction.
  - Construction of these improvements are not planned to occur for many years.
- There are no off-site vehicular parking areas available in the immediate vicinity of the property.
- The entire project site is situated within a flood hazard areas based upon the Flood Insurance Rate Map for the area. The flood designations include:
  - Zone AE (base flood elevations determined).
  - Zone X (areas of 500-year flood).
- There are no existing water or sewer facilities serving this site.
- There are no existing pedestrian pathways to the site.



**Figure 2.2**

**PHYSICAL ENVIRONMENT CONDITIONS**

Kapaa Soccer Park

County of Kauai, Department of Public Works



Source:  
(Aerial) NOAA

### **2.3.2 Basis of Design Criteria**

Based upon the information gathered, alternative site plan concepts were developed trying to take maximum advantage of the existing natural resources and site conditions associated with the property and surrounding environment. The overall vision for this park is intended to draw together the positive visual aspects and functionalities of the site's natural features. Large shade trees will be used for shelter and shade. This concept will create open spaces with the potential for a variety of dynamic accessory park uses.

This soccer park should feature a minimum of one regulation-sized soccer field suitable for all high school men's, women's, and adult co-ed league games. Additional fields and practice areas should also be integrated into open areas of the park. Other space should be utilized in such a way to maximize the use of available open space and provide an optimal environment for public recreation. The basic design criteria used in developing the conceptual site layouts are discussed below.

#### **Soccer Field Sizes and Design**

The maximum international regulation soccer field is 120 yards by 80 yards as determined by the Fédération Internationale de Football Association, known worldwide as FIFA. The minimum size is 110 yards by 70 yards. The University of Hawai'i Women's Soccer Program's NCAA match field, located within the Waipi'o Soccer Complex, is 120 yards by 76 yards. Either of these field dimensions would be suitable for men's, women's and co-ed league games.

A minimum field size for youth games (age 14 and under) is 100 yards by 60 yards. A minimum field size for youth games (age 12 and under) is 80 yards by 50 yards. In most instances a full size regulation field can be divided in half to provide two (2) fields for the 12 and under age group.

Ideally, the crown of the field should be directly at center field with a 1 to 2 percent slope away in all directions. If the entire field is sloped in one direction, it gives players an unfair advantage of running downhill verse uphill and could distort game play. It is critical to establish adequate surface drainage on a soccer field, or any other athletic field. Without proper surface drainage, depressions will gradually develop that will hold water, make it difficult to maintain, and may risk injury to players.

For native soil fields, it is imperative to achieve at least 1 percent slope from the center of the field to both sidelines. This will make a crown from 9 to 18 inches at the center of the field depending on the width. Another alternative is to slope the field from one sideline to the other at a 1 to 2 percent grade. This will provide a "flat" field and allow surface drainage off the field, but is not as efficient as moving water from a field crowned in the center. However, the design phase of this project to be conducted later will determine the final field sizes and slope design.

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### **Soccer Fields Separation and Orientation**

Ideally, multiple fields should all be parallel with one another for player depth analysis and orientation. A minimum distance between fields should be established for players to recognize different whistles from the referees. When fields are too close, it becomes hard for players to differentiate whistles from the other field and this could disrupt the game. However, if fields are too far away from each other, there is “dead space” which is essentially wasted.

The ideal distance between fields is roughly 25 feet. Due to the irregular shape of this parcel, extra space in the corners of the site could be used as practice areas, potluck areas, or for other passive recreational park uses.

#### **Sun Angle and Direction**

Ideally, the sun should run parallel to the width of the field. The angle of the sun could potentially give one team an unfair advantage depending on the time of day and the intensity of the sun. Although teams switch sides at half time, the sun may play a factor depending on the location and angle above the horizon for the teams and the least affect occurs when the sun’s direction parallels the width of the field. Based upon the sun directional patterns in this region, the ideal longitudinal direction of the field should generally run in a north to south relationship.

#### **Wind Patterns**

Another element which affects playing conditions are trade winds. Because winds in the Kapa‘a area are strong at times, this can substantially affect or alter the game as balls are “hung up” or “taken” by the wind. The ideal situation should have the wind running parallel to the width of the field similar to the orientation factor associated with the sun angle.

### **Relief Route Corridor**

As previously shown on Figure 2.2, the proposed right-of-way (ROW) for the future Kapa‘a Relief Route will require acquisition of a substantial amount of property along the entire mauka (northern) boundary. This will alter the current size and shape of the soccer park project site by acquiring property in the amount of approximately two acres. This taking will consequently reduce the project site acreage to approximately 9.5 acres, and constrain space available for the orientation of soccer fields and other amenities.

### **Flood Zones**

The makai (seaward) portions of this project site were designated as Flood Zone X and Flood Zone AE with base flood elevations determined to be between 6 and 12 feet based upon the corresponding Flood Insurance Rate Map. Figure 2.2 graphically identified these floodways in relation to the property.

Due to this coastal flood hazard designation for the property, there will be no structures located in an area that may be damaged or affected by potential flooding. Therefore, the comfort station was sited within the Zone X flood area which includes the land area situated above

(inland) the Zone AE hazard area. All structures associated with this soccer park are expected to be designed and constructed in compliance with Building Code requirements.

### **Comfort Station Location**

Ideally the comfort station should be located in a centralized location of the park site to allow easy and convenient accessibility to park users. Due to flood zone constraints, the comfort station should be located along Cane Haul Road near the middle of the site within the Zone X designation. Vehicular access into the site from the proposed Kapa'a Relief Route has also been designated for this general area.

### **Parking Lot Location and Spaces**

The minimum amount of parking stalls required per field is 12 stalls based upon the City and County of Honolulu *Land Use Ordinance* requirements. The County of Kaua'i presently has no parking stall requirement standards for park facilities. However, due to the number of players and spectators for each soccer game, and overlapping activities associated with multiple games, this number is expected to be deficient. These parking issues considered included the following items.

- In general, each team usually has about 18 players with 2 coaches. Each game also requires three referees.
- Typically, teams warm up along the sidelines and in open spaces one hour prior to kick off while the current game is being played.
- After a game, each team usually remains at the site for a team "cool down" and refreshments. This could mean as much as six teams per field being at the park at the same time.

There were also other site conditions affecting available parking for this site and in the general area which included the following:

- There are no off-street parking areas available in the immediate vicinity of the project site because the property is currently land locked from public roadways.
- Off-street parking is not expected to be available with the State DOT's temporary bypass road improvement made to the existing cane haul road.
- The Kapa'a Relief Route would not provide off-street parking available along that section of the highway.
- Parking stalls are available at the Kapa'a New Park site, however, there is no vehicular or pedestrian access available to that area from the project site. A future extension of Kahau Road with a bridge crossing the Mō'īkeha Canal is planned to be constructed by the State DOT. However, that improvement would be associated with construction of the Kapa'a Relief Route and would not occur for many years.

Given these additional site constraints, an appropriate number of parking stalls should be provided on the site. Without providing a sufficient number of parking stalls, spectators, players, and children would potentially need to walk along the temporary bypass road from other areas within Kapa'a town to the site creating inconvenient conditions. Furthermore, available public parking areas in the Kapa'a town is limited, and access to Kapa'a New Park would not likely occur for many years. Therefore, consideration was given to providing a suitable number of parking stalls on site with consideration for a future bridge connection to Kapa'a New Park constructed by the State DOT.

### **Ambulance Accessibility**

Ambulance accessibility must be taken into account as players of all ages are susceptible to injuries and may need medical assistance. Ambulances must have direct access to the field and a clear path to exit the field. This can be accomplished in a number of ways and parking location and curbs must be taken in to consideration to provide emergency access to all parts of the field.

### **Field Protection and Security**

The field must be protected during non-park users' times. Often, an unprotected park creates a venue for cars and non-park use during the night time hours. A simple way to protect the park area is to have a barrier such as curbs, bushes or fencing to restrict un-permitted users out of the park when not open.

### **2.3.3 Conceptual Site Plan**

The conceptual site plan for this project would consist of providing two (2) regulation sized soccer fields meeting FIFA international standards. Under this conceptual plan, one maximum sized regulation size field of 120 yards by 80 yards and one slightly smaller field of 110 yards by 70 yards could be provided. Both soccer field sizes would be adequate for men's and women's adult soccer leagues along with accommodating various youth leagues. These fields would be sited next to each other and oriented in a northwest direction due to the existing configuration of the property. Figure 2.3 includes the conceptual site plan for this proposed soccer park, and Figure 2.4 provides a conceptual 3-D simulated perspective view of this potential park.

### **Consultation With State Department of Transportation**

This conceptual site plan reflects a refinement to the previous site plan included in the Draft EA based upon further consultation with the State DOT. That site plan was developed based upon a proposed 25-foot reduction in the right-of-way presently planned for the Kapa'a Relief Route. The current right-of-way planned for the highway would acquire a significant amount of property along the northern boundary and thus restrict the size of one field. With the 25-foot reduction, a second larger 120 yards by 80 yards sized field could be accommodated along with additional parking stalls provided for the park.



# CONCEPTUAL SITE PLAN

Kapaa Soccer Park  
 County of Kauai, Department of Public Works

Figure 2.3

Source:  
 (Aerial) NOAA





**Figure 2.4**

**CONCEPTUAL PERSPECTIVE VIEW OF KAPA'A SOCCER PARK**

Source:  
SSFM International, Inc.

Kapa'a Soccer Park  
County of Kauai, Department of Public Works

Based upon preliminary discussion with the State DOT, Kaua'i District Office, it was possible to request a reduced right-of-way for the Kapa'a Relief Route since it would decrease the amount of property acquired from the project site. A formal request was submitted to the State DOT for their evaluation and consideration of this reduction in the right-of-way planned to be acquired. However, the State DOT responded that it appears a 25-foot reduction in right-of-way may not be possible due to effects on highway plans and design constraints for the future Kapa'a Relief Route.

Therefore, the present conceptual site plan for the project reflects accommodation of the preliminary right-of-way boundary being proposed for the future Kapa'a Relief Route. The proposed right-of-way acquisition will reduce the acreage available for the soccer park site by approximately two acres.

However, the final right-of-way boundary has not been firmly established at this time as the State DOT is still preparing their Draft Environmental Impact Statement (EIS) for the Kapa'a Relief Route project. Thus, further coordination between the County of Kauai and State DOT is planned to be conducted to address necessary right-of-way and land acquisition as part of their EIS process. Such coordination efforts are intended to minimize the amount of land acquisition from the soccer park site, and development of acceptable mitigative measures from highway impacts.

### **Other Site Plan Improvements**

Based upon the conceptual site plan shown on Figure 2.3, a range of 60 to 65 parking stalls could be provided. However, additional parking stalls increasing to about 100 stalls could be added to the site by reducing nearby open areas. The final number of parking stalls will be determined during the design phase of this project. Under this site plan, the open corners of the parcel would be utilized for spectators or for other teams to warm up or relax after games. Large shade trees would also be provided for park users to use since no permanent pavilions will be provided.

Vehicular entrance into this site would be from the area presently designated for the driveway based upon preliminary plans of the Kapa'a Relief Route from the State DOT. Other site features are identified below.

1. A 20-foot buffer area was established around each soccer field. This buffer area would serve both teams and spectators.
2. A comfort station shown with a proposed 30 foot by 30 foot building footprint. This would accommodate 6 women stalls and 6 men stalls/urinals. This footprint size is similar to a comfort station provided at the Waipi'o Soccer Complex located on the island of O'ahu.
3. Open landscaped areas established at the site would be used for team warm up along with spectator gathering areas (ex. picnic, etc.).

4. Fencing and landscaping (trees, etc.) will be provided on the site. Further details on specific types of fencing and landscaping will be added to the plans after the final field layout and facility location is established. A landscaping plan will be developed during the project's design phase.
5. A walking/jogging path will run along the parks perimeter to enhance the recreational use of the park. This paved pathway may also be designed to accommodate bicycles.
6. A future State DOT constructed bridge connection over the Mō'ikeha Canal connecting to the extension of Kahau Road.
  - However, this bridge extension of Kahau Road would not occur for many years until the actual permanent Kapa'a Relief Route is constructed.
7. A future County constructed pedestrian bridge connection over the Mō'ikeha Canal is planned to be located adjacent to the future Kahau Road bridge extension. This pedestrian-dedicated bridge will enhance the soccer park's connection with the Kapa'a New Park.

## **2.4 DEVELOPMENT SCHEDULE AND ESTIMATED COSTS**

The County plans to initiate the final design of this Kapa'a Soccer Park Project after the completion of the Environmental Assessment and obtaining necessary entitlements from the County. As a result, the design phase of this project could begin in 2007. Consequently, construction of this project is likely to begin around the end of 2007 and be completed within one year or sometime in 2008.

The estimated construction cost for this project is about \$2.0 million. The County Department of Public Works is the expending agency for this project. The entitlement required for this project from the County of Kaua'i is a Use Permit. Other remaining approvals will consist of ministerial permits from pertinent governmental agencies.

## **2.5 LISTING OF REQUIRED PERMITS**

### **Federal Permits**

1. Department of Army, Nationwide Permit

### **State of Hawaii Permits**

1. Construction Noise Permit
2. National Pollutant Discharge Elimination System (NPDES) Permit

### **County of Kaua'i Permits**

1. Building and grading permits
2. Use Permit

## 2.6 ALTERNATIVES CONSIDERED

This section discusses alternatives that were identified and considered for the Kapa'a Soccer Park Project.

### **No Action Alternative**

One alternative considered was not implementing development of this project which is otherwise referred to as the No Action Alternative. This No Action Alternative would entail not proceeding with development of the proposed soccer park on the project site. Under this scenario, the County property would remain undeveloped. A portion of the property presently leased to the Aloha Lumber Company to store lumber material in barge containers could continue.

This alternative would not adequately address the County's need for this project and desired objectives to provide additional soccer and recreational facilities for this community. With the property remaining undeveloped, there would be no other suitable sites within Kapa'a for development of regulation sized soccer fields and the Kapa'a High School soccer teams would be restricted to substandard fields for use. This alternative would not support the County's effort to effectively utilize their property for public or government use to improve services and facilities for the community. Therefore, this alternative was eliminated from further consideration.

### **Alternative Site Plan Configurations**

A total of three (3) alternate conceptual site plan configurations for the project were initially developed for consideration by the County. Two of the alternative site plans have been reviewed and evaluated by the County based upon the assessment results, agency consultation efforts, and comments received on the Draft EA. These other site plan alternatives have subsequently been eliminated from further consideration because the refined conceptual site plan proposed in this Final EA would address the project's needs and objectives.

### **Site Plan Modification Associated With State DOT Consultation**

As previously discussed, the conceptual site plan identified in the Draft EA reflected improvements including a proposed 25-foot reduction in the preliminary right-of-way planned for the Kapa'a Relief Route. The reduction to the preliminary right-of-way boundary would reduce the amount of property having to be acquired from the project site. It would have allowed the second soccer field to be a larger sized field, and easily accommodated additional parking stalls while maintaining open space at the park site.

However, based upon further consultation with the State DOT, it appears a 25-foot reduction in right-of-way boundary along the project site may not be possible due to effects on highway plans and design constraints for the future Kapa'a Relief Route. Thus, the current

refined conceptual site plan in Figure 2.3 of the Final EA reflects accommodation of the preliminary right-of-way boundary being proposed for the future Kapa'a Relief Route. As a result, the site plan showing improvements with a reduction in the preliminary highway right-of-way boundary is now included as an alternative no longer being considered (now referred to as Alternative 2).

However, the final right-of-way boundary has not been determined at this time since the State DOT is still preparing their Draft EIS for the Kapa'a Relief Route project. Thus, further coordination between the County of Kauai and State DOT as part of their EIS process is planned to be conducted to address necessary right-of-way, land acquisition, and mitigating impacts to the proposed soccer park.

The impacts associated with the conceptual soccer park site plan identified in the Draft EA and the currently proposed site plan in this Final EA are essentially the same. The only notable differences between the two site plans are: 1) the size of the second soccer field; and 2) the number of parking stalls provided. With reduction in the proposed highway right-of-way boundary, a slightly larger (120 by 80 yards) field could be accommodated, along with more parking stalls (up to 40 stalls).

However, the same number of parking stalls could still be provided with the presently proposed conceptual site plan. Some open space area would be utilized to provide additional parking stalls for the parking lot. The actual number of parking stalls provided would be developed during the project's design phase.

The entire property was also assessed to determine effects on the physical and biological environment. There would also be no change in the type of impacts associated with public facilities, infrastructure, and utilities between the two site plan configurations. Social and economic effects would also be the same. Therefore, the environmental impacts associated with both site plan configurations are similar and were adequately addressed in both the Draft EA and Final EA.

#### Alternative Site Plans Description

The alternative site plan configurations eliminated from further consideration are identified as Alternatives 1 and 2. These alternative site plans are shown on Figures 2.5 and 2.6, respectively. A brief summary of the components for these alternatives is provided, and both of them included the following components:

1. A 20-foot buffer area was established around each soccer field.
2. A comfort station shown with a proposed 30 foot by 30 foot building footprint. This would accommodate 6 women stalls and 6 men stalls/urinals.
3. Open landscaped areas established at the site would be used for team warm up along with spectator gathering areas (ex. picnic, etc.).



**Figure 2.5**



Source:  
(Aerial) NOAA

**ALTERNATIVE 1**

Kapaa Soccer Park  
County of Kauai, Department of Public Works



4. Fencing and landscaping (trees, etc.) will be provided on the site. Further details on specific types of fencing and landscaping will be added to the plans after the final field layout and facility location is established.
5. A walking/jogging path will run along the parks perimeter to enhance the recreational use of the park. This paved pathway may also be designed to accommodate bicycles.
6. A future State DOT constructed bridge connection over the Mō'ikeha Canal connecting to the extension of Kahau Road.

Alternative 1. Single Full Size Field

This alternative provides one regulation size field of 120 yards by 80 yards. A range of 130 to 140 parking stalls can be provided because only one soccer field will be developed. This site plan would provide the most parking and have the most open space not occupied by a soccer field. This site plan would also allow users to utilize the open areas of the field for different recreational activities. Large shade trees would be provided for park users to use since no permanent pavilions will be provided.

Alternative 1 was eliminated primarily due to the fact that only one soccer field would be provided, and the project objective is to provide as many regulation size soccer fields as possible.

Alternative 2. Two Fields

This alternative provides two (2) regulation sized soccer fields with dimensions of 120 yards by 80 yards. These fields would be sited next to each other and oriented in a northwest direction due to the existing boundaries and configuration of the property. A parking lot with a number of parking stalls would be provided in the range of 100 to 110 stalls. This site plan would provide benefits for the park and support achieving project objects because it would provide several parking stalls and the two maximum sized fields.

However, this alternative was developed on the assumption of being able to reduce the preliminary right-of-way boundary along the project site proposed for the State DOT's Kapa'a Relief Route. A right-of-way reduction of 25 feet was planned to reduce the amount of property acquired. However, this reduction may not be possible based upon further consultation with the State DOT. Thus Alternative 2 was eliminated due to the uncertainty of future right-of-way reduction efforts being available for the soccer park project.

## CHAPTER 3 PHYSICAL AND BIOLOGICAL ENVIRONMENT

This chapter describes the existing surrounding environment in the vicinity of the project site. The probable environmental impacts associated with the construction and operations of the Kapa'a Soccer Park are discussed, and mitigative measures are identified if necessary.

### 3.1 CLIMATE, TOPOGRAPHY, AND SOILS

The island of Kaua'i has a total land area of about 553.3 square miles, and is the fourth largest island in the Hawaiian island chain. Climate on the island of Kaua'i, as well as within the State of Hawai'i, can be characterized as having low day-to-day and month-to-month variability. Differences in the climate of various areas are generally attributed to the island's geologic formation and topography creating miniature ecosystems ranging from tropical rain forests to dryer plains along with corresponding differences in temperature, humidity, wind, and rainfall over short distances (Dept. of Geography, 1998).

The climate of the project area is predominantly warm with moderate rainfall. Typically average annual rainfall is over 40 inches. Widespread rainstorms, which account for much of the precipitation, occur most frequently during the wet season which extends from October through April (NOAA, 2000).

Temperatures in the Kapa'a area are similar to that of Līhu'e where average annual monthly temperatures ranged between 72 and 84 degrees (Fahrenheit) in the year 2003 with an average annual temperature of 78.9 degrees. The low-variability temperatures are associated with the mid-ocean location of the island and to the small seasonal variation in the amount of energy received from the sun. The range in normal temperatures for the island of Kaua'i from the coolest month, February, to the warmest month, August, is less than 8 degrees.

Relative humidity is typically at 78 percent with highs of 82 percent during January and lows of 75 percent during June. Humidity is moderate to high in all seasons and slightly higher in the wet season than in the dry. However, even during periods when the temperature and humidity are both high, the weather is seldom oppressive. This is due to year-round trade winds which provide a system of natural ventilation during most of each year (NOAA, 2000).

The predominate surface wind occurring in the Kapa'a area is the prevailing trade winds from the northeast direction which usually dominate from April to November. Winds from the south are infrequent occurring only a few days a year and mostly in the winter associated with "Kona" storms. Wind speeds in this area are predominantly in the 13 to 24 miles per hour range for much of the time (Dept. of Geography, 1998).

### 3.1.1 Topography

The island of Kaua'i consists of a single great shield volcano that is deeply eroded and partly veneered with much later volcanic activity. The Kaua'i shield has a volume of about 4,200 cubic kilometers and rises 5,100 meters above the surrounding sea floor (Macdonald, Abbot, and Peterson, 1983).

The project site is situated on the eastern end of the island and is approximately 590 feet away from the shoreline. The overall topography of the project site is generally level with small to moderate slopes. Typical slopes of the project area ranges between 0 to 3 percent near the east (makai) of the project site. Within the project site, elevations range between 10 to 15 feet mean sea level (msl). Kapa'a Town is generally fairly level with small to moderate slopes with elevations ranging from about 5 to 7 feet msl. The nearby Kuhio Highway is situated at a slightly higher elevation increasing to about 15 to 20 feet msl.

### 3.1.2 Soils

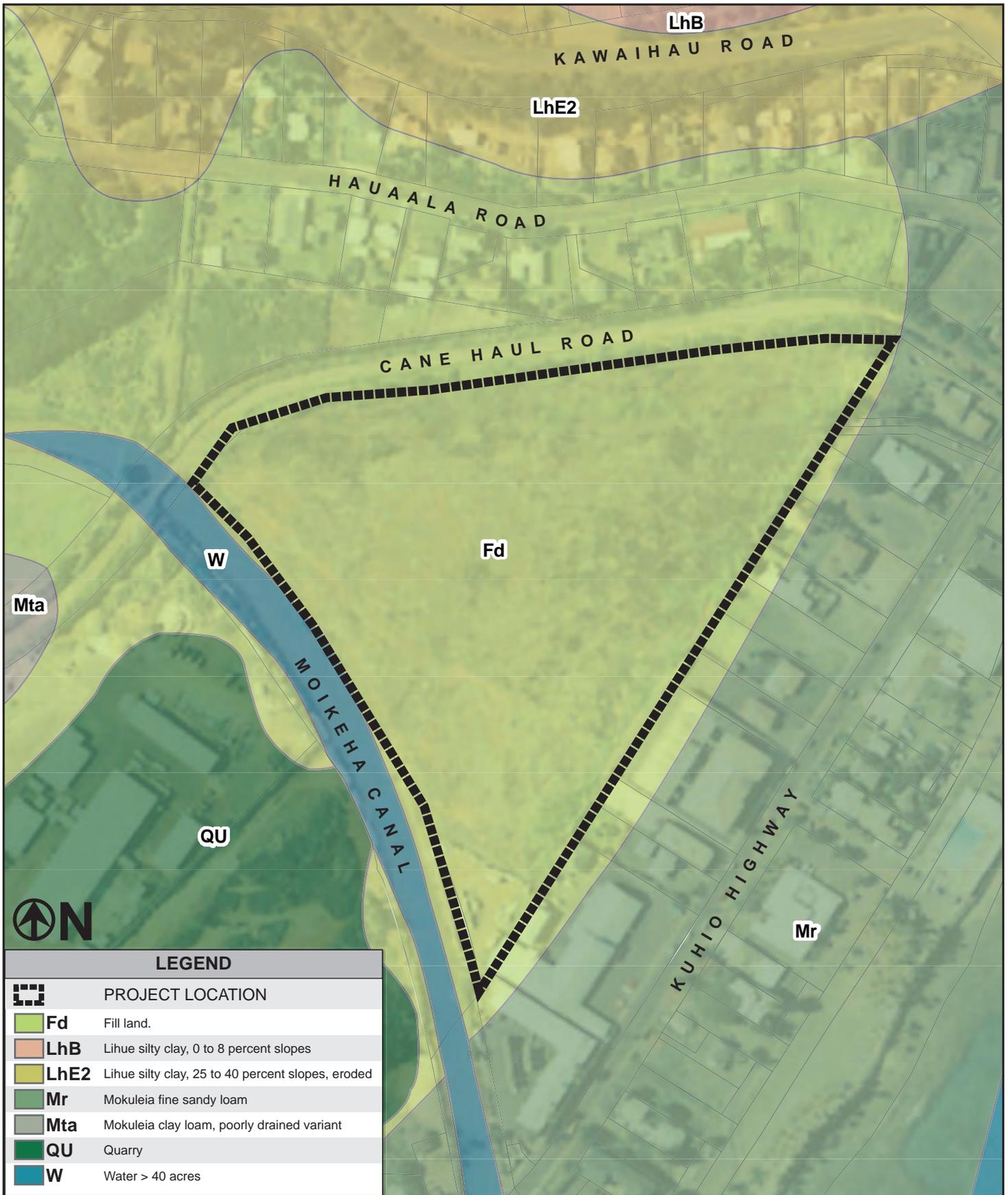
The U.S. Department of Agriculture, Soil Conservation Service's *Soil Survey of Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lāna'i, State of Hawai'i* includes general soil maps developed for the Kapa'a region based upon soil surveys taken (SCS, 1973). These soil maps show the soil associations developed which are classified by soil series and soil phases.

The project area contains one type of soil classification, Fill Land (Fd). This soil type is used mostly for the cultivation of sugarcane and consists mostly of areas filled with bagasse and slurry from sugar mills. A few areas are filled with material from dredging and from soil excavations. Generally, these materials are dumped and spread over marshes and low-lying areas along the coastal flats, coral sand, coral limestone, or areas shallow to bedrock (SCS, 1973). Figure 3.1 shows the soils survey map associated with this site.

### 3.1.3 Impacts on Soils and Topography

Short-term impacts would be associated with construction activities conducted for the project. This would include development if the soccer park along with construction of park amenities such as the parking lot, comfort station, and infrastructure connections.

Impacts on the existing topography should be minimal. Processes included in the development of the site would be clearing and grubbing activities to remove vegetation on the surface to about eight inches below the surface in order to remove vegetation, roots and rocks on the site. Grading will allow storm water to sheet flow from the site and discharge runoff following existing drainage patterns. Complying with County standards, storm water runoff should not increase due to development of the site. In addition, all water discharging into the earth drainage ditch or Mō'ikeha Canal will meet storm water quality standards through either with a retention/detention device or flow through device such as a 100 foot grassed swale.



## SOIL SURVEY MAP

**Figure 3.1**

Kapaa Soccer Park  
 County of Kauai, Department of Public Works

Source:  
 (Aerial) NOAA,  
 (Soil Data) NRCS  
 (GIS Data) State Office of Planning



## **3.2 NATURAL HAZARDS**

This section addresses only those natural and urban-related hazards applicable to the project site. Of the potential natural hazards, only earthquakes, hurricane, and flooding hazards are applicable. These natural hazards are addressed below.

### **Earthquake Hazards**

Although difficult to predict, an earthquake of sufficient magnitude causing structural or other property damage may occur in the future. However, except for the island of Hawai'i, the Hawaiian Islands are not situated in a high seismic area subject to numerous earthquakes (Macdonald et al., 1983). Most of the earthquakes that have occurred in the past have been volcanic earthquakes causing little or no damage.

Earthquakes in the Hawaiian Islands are primarily associated with volcanic eruptions from the inflation or shrinkage of magma reservoirs beneath which segments of the volcano shift (Macdonald et al., 1983). Kaua'i is periodically subject to episodes of seismic activity of varying intensity. Available historical data indicates that the number of major earthquakes occurring on Kaua'i have generally been fewer and of lower magnitude than those on other islands such as Hawai'i (DBEDT 2001, Furumoto, et al., 1973). However, earthquakes cannot be avoided or predicted with any degree of certainty, and an earthquake of sufficient magnitude (greater than 5 on the Richter Scale) may cause damage to the new soccer park.

Although the possibility of earthquakes on Kaua'i is moderately low, potential damage to park facilities may occur from an earthquake of sufficient magnitude. However, damages to the new park and accessory structures would be minimal because appropriate County building code standards will be followed. Thus, the risk of potential damage to this project will be no greater than that of similar homes, businesses, and other park facilities on the island of Kaua'i.

### **Hurricane Hazards**

The three major elements that make a hurricane hazardous are: 1) strong winds and gusts, 2) large waves and storm surges, and 3) heavy rainfall (FEMA, 1993). A hazard mitigation report prepared by the Federal Emergency Management Agency after Hurricane Iniki in 1992 determined that nine hurricanes approached within 300 nautical miles (about one day's travel time) of the Hawaiian Islands' coastlines between 1970 and 1992 (FEMA, 1993). Most hurricanes affecting the Hawaiian Islands have focused on Kaua'i. Based upon a tracking of hurricanes since 1950, there appears to be no geographical or meteorological reasons why hurricanes miss other islands and tend to steer toward Kaua'i (FEMA, 1993).

A hurricane of significant strength and high winds passing close to the island could cause damages to the Kapa'a Soccer Park. However, the comfort station would be constructed of suitable materials and designed to comply with County building code requirements minimizing its susceptibility to structural damage.

### **Tsunami Inundation and Flooding**

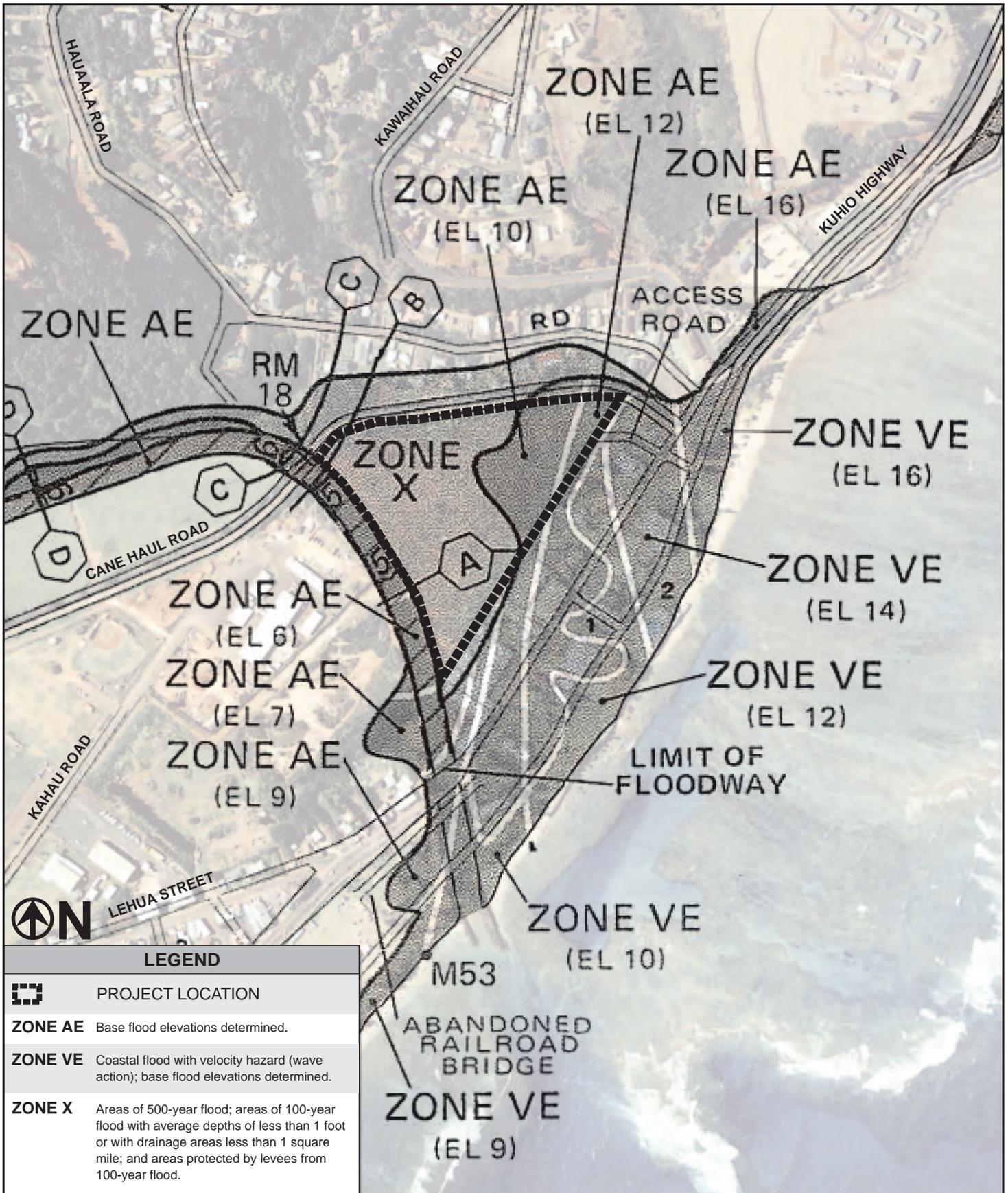
The Flood Insurance Rate Map (FIRM), Community Panel Number 150002 0135 C (revised March 4, 1987) for the subject parcel was reviewed to determine the existing floodways. Based upon this FIRM, the subject parcel falls within Zones AE and X. Figure 3.2 shows the flood zone boundaries associated with the new soccer park site.

In general, areas near the shoreline fall within Zones AE and VE which are flood hazard areas that are inundated by the 100-year flood. Zone X depicts areas of the 500-year flood or areas of the 100-year flood with average depths of less than one (1) foot or with drainage areas less than one (1) square mile, and areas protected by levees from the 100-year flood (FEMA, 1987).

At the makai (seaward) portions of this project site, Zone AE base flood elevations were determined to be between 6 and 12 feet based upon the FIRM. These areas are not associated with coastal flood hazards caused by velocity hazards (high waves). There will be no project related structures located in this area that may be damaged or affected by potential flooding. The majority of the site would be open and undeveloped since it will serve as a soccer park.

The Zone X flood area includes the land area situated above (inland) the Zone AE hazard area. The new comfort station and parking lot facilities are planned to be located in this area and would reduce the potential for structural damages caused by flooding. All structures associated with this soccer park facility are expected to be designed and constructed in compliance with Building Code requirements. This will also include designing and implementing necessary site drainage improvements. Such plans will be submitted for County review and approval during the project's design.

Any major tsunami can subject the entire eastern coast of Kaua'i to severe damage which includes potentially damaging the new comfort station as well as other accessory structures on the park facility. While the potential for damage exists, this risk shall be minimized through strict adherence to flood zone and building code requirements. Furthermore, as the park would be closed in the event of a tsunami warning, the new comfort station would not, in and of itself, increase the risk for loss of life as the result of a tsunami.



# FLOOD INSURANCE RATE MAP

**Figure 3.2**

Kapaa Soccer Park  
 County of Kauai, Department of Public Works

Source:  
 (Aerial) NOAA,  
 Federal Emergency Management Agency



### 3.3 AIR QUALITY

National ambient air quality standards (NAAQS) have been established by the U.S. Environmental Protection Agency (EPA) that set standards for six criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, ozone, and concentrations of particulate matter less than 10 microns (PM<sub>10</sub>) and 2.5 microns (PM<sub>2.5</sub>). Since 2003, the State began participating in the National PM<sub>2.5</sub> speciation monitoring program. In addition, a State standard has been established for hydrogen sulfide. State ambient air quality standards are more stringent than the comparable national limits (NAAQS) except for the standards for sulfur dioxide, particulate matter and lead, which are set at the same levels. A summary of both State and National AAQS is presented below under Table 3.1.

**Table 3.1 Summary of National and State Ambient Air Quality Standards**

Pollutant	Sampling Period	NAAQS Primary	NAAQS Secondary	State Standards
Carbon Monoxide	1-Hour	40,000	40,000	10
	8-Hour	10,000	10,000	5
Nitrogen Dioxide	Annual	100	100	70
Sulfur Dioxide	3-Hour	n/a	1,300	1,300
	24-Hour	365	n/a	365
	Annual	80	n/a	80
Lead	Quarter	1.5	1.5	1.5
Ozone	1-Hour	235	235	n/a
	8-Hour	157	157	157
PM <sub>10</sub>	Annual	50	50	50
	24-Hour	150	150	150
PM <sub>2.5</sub>	Annual	50	50	n/a
	24-Hour	150	150	n/a
Hydrogen Sulfide	1-Hour	n/a	n/a	35

Note: All concentrations in micrograms per cubic meter (µg/m<sup>3</sup>) except for carbon monoxide which is in milligrams per cubic meter (mg/m<sup>3</sup>)

Hawai'i's standards are not divided into primary and secondary standards as are the National standards. Primary standards are intended to protect public health with an adequate margin of safety while secondary standards are intended to protect public welfare through the prevention of adverse effects to soils, water, vegetation, man-made materials, animals, wildlife, visibility, climate, and economic values. Air quality in Hawai'i is generally characterized as relatively clean and low in pollution. Northeast trade winds that are predominant throughout the year typically carry emissions and other air pollutants from inland areas out toward the ocean.

The State Department of Health (DOH) has one monitoring station on the island of Kaua'i, which samples for particulate matter less than 10 microns (PM<sub>10</sub>). This monitoring station is located in downtown Līhu'e in a commercial and residential area with nearby agricultural areas. Based upon the State DOH's 2004 air quality data for the island of Kaua'i, there were no occurrences of PM<sub>10</sub> greater than the National or State standards.

### **Probable Impacts And Mitigative Measures**

Impacts on ambient air quality associated with this project would primarily be limited to short-term construction activities. Once completed, there would essentially be no activities occurring within the new soccer park site that would generate significant amounts of air pollutants exceeding State or National standards. Furthermore, construction of this new park facility would not generate additional vehicular traffic that may significantly increase carbon monoxide emissions in the area. Access to the site would also be limited to left-turns in and out from the site (with extension of temporary bypass road) minimizing traffic congestion at the entrance and potential increased emissions of carbon monoxide.

Short-term and minor impacts on air quality from construction activities would predominantly be associated with fugitive dust emissions and exhaust emissions from on-site construction equipment. Fugitive dust emissions would generally arise from clearing, grading, and other dirt moving activities associated with site clearing and ground preparation for the new soccer park and accessory improvements.

Impacts from such construction activities would be temporary and should not result in a significant impact on air quality or result in State or National ambient air quality standards being exceeded. Nevertheless, minor impacts associated with fugitive dust emissions would be mitigated through the implementation of a dust control plan. Construction scheduling combined with dust control measures would minimize air quality impacts such that the least number of surrounding properties are affected by work activities.

State air pollution controls prescribed under the Department of Health's (DOH) rules (Chapter 11-59, HAR "Ambient Air Quality Standards" and Chapter 11-60.1, HAR "Air Pollution Control") prohibit visible emissions of fugitive dust from construction activities at the property line. Therefore, a dust control plan would be prepared and implemented to have the contractor comply with these regulations. Adequate fugitive dust control can usually be accomplished by establishing a frequent watering program or implementing other measures to address grubbing and grading activities. Some measures that could be considered during the project's design for implementation by the contractor may include:

1. Limiting the areas that are disturbed at any given time;
2. Applying chemical soil stabilizers, mulching, or using wind screens;
3. Establishing a road cleaning or tire washing program to reduce fugitive dust emissions from trucks using paved roadways in or around the project site; and
4. Establishing landscaping early in the construction schedule to control dust.

In addition to these possible measures, fabric dust barriers would be put up around construction areas to further minimize the effects of fugitive dust emissions on surrounding properties. These dust barriers would have a minimum height of 12 feet, and will be installed in conformance with State construction specifications.

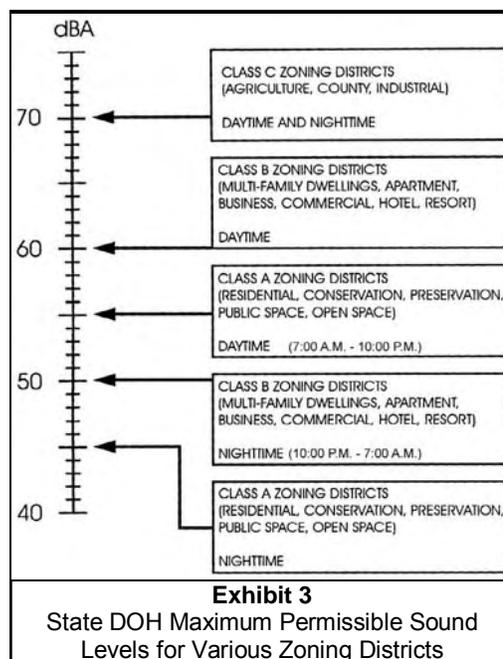
Temporary on-site mobile and stationary construction equipment would also emit air pollutants from engine exhausts. Minor nitrogen dioxide emissions from construction equipment should not violate stricter State standards since such emissions would be short-term and the standards are set on an annual basis. Short-term carbon monoxide emissions from construction equipment would similarly be low and should be relatively insignificant.

Impacts from slow-moving construction vehicles would be mitigated by scheduling slow-moving vehicular travel during periods of low traffic volume on the affected roadways. Engine exhaust emissions from construction vehicles will be minimized via the proper operation and maintenance of all equipment to further limit potential air quality impacts. The fabric dust barriers installed around the construction area would further mitigate the short-term effects and nuisances associated with these other air pollutant emissions.

### 3.4 NOISE

The State Department of Health (DOH) defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources such as air-conditioning units, exhaust systems, generators, compressors, pumps, etc., and equipment related to agricultural, construction, and industrial activities. These levels are enforced for any location at or beyond the property line and shall not be exceeded for more than 10 percent of the time during any 20-minute period. The noise limits which apply are a function of the zoning and time of day (see Exhibit 3 ►).

Potential noise impacts associated with this project would mainly be associated with short-term construction activities. Park-related activities at this site are thus not expected to have a significant noise impact on surrounding private residential and commercial properties located along the adjacent property line.



#### Short-Term Noise Impacts from Construction Activities

Noise from construction activities are regulated under Title 11, Chapter 46 (Community Noise Control) of the State DOH's Administrative Rules. Under these regulations, the project site is situated within both Residential and Open Space zoning districts (Class A). Therefore, the maximum permissible sound levels for construction activities is 55 dBA during daytime (7:00 a.m. to 10:00 p.m.) hours and 45 dBA during nighttime hours (10:00 p.m. to 7:00 a.m.). These levels may not be exceeded at or beyond the property line for more than 10 percent of any continuous 20-minute period.

Construction-related activities will temporarily increase ambient noise levels within the vicinity of the work area. Potential noise sources will include construction vehicles, trenching work, and other power equipment. Measures to control construction noise include the use of mufflers on power equipment and vehicles. Construction activities are expected to be limited to regular workday hours (7:00 a.m. to 3:30 p.m., Monday through Friday). All construction-related vehicles traveling on the roadways must also meet the vehicle noise level requirements set by the DOH.

Thus, construction activities are not expected to result in a significant impact. If necessary, a construction noise permit would be obtained from the State DOH to allow these activities. Specific permit restrictions for construction activities are:

1. No permit shall allow construction activities creating excessive noise before 7:00 a.m. and after 6:00 p.m. of the same day.
2. No permit shall allow construction activities that create excessive noise before 9:00 a.m. and after 6:00 p.m. on Saturdays.
3. No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on holidays.

### **3.5 VISUAL RESOURCES**

The County of Kaua'i General Plan (2000) identifies important landforms that have ecological, recreational, cultural, and scenic value. This includes landforms such as mountains, hills, stream valleys and gulches, and high cliffs and bluffs. These important landforms are identified on the *General Plan's* Heritage Resources Maps. Based upon review of Kawaihau's resources map, there are no unique natural or topographical features, landmarks, or other land forms of significant or important visual character known to be present on the project site or in the immediate vicinity of the project site. Views of the property from Kūhiō Highway are obstructed because of existing developments along the highway blocking mauka views towards the site.

Development of the project is not expected to have significant impacts on existing visual resources, nor negatively affect the visual character of surroundings. The project would primarily consist of grassed open space with landscaped trees along the property boundary. The only major structure constructed at the site would be the single-story comfort station building. This structure would be appropriately designed to be consistent with other County park facilities, and painted using natural earth tone colors so that it is visually compatible with the environment.

The site would not be visible from cars traveling along Kūhiō Highway due to existing buildings. However, with the temporary bypass road and eventually the permanent Kapa'a Relief Route constructed in the future, views of the park site will be visible from this highway. However, such views are not expected to be adverse because the project essentially consists of a new park with large grassed areas and landscaping. This park project would create more landscaped open space that would be compatible with the surrounding environment.

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### 3.6 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

An archaeological inventory survey was conducted for the property by Cultural Surveys Hawai'i, Inc. (CSH). In consultation with the State Historic Preservation Division (SHPD), an inventory survey was prepared to support the proposed project's historic preservation review under HRS Chapter 6E-42, HAR Chapter 13-13-284, and State requirements for archaeological field survey (HAR Chapter 13-376-4). A copy of this inventory survey is included in Appendix C of this document.

#### **Scope of Archaeological Fieldwork**

The archaeological inventory survey included the following typical fieldwork procedures:

1. A complete ground survey of the entire project area for the purpose of site inventory. All sites were located, described, and mapped with an evaluation of function, interrelationships, and significance. Documentation included photographs and scale drawings of selected sites and complexes;
2. Subsurface testing with a backhoe was conducted to determine if subsurface deposits are located in the project area, and if so, evaluate their significance.
3. Research on historic and archaeological background, including searches of historic maps, written records, and Land Commission Award documents. This research focuses on the specific project area, with background on the traditional district, the ahupua'a, and with special emphases on settlement patterns;
4. The administrative rules of SHPD/Department of Land and Natural Resources (DLNR) also required consultation with community members about their cultural and historical concerns with the project area. CSH conducted a consultation from a list of knowledgeable kama'āina residents; and,
5. Preparation of a survey report that includes the following:
  - a. A topographic map of the area showing all archaeological sites and site areas;
  - b. Description of all archaeological sites with selected photographs, scale drawings, and discussions of function;
  - c. Historical and archeological background sections summarizing pre-contact and historic use as they relate to the archaeological features;
  - d. A summary of site categories and their significance in an archaeological and historic context;
  - e. Recommendations based on all information generated that specify what steps to be taken to mitigate impact of development on archaeological resources – such as data recovery (excavation) and preservation of specific areas.

This scope of work also included full coordination with the SHPD and Kaua'i County relating to archaeological matters. All coordination work took place after consent of the owner or representatives.

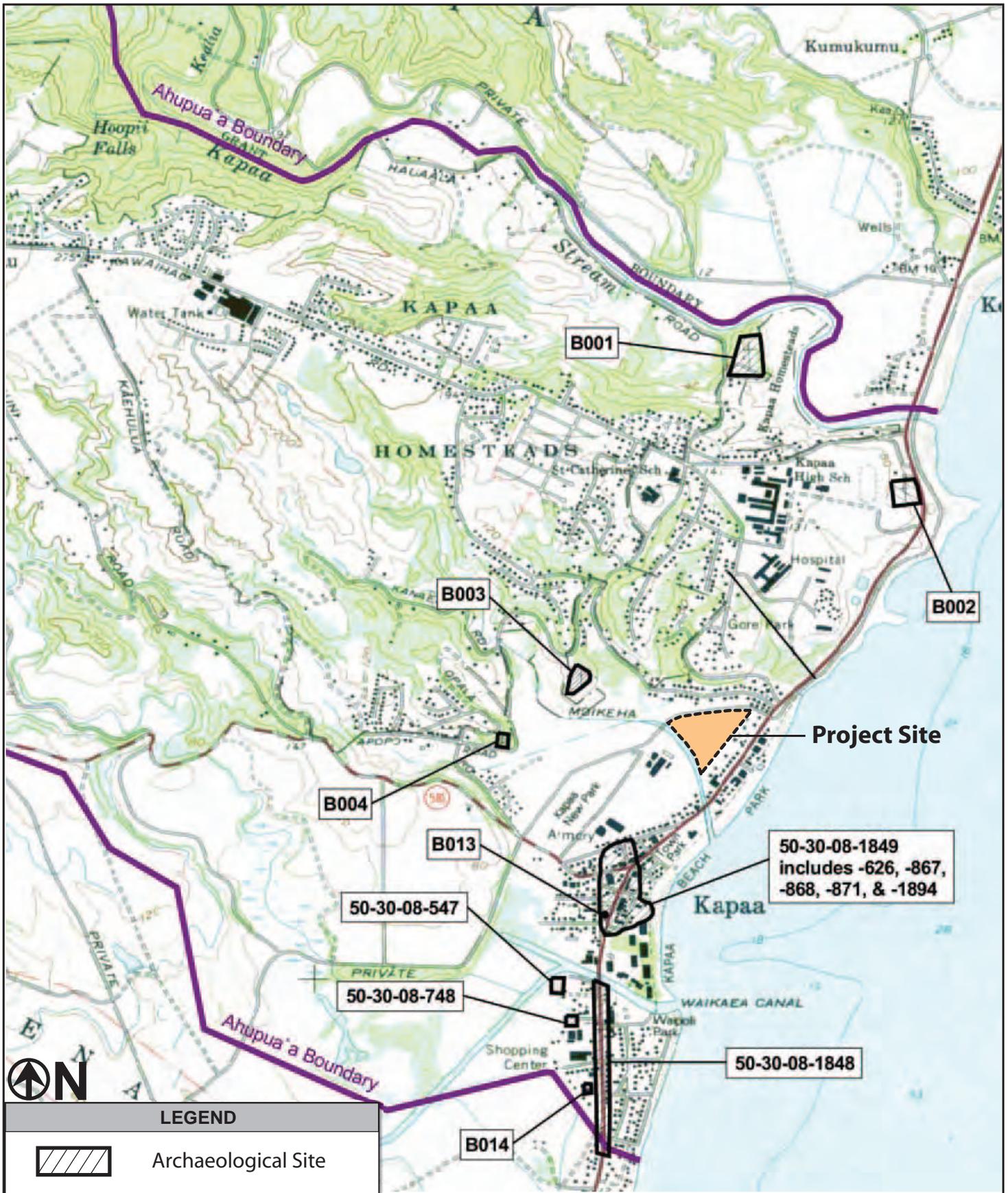
### **3.6.1 Previous Archaeological Research and Findings**

The areas mauka of Kapa'a Town are marshy, although much of it has been filled-in within recent decades. In the historic period, this parcel was surrounded by railroad track for the McKee Sugar plantation, with one spur ending at McKee Landing, located across Kūhiō Highway, directly makai of the project area. The study parcel was used as a rice field and kula in the early historic period, and was probably later planted in sugar cane. There may be trash pits in the region associated with this sugar cane plantation use, and trash related to the nearby Kapa'a Town.

Since 1931, there have been numerous archaeological studies conducted within the Kapa'a Ahupua'a. However, the pattern of archaeological studies in Kapa'a Ahupua'a is somewhat skewed, with a dozen projects in urban Kapa'a Town and very little work done along the coast. Major archaeological sites have been found in the Kapa'a Town area, including extensive cultural layers with burials and other cultural features underlying Kūhiō Highway near All Saints Gym and near the older part of Kapa'a Town between Waika'ea Canal and Kapa'a Beach Park, makai (seaward) of Kūhiō Highway. The mauka (inland) makai extent of these cultural layers has not been clearly defined. These extensive cultural deposits associated with pre-historic and early historic habitation are known to exist in a relatively narrow sand berm that makes up the physiogeography of Kapa'a.

Significance of these sites were based on the criteria of the Hawai'i State and National Registers of Historic Places which define five broad criteria for defining a cultural site as significant. A listing of these criteria is provided below along with a summary of the criteria given to the project corridor sites. The Archaeological Inventory Survey provides a list of all the identified sites along with the State site number, site type or name, site location, probable age, significance, and reference (Appendix C, Table 6). Figure 3.3 of this document shows the locations of the identified sites within this Ahupua'a.

- A. Site reflects major trends or events in the prehistory or history of the state or nation.
- B. Site is associated with the lives of persons significant in our past.
- C. Site is an excellent example of a site type.
- D. Site has yielded or is likely to yield information important to prehistory or history.
- E. Site has traditional cultural significance to an ethnic group.



**PREVIOUSLY DOCUMENTED ARCHAEOLOGICAL SITES IN KAPA'A**

Kapaa Soccer Park  
 County of Kauai, Department of Public Works

**Figure 3.3**

Source:  
 Cultural Surverys Hawaii, Inc.



### 3.6.2 Results of Fieldwork

The current project area is adjacent, and perhaps overlapped, the large marsh area portrayed on late nineteenth century and early twentieth century maps. It is unlikely, therefore, that this area was used for pre-Contact habitation or for burial. However, the edges of the marshes could have been used to grow taro in *lo'i* and the area would have been used to gather other resources, such as the famous *Kalukalu* sedge grass, used for weaving mats. The makai portion of the project area is labeled as Fill Lands on soil maps, but subsurface soil strata representing wetland deposits may still be intact in portions of the project area.

No historic properties were identified during the pedestrian survey of the project area. A total of eight backhoe trenches were also excavated for the project area, and each trench was approximately 80 centimeters (about 2.6 feet) wide and 1.5 meters (about 5 feet) deep. The locations of the trenches were selected based upon the probable areas of maximum construction impact associated with this project. Thus, trenches were located in the areas where the construction of the comfort stations and their association utility lines will require ground disturbance activities.

The stratigraphy was drawn and photographed, and sediments were described for each of the eight trenches. Sediment descriptions include Munsell color, texture, consistence, structure, plasticity, cementation, origin of sediments, descriptions of any inclusions such as cultural material and/or roots and rootlets, lower boundary distinctiveness and topography and other general observations. Details of these results are included in Appendix C.

Excavations confirmed that the project area is covered by at least 1.0 meter (>3 feet) of imported clay fill that overlies natural marsh/lagoonal sand sediments. No Jaucas Beach Sand, which often contains cultural layers and human burials, was observed within the project area. Sediments that were excavated from sub-surface testing were not screened because no cultural material was observed. Therefore, no laboratory work was necessary for the archaeological survey (CSH, 2006).

### 3.6.3 Summary of Impact on Archaeological Resources

Historically, Kapa'a was principally used for the cultivation of sugar cane throughout the nineteenth and early portion of the twentieth centuries. As the twentieth century progressed, the agricultural land slowly gave way to commercial and residential developments with tourist facilities along the coastline making up the recent wave of changes to the east shore of Kaua'i.

Most of the previous archaeological work in Kapa'a Ahupua'a has taken place in Kapa'a Town and not along the coast. Within the town several cultural layers and numerous human burials have been discovered. Mauka of the narrow coastal strip, the landscape is characterized by marsh and wetlands that have been filled in with imported sediment. These areas have proven to have a shortage of archaeology resources by comparison.

The stratigraphy observed in the eight backhoe trenches excavated was consistent with historic records showing thick layers of imported clay fill for agriculture overlaid on a thin layer of lagoonal sands. The subsurface investigations did not reveal any stratigraphic layers, such as Jaucas Sand, that are typically associated with cultural deposits and human remains. No historic properties were discovered within the project area. The grading and leveling necessary for the soccer fields, landscaping, and parking lots is unlikely to penetrate the 1.0 meter (>3 feet) average thickness of fill sediments across the project area. The risk of encountering cultural remains during the trenching for comfort station utility lines is extremely low.

Based upon the results of the inventory survey, the project specific effect recommendation by CSH was “no historic properties affected.” Because of the lack of historic properties and sedimentary deposits that may likely contain archaeological materials, the project specific recommendation was that no further historic preservation work is necessary for the project area.

The archaeological inventory survey was reviewed and approved by the State Historic Preservation Division (SHPD) on September 2, 2006 (LOG NO: 2006.2791 DOC NO: 0609NM02). SHPD concurred with the project specific effect recommendation that no historic sites were found and no further archaeological work is recommended. Thus, SHPD has found the inventory report to be complete and considers the historic preservation review process concluded. A copy of this letter is included in Appendix B.

In the event cultural deposits or subsurface human remains are encountered during construction activities, all work would stop immediately and the SHPD would be notified. The treatment of any human remains encountered would be determined, and conducted in accordance with the applicable requirements of Chapter 6E, HRS, and Chapter 13-300, HAR. Furthermore, as a precautionary measure, construction personnel involved in development activities would be informed of the possibility of inadvertent cultural finds, and would be made aware of the appropriate notification measures to follow.

#### **3.6.4 Cultural Resources Assessment**

In terms of cultural resources, this project is not expected to significantly affect traditional native Hawaiian cultural practices or other traditional cultural practices occurring within the project site or surrounding area. There are currently no known cultural practices occurring within the project site based upon information provided by community consultation and background research. Temporary construction activities should similarly not restrict or prohibit access to surrounding areas that may possibly be used for traditional gathering or other cultural practices since it would be confined to the project site. The activities associated with the proposed soccer park would also not restrict access to surrounding areas which may potentially be used for traditional native Hawaiian cultural practices.

Consultation for this project was conducted by CSH, in which case they attempted to contact four individuals who were recommended by SHPD's Kaua'i Archaeologist. These

efforts included sending consultation letters which contained information describing the archaeological inventory survey and requested any historical or cultural information known about the project area. In an attempt to follow up on the consultation letters, several telephone calls were made to each recipient. The following Table 3.2 summarizes the efforts and results of this consultation process.

**Table 3.2 Summary of Consultation Efforts**

Individual	Affiliation	Methods of Contact*	Response
Nancy McMahon	SHPD, Kaua'i Island Archaeologist	L, TC	Recommended to contact Bobbie Farias, Stanley Vasquez, Valentine Ako, and Kehau Kekua.
Bobbie Farias	Long-time local resident	L, TM	No Response
Kehau Kekua	Kaua'i Cultural Center	L, TM	No Response
Valentine Ako	Long-time local resident	L, TC	Val commented that the parcel had been used for cattle ranching during the 1950's. He also mentioned that he was not aware of any <i>heiau</i> in the surrounding area.
Stanley Vasquez	Long-time local resident	L	No response. CSH was not able to obtain a valid telephone number for this person.

\* L = Letter; TC = Telephone Conversation; TM = Telephone Message

Despite leaving messages on answering machines, CSH was unable to solicit a response from either Bobby Farias or Kehau Kekua. CSH was unable to obtain a valid telephone number for Stanley Vasquez. Valentine Ako, a long-time local resident confirmed that the parcel was used for cattle ranching and that there were no *heiau* in the vicinity of the project area.

In summary, no additional archaeological historic properties were identified as a result of the cultural consultation. No new or previously unknown information regarding the project area was obtained during the cultural consultation. Consequently, this project should not significantly restrict access to other surrounding areas that may be used for cultural practices because all proposed improvements would be limited to the project site. This project would also not prevent public access to shoreline areas or surrounding mauka areas that may be used for traditional gathering or other cultural practices.

### **3.7 BIOLOGICAL ENVIRONMENT**

#### **3.7.1 Botanical Resources**

The natural vegetation found in this area consists of kiawe (*Prosopis pallida*), klu (*Acacia farnessiana*), koa haole (*Leucaena leucocephala*), and bermudagrass (*Cynodon dactylon*) in the drier areas and napiergrass (*Pennisetum purpurem*), guava (*Psidium guajava*), and joe ( *Verbena litoralis*) in the wetter areas.

Construction of the proposed soccer park and amenities should not have a negative impact on the botanical resources present in or surrounding the project site. None of the plants located within the project site were identified as threatened or endangered species, or a species of concern. Furthermore, all of the plants can be found in similar vegetation types throughout the island and within the State of Hawai'i.

### **3.7.2 Hydrogeological Resources**

Under the State's Water Resource Protection Plan, aquifers of the island of Kaua'i have been classified under an aquifer coding system to identify and describe these aquifers. This system is comprised of Aquifer Sectors, and then Aquifer Systems located within these sectors. An Aquifer Sector reflects an area with broad hydrogeological (subsurface) similarities while maintaining traditional hydrographic (surface), topographic and historical boundaries. The Aquifer system is an area within a sector that is more specifically defined by hydrogeologic continuity, particularly hydraulic connections among aquifer types and units.

The Kapa'a Soccer Park site is situated within the Līhu'e Aquifer Sector (303). This sector includes the hydrologic units of Kōloa, Hanamā'ulu, Wailuā, Anahola, and Kīlauea. The project site is situated within the Anahola hydrologic unit (20104).

The geology of the Līhu'e Sector coincides with the Līhu'e Depression and the rocks of the Kōloa volcanics. Due to Kaua'i's complex relationships among the various types of groundwater and between groundwater and surface water, the estimated sustainable yield of the Līhu'e Aquifer Sector is difficult to estimate. The Līhu'e Aquifer Sector estimated sustainable yields are based upon the assumption that exploitable basal lenses exists.

#### **Effects on Hydrogeological Resources**

Construction of the new soccer park is expected to have minimal impacts on the surrounding groundwater system. The small increase in developed impervious surface from this project would inevitably decrease the amount of localized groundwater recharge occurring at the project site. However, this decrease is expected to be negligible and ultimately inconsequential to the overall function of the area's natural hydrological system. Further, the project site is located near the shoreline reducing the importance of groundwater recharge occurring in this area. As a result, the project should not adversely impact the underlying aquifer system nor contaminate potable water sources.

Construction activity is not anticipated to have impacts on coastal resources and water quality resulting from silt runoff. It is expected that contractors will minimize runoff by implementing best management practices (BMPs) to be developed during the project's design. Such measures should be designed to trap and reduce runoff during construction activities.

Appropriate BMPs would be considered and incorporated into design plans to address potential short-term impacts from runoff. In addition, such plans developed would be reviewed by pertinent agencies for comments and approval prior to construction. Therefore, impacts on coastal waters and water quality should be minimal or minor because the contractor will employ approved measures to prevent silt runoff from construction areas along with complying with other related permit conditions.

### **3.7.3 Streams and Water Quality**

Mō'ikeha Canal is the only stream located in vicinity of the project area. As previously shown on Figure 1.1, this stream begins from inland (mauka) areas and extends along southern boundary of the project site before discharging into the Pacific Ocean. According to the *List of Impaired Waters in Hawai'i 2004*, Mō'ikeha Canal is not identified as an impaired waterway.

On July 26, 2002, AECOS, Inc. biologists performed a streams survey report which included a reconnaissance survey of streams stretching between Waika'ea Canal and up north to Kamalomalo'o Stream. Subsequently, Mō'ikeha Canal was one of the six streams surveyed. Aquatic fauna and water samples were collected from Mō'ikeha Canal at the stream's crossing point near Kaua'i Belt Road.

This report identified Mō'ikeha canal as a straightened and hardened canal that flows through Kapa'a Town and discharges into the ocean between boulder jetties. Large boulders line the banks, but the canal has a sand bottom. Discussion reported in the document stated that all six of the streams studied contained some habitats for native fauna, although Mō'ikeha Canal has been extensively altered by man, native amphidromous fauna might live in or migrate through its lower reaches because of its connection to the ocean.

#### **Effects on Streams and Water Quality**

Development of this project should not have a significant effect on Mō'ikeha Canal or aquatic resources associated with it. The project would not involve stream channel alterations or diverting of any surface flow water. Since Mō'ikeha Canal is known to provide adequate habitat for native amphidromous fauna, care must be taken to ensure that the flow of water or the migration of these species from the stream to the ocean are not impeded. The only anticipated effect to the stream would be inconsequential additional storm water runoff being directed into this stream due to new facilities constructed on the subject property.

Appropriate best management practices would be developed during the project design, and implemented during construction activities to mitigate potential effects. Activities that decrease the water quality during construction should be avoided by using BMPs designed to reduce or trap runoff. A National Pollutant Discharge Elimination System (NPDES) permit for construction activities would also be obtained, and the necessary requirements would be implemented by the contractor.

### **3.7.4 Avifauna and Fauna**

No avian species listed as endangered, threatened, proposed, or as a candidate species by the U.S. Fish and Wildlife Service or by the State of Hawai'i under its endangered species program are known to be present on the project site. The project site is not located within a State designated Natural Area Reserve nor is it within an area designated as habitat for the recovery of Hawaiian forest birds (FWS, 2003).

The proposed soccer park site is located within predominantly urbanized areas which typically are lacking in suitable habitat for threatened, endangered or candidate fauna species presumed or known to reside on the island of Kaua'i. Animal species in the project vicinity would be typical of species found in the urbanized areas of the Kapa'a region. Examples of feral mammals found in this area would include cats, rats, mice, and mongooses. No mammals were observed at the project site during a recent site visit to the property.

#### **Effects on Avifauna and Fauna**

Vegetation on the project site consists predominantly of introduced species and weeds, and there are no wetlands present on the project site or in the immediate vicinity which may serve as important nesting or foraging habitat for endangered or threatened species.

With the development of the soccer park, existing feral mammals utilizing the property would be displaced. However, this change would not result in a significant negative impact on potential mammalian species present on the property or in the surrounding area because they consist predominantly of alien species such as rodents or feral animals which are typically harmful to native avian plant communities.

## CHAPTER 4 ECONOMIC AND SOCIAL FACTORS

This chapter discusses the project's probable impact on economic and fiscal factors associated with the State and County, as well as social factors such as changes in resident population, housing, and character of community.

### 4.1 EXISTING SOCIAL AND ECONOMIC CONTEXT

Kapa'a is a historic town noted for its "western plantation style architecture and walk able small town character." As an agricultural town, Kapa'a was primarily a sugar cane plantation town, and today has become a commercial center for the island's east side. Both locals and tourists utilize the Kapa'a area, with many small businesses thriving due to the high patronage of local community members and tourists that frequent the area.

Kaua'i County has transformed over time from a plantation economy to a mixed one. Tourism, diversified agriculture, construction, and local small businesses have replaced sugar as the basis of the economy. Kapa'a does not have its own harbor or airport. However, the island's main harbor of Nāwiliwili and the primary airport in Līhu'e service the entire island, and is in close proximity to Kapa'a.

#### **Industries**

The largest industries in terms of jobs are in trade (retail and wholesale) and services. Hotels accounted for some 3,800 jobs in June 2002, while eating and drinking establishments accounted for 3,100 jobs. Agriculture on the other hand accounted for approximately 600 jobs County-wide as of June 2002 (DLIR, 2002).

In a study completed by the State Department of Labor and Industrial Relations (DLIR), it was projected that by the year 2008, service and production occupational groups will account for approximately 50 percent of the total projected job growth for the County, whereas agricultural occupation, including forestry and fishing, will lose ground. It is projected that the service industry will the highest gains in terms of job openings.

#### **Income**

Personal income of County residents has been increasing over time, but not as fast as the State as a whole. The per capita disposable personal income level for residents of the County has fallen below income levels for the State as a whole since the mid-1970s. Since that time, this gap has also slowly widened where it is now about \$8,000 lower to approximately \$28,000 for the State and \$20,000 for the County.

The 2000 Hawai'i Health Survey indicated that 21.9 percent of the County population was below the poverty line, while only 14.1 percent of the statewide population fell under the poverty

line. The same source indicated the medium household income in the County as 78.0 percent of the State's median. The State median household income was \$41,137 while the County was \$32,084. Both the extremely low- and low- income groups (up to \$30,000) also form a much larger share of the County population than for the State as a whole.

## **4.2 ECONOMIC AND FISCAL FACTORS**

This section discusses both the short and long-term effects of the project on both the County and State economic and fiscal factors. Development of the proposed soccer park will have different impacts in relation to the County of Kaua'i and the State of Hawai'i. In discussions of jobs and income, three broad types are distinguished:

- Direct jobs are immediately involved with construction of a project or with its operations.
- Indirect jobs are created as businesses directly involved with a project purchase goods and services in the local community.
- Induced jobs are created as workers spend their income for goods and services.

Given the nature of this project, the main economic effect of the project would be construction related such as new construction jobs and income. As a result this construction project would create several construction jobs over the anticipated one-year construction period.

Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. Direct construction jobs created would also stimulate indirect and induced employment within other industries on the island such as retail, restaurants, material distributors, and other related businesses supporting the construction industry.

These new jobs would generate additional personal income for construction workers. Personal income is defined as the wages paid to the direct construction workers or operational employees associated with a development. It is anticipated that these construction jobs would likely be filled by residents from the island of Kaua'i employed within the construction industry. Indirect and induced income would also be generated from this project.

### **Fiscal Factors**

Fiscal impacts associated with this project would primarily involve slightly additional tax revenue generated to the State. Tax revenue sources for State government would be composed primarily of general excise taxes (GET) on development costs and construction materials, corporate income tax, and GET on construction income spent by workers. In addition, GET taxes on indirect and induced income spent stimulated by the spending of direct income would also contribute new revenues to the State.

Since County revenues are primarily limited to property tax revenues, there should be minimal changes to the County revenues. Because the Kapa'a Soccer Park site is a government owned property under the County's jurisdiction, there wouldn't be any County property tax

revenue generated from this site. This project would not generate any new in-migrant residents to the island of Kaua'i. Thus, there should be minimal if any effect on State and County operational expenditures for public services.

There will be additional costs to the County for the maintenance and upkeep of the proposed park facilities. The comfort station will need trash pick up, cleaning, and eventual structural repairs typical of park facilities. The field will also require upkeep by frequent watering, line painting, and grass cutting. Trees, shrubs, and other vegetation incorporated into the park will need maintenance and trimming. These maintenance costs are similar to those of typical park facilities and will be coordinated through the County Department of Public Works, Parks Division.

### **4.3 SOCIAL IMPACT FACTORS**

The proposed soccer park project is not expected to change the existing resident population in the Kapa'a community or region. This project is a County-initiated capital improvement project for the Kawaihau District. There are no new residential units or visitor units associated with this project, and no in-migration of individuals to reside within the County would result. As a result, there should be no impact on the existing resident population.

This project would also not change or alter the character of the Kapa'a community or the character of the Kawaihau district. The project essentially adds another soccer park and amenities to accommodate the existing recreational needs of the Kapa'a community. Consequently, this project would not change existing uses in the surrounding area or have a significant impact on surrounding land uses.

### **4.4 SECONDARY AND CUMULATIVE IMPACTS**

#### **Secondary Impacts**

Secondary impacts, or indirect effects, are effects which are caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable. Such effects may include growth inducing impacts and other effects related to changes in land use patterns, population density or growth rate, and related effects on air, water, and other natural systems. The proposed project is expected to have minimal if any secondary impacts on resident population, land use patterns, public facilities and infrastructure, and the natural environment.

Construction of this project is expected to generate only minor short-term impacts associated with these activities. Creation of short-term construction jobs are not expected to generate a substantial number of workers in-migrating to the island of Kaua'i to fill these jobs. It is anticipated that qualified local contractors on the island or within the State of Hawai'i would likely be used for the project's construction. These workers would thus have minimal if any effect on the County's residential population or housing demand.

This project would not affect the County's resident population growth projected for the Kawaihau District, and thus not generate the associated secondary effects on infrastructure, public facilities, and housing. The project accommodates the need for additional soccer fields in the Kapa'a area. Such enhancements are not expected to significantly affect the County's rate of in-migration or potential relocation to the Kawaihau District area.

### **Cumulative Impacts**

Cumulative impacts are effects on the environment which result from the incremental impact of a project when added to past, present, and reasonably foreseeable future actions. The cumulative impacts associated with this new soccer park includes assessing the implementation of this project to evaluate it, and incorporate other known planned improvements within the study area that would effect or be affected by the project.

The only other known development that would occur in the immediate vicinity of the new soccer park site during the same timeframe is the planned improvement to the adjacent cane haul road which currently forms the northern boundary of the project site. The State DOT has already begun construction to improve the existing cane haul road to extend the existing temporary Kapa'a Bypass Road.

The improvements will resurface the existing cane haul road, realign a portion of Opala Road, improve the entry point off Kūhiō Highway in Kapa'a, add street lighting to the termini and provide appurtenant signage. The temporary Kapa'a Bypass Road has started construction with the installation of a temporary vehicular bridge crossing Mō'īkeha Canal and Cane Haul Road resurfacing. Therefore, construction of the temporary bypass is not anticipated to occur concurrently with construction activities for the new soccer park. However, in the event that a portion of the temporary bypass road construction does occur during the soccer park's construction, an assessment of such cumulative impacts is addressed.

The cumulative impact from construction related activities for the new soccer park and temporary bypass road are not expected to be significant. Construction of the soccer park does not involve major site work due to the property's existing site conditions. The only major facility constructed would be the comfort station building. Similarly, the temporary bypass road involves minor construction activities since the State DOT is essentially improving the existing cane haul road.

Best management practices such as erosion control and other mitigative measures would be implemented by the contractor during construction activities. This includes compliance with all applicable permits and regulations such as those concerning noise control and air quality. The overlap of temporary bypass road construction with the soccer park would also occur over a shorter period since it is already under construction. The assessment presented in this document includes the cumulative effects associated with this project and results show that there are no major cumulative impacts associated with this project.

## CHAPTER 5

### INFRASTRUCTURE FACILITIES

This chapter discusses the project's probable impact on infrastructure facilities serving the project site and surrounding area. Due to the nature of improvements proposed for this soccer park project, most of the impacts would be associated with construction-related activities.

#### 5.1 WATER FACILITIES

The County of Kaua'i, Department of Water provides water supply serving the Kapa'a to Anahola districts within the study corridor. The main water mains are routed along Kuhio Highway with distribution lines extending into smaller subdivisions. This project will require the construction of a water line to connect the comfort station to the main water line along Kūhiō Highway. This new water line will be situated along the existing cane haul road. Irrigation lines within the project site will also be installed for the watering of the soccer fields.

Project improvements that would affect the area's demand for potable water would include the soccer park's comfort station and water fountain. According to the 2002 State of Hawai'i Water System Standards, the Domestic Consumption Guidelines for a park on the island of Kaua'i is 4,000 gallons per acre. This guideline also accounts for irrigation.

However, this guideline would considerably overestimate the probable amount of water actually utilized for this project. Based upon 11.5 acres for the site, the resulting water demand would be 46,000 gallons per day. The amount of water likely utilized by park users is estimated to be considerably lower. Water would also be used for irrigation of the site. However, such irrigation should typically occur at night or during non-peak use periods, and this area receives a moderate amount of annual rainfall which would reduce the amount of water needed for irrigation.

Using the water systems standards, 60 gallons of water per day per person is provided as a guideline for park or school land uses. It is estimated that about 20 gallons are used for sanitation activities such as flushing toilets and on average, a healthy person consumes one gallon of water per day (Gleick, 1996). Conservatively assuming that 100 percent of all the people visiting the park will use 50 percent of their daily intake/discharge of water and that all of the allocated 60 gallons per person per day is used, then the following table shows the estimated consumptions associated with park activities. The projected number of people using the park facility was assumed by multiplying the amount of estimated parking stalls (104) by 2.5, which represents the average daily amount of park users.

**Table 5.1 Average Daily Water Demand**

Activity	Water/person (gal/cap/day)	Number of People at Park	Daily Demand
Drinking	0.5	260	130
Sanitation	20	260	5,200
Total			5,330

\* Values are approximate.

Based upon these calculations, the total projected average daily water demand generated by the soccer park is conservatively expected to be about 5,300 gallons per day. Additional water demand would be generated for irrigation of the site, but should not be that significant. This additional demand should have minimal impacts on the County's existing water system serving this area. Depending upon the actual sizing of facilities, extensions of waterlines between 1-inch and 3-inch in size would likely be required to connect to current water mains. During the project's design, appropriate design plans would be coordinated with the County DOW for review and approval.

Irrigation of the project site as part of maintenance activities would also utilize water. Properly irrigated soccer fields are needed to maintain a healthy, actively growing field capable of recovery from its use. The frequency of watering will vary from site to site, but should be determined by the appearance of the turf. Preferable times to irrigate a soccer field would typically be between 4:00 a.m. and 8:00 a.m. due to less water lost from evaporation. The second best time to water is from 8:00 p.m. to 12:00 p.m. (Purdue University, 2006).

Generally,  $\frac{3}{4}$ -inch of water should be applied per irrigation which will wet the entire grass root zone (University of Florida, 2006). It is better to apply irrigation water in a single, thorough soaking, or two equal applications of water three to four days apart rather than in light irrigations every day. Based upon watering of  $\frac{3}{4}$ -inch twice a week for the two soccer fields, it was estimated that about 23,250 gallons per day of water would be used.

One alternative to using potable water from County sources is to use surface water diverted from other sources such as the adjacent Moikeha Canal. However, such water from this canal would need to be treated prior to use to remove suspended solids and pollutants along with reducing potential viral and bacteria pathogens that could be present. Such solids could clog irrigation lines over time causing additional maintenance and repair work.

In addition, the use of such water would require permit approval from the Commission on Water Resource Management, State Department of Land and Natural Resources because it would be a diversion of stream water. Approval from the Corps of Engineers would also be required since the canal would fall under their jurisdiction since it meets the definition of

“navigable waters” due to it being tidally influenced. Its use may also require approval and regulation under the State Department of Health.

Therefore, the use of surface water from Moikeha Canal is an option that could be considered during the project’s design phase. However, the feasibility and practicability of using such water sources may not be beneficial due to applicable regulations and approvals needed, potential maintenance costs and repair considerations, and costs necessary to properly treat the water within the project site which may affect available areas used for the soccer park.

## **5.2 WASTEWATER FACILITIES**

There are no existing wastewater facilities located on this project site or land uses generating wastewater from this property. Existing County sewer lines are available in the Kapa‘a Town area from the main sewer line that runs along Kuhio Highway. There are also no existing sewer lines serving the project site.

The comfort station would be the project’s only facility that would require wastewater improvements on the site to serve park users. Based upon the estimated water generated by park users for sanitation purposes, the resulting wastewater generated from this project would conservatively be about 5,200 gallons per day. However, the actual amount of wastewater would likely be lower during weekdays when the level of park use is not as high as compared to weekends.

If economically feasible and practicable based upon the comfort station’s design, a sewer line extension could be provided to connect the comfort station to the main sewer line along Kūhiō Highway. This new sewer line would be routed along the extension of the temporary bypass road.

However, it is more probable that the generated wastewater would be treated using an individual wastewater system because of lower construction costs for its implementation. Due to the potentially high water table at the project site, a septic tank and mound system is an alternative system that may be appropriate.

In a septic tank and mound system, effluent is pumped into a gravel bed or trenches on top of a bed of sand. Sandy soil carefully placed above the plowed ground surface treats the effluent before it moves into the natural soil. The system is designed to extend on-site system use in areas with high groundwater, high bedrock, or tighter clay soils. This type of system requires regular inspection of the pumps and controls, and flushing of the distribution network.

The costs associated with the septic tank system should be much less than costs to construct the sewer line extension to Kūhiō Highway. Furthermore, the wastewater generated should have minimal impact on the environment and County’s existing wastewater system. However, the specific type of septic system will be determined during the project’s design, and appropriate design plans would be coordinated with the County DPW and State DOH for review and

approval. The project's design phase would also include a cost assessment to determine whether a sewer line connection or individual wastewater system is a more feasible and practicable solution for the County considering both long-term maintenance and initial construction costs. Furthermore, if a sewer line is routed along the project site, the park facility will be required to connect to that system.

### **5.3 DRAINAGE FACILITIES**

Existing drainage facilities surrounding the project site consist of the Mō'īkeha Canal bordering the western end of the property and a small unlined drainage ditch routed along the northern edge of the adjacent cane haul road. There are no existing drainage facilities on the project site. Surrounding properties to the north and west of the project site generally sheet flow into the Mō'īkeha Canal for eventual discharge into the ocean. Existing properties immediately north of the site generally sheet flow into the unlined drainage ditch along the current cane haul road.

As discussed in Chapter 3, portions of the project site are located within the floodway. The Mō'īkeha Canal is designated as a floodway (Zone AE) with base elevations determined (see Figure 3.2). The northeastern portion of the project site is within the Zone AE floodway with base flood elevations of 10 and 12 feet.

Storm water runoff currently sheet flows from the project site into these drainageways. In general, the western half of the site appears to drain into the Mō'īkeha Canal with the discharge point located in the southwestern corner. The eastern half of the site appears to flow into the unlined earth drainage ditch with the discharge point located in the northern corner of the site.

Construction of the park's parking lot, comfort station, and walkway would create additional impervious surfaces on the project site. However, the majority of the site will be grassed maintaining existing pervious areas for most of the property. Thus, the increased storm water runoff generated by this project would be small and is not expected to have a significant impact on existing drainage facilities or downstream properties.

Existing drainage patterns on the property are intended to be maintained with the project. As a result, improvements will be designed to allow storm water runoff to continue to discharge into both the Mō'īkeha Canal and the unlined drainage ditch without negatively impacting the State's extension of the temporary bypass road.

The specific runoff quantities and changes to drainage patterns would be developed during the design phase of this project. The design of this project will also include a detention area on the property to reduce the increased runoff generated by this project. Drainage facilities will be designed in accordance to the County's Storm Drainage Standards and design plans will be appropriately coordinated with the County for their review and approval.

## **5.4 SOLID WASTE**

The County maintains an island-wide system of solid waste collection and disposal. The Kekaha Landfill, Phase II is the primary disposal site for solid waste serving the island. Refuse transfer stations are located throughout the island, and the Kapa'a station is the closest station serving the project area.

Construction of the proposed soccer park and related amenities will generate solid waste typical of normal construction related activities over a short time period. Generated wastes will consist primarily of vegetation, rocks, and other debris resulting from the clearing and grubbing of the area. The contractor will be required to remove all debris from the site, and properly dispose them at the landfill in conformance with County regulations. Such activities are expected to have a minor impact on County solid waste facilities.

Users of the park would generate a need for more trash receptors at various locations within the park to prevent rubbish from being openly discarded in the park area. Solid waste would only be generated periodically as the park would not be in constant use everyday. Solid waste generation would mostly occur on the weekends when most activities are conducted because families bring food and refreshments for the players after the games. Teams using the field for practice during the weekdays are not expected to generate much solid waste.

The amounts of solid waste generated at the soccer park is expected to be small and not very large as most solid waste will consist of food, beverage containers, utensils, etc. or biodegradable leftovers. Consequently, this project is not expected to create a significant increase in rubbish since solid waste generated will occur only periodically and consist of solid waste that is rather small in quantity.

## **5.5 TRANSPORTATION FACILITIES**

### **5.5.1 Existing Conditions**

Presently, there is no public roadway facility serving this soccer field site. There is only a privately-owned cane haul road which is routed along the northern boundary of the project site. This cane haul road connects with Kūhiō Highway to the northeast on one end and with Olohena Road further southwest. An existing bridge for this cane haul road crosses the Mō'īkeha Canal near the western corner of the project site.

Kūhiō Highway is a State Department of Transportation (DOT) operated highway facility generally running along the coastline within the Kawaihau district, and is the only facility providing vehicular access through the Kapa'a Town area. Immediately south of Waika'ea Canal, Kūhiō Highway consists of three lanes with the center lane used for left-turns. North of this canal, the highway consists of two lanes (one in each direction) with on-street parking

provided through Kapa'a Town. Within Kapa'a Town, the posted speed limit is 25 mph which increases to 50 mph north of Kawaihau Road toward Anahola.

In 1995, the State DOT established a temporary "bypass road" for traffic during daylight hours to help alleviate traffic congestion through the Kapa'a Town corridor. This route utilizes the former cane haul road running mauka of Kapa'a Town, and consists of a two-lane roadway with narrow or no shoulders. The current limits of this bypass road are from Kūhiō Highway just south of Papaloa Road northbound up to Olohena Road. The speed limit along this bypass road is generally 35 mph except in the vicinity of a narrow bridge structure (WOA, May 2002).

Olohena Road is a two-lane roadway providing access to mauka residential areas, Kapa'a New Park, and schools in the vicinity of the project site. This road serves as the terminus for the current temporary bypass road, and has a posted speed limit of 25 mph.

### **Extension of Temporary Bypass Road**

The State DOT is constructing an extension of the current temporary bypass road northbound utilizing the existing cane haul road. This extension starts from the existing bypass road's intersection with Olohena Road, and proceeds north about 0.82 miles along the cane haul road before connecting with Kūhiō Highway just south of Hau'a'ala Road. This extension will only provide a single lane for one-way travel in the Hanalei to Lihue direction (south).

Improvements will also include the realignment of a portion of Malu Road and the construction of a roundabout intersection serving the new temporary bypass road extension, Olohena Road, and the existing bypass road. A temporary Acrow Panel Bridge is also being constructed for this extension to span the Mō'ikeha Canal at the location of the current concrete bridge because it is inadequate. A new 6-foot high chain link fence will be installed from the Lihue end of the bridge to the Olohena Road roundabout along the bypass extension's makai right-of-way (DOT, August 2004).

### **Existing Traffic Volumes**

Published State DOT traffic count data taken in 2003 along Kūhiō Highway at Station No. 26 (Kūhiō Highway with Hau'a'ala Road) was reviewed. This station is situated closest to the cane haul road connection to the highway where the extension of the temporary bypass road will occur. The count data indicated that the morning commuter peak hour occurred from 7:00 to 8:00 a.m., and the afternoon peak hour occurred from 3:45 to 4:45 p.m.

There is presently no public roadway providing vehicular access to the Kapa'a Soccer Park project site. As a result, there are no vehicles traveling along the existing cane haul road fronting the property. A Final Environmental Assessment (DOT, August 2004) completed for the extension of the temporary bypass road did not include a traffic study or forecasts of future traffic volumes expected to occur along this extension. Therefore, there is no data available for use in the analysis of existing conditions at the project site's proposed driveway.

## 5.5.2 Projected Traffic Conditions and Impacts

Future traffic volumes along the extension of the bypass road were not provided in the Final Environmental Assessment (Final EA) published for that improvement. However, vehicular traffic on that extension would only be limited to one-way traffic in the southbound (to Līhu'e) direction. Consequently, project related traffic associated with the soccer park site would be limited to only left-turns into the site and left-turns exiting.

Vehicular trips generated by this soccer park were estimated by evaluating trip generation rate data from the ITE published *Trip Generation Handbook*<sup>1</sup> for this type of land use. In addition, trip generation data from a traffic study conducted for the Central Oahu Regional Park<sup>2</sup> on O'ahu was also reviewed and evaluated. The resulting assumptions used in estimating project generated traffic are listed below:

1. The ITE's description for the Soccer Complex (Land Use Code 488) category was applicable to this project.
  - This land use was described as outdoor parks that are used for non-professional soccer games. They may consist of one or more fields, and the size of each field within the the land use may vary to accommodate games for different age groups.
2. The sample size for this Soccer Complex category was small, therefore, the traffic study for the Central Oahu Regional Park was reviewed.
  - Those trip rates were derived based upon assumptions estimating players for teams and spectators. An average vehicle occupancy rate of 2 persons per vehicle was used.
  - Weekday morning peak hour trips were assumed to consist of park employees (maintenance, etc.).
3. The average trip rate for the weekday afternoon peak hour established for the Regional Park traffic study was similar to the average trip rates from the *Trip Generation Handbook*.

Therefore, the ITE trip generation data was determined to be reasonable for use. The resulting trip generation for this soccer park project is summarized below in Table 5.2. As shown on the table, there would be minimal traffic entering and exiting this site during the morning commuter peak hour. During the afternoon peak hour, a total of 41 trips would be generated by the project of which 69 percent would be entering the site.

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<sup>1</sup> Institute of Transportation Engineers, 2003. *Trip Generation Handbook*, 7th Edition, Washington, D.C.

<sup>2</sup> Pacific Planning & Engineering, Inc., June 1998. *Traffic Impact Assessment Report for Central O'ahu Regional Park*. Honolulu, Hawaii'i.

Table 5.2. Trip Generation Summary for Proposed Project							
Land Use Description	Parameter	Morning Peak Hour			Afternoon Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<b>Trip Generation</b>							
1. Kapa'a Soccer Park (2 fields)	Fields	2	1	3	28	13	41

With the soccer park project, construction of the extension of the temporary bypass road by the State DOT should be completed. This roadway will provide the only vehicle access to the project site, and would be limited to left-turns into the site and out since this roadway will be a single lane with a one-way southerly directional flow (to Līhu'e). No traffic forecast volumes were provided in the Final EA for that extension road.

However, based upon the estimated trips generated, this soccer park project is expected to have minimal impacts to the operational conditions along the temporary bypass road extension. The project should not affect the morning peak hour traffic flow along this extension nor its intersection with Kūhiō Highway and new roundabout intersection with Olohena Road due to the low volumes.

During the afternoon peak hour, the project driveway's intersection with the bypass road extension should operate fairly well due to the low volumes of vehicles entering and exiting the site. Since it will be a one-way roadway, there should be minimal delays occurring at the driveway since there would be no conflicting movements from cars traveling in the opposite direction. The low project generated traffic volumes are also expected to have minimal effect on the bypass road's intersection with Kūhiō Highway and at the Olohena Road roundabout. The design plans developed for this roundabout and roadway extension included in the Final EA should accommodate present and future growth in traffic volumes.

Development plans for the future Kapa'a Relief Route (permanent bypass road) have also been incorporated in the site planning for this project. Therefore, this project should not negatively affect plans being developed for that improvement. Coordination with State DOT would be conducted during the design phase of this project.

## CHAPTER 6 PUBLIC FACILITIES AND UTILITIES

This chapter discusses the project's probable impact on public facilities and utilities serving the project site and surrounding area. Due to the nature of improvements proposed, impacts would be primarily associated with construction-related activities, although positive long-term impacts to recreational facilities are also anticipated.

### 6.1 ELECTRICAL AND COMMUNICATION FACILITIES

There are currently no electrical or communication facilities serving the project site. Electrical services will be provided to the Kapa'a Soccer Park via Kaua'i Electric (KE) distribution lines. The area surrounding the project site is served by overhead KE transmission lines along the Power Line Trail supplemented by power from the Wainiha Hydroelectric Plant. There will be no telecommunication and cable television services provided to the project site.

The new soccer park project will generate a slight increase in demand for electrical power. Lighting will be provided for the comfort station and could be provided for parking lot areas; however, there will be no lighting for the fields. These increases in demand for electrical services are expected to be quite minimal and not expected to have a significant impact on KE's distribution facilities or power generation facilities. Design plans will be appropriately coordinated with KE for their review to secure necessary improvements.

### 6.2 RECREATIONAL FACILITIES

There are a number of existing recreational facilities and activities occurring within the study area. Recreational facilities located in the vicinity of the Kapa'a Soccer Park include Mō'ikeha Canal Bridge, Kapa'a Neighborhood Center, Smokey Louie Public Swimming Pool, Waipouli Beach Park, Kapa'a Beach Park, Kapa'a New Park, Gore Park, and Wailua River State Park.

Mō'ikeha Canal Bridge is a County-owned bridge crossing this canal and has been improved for bikes and pedestrians using the path. This bridge is used for fishing activities within the canal and along the shoreline by the public. People presently park along the canal at open areas near the highway and along the shoreline makai of the library parking lot.

Kapa'a Neighborhood Center is a community center located along Kou Road, and is used for various community activities and meetings. The Smokey Louie Public Swimming Pool is a County-owned pool located along the shoreline across from the neighborhood center at the end of Kou Road. There are also a few open grassed fields south and north of this pool utilized as play areas for parents with children, Frisbee players, families or groups having picnics, and practicing hula halau.

Kapa‘a Beach Park is 17.54 acres and facilities on site include picnic tables, pavilions, and restrooms. Gore Neighborhood Park is 0.7 acres and mainly serves as open space for beautification purposes. Kapa‘a New Park is 18 acres and facilities for the Kapa‘a New Park include a little league field, baseball field, football field, softball field, a lighted roller hockey rink, basketball court, tennis courts, and comfort station.

The construction related activities of the proposed project are not expected to have an impact on the existing recreational facilities in the immediate area. Due to the distances that these surrounding facilities are located from the proposed site, potential disturbances from construction noise, fugitive dust emissions, and construction traffic should not negatively affect activities at these recreational facilities. The proposed project is not considered to be a population generator. As a result, additional demand on existing recreation facilities is not anticipated.

This project will provide a needed additional recreational facility for the town of Kapa‘a. The proposed soccer park will add two full-sized soccer fields, a walking trail around the park and other park related amenities for the benefit of park users. Included in these park amenities are the parking lot and comfort station. This park will also provide additional recreational resources for Kapa‘a elementary and high schools as discussed in subsequent sections. This improvement would support the need for more regulation sized soccer fields, and can be used for other recreational activities to benefit the community.

### **6.3 EDUCATIONAL FACILITIES**

The Kapa‘a Complex Area currently contains six public schools that are operated under the State Department of Education (DOE). The three elementary schools in the complex include Hanalei, Kapa‘a, and Kīlauea. Kapa‘a Middle School and Kapa‘a High School are the only middle school and high school in the complex area respectively. Kanuikapono, a new century charter school serving students in grades K-12, is also located within the Kapa‘a Complex area.

Kapa‘a High School is operating under a School/Community-Based Management system and serves students along the entire northeastern coastline of the island. This area starts from the Wailuā community and extends through Waipouli, Kapa‘a, Anahola, Kīlauea, Kalihiwai, Princeville, and up to Hā‘ena. This school serves a very diverse student population of various ethnic backgrounds. The socio-economic status of families within these communities range from low to affluent.

Kapa‘a Middle School is operating under a School/Community-Based Management system and serves students in the same region as the high school. Kapa‘a Elementary School serves students in Kindergarten to sixth grade from the Kawaihau District, which includes the Wailuā Homesteads and the area east of the Wailuā River to Moloa‘a Stream. A unique feature of Kapa‘a Elementary School is the Schools-Within-School (SWS) model.

The primary impact of the project on educational facilities would be to provide an additional recreational facility for students in the area. Students of Kapa'a Elementary would be most affected by the new facility as it is only 0.5 miles away from the project site. There is also a need to establish a "home" field for Kapa'a High School to serve their soccer team which has been using the small soccer field at Kapa'a Town Park thus far. The Kapa'a High School soccer teams will then be able to use the proposed park as their "home" field which will be regulation sized. The new facility will provide students of all ages with more opportunities to participate in recreational activities and may help to contribute to improving student physical education and improved student health.

Other impacts to the school would consist of short-term construction-related activities. Noise and dust emissions and construction related traffic would likely constitute the primary impacts associated with construction activities. In order to mitigate these impacts to the greatest extent possible, the contractor would be required to comply with applicable regulations and permit conditions governing construction activities to minimize disruptions to on-going classes, and nearby residential areas. Best management practices would also be implemented to minimize dust, erosion, and other nuisances from short-term construction activities. Any increased traffic caused by construction activity would be temporary and subside as soon as construction on the project is completed.

#### **6.4 POLICE PROTECTION**

The County of Kaua'i Police Department provides services to the Kawaihau District from its main station and administrative headquarters situated in Lihue. Police headquarters is located approximately 8.5 miles south of Kapa'a. Additional police protection, if needed, is located approximately 13 miles north of Kapa'a in Hanalei. Police staff may be hired to assist in directing traffic during construction activities. However, these added services should not negatively impact the Department's ability to conduct normal operations.

There is also the possibility of some complaints to the Police Department from residents over dust and noise from construction activities. As previously noted, however, the contractor would be required to comply with applicable regulations and permit conditions governing construction activities to minimize disruptions to nearby residents. Best management practices would also be implemented to ensure that dust, erosion, and other nuisances from short-term construction activities are kept to a minimum.

The Kapa'a Soccer Park is expected to have minimal impacts on the operations of the police department. Such impacts are not expected to affect their ability to provide adequate protection services to the surrounding Kapa'a community and the larger Kawaihau District. Therefore, this project should not have a significant impact on the police department's ability to provide protective services in the project area either during construction or upon completion of

the new soccer park as the project is not expected to cause an increase in the population of the surrounding area and thus generate any additional need for police protection services.

## **6.5 FIRE PROTECTION**

The Kauai Fire Department has a fire station in Kapa'a. Other stations are located in Waimea, Hanapēpē, Kalāheo, Kōloa, Līhu'e, and Hanalei. The County has a unified, island-wide system of fire protection and rescue services. The Kapa'a Fire Station is approximately 1.5 miles from the project site, on the makai (east) side of Kūhiō Highway. Back-up service is provided by the Lihue Fire Station.

This project is not expected to have a significant impact on the Fire Department's ability to provide fire protection services to the Kapa'a community. The proposed soccer park will be designed to meet fire and building code requirements. This will include providing necessary hydrants, meeting fire flow requirements for water system improvements, and complying with County standards for fire truck access to the park. Consequently, this project should not have a significant impact on the department's fire protection services.

## **6.6 MEDICAL FACILITIES**

The only medical facility located within the Kapa'a area is the Samuel Mahelona Memorial Hospital. The Wilcox Memorial Hospital and the Kauai Dialysis Unit are both in Lihue and are both approximately six miles away. Emergency room services for Kapa'a are provided by the Samuel Mahelona Memorial Hospital. The hospital provides a 24-hour mid-level emergency room service. Other types of services provided by the hospital include outpatient services, long-term care, psychiatric services, tuberculosis services, and pharmacy services.

Emergency room medical services for the Kapa'a community are also provided by the Wilcox Memorial Hospital. The triage unit at the Wilcox Memorial Hospital has a waiting area that can accommodate 30 people at a time and has 20 beds. For severe cases, the hospital has a communication system that allows it to communicate with triage centers on Oahu. Patients with severe and critical health conditions can be transported to Oahu via air ambulance.

Short-term construction activities associated with the project should have no impact on medical facilities or the activities occurring there. Upon completion of the new soccer park facility, the use of the soccer park should not impact these medical facilities or services provided as the soccer park will be primarily used by current area residents and will not lead to an increase in the area's population.

## CHAPTER 7

### CONFORMANCE WITH PLANS AND POLICIES

This chapter discusses the project's conformance with the State Land Use District regulations, State Environmental Policy (Chapter 344, HRS), and the regulations, policies, and goals set forth under the *County of Kaua'i General Plan* and Zoning district regulations prescribed under *Kaua'i County Code*.

#### 7.1 STATE LAND USE DISTRICT

The State Land Use District Boundary Map for the Kapa'a region indicated that the soccer park facility project site is classified as "Urban" District. Chapter 1 included a figure showing the project site in relation to the established State land use districts for this area.

Permitted uses or activities within the Urban District are provided by ordinances or regulations of the county within which the Urban District is situated. Thus, Urban District lands on the island of Kaua'i are regulated by the ordinances and regulations of the County of Kaua'i.

#### 7.2 CHAPTER 344, STATE ENVIRONMENTAL POLICY

This section discusses the project's conformance and consistency with the pertinent goals, policies, and guidelines described under Chapter 344, HRS, State Environmental Policy.

##### Environmental Policy

- 1. Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawai'i.*

The project would be consistent with this environmental policy as it would conserve important natural resources within the residential and commercial areas of Kapa'a Town. The soccer park amenities would support recreational activities already occurring in this area and provide needed facilities. These improvements would be designed and constructed to minimize effects on natural resources, control pollutants during construction by implementing best management practices, and include review by approval by pertinent regulatory agencies. This project would not have an adverse impact on natural resources or the environment as emphasized in the previous sections of this document.

The new soccer park site location is relatively level thus minimizing the need for extensive grading. The design of this project will incorporate safeguards to protect the unique natural environment and characteristics associated with this project area. Best management practices would be implemented during construction to minimize runoff and other short-term impacts such as fugitive dust and noise. Structures would meet all applicable Federal, State and County building requirements and regulations to protect the environment. This project will also conserve natural resources such as open space lands, and is not anticipated to impact the shoreline or the ocean.

**2. *Enhance the quality of life by:***

- A. Setting population limits so that the interaction between the natural and manmade environments and the population is mutually beneficial.*
- B. Creating opportunities for the residents of Hawaii to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments.*
- C. Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian.*
- D. Establishing a commitment on the part of each person to protect and enhance Hawaii's environment and reduce the drain on nonrenewable resources.*

This project would be consistent with these environmental polices regarding the quality of life. The new soccer park would not adversely affect the existing or future resident population in Kapa'a or the establishment of new communities. The proposed park does not involve any new homes or visitor units, and short-term construction jobs are expected to be filled by Hawai'i residents not resulting in any in-migration. Construction of this project would create additional short-term construction related jobs for island residents involved in the construction industry and generate indirect benefits to other businesses as discussed in Chapter 4 of this document. This soccer park would greatly improve park facilities in the area by supporting the island's soccer programs and benefiting both the residents and players. This soccer park will directly benefit the Kapa'a community.

**Guidelines**

**1. *Population***

- A. Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation.*

- B. *Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.*

The project would not affect the existing or future resident population in Kapa'a or cause the establishment of new communities. The proposed improvements do not involve any new homes or visitor units, and short-term construction jobs are expected to be filled by Hawai'i residents not resulting in increased in-migration.

**2. *Land, water, mineral, visual, air, and other natural resources***

- A. *Encourage the management practices which conserve and protect watersheds and water sources, forest, and open space areas.*
- B. *Establish and maintain natural area preserves, wildlife preserves, forest preserves, marine preserves, and unique ecological preserves.*

This project would be consistent with these guidelines because the improvements would not impact those natural resources identified such as watersheds, forest preserves, wildlife preserves, or unique ecological preserves. Appropriate measures would be incorporated into the project's design to minimize erosion and address appropriate drainage requirements.

**3. *Flora and fauna***

- A. *Protect endangered species of indigenous plants and animals and introduce new plants or animals only upon assurance of negligible ecological hazard.*
- B. *Foster the planting of native as well as other trees, shrubs, and flowering plants compatible to the enhancement of our environment.*

As discussed in this document, this project would not impact endangered plants or animals since none are known to be present on the project site or immediate surrounding area. This project would also not introduce new plants or animals to the area which may contribute to an ecological hazard on flora or fauna in the region.

**4. *Parks, recreation, and open space***

- A. *Establish, preserve and maintain scenic, historic, cultural, park and recreation areas including the shorelines, for public recreational, educational, and scientific uses.*
- B. *Protect the shorelines of the State from encroachment of manmade improvements, structures, and activities.*

The project is not expected to impact significant historic properties or cultural resources and practices as discussed in Chapter 3 since there are no known sites present or traditional cultural practices affected by the project. Due to the project

site's inland location, the shoreline should not be affected by this project, nor would this project restrict the public's access to shoreline resources. Proposed park improvements would not adversely impact any recreational area or scenic visual resources along the shoreline since none are present or occur within project site.

**5. Citizen participation**

A. *Provide for expanding citizen participation in the decision making process so it continually embraces more citizens and more issues.*

The environmental review process allows for public and government agency input to express concerns and comments associated with the project. Such opportunities include pre-assessment consultation efforts and the availability of the Draft EA for public review. Thus, the public consultation process incorporated within this environmental review process provides the general public and decision-makers with a diverse array of information to consider in evaluating this project.

**7.3 COUNTY OF KAUA'I GENERAL PLAN**

This section discusses the project's conformance with pertinent policies from the County of Kaua'i's *General Plan* which was adopted under Ordinance No. 753 on November 30, 2000. The General Plan establishes policy for the long-range development, conservation, use and allocation of land, water, and other resources in the County of Kaua'i. The General Plan includes vision statements which describes the desired state of the County 20 years into the future. Furthermore, the General Plan included policies intended to achieve that vision as well as implementing actions that set forth recommended courses of action to carry out the policies.

**Consistency with Applicable Policies and Implementation Actions**

**A. Heritage Resources Map**

*1. Policies:*

- (a) The Heritage Resource Map depicts natural, cultural and scenic resources that are important to the County of Kaua'i and that are intended to be conserved. The mapping of important landforms, streams and other physical elements represents the general location of the resource. The mapping of historic and archeological sites, other features and Scenic Roadway Corridors is intended to be representational, not precise.*
- (d) Projects undertaken with State or County lands or funds shall be designated to conserve heritage resources.*

The Kawaihau Planning District Land Use Map shows the project site as being designated as Urban Center. The Kawaihau Planning District Heritage Resources Map matches the Urban Center designation. Additionally, the Kawaihau Planning

District Heritage Resources Map designates portions of Kūhiō Highway between Kapa‘a Town and Anahola which are considered scenic roadway corridors, and identifies selected historic and archaeological sites in the area as heritage resources. Based upon this heritage resources map, the project site is not located within the vicinity of portions of Kūhiō Highway’s scenic corridors. Furthermore, there are no registered historic buildings, or any other important heritage sites located within the project site. The project would be consistent with the Kawaihau District Land Use Map along with the district’s heritage resources map since it will not be affecting any identified cultural, historic, or archaeological heritage resource. The project will also not affect scenic view planes along the coast or Kūhiō Highway’s scenic corridor.

**B. Scenic Views**

1. *Policies:*

- (a) *In developing public facilities and in administering land use regulations, the County shall seek to preserve scenic resources and public views. Public views are those from a public place, such as a park, highway, or along the shoreline.*
- (b) *The County shall observe the following general principles in maintaining scenic resources:*
  - 1. *Preserve public views that exhibit a high degree of intactness or vividness.*
  - 2. *Preserve the scenic qualities of mountains, hills, and other elevated landforms, qualities such as the silhouette against the horizon and the mass and shape of the landform.*
  - 3. *Preserve the scenic qualities of lowland/open space features, such as the shoreline, the edge of a coastal bluff, a marsh, a fishpond, or a historic or cultural property. Structures should not impede or intrude upon public views of the feature and should not alter the character of the immediate area around the land feature, historic or cultural property.*

There are no significant visual resources situated within the project site that would be affected by the soccer field or accessory structures nor are there any important coastal views from Kūhiō Highway within the vicinity of site. This project would thus not alter any significant natural landforms or obstruct existing public views of the shoreline and scenic resources. Furthermore, the amenities planned for the project such as the comfort station and parking lot will be designed to be non-intrusive, low-scaled buildings in keeping with the surrounding environment. The comfort station will be painted in colors complimentary to the surrounding environment.

**C. Historic and Archeological Sites**

1. *Policies:*

- (a) *Preserve important archeological and historic sites and provide: (1) a buffer area between the site and adjacent uses; and (2) public pedestrian access, as appropriate to the site.*

The project is not expected to have adverse impacts on significant historic properties or cultural resources and practices as discussed in Chapter 3 of this document. Coordination with SHPD has been conducted to address the project's effects on such resources. An Archaeological Inventory Survey was conducted for the project site and based upon the results of the inventory survey, the project specific effect recommendation by CSH is "no historic properties affected." Thus, the project is not expected to impact cultural, historic, architectural, or archaeological resources. However, in the event subsurface historic sites such as cultural layers or human burial are encountered during construction, all work would stop and the SHPD would be notified immediately.

**D. Watersheds, Streams and Water Quality Policy**

1. *Policies:*

(a) *New Development*

1. *Reduce average annual post-development sediment in runoff (total suspended solids), so that it is no greater than pre-development levels.*
2. *Maintain post-development peak runoff rate and average volume at levels similar to pre-development.*

(b) *Site Development Plan, design and develop sites to:*

4. *Limit land disturbance activities such as clearing and grading, and cut and fill to reduce erosion and sediment loss*

(c) *Construction Site Erosion and Sediment Control*

1. *Reduce erosion and, to the extent practicable, retain sediment onsite during and after construction.*
2. *Prior to land disturbance, prepare and implement an approved erosion and sediment control plan or similar administrative document that contains erosion and sediment control provisions.*

This project is not an incompatible development with the surrounding natural environment. It involves the construction of a soccer park and related amenities such as a comfort station and parking lot. The comfort station and parking lot will be appropriately designed to meet County building requirements and compliment the surrounding physical environment. The site is relatively flat, already disturbed and

absent of distinctive land forms, does not involve a water recharge area, and absent of significant or important vegetation. The grading involved with this project should actually improve the existing drainage and vegetation of the site. Erosion control measures will be addressed during the design phase of this project and plans coordinated with the appropriate agencies.

**E. Native Hawaiian Rights**

1. *Policies:*

(a) *Under the State Constitution and the county Charter, the County of Kaua'i is empowered to promote the health, safety and welfare of all inhabitants without discrimination as to ethnic origin. As part of carrying out its responsibilities under the Constitution and the Charter, the County recognizes the rights of native Hawaiians and the laws concerning lands and waters that have been established through the State Constitution, State and Federal laws, and State and Federal court decisions. No County ordinance or rule shall modify or diminish these rights:*

1. *Kuleana lands, water rights and access rights provided under the Kuleana Act of 1850, as recognized in current statutes, rules and court decisions.*
2. *Traditional and customary rights of Native Hawaiians, such as for access and gathering, provided under the State Constitution and Hawai'i Revised Statutes, as interpreted by the courts (i.e. the PASH case).*
3. *Burial rights provided under the Hawai'i Historic Preservation Act and federal Native American Graves Repatriation Act.*
4. *Preservation of historic properties and archaeological resources provided under the federal Archaeological Resources Protection Act of 1979; the National Historic Preservation Act of 1966; and the Hawai'i Historic Preservation Act.*

The project will be consistent with these policies as it will not diminish any native Hawaiian rights specified by the referenced laws and court cases. Studies conducted and discussed in this document show the proposed improvements should not have an adverse effect on historic sites, and necessary mitigative measures will be implemented to ensure this in compliance with the identified regulations.

**F. Scenic Roadway Corridors**

1. *Policies:*

(a) *The purpose of designating Scenic Roadway Corridors is to conserve open space, scenic features, and views within and along Kaua'i's most heavily-*

*traveled routes. The policy of conservation recognizes the vital function of these roadways in meeting the public need for transportation. It also recognizes the legitimate desire of private landowners to make economic use of their lands. The intent of this policy is to establish basic principles for roadway design and land use within these scenic corridors and provide a basis for County action to establish programs and regulations to implement them.*

The project will not affect scenic roadway corridors since the portion of Kūhiō Highway adjacent to the project site is not within a designated scenic roadway corridor. Therefore, the perseverance and environmental impacts of scenic roadway features will remain unaffected by the projects proposed improvements.

**G. Water Supply**

*1. Policies:*

- (a) Develop a long-range plan to guide expansion, improvement, and rehabilitation of County water systems.*
- (b) Coordinate planning of future water system development and rate structures with General Plan policies and guidelines.*
- (c) Support compact development by giving priority to water supply improvements for existing and planned Urban Center, Residential Community, and Resort areas, while also supporting development in already established Agricultural Communities.*

The County Department of Water Supply (DWS) currently provides water supply service to the Kapa'a to Anahola districts. The main water mains are routed along Kūhiō Highway with distribution lines extending into smaller subdivisions. Park improvements affecting water demand and facilities would be associated with park amenities such as the drinking water fountains, comfort station, and irrigation. During the project's design, appropriate design plans would be coordinated with the County DWS for review and approval.

**G. Wastewater Treatment**

*1. Policies:*

- (a) The County and private utilities shall develop and operate wastewater collection, treatment and disposal systems as necessary to serve urban areas for the purposes of safeguarding public health, potable water supplies, and the quality of stream and ocean waters.*

The project would require wastewater facilities for uses within the new comfort station. As mentioned earlier in the project description, the project will connect to the

existing County sewer line collection system located along Kūhiō Highway. Connection to the Kūhiō Highway sewer main will be via a new wastewater line situated along the existing cane haul road. Plans for this project's wastewater improvements will be coordinated with the appropriate County agency.

#### **H. Drainage and Flood Control**

##### *1. Policies:*

*(d) Regulations and drainage improvements shall be consistent with the following principles:*

- 1. Use natural drainage ways for storm runoff waterways wherever possible.*
- 2. Avoid channelization or alteration of natural drainage ways.*
- 5. Require detention basins in new developments, in order to maintain pre-development storm water flow rates. Requirements shall be based on the two-year storm but may be increased.*
- 6. To conserve land, develop detention basins in conjunction with park or open lands and design for multiple uses.*
- 7. Protect buildings from the 100-year flood.*
- 8. Where there are no downstream drainage systems or if the downstream systems lack sufficient capacity, require retention facilities sufficient to maintain 100-year storm flows at pre-development rates and conditions.*

The proposed soccer park and related accessory improvements will be constructed to minimize potential damage from flood hazards and erosion. Improvements will not include any channalization or alteration of natural drainage ways. The soccer park and accessory facilities will be designed in accordance with County standards and regulations which include addressing runoff, erosion control, and flood protection. Furthermore, best management practices would be implemented during the construction phase of this project.

#### **H. Energy**

##### *1. Policies:*

*(a) Require new buildings to incorporate economically-feasible design and equipment to save energy.*

The new comfort station provided as part of this project would already require minimal new energy consumption, and would be designed to save energy to the extent practicable. The proposed soccer park is not planned to include energy generating equipment such as lighting for the field, however the comfort station may require lighting which requires minimal new energy consumption.

## **H. Police and Fire Safety**

### *1. Policies:*

- (a) Evaluate fire protection services island wide, with particular attention to the east side, from Wailuā to Anahola.*

The proposed project is not considered a population generator and does not include the addition of new residential units on the island of Kaua'i. Therefore, this project should not have a significant impact on the ability for the police or fire departments to provide services to the Kapa'a area.

## **I. Parks and Recreation**

### *1. Policies:*

- (a) Develop and maintain Kaua'i's parks to meet the needs of the island's various communities and of both residents and visitors.*
- (b) Provide convenient access to all of Kaua'i's beaches and inland recreation areas.*
- (c) Provide for the safe and secure use of public park and recreation facilities.*
- (d) Give high priority to improving maintenance of grounds and comfort stations.*

### *2. Implementing Action*

#### *(a) New Sites and Facilities*

- 1. Develop new sites, facilities, and recreational opportunities in areas that are deficient in outdoor recreational opportunities or overburdened by the number of park users.*
- 2. To the extent possible, utilize land in existing County parks that had not been fully developed for recreation uses.*
- 3. Construct park facilities in a manner which avoids adverse impacts on natural resources or processes in the coastal zone or any other environmentally sensitive area. In the design of recreation areas, incorporate natural features of the site and use landscape materials that are indigenous to the area where feasible in order to retain a sense of place.*
- 4. Link recreational attractions, that may be designed to have distinct identities and entries, with surrounding areas through the use of*

*connecting roadways, bikeways, walkways, landscape features and/or architectural design.*

The project would be consistent with these polices and implementing action since the improvements planned supports those listed. The project will provide new recreational opportunities to local residents and visitors in the form of a new soccer park. In addition, the project will provide needed facility accessories such as a comfort station and parking lot for park users and will improve the overall safety of the area by developing vacant lands into park uses.

#### **7.4 COUNTY ZONING DISTRICT**

The County of Kaua'i zoning map for the Kapa'a area indicates the current zoning classifications for the project site and surrounding areas. Based upon this zoning map, the project site is zoned both Open and R-20, Residential with maximum 20 dwelling units per acre. Figure 1.4 showed the County of Kaua'i zoning classifications for the project site and surrounding areas.

According to the County of Kaua'i's Comprehensive Zoning Ordinance, permitted uses and structures within both the R-20 and Open include public and private parks. As such, the proposed soccer park facility and related accessory improvements would meet the public parks use definition and are permitted uses within these districts. However, a Use Permit would be required because the property lies within the Kapa'a/Wailuā Development Plan's Special Planning Area "C." Therefore, a Use Permit will be sought from the County Planning Department after the completion of the environmental assessment process.

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## CHAPTER 8

### AGENCY AND PUBLIC CONSULTATION

Consultations with various government agencies and the community have been conducted for this project as part of the process implemented in preparing this document. Such efforts consisted of distributing pre-assessment solicitation letters to several agencies to obtain their input and comments on the project identifying issues which should be addressed along with the publication of the Draft EA.

Publication of the Draft EA also provided an opportunity for government agencies and the community to review the document and provide comments. A public informational meeting was also held to receive comments on the Draft EA. These consultation efforts are discussed in this Chapter, and copies of comments received are included in Appendix B of this document.

#### **8.1 PRE-ASSESSMENT CONSULTATION (DRAFT EA)**

Letters providing project information along with a preliminary site plan were sent to various consulted parties in April 2006 to solicit their initial comments and concerns associated with the project as part of the preparation of this Draft EA. A listing of agencies and organizations for which consultation letters were sent is provided below. Those providing written responses are identified with a “»” symbol. Copies of written comments received along with responses to them are included in Appendix B. Comments received have been addressed in the appropriate sections of this Draft EA.

##### **Federal Agencies**

- Department of Agriculture, Natural Resources Conservation Service
- » Department of the Army, U.S. Army Engineer District, Honolulu, Regulatory Branch
- Department of the Interior, Fish and Wildlife Service, Pacific Island Region
- » Department of Interior, National Park Service, Pacific West Region, Honolulu
- Department of the Interior, Water Resources Division, U.S. Geological Survey
- Department of Transportation, Federal Highways Administration, Hawai'i Division

##### **State of Hawai'i Agencies**

- » Department of Accounting and General Services
- Department of Agriculture
- Department of Business, Economic Development and Tourism (DBEDT)
- Department of Defense
- Department of Education, Kaua'i Schools Superintendent
- Department of Education, Kaua'i Interscholastic Federation
- » Department of Hawaiian Home Lands
- Department of Health

- Department of Land and Natural Resources (DLNR)
- » Department of Transportation
- Environmental Planning Office
- » Land Use Commission, DBEDT
- » Office of Hawaiian Affairs
- » Office of Planning, DBEDT
- » State Parks Division, DLNR
- » State Historic Preservation Division, DLNR

### **County of Kaua'i Agencies**

- Civil Defense Agency
- Department of Planning
- Department of Public Works, Engineering Division
- » Department of Public Works, Building Division
- Department of Public Works, Roads and Highways Division
- » Department of Public Works, Wastewater Management Division
- » Department of Water
- Fire Department
- Office of Community Assistance, Recreation Agency
- Police Department

### **Non-Governmental Agencies**

- The Honorable Bryan J. Baptiste, Mayor, County of Kaua'i
- The Honorable Hermina M Morita, Representative, 14<sup>th</sup> Representative District
- The Honorable Gary L. Hooser, Senator, 7<sup>th</sup> Senatorial District
- Ms. Donna Palmer, AYSO 941 East
- Mr. Bob French, AYSO 940 West
- »<sup>1</sup> Mr. Karl Ubongen, HYSA/AYSO
- »<sup>2</sup> Kapa'a Business Association
- Mr. Greg Gonsalves, Kapa'a High School Athletic Director

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<sup>1</sup> Input was obtained on the preliminary site plans being developed.

<sup>2</sup> On May 2, SSFM International, Inc. staff met with representatives of the Kapa'a Business Association (KBA) in the Pi'ikoi Building on Kaua'i. The purpose of this meeting was to update KBA on the current status of the Kapa'a Soccer Park Facility and gather their input on the proposed project.

## 8.2 DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

The Draft EA for this project was published in the September 8, 2006 issue of the State Office of Environmental Quality Control's *The Environmental Notice*, initiating a 30-day public comment period that ended on October 9, 2006. Copies of the Draft EA were distributed to the following parties for review and comments. Those parties that submitted comments are indicated by "»" next to them. Comment letters received from these parties along with correlating response letters from the applicant are included in Appendix B. This Final EA has incorporated additional information in response to these comments received.

### Federal Agencies

- Department of Agriculture, Natural Resources Conservation Service
- Department of the Army, U.S. Army Engineer District, Honolulu, Regulatory Branch
- Department of the Interior, National Park Service, Pacific West Region, Honolulu
- » Department of the Interior, Water Resources Division, U.S. Geological Survey
- Department of Transportation, Federal Highways Administration, Hawai'i Division

### State of Hawai'i Agencies

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- Department of Education, Kaua'i Interscholastic Federation
- Department of Hawaiian Home Lands
- Department of Health (DOH)
- Department of Land and Natural Resources (DLNR)
- Department of Transportation, Kaua'i District Office
- » Environmental Planning Office, DOH
- » Land Use Commission, DBEDT
- » Office of Environmental Quality Control
- » Office of Hawaiian Affairs
- Office of Planning, DBEDT
- State Parks Division, DLNR
- » State Historic Preservation Division, DLNR

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- Mr. Karl Ubongen, HYS/AYSO
- Kapa'a Business Association
- Mr. Greg Gonsalves, Kapa'a High School Athletic Director

## **8.3 PUBLIC INFORMATIONAL MEETING**

A public informational meeting was held by the County DPW to solicit input and comments on the project and Draft EA. The meeting was held on October 26, 2006 at 6:30 p.m. at the Kapa'a Neighborhood Center. Public notifications of these meetings were published in the October 13, 2006 issue of The Garden Isle News and the Honolulu Star Bulletin newspapers. Notices of this meeting was also distributed to properties within 300 feet of the project site.

A copy of the attendance sheet for this informational meeting is provided in Appendix B along with a summary of comments received at that meeting. General comments received at this meeting could be grouped into a few categories which are summarized below along with discussions as to how they are being addressed.

1. General comments about the soccer park site alternatives included the following:
  - Asked how many parking is provided in the conceptual site plan?  
*While the conceptual site plan was showing approximately 100 parking spaces, it was emphasized that the plans were not finalized and that number may be higher or lower depending on the final design.*
  - Asked if only one field would be built at a time.  
*The soccer fields will be built at the same time.*
  - Asked how close are the fields to each other?  
*Although they looked to be in close proximity in the site plans, the fields would be about 30 to 40 feet apart from each other.*

- Asked how high will the fences be around the park?

*Typically, fencing around the park will be 6 feet tall in compliance with County design standards. However, fencing behind the fields nearest the existing businesses along Kūhiō Highway would be between 8-12 feet tall to minimize balls being kicked over them.*

- Commented it would it be wiser to bring restroom closer to Kūhiō Highway to shorten the length of sewer line.

*Due to a flood zone within a portion of the site, the location of the comfort station was sited outside of that zone to minimize flooding impacts and design constraints. It was also preferable to keep the restroom closer to the parking lot and more centrally located to both soccer fields.*

- Recommend twice the number of women's stalls as men's.

*The comfort station footprint was intended to be of sufficient size to serve a district level park facility, and was planned to have six women stalls. The project's design phase will determine the final configuration of this facility and number of stalls.*

- Recommend night lighting for the soccer fields.

*Night usage will be limited to the football field at Kapa'a New Park. Also, night lighting was not planned due to potential problems it could cause to certain birds (Newell's Shearwater) with migratory patterns in this region.*

- Recommend adding more bike racks.

*The project's design phase will determine the appropriate number of bike racks to provide at this park site. The project's concept was to provide bike racks and did not specify the exact number.*

- Comment that the multiple field concept was good.

*No response necessary.*

- Raised questions on flooding in the canal and potential for drainage problems.

*A large portion of the site is within the flood zone designed as Zone AE (100 year flood) with the remaining portion of the site within Flood Zone X (500 year flood).. The Moikeha Canal is designated Zone AE, however, the flood boundary is generally confined within the canal. The existing drainage patterns for the site will be maintained and should not have adverse impacts on the surrounding environment. No significant impacts are anticipated to Moikeha Canal due to this project.*

- Asked if pavilions will be constructed?

*No pavilions will be constructed because shade will be provided by trees. The intent was to keep the park open and as flexible as possible to accommodate various activities for the community.*

- Recommend irrigation for the shade trees and grass and non-compacting surface for playing fields.

*Irrigation will be provided for the soccer fields and a landscaping plan will be developed as part of the project's design phase. Non-compacting surface will be considered for the soccer fields as part of the project's design phase.*

- Asked which other facilities the soccer park will be tied into?

*A pedestrian bridge will be installed across the canal from the soccer park site to provide a connection to the Kapa'a New Park site. In the future, the State plans to construct a two way bridge for cars across Moikeha Canal and extend Kahau Road to provide another connection between the two park sites.*

2. Comments about parking and pedestrian accessibility included the following:

- Asked if cars be allowed to park along the bypass road?

*Current State DOT plans indicate that no street parking will not be allowed along the temporary one-way bypass.*

- Asked if overflow parking will be located at the new park?

*The County bridge planned across the Moikeha Canal will provide pedestrian access to the Kapa'a New Park. As a result, overflow parking could be accommodated at the Kapa'a New Park site since persons could walk to the new soccer park from this area.*

- Asked what are the guidelines for parking?

*Currently, there are no parking requirements for park sites under the County of Kaua'i's comprehensive zoning ordinance. The City and County of Honolulu standards are 12 stalls per field. However, this number is usually not adequate for soccer park sites due to overlap of games and activities. Thus, the parks conceptual plan was to provide parking stalls well above these standards. The final number of parking stalls provided will be developed during the project's design phase.*

3. Comments about the proposed Kapa'a Relief Route association included the following:

- Asked if the permanent bypass (Kapa'a Relief Route) would be constructed before the soccer park is constructed?

*It is probable that the soccer park will be completed prior to the completion of the permanent relief route.*

- What are the issues with the State DOT right-of-way for Alternative 1 (Figure 2.5).  
*There are no right-of-way issues since this alternative accommodated the preliminary boundary of proposed property acquisition.*

4. Comments on the connection to other resources in Kapa'a included the following:

- Provide a pedestrian path from Kapa'a High School to the field at the north end of the park.

*This improvement is outside the scope of this project and not directly applicable with the project's need and objectives. Such a path includes properties and other landowners outside of the County's project site. The County will consider and evaluate this request for possible action on it in the future as a separate project.*

- Provide access from the multi-use coastal trail to the soccer park.

*Providing a connection of the County's bike path improvements (coastal trail) to the soccer park site is outside of this project scope and not directly applicable to the project's need and objectives. Accommodations are being made within the park site to accommodate bicyclists and pedestrians along with creating a pedestrian bridge across the Moikeha Canal to allow access to the Kapa'a New Park site. However, such bike path improvements providing a connection to the soccer park site from the present route would need to be implemented separately from this project. Access to the soccer park site would probably need to occur along the State DOT's extension of the temporary bypass road.*

- Provide vehicular access from Kūhiō Highway to the soccer park site to minimize left-turns and provide more convenient direct access.

*The soccer park site is presently land-locked with no existing public vehicular access. However, with the State DOT's construction of the extension of the temporary bypass road, vehicular access to the project site will now be provided. However, that bypass road is limited to a one-way (southwest to Līhu'e bound) directional movement. Thus, the only direct access to the soccer park site will be turning from Kūhiō Highway onto the temporary bypass road extension. The County is planning a pedestrian bridge across the Moikeha Canal to allow pedestrian access to the Kapa'a New Park site under this soccer park project.*

*With implementation of the future permanent Kapa'a Relief Route, this highway along the project site will be two directional and multiple lanes. However, vehicular access to the site is planned to be restricted by the State DOT to only right-turns into and out from the site. The State DOT also plans to extend Kahau Road and provide a new vehicular bridge across the Moikeha Canal to connect to the soccer park. This would provide another vehicular access to the soccer park site.*

- Commented that park users may walk through the businesses sites situated along Kūhiō Highway to get to the soccer park site. It was suggested that a connection along the Moikeha Canal could be provided to mitigate this travel through businesses.

*A chain link fence would be constructed between the soccer park site and business properties along the highway. This would prevent persons from cutting through businesses to access the soccer park site. The fence along this area would also be taller than the typical 6-foot height to minimize balls being kicked into their properties. A pedestrian connection along the canal to the soccer park could be considered as a separate project by the County in the future. However, such a path is not being included under this project at this time. Implementation of such a path would possibly affect other State, privately-owned, or State Department of Hawaiian Homeland*

*properties. Thus, negotiations with affected landowners would be required to assess its feasibility before details of a plans could be developed.*

5. Comments on the projects environmental impacts included the following:

- Asked where the wetland areas were located in relation to the project site?

*The wetland areas in question would not be affected by this project as they are located further mauka (inland) and south of the project site. No wetlands are present on the project site.*

- Asked why an Environmental Assessment is required?

*Generally, any use of State or County funds or State or County lands requires compliance with State environmental regulations which includes the preparation and processing of an Environmental Assessment for this particular project.*

6. Asked what will happen to the Kapa'a Beach Park once the soccer park is constructed, and if Lydgate Park will have full size (120 yards by 80 yards) regulation fields?

*The County has not determined at this time what will happen to the existing soccer field at Kapa'a Beach Park after the completion of this soccer park project. The County plans to work with the community to determine if any changes to the future use of that site are needed and what it should be changed to. It was discussed that improvements are currently being implemented at Lydgate Park to add three new regulation sized soccer fields.*

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## CHAPTER 9 FINDINGS AND DETERMINATION

To determine whether a proposed action may have a significant effect on the environment, the Approving Agency needs to consider every phase of the action, the expected primary and secondary consequences, cumulative effect, and the short- and long-term effects. The Approving Agency's review and evaluation of the proposed action's effect on the environment would result in a determination whether: 1) the action would have a significant effect on the environment, and an Environmental Impact Statement Preparation Notice should be issued, or 2) the action would not have a significant effect warranting a Finding of No Significant Impact (FONSI).

This chapter discusses the results of the environmental assessment conducted of the proposed Kapa'a Soccer Park in relation to the 13 Significance Criteria prescribed under the State Department of Health's Administrative Rules Title 11, Chapter 200. The purpose of this assessment was to consider the "significance" of potential environmental effects which includes the sum of effects on the quality of the environment along with the overall and cumulative effects. The resulting findings are discussed below for each criterion.

### 9.1 FINDINGS

*1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.*

The proposed improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. As discussed in Chapter 2 of this Draft EA, the improvements are intended to provide a recreational soccer park for Kapa'a. This project would help to alleviate the current shortfall of available soccer fields within the Kawaihau District. The proposed soccer park would be constructed within an undeveloped site in a generally urbanized part of Kapa'a. Thus, there would be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources.

In terms of archaeological and historic resources, there are no known historic or culturally significant sites within or surrounding the project site. In the event subsurface human remains or other indications of human activity older than 50 years are encountered during construction activities, all work would stop immediately and the SHPD notified. The treatment of human remains encountered would be determined and conducted in accordance with the applicable requirements of Chapter 6E, HRS, and Chapter 13-300, Hawai'i Administrative Rules.

The project would also not restrict access to surrounding areas that may be potentially used for traditional native Hawaiian cultural practices or the cultural practices of any other

cultures. This project would not prevent access to shoreline areas or surrounding mauka areas that may be used for traditional gathering or other cultural practices, as other access points exist to reach the shoreline and surrounding mauka areas.

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

The project would not curtail the range of beneficial uses of the surrounding environment. The site chosen for this project is currently undeveloped and located within an urban setting. Existing surrounding land uses include residential, commercial, and park/open space. Therefore, the improvements planned would not change the existing uses of such lands. Existing surrounding uses would remain as the soccer park is constructed and completed. Thus, the proposed project will not limit or significantly impact existing uses or the surrounding environment.

**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 improvements proposed under this project would not conflict with the State's long-term environmental policies or goals and guidelines expressed in Chapter 344, HRS. This Draft EA addressed the probable environmental impacts associated with the project, which would be primarily associated with short-term construction activities. Generally, the project would be consistent in conserving natural resources in the area, and enhancing the quality of life for residents in Kapa'a, specifically that of soccer players and park users of all ages.

**4. *Substantially affects the economic, social welfare, or cultural practices of the community or State.*<sup>5</sup>**

As discussed under Chapter 4, the project would not have any significant negative impacts on the economic structure of the Kawaihau District, or the social welfare of the Kapa'a community. The project would create a short-term, minor economic benefit by generating construction jobs and personal income. Improvements planned are limited to construction of the comfort station, parking lot, necessary infrastructure such as electrical, sewer, and water connections to the County's existing facilities. As a result, there should be no negative impact or change to the overall character of the community. In terms of cultural practices, there are no known cultural resources at the project site or traditional native Hawaiian cultural practices occurring within the project area. Therefore, the proposed soccer park is not expected to have negative impacts upon cultural resources or the social and economic welfare of the Kapa'a Community or State of Hawai'i.

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<sup>5</sup> This significance criteria was modified to reflect the recent change to Chapter 343, HRS approved by the Governor as Act 50 on April 26, 2000. This Act added "cultural practices" as part of the factors considered in determining the significance of an effect.

**5. *Substantially affects public health.***

The project is not expected to substantially affect public health since it would involve the construction of a soccer park in Kapa'a. The proposed park facility would improve public health by providing a safe park with adequate amenities for soccer games and general park usage.

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

The project should not have any secondary impacts on the social environment or infrastructure and public facilities. The project strictly involves only construction of a new soccer park and accessory improvements, and does not include residential housing or visitor accommodations. Therefore, there would not be any elements of the project contributing to in-migration of residents or additional visitors to the island. The project would also not significantly impact other existing infrastructure facilities or public facilities in the immediate area due to the type of improvements being proposed as discussed under Chapter 2 and 4 of this document.

**7. *Involves a substantial degradation of environmental quality.***

The proposed project would not involve a substantial degradation to the quality of the surrounding environment. Improvements are limited to construction of new soccer park and accessory improvements. As a result, construction activities would be performed on undeveloped areas, and necessary best management practices would be implemented during construction to minimize erosion and other short-term impacts.

**8. *Is individually limited, but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.***

This project only involves the construction of the new soccer park and accessory improvements as described in Chapter 2 and 4 of this document. Impacts associated with these improvements were addressed in this document, and are mainly associated with construction activities. Thus, the cumulative impacts of these improvements were considered in assessing environmental impacts, and it was determined that the project would not have a significant effect on the environment. This project does not involve the commitment for larger actions on the proposed soccer park or community.

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

There are no known endangered, threatened, or rare botanical resources on the project site, or faunal and avifaunal species inhabiting the area which may be affected by construction activities or the operation of the new soccer park. Necessary control measures and best management practices would be implemented to minimize runoff and other

potential short-term impacts associated with construction activity. Thus, the project is not expected to substantially affect rare, threatened, or endangered species or potential habitat for such species.

**10. *Detrimentially affects air or water quality or ambient noise levels.***

The project should not have a detrimentally significant impact on air, water quality, or ambient noise levels. Impacts associated with these factors would be limited to short-term construction activities. However, such impacts are expected to be minor due to the relatively small amount of grading and excavation necessary for the project. To further minimize impacts on air and water quality, construction activities would be subject to applicable State regulations as discussed under Chapter 3 of this document.

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

The soccer park project site is located within an environmentally sensitive area characterized by the flood plain. A marginal portion of the existing project site is within the Zone AE flood plain. However, it is not situated within a tsunami inundation zone, erosion-prone area or geologically hazardous area. Consequently, this property would not be affected by those hazards or impact such environmentally sensitive areas. Construction of the soccer park and amenities such as the comfort station and parking lot would be done in conformance to City design standards and other agency requirements associated with this flood area. Furthermore, the locations of the comfort station and parking lot are planned to be in the Flood Zone X which is associated with minimal flood hazards.

**12. *Substantially affects scenic vistas and view planes identified in county or state plans or studies.***

The proposed soccer park is not expected to affect scenic vistas or view planes since none are known to exist with the park's vicinity. As discussed in Chapter 3, there are no significant scenic and open space viewing points for the public on or around the proposed soccer park. The project site for the comfort station is located mauka of existing buildings along Kūhiō Highway whose height is high as or higher than the parks comfort station. Construction and the operation of this soccer park is thus expected to have minimal or no effect on visual resources or public viewing points.

**13. *Requires substantial energy consumption.***

The project would not require substantial energy consumption or increased electrical facilities to serve the proposed soccer park. Improvements planned are relatively minor and can be serviced using existing electrical distribution facilities and power generating sources. The proposed soccer park is not planned to include energy generating equipment

such as lighting for the field, however the comfort station may require lighting which requires minimal new energy consumption.

## **9.2 DETERMINATION**

Based upon the result of the environmental assessment documented in this Final Environmental Assessment, a Negative Declaration, also referred to as a Finding of No Significant Impact (FONSI), determination is warranted for the Kapa'a Soccer Park Project. The findings supporting this determination are based upon the previous discussion of the project's affect on the environment in relation to the 13 Significance Criteria.

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## CHAPTER 10 REFERENCES

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# APPENDICES

# APPENDIX A

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*PHOTOGRAPHS OF PROJECT SITE  
AND SURROUNDING AREAS*



Photo 1 - Cane Haul Road (off Kuhio Highway)



Photo 2 - Cane Haul Road facing east



Photo 3 - Cane Haul Road facing west



Photo 4 - Cane Haul Road facing east



Photo 5 - Unlined Drainage Way facing east



Photo 6 - Unlined Drainage Way Along Cane Haul Road



**Photo 7 - Existing Vegetative Cover on Proposed Soccer Field Site**



**Photo 8 - Neighboring Properties Near Proposed Soccer Field Site**



**Photo 9 - Cane Haul Road Leading to New Bridge**



**Photo 10 - Moikeha Canal under New Bridge (Mauka Side)**



**Photo 11 - Moikeha Canal Old Bridge (bottom) and New Bridge (above) (Makai Side)**



**Photo 12 - Existing Contractor Staging Area Near Proposed Field Site**



**Photo 13 - Moikeha Canal**



**Photo 14 - Cane Haul Road to Proposed Soccer Field Site**



**Photo 15 - Adjacent Housing Mauka of Cane Haul Road**



**Photo 16 - Adjacent Housing Mauka of Cane Haul Road**



**Photo 17 - Cane Haul Road and Kuhio Hwy. Intersection**



**Photo 18 - Cane Haul Road and Kuhio Hwy. Intersection**



**Photo 19 - Kuhio Hwy. Lihue-Bound Traffic**



**Photo 20 - Neighboring Businesses Near Proposed Soccer Field Site**



**Photo 21 - Neighboring Businesses Near Proposed Soccer Field Site and View of Kuhio Hwy.**



**Photo 22 - Existing Vegetative Cover on Proposed Soccer Field Site.**



**Photo 23 - Parking Area of Shops Bordering Proposed Soccer Field Site.**



**Photo 24 - Storage Yard (Rented Area) Adjacent to Proposed Soccer Field Site.**

# APPENDIX B

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## *CONSULTATION EFFORTS*

# APPENDIX B1

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## *PRE-ASSESSMENT CONSULTATION COMMENT LETTERS AND RESPONSES*



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96858-5440

May 9, 2006

Regulatory Branch

File No. **POH-2006-194**

Ronald A. Sato, AICP  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

SSFM INTERNATIONAL, IN  
RECEIVED  
~~MAY 11 2006~~  
FAS  
FILE

**FILE COPY**

Dear Mr. Sato:

This responds to your request dated April 20, 2006 on behalf of the County of Kauai, Department of Public Works (DPW) for written comments to a Pre-Assessment Consultation for a Draft Environmental Assessment (dEA) which will address activities and impacts of their proposed soccer field complex on an 11.5 acre site identified by TMK: (4) 4-5-15:036.

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 state in appropriate sections that there is, or no 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 project.

Thank you for your cooperation with our regulatory program. If you have any further questions, please contact Ms. Connie Ramsey by telephone at 808-438-2039, by facsimile at 808-438-4060 or by electronic mail at [Connie.L.Ramsey@usace.army.mil](mailto:Connie.L.Ramsey@usace.army.mil) . Please refer to the file number above in future correspondence regarding this project.

Sincerely,

George P. Young, P.E.  
Chief, Regulatory Branch



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. George P. Young, P.E., Chief  
Regulatory Branch  
United States Department of the Army  
U.S. Army Engineer District, Honolulu  
Ft. Shafter, Hawai'i 96858-5440

Dear Mr. Young:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 9, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

The Draft Environmental Assessment (DEA) will identify all waters, as represented by perennial or intermittent streams, and wetlands are in, or adjacent to, or absent from, the proposed project. The DEA will also address the potential impacts of construction and ground disturbance activities on waters adjacent to the proposed project site.

If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner



United States Department of the Interior



NATIONAL PARK SERVICE
Pacific West Region
300 Ala Moana Boulevard, Box 50165
Room 6-226
Honolulu, Hawaii 96850-0053

IN REPLY REFER TO:

L76 (PWRH-PAD)

May 01, 2006.

SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817
Attention: Mr. Ronald Sato, AICP

Subject: Kapa'a Soccer Field Complex
Pre-Assessment Consultation for Draft Environmental Assessment
Kapa'a, Kaua'i, Hawaii.

FILE COPY

SSFM INTERNATIONAL, INC
RECEIVED
MAY 03 2006
YAS
FILE

Dear Mr. Sato:

Thank you for providing us with the opportunity to provide comments, concerns or identify any regulatory requirements we may have in regards to the above mentioned project. At this time, we have no comments or concerns. However, we would like to request that if this office is identified in the report, that the correct title and name of the office be used as provided:

Department of the Interior
National Park Service, Pacific West Region, Honolulu
Frank R. Hays, Pacific Area Director

Thank you in advance for your kind attention to this matter.

Sincerely,

[Handwritten signature of M. Melia Lane-Kamahele]

M. Melia Lane-Kamahele
Acting Pacific Area Director





**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Ms. M. Melia Lane-Kamahele, Acting Pacific Area Director  
National Park Service, Pacific West Region, Honolulu  
United States Department of the Interior  
300 Ala Moana Boulevard, Box 50165, Room 6-226  
Honolulu, Hawai'i 96850-0053

Dear Ms. Lane-Kamahele:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 1, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note you have no comments to offer at this time.

We will also identify your office by the correct title and name provided in your letter.

If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
GOVERNOR



RUSS K. SAITO  
COMPTROLLER  
KATHERINE H. THOMASON  
DEPUTY COMPTROLLER

**STATE OF HAWAII**  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 119, HONOLULU, HAWAII 96810

(P)1101.6

SSFM INTERNATIONAL, INC.  
RECEIVED

**MAY - 8 2006**

**MAY 09 2006**

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Mr. Ronald A. Sato, AICP, Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

**FILE COPY**

Dear Mr. Sato:

Subject: Kapaa Soccer Field Complex  
Pre-Assessment Consultation for Draft Environmental Assessment  
Kilauea, Kauai, Hawaii  
TMK: [4] 4-05-015: 036

Thank you for the opportunity to provide comments prior to the subject project's Draft Environmental Assessment. This project does not directly impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or have your staff call Mr. Bruce Bennett, of the Public Works Division, at 586-0491.

Sincerely,

*Russ K. Saito*  
RUSS K. SAITO  
State Comptroller

c: Ms. Genevieve Salmonson, DOH-OEQC



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. Russ K. Saito, State Comptroller  
Department of Accounting and General Services  
State of Hawai'i  
P.O. Box 119  
Honolulu, Hawai'i 96810

Dear Mr. Saito:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 8, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We confirm that this project will not directly impact any of DAGS existing facilities or projects, and note you have no further comments to offer at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Ronald A. Sato".

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
GOVERNOR  
STATE OF HAWAII



MICAH A. KANE  
CHAIRMAN  
HAWAIIAN HOMES COMMISSION

BEN HENDERSON  
DEPUTY TO THE CHAIRMAN

KAULANA H. PARK  
EXECUTIVE ASSISTANT

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

P.O. BOX 1879  
HONOLULU, HAWAII 96805

April 27, 2006

SSFM INTERNATIONAL, INC  
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APR 28 2006

ras

Mr. Ronald A. Sato  
SSFM International, Inc.  
501 Summer Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato:

FILE COPY

Subject: Kapa'a Soccer Field Complex, Kapa'a, Kauai

FILE

Thank you for informing us about the proposed project. Your letter, dated April 20, 2006, was referred to the Land Management Division (LMD) of the Department of Hawaiian Home Lands (DHHL) for review and response.

LMD staff has reviewed the project information you provided and determined that it will have little or no impact on Hawaiian Home Lands (TMK:(4)4-5-015:034) located across Moikeha Canal from the proposed project site. However, we would like to know if the proposed project will have access from the south via the cane haul road and/or Kahau Road, and if so, will these roadways be improved to accommodate the increased traffic. Please also inform us if there are anticipated impacts to Moikeha Canal or if improvements to the canal are planned. This information could assist us in our future plans to the DHHL parcel.

We look forward to your response. If you have questions, you may contact Noel Akamu, LMD Property Development Manager, at (808) 587-6432 in Honolulu.

Aloha and mahalo,

Linda Chinn, Administrator  
Land Management Division



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Ms. Linda Chinn, Administrator  
Land Management Division  
Department of Hawaiian Home Lands  
State of Hawai'i  
P.O. Box 1879  
Honolulu, Hawai'i 96805

Dear Ms. Chinn:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated April 27, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We appreciate your determination that the project will have little or no impact on your Department of Hawaiian Home Lands parcel identified as TMK (4) 4-5-015: 034, which is located across of Mo'ikeha Canal from the proposed project site.

Future vehicular access to the park will be addressed in the Draft Environmental Assessment. The State Department of Transportation (DOT) is currently improving the existing cane haul road to provide a temporary bypass road. This will be a one-way westbound thoroughfare from Kūhiō Highway to Olohena Road, and may be completed by the end of this year. With this extension, vehicular access to the proposed park will be available, however, it will be limited to only a left-turn into the property and a left-turn out.

Through consultation with State DOT regarding the planning of the permanent Kapa'a Relief Route, we are aware that a future extension of Kahau Road with bridge crossing Mo'ikeha Canal is planned as part of the highway project. This would extend Kahau Road to our project site and would be constructed by the State DOT as part of the new Kapa'a Relief Route's construction. We are not aware whether this extension will accommodate increased traffic.

This project will not involve any improvements to Mo'ikeha Canal, nor are there any anticipated impacts to the canal.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

May 4, 2006

SSFM INTERNATIONAL, INC.

RECEIVED

~~MAY 09 2006~~

ms

RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
BARRY FUKUNAGA  
BRENNON T. MORIOKA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.2146

FILE

**FILE COPY**

Mr. Ronald A. Sato  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kapaa Soccer Field Complex, Kauai  
Pre-Assessment Consultation for Draft Environmental Assessment

Thank you for your advance consultation notice for the proposed soccer complex.

The establishment of the soccer complex and volume of users may impact the Kapaa By-Pass and Kuhio Highway. Your work on the draft environmental assessment for the soccer complex should include a traffic impact analysis addressing anticipated or potential effects due to the location of the complex next to these two roads.

Also, your firm and the Kauai Department of Public Works should or continue to coordinate the development of the soccer complex with our Highways Division through the Highways Planning Branch.

We appreciate the opportunity to provide our comments and look forward to receiving at least four (4) copies of the draft environmental assessment.

Very truly yours,

  
RODNEY K. HARAGA  
Director of Transportation



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. Rodney K. Haraga, Director  
Department of Transportation  
State of Hawai'i  
869 Punchbowl Street  
Honolulu, Hawai'i 96813-5097

Dear Mr. Haraga:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 4, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

The Draft Environmental Assessment will address traffic impacts from the project to Kūhiō Highway and the future Kapa'a Relief Route.

We have already been coordinating the development of this soccer park with State DOT Kauai District Office, and will include your Highways Planning Branch as well as requested.

Four copies of the Draft EA will be provided when published. If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner



**STATE OF HAWAII**  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM  
**LAND USE COMMISSION**  
P.O. Box 2359  
Honolulu, Hawaii 96804-2359  
Telephone: 808-587-3822  
Fax: 808-587-3827

SSFM INTERNATIONAL, INC  
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**MAY 17 2006**

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May 12, 2006

**FILE COPY**

Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato:

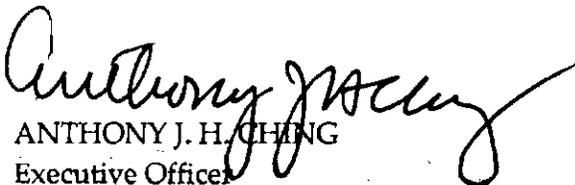
Subject: Kapa`a Soccer Field Complex  
Pre-Assessment Consultation for Draft Environmental Assessment  
Kapa`a, Kaua`i, Hawai`i

We have reviewed the above subject project summary and location map forwarded by your letter dated April 20, 2006, and confirm that this property is located within the State Land Use Urban District.

Given the location, scope, and nature of the proposed activity, the State Land Use Commission defers to the judgment of the County of Kauai in this matter. We have no further comments to offer at this time.

Thank you for the opportunity to comment on the subject project. Please feel free to contact me at 587-3822 should you require clarification or any further assistance.

Sincerely,

  
ANTHONY J. H. CHING  
Executive Officer



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. Anthony J.H. Ching, Executive Officer  
Land Use Commission  
Department of Business, Economic Development & Tourism  
State of Hawai'i  
P.O. Box 2359  
Honolulu, Hawai'i 96804-2359

Dear Mr. Ching:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 12, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note that the State Land Use Commission defers to the judgment of the County of Kaua'i in matters pertaining to the subject project and you have no further comments to offer at this time.

If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

SSFM INTERNATIONAL, INC  
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**FILE COPY**

June 7, 2006

Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawai'i  
96817

**RE: Pre-consultation on a Draft Environmental Assessment for proposed Kapa'a Soccer Field Complex, Kapa'a, Kaua'i; TMK: 4-5-015:036**

Dear Ronald A. Sato,

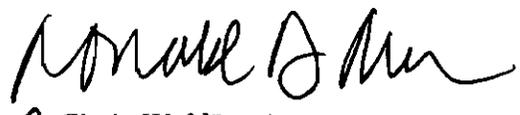
The Office of Hawaiian Affairs (OHA) is in receipt of your April 20, 2006, request for comments on the above project, which would include the development of a new soccer field and associated park amenities within approximately 11.5 acres. OHA apologizes for the delay and offers the following comments.

Because this culturally significant area has been found to hold many burials and other cultural deposits, OHA requests an archaeological inventory survey, literature review, cultural consultation and that an archaeological monitor to be on site during any ground disturbances. We further request the applicant's assurances in the Draft Environmental Assessment (EA) that should iwi kūpuna or Native Hawaiian cultural deposits be found during ground disturbance, work will cease, and the appropriate agencies be contacted pursuant to applicable law. OHA hopes, however, that the archaeological inventory survey will prevent any such inadvertent finds.

Ronald A. Sato  
June 7, 2006  
Page 2

Thank you for the opportunity to comment, and we look forward to reviewing the forthcoming Draft EA. If you have any further questions or concerns please contact Heidi Guth at (808) 594-1962 or e-mail her at [heidig@oha.org](mailto:heidig@oha.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald A. Sato".

 Clyde W. Nāmu'o  
Administrator



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. Clyde W. Nāmu‘o, Administrator  
Office of Hawaiian Affairs  
State of Hawai‘i  
711 Kapi‘olani Boulevard, Suite 500  
Honolulu, Hawai‘i 96813

Dear Mr. Nāmu‘o:

Subject: Kapa‘a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated June 7, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We will provide OHA with a copy of the Draft Environmental Assessment, which will include the Archaeological Inventory Survey report conducted for this project.

The Draft Environmental Assessment will also include assurances that should iwi kupuna or Native Hawaiian cultural deposits be encountered during ground disturbance activities, all work will cease immediately and the State Historic Preservation Division notified following State regulations.

If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

**From:** Ronald Sato  
**To:** Jared Chang; Pat Owan;  
**CC:**  
**Subject:** Kapaa Soccer Field  
**Date:** Tuesday, April 25, 2006 10:34:00 AM  
**Attachments:**

---

Everyone,

Received a call from Ms. Debra Tom of the State Coastal Zone Management office, Office of Planning regarding our pre-assessment consultation letter sent to them.

She said they dont' have any comments on the project.

Also, she said that they don't comment on EA documents anymore. Thus, please remember to remove them from the list for consultation in the future.

I'll file this email for the record.

Ronald.



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

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Ms. Debra Tom  
Coastal Zone Management Office  
Office of Planning  
Department of Business and Economic Development  
State of Hawai'i  
P.O. Box 2359  
Honolulu, Hawai'i 96804

Dear Ms. Tom:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for phone call on April 25, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note you have no comments to offer on the subject project at this time and your office doesn't comment on environmental assessment documents anymore. Thus, we will remove your office from our consultation lists for future projects.

If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

LINDA LINGLE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

DIVISION OF STATE PARKS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**PETER T. YOUNG**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
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

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May 2, 2006

Ronald A. Sato, AICP  
SSFM International, Inc.  
501 Sumner St., Suite 620  
Honolulu, Hawai'i 96817

**FILE COPY**

Dear Mr. Sato:

Thank you for the opportunity to provide comments during the pre-assessment consultation phase of the environmental review process for the proposed Kapa'a Soccer Field Complex. The proposed recreational facility will not impact any areas under our jurisdiction and therefore, we have no comments to offer.

Very truly yours,

Daniel S. Quinn  
State Parks Administrator



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

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Mr. Daniel S. Quinn, State Parks Administrator  
Division of State Parks  
State Historic Preservation Division  
Department of Land and Natural Resources  
State of Hawai'i  
P.O. Box 621  
Honolulu, Hawai'i 96809

Dear Mr. Quinn:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 2, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note you have no comments to offer at this time.

If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner



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JUN 02 2006

ras

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
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

FILE

FILE COPY

May 23, 2006

Ronald Sato, Senior Project Planner  
SSFM International  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

LOG NO: 2006.1615  
DOC NO: 0605M06  
Archaeology

Dear Mr. Sato:

**SUBJECT: Chapter 6E-42 – Historic Preservation Review –  
Pre-Assessment Consultation for Draft EA for Kapa’a Soccer Field Complex  
Kapa’a, Kawaihau District, Island of Kauai  
TMK: (4) 4-05-015: 036**

Thank you for submitting your letter on the aforementioned project for a new soccer field and associated park amenities. Restrooms, septic tanks and leach fields may impact cultural deposits and human burials. Therefore, we recommend the following conditions to ensure significant historic sites and human remains have been properly identified and treated:

1) An archaeologist inventory survey shall be conducted by a qualified archaeologist prior to any construction or drilling activities. A report documenting the archaeological work shall be submitted to the State Historic Preservation Division for review and approval. The report shall include: 1) Detail drawings of burials and deposits to scale; 2) All artifacts shall be sketched and photographed; 3) Analyses of all perishable and datable remains shall be conducted; 4) Stratigraphic profiles shall be drawn and made to scale; 5) All locations of historic sites shall be on an overall map of the project area; 6) Initial significance evaluations shall be included for each historic site found; and 7) Documentation on the nature and age of the historic sites shall be done. If significant historic sites are found then proposed mitigation or preservation plans can be submitted for review and approval.

2) A burial treatment plan shall be prepared and approved for burial discoveries encountered during the project. In addition, consultation with the appropriate ethnic groups, the procedures outlined in Chapter 6E-43 shall be followed. It is necessary for the treatment plan to be prepared after consultation with native Hawaiians, such as the Kauai Island Burial Council and the Office of Hawaiian Affairs.

If you have any questions please call Nancy McMahon our Kauai archaeologist at (808) 742-7033.

Aloha,

Melanie A. Chinen, Administrator  
State Historic Preservation Division

NM:jen



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Ms. Melanie A. Chinen, Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
State of Hawai'i  
601 Kamokila Boulevard, Room 555  
Kapolei, Hawai'i 96707

Dear Ms. Chinen:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 23, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

Our archaeologist will provide SHPD with a copy of the Archaeological Inventory Survey conducted for this project for review and approval. A copy will also be included in the Draft Environmental Assessment distributed to your department for review as well. Consultation with appropriate individuals will be conducted as a part of the Archaeological Inventory Survey.

Based upon the results and findings of the Archaeological Inventory Survey, a burial treatment plan will be prepared if warranted. Our archaeologist will appropriately coordinate with your department to address this further.

If you have any questions on this matter, please call me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

**From:** Doug Haigh  
**To:** Ronald Sato;  
**CC:** Mel Nishihara;  
**Subject:** Kapaa Soccer Field Complex Pre-Assessment Consultation for  
DEA  
**Date:** Tuesday, April 25, 2006 1:10:24 PM  
**Attachments:**

---

I have no comments on the project. at this time.

Douglas Haigh, PE  
Chief, Building Division  
Phone: 808-241-6650, Fax: 808-241-6806  
dhaigh@kauai.gov  
4444 Rice Street, Suite 175  
Lihue, HI 96766



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. Douglas Haigh, P.E., Chief  
Building Division  
Department of Public Works  
County of Kaua'i  
4444 Rice Street, Suite 175  
Līhu'e, Hawai'i 96766

Dear Mr. Haigh:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your email response dated April 25, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We note you have no comments to offer at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

**BRYAN J. BAPTISTE**  
MAYOR



**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-6600

**GARY K. HEU**  
ADMINISTRATIVE ASSISTANT

**LADYE H. MARTIN**  
DEPUTY COUNTY ENGINEER  
TELEPHONE 241-6600

**AN EQUAL OPPORTUNITY EMPLOYER**  
**COUNTY OF KAUAI**  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUAI, HAWAII 96766-1340

June 2, 2006

SSFM INTERNATIONAL, INC  
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JUN 06 2006

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Mr. Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

**FILE COPY**

FILE

**Subject: Kapaa Soccer Field Complex, Pre-Assessment Consultation for Draft Environmental Assessment**

Dear Mr. Sato:

The County of Kauai, Department of Public Works, Wastewater Management Division has no objections to the proposed Kapaa Soccer Field Complex. Based on the information provided with your April 20, 2006 Pre-Assessment Consultation letter, it is our understanding that a comfort station is planned for this facility. We recommend that in the planning for the comfort station, consideration should be given locating the comfort station in an area that can efficiently obtain wastewater service from the County via a connection to our sewage collection main situated in Kuhio Highway. It appears that a sewer main extension from the property to Kuhio Highway will be necessary for this service. Details on the location of the existing main in the highway can be obtained from our office.

If you have any questions please feel free to call Edward Tschupp at (808) 241-6610

Very truly yours,

EDWARD TSCHUPP, Chief  
Wastewater Management Division

CONCUR:

DONALD M. FUJIMOTO  
County Engineer



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. Edward Tschupp, Chief  
Wastewater Management Division  
Department of Public Works  
County of Kaua'i  
4444 Rice Street, Suite 275  
Līhu'e, Kaua'i Hawai'i 96766-1340

Dear Mr. Tschupp:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated June 2, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note that the Department of Public Works, Wastewater Management Division has no objections to the proposed project.

The proposed comfort station for this park facility will be situated in an efficient location for connection to the sewage collection main situated in Kūhiō Highway. We have already obtained as built plans from your department to identify the location of existing sewer lines. Project design plans will be appropriately coordinated with your department during the design phase of this project.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner



Water has no substitute.....Conserve it

SSFM INTERNATIONAL, INC.  
RECEIVED

MAY 17 2006

*ras*

**FILE COPY**

FILE

May 9, 2006

Mr. Ronald Sato  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, HI 96817

Dear Mr. Sato:

Subject: Water Service Inquiry: Kapaa Soccer Field Complex, Pre-Assessment Consultation for Draft Environmental Assessment, TMK: 4-5-15:036 (Existing 5/8-Inch Water Meter), Off of Kuhio Highway, Kapaa, Kauai

This is in regard to your letter dated April 20, 2006. The following are our comments to the subject Draft Environmental Assessment for a proposed Soccer Field Complex on TMK: 4-5-15:036.

Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the present time, we request additional information to determine the status of our existing facilities.

Prior to the Department of Water (DOW) recommending water meter service or building permit approval for the subject development, the applicant must:

1. Submit a formal request for water service for our review and approval. Include detailed water demand (both domestic and irrigation) calculations along with the proposed water meter size. Water demand calculations submitted by your engineer or architect should also include fixture count and water meter sizing worksheets. The Department's comments may change depending on the approved water demand calculations.
2. Prepare and receive DOW's approval of construction drawings for necessary water system facilities and construct said facilities. These facilities shall include but not be limited to:
  - a) The domestic service connection, if applicable.
  - b) The fire service connection, if applicable.
  - c) The interior plumbing plans with the appropriate backflow prevention device.
3. Pay the applicable charges in effect at the time of payment to the Department. At the present time, this charge will be dependent on the approved water meter size.
4. Receive a "Certification of Completion" for the construction of the necessary water system facilities from the DOW.

If you have any questions, please call Edward Doi at 245-5417.

Sincerely,

*Edward Doi*

for Gregg Fujikawa  
Chief of Water Resources and Planning

ED:mll  
26-166 Kapaa, Sato



**SSFM INTERNATIONAL, INC.**

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers  
American Council of Engineering Companies, Member

August 21, 2006

2005\_050.000

Mr. Gregg Fujikawa, Chief  
Water Resources and Planning  
Department of Water  
County of Kaua'i  
4398 Pua Loke Street  
Līhu'e, Hawai'i 96766

Dear Mr. Fujikawa:

Subject: Kapa'a Soccer Park Project  
Pre-Assessment Comments, Draft Environmental Assessment  
TMK: (4) 4-05-015: 036

Thank you for your letter dated May 9, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that any actual development of the subject area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time.

In regards to your request for additional information to determine the status of current facilities, a formal request for water service will be submitted to your department during the project's design phase for review and approval which includes the detailed water demand calculations, proposed water meter size for the lot, and other information indicated in your letter. We understand your approval requirements may also change based upon these calculations submitted.

Construction drawings of the water system facilities and items indicated in your letter will be submitted to your department for review and approval. The County Department of Public Works (DPW) will be responsible for constructing these improvements.

The County DPW understands they will need to pay applicable charges in effect as determined by the approved construction drawings. A "Certification of Completion" will also be obtained following completion of the necessary water system facilities.

If you have any further questions, please contact me at 531-1308. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP  
Senior Project Planner

# APPENDIX B2

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*DRAFT ENVIRONMENTAL ASSESSMENT  
COMMENT LETTERS AND RESPONSES*

SEP 14 2006

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# United States Department of the Interior

U.S. GEOLOGICAL SURVEY

Pacific Islands Water Science Center

677 Ala Moana Blvd., Suite 415

Honolulu, HI 96813

Phone: (808) 587-2400/Fax: (808) 587-2401

September 12, 2006

Mr. Ronald A. Sato, AICP  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Draft Environmental Assessment  
Kapa'a Soccer Park Project  
Kawaihau, Kauai  
TMK: (4) 4-05-015:036

Thank you for forwarding the subject Draft Environment Assessment for review and comment by the staff of the U.S. Geological Survey, Pacific Islands Water Science Center. We regret however, that due to prior commitments and lack of available staff, we are unable to review this document.

We appreciate the opportunity to participate in the review process.

Sincerely,

Gordon Tribble  
Director

Enclosure

cc: Mr. Mel Nishihara, Park Administrator  
Parks Division  
Department of Public Works  
County of Kauai  
4444 Street  
Mo'ikeha Building, Suite 275  
Lihue, Hawaii 96766

**BRYAN J. BAPTISTE**  
MAYOR

**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-6600

**GARY K. HEU**  
ADMINISTRATIVE ASSISTANT



DEPUTY COUNTY ENGINEER  
TELEPHONE 241-6600

AN EQUAL OPPORTUNITY EMPLOYER  
COUNTY OF KAUA'I  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUA'I, HAWAII 96766-1340

December 6, 2006

Mr. Gordon Tribble, District Chief  
Water Resources Division, Geological Survey  
U.S. Department of the Interior  
677 Ala Moana Boulevard, Suite 415  
Honolulu, Hawai'i 96813

Dear Mr. Tribble:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your letter dated September 12, 2006 providing comments on the Draft Environmental Assessment (Draft EA) for the subject project.

We note that you were unable to review the Draft Environmental Assessment due to lack of available staff and prior commitments.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,

DONALD M. FUJIMOTO  
County Engineer



**STATE OF HAWAII**  
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM  
**LAND USE COMMISSION**  
P.O. Box 2359  
Honolulu, Hawaii 96804-2359  
Telephone: 808-587-3822  
Fax: 808-587-3827

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SEP 27 2006

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**FILE COPY**

September 20, 2006

Ronald Sato, AICP  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Kapa`a Soccer Park  
Draft Environmental Assessment  
Proposing Agency: County of Kaua`i Department of Public Works, Parks Division  
TMK No.: (4) 4-5-015: 036

We have reviewed the subject application forwarded by your correspondence dated September 7, 2006, for the Proposing Agency to develop a new soccer complex to include two soccer fields along with related park amenities. Based upon review of the subject application, we have the following comments:

1. We confirm that the subject property is located in the State Land Use Urban District.
2. Pursuant to §205-5, Hawai`i Revised Statutes, the LUC defers to the judgment of the County of Kaua`i regarding other matters of the subject application given the location, scope, and nature of the proposed activity. We have no further comments to offer at this time.

Thank you for the opportunity to comment on the subject application. Please feel free to contact Max Rogers of my office at 587-3822, if you have any questions or need clarification.

Sincerely,

  
ANTHONY J. H. CHING  
Executive Officer

c: Mel Nishihara, Park Administrator, County of Kauai

**BRYAN J. BAPTISTE**  
MAYOR



**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-6600

**GARY K. HEU**  
ADMINISTRATIVE ASSISTANT

DEPUTY COUNTY ENGINEER  
TELEPHONE 241-6600

**AN EQUAL OPPORTUNITY EMPLOYER**  
**COUNTY OF KAUA'I**  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUA'I, HAWAII 96766-1340

December 6, 2006

Mr. Anthony J.H. Ching, Executive Officer  
Land Use Commission  
Department of Business, Economic Development & Tourism  
State of Hawai'i  
P.O. Box 2359  
Honolulu, Hawai'i 96804-2359

Dear Mr. Ching:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your letter dated September 20, 2006 providing comments on the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm your determination that the project is located within the State Land Use Urban District. We also note that your department is deferring judgment on matters associated with proposed project to the County of Kaua'i pursuant to §205-5, Hawai'i Revised Statutes.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,

DONALD M. FUJIMOTO  
County Engineer

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](mailto:oeqc@health.state.hi.us)

September 21, 2006

Mel Nishihara  
Department of Public Works, Parks Division  
4444 Rice St.  
Lihue, Hawaii 96766

Dear Mr. Nishihara:

Subject: Draft Environmental Assessment (EA) for **Kapaa Soccer Park**

We have the following comments to offer:

Safety: Will there be a staging area on site for construction equipment? How will you prevent theft or vandalism of construction property? How will you assure pedestrian safety during construction?

Pedestrian and bicycle paths: These would enhance recreational use of the park. Have they been considered? Will there be sidewalks in and out of the park?

Recycling: We recommend establishing a recycling plan for construction debris and also having recycle bins in the park.

Paving: Hawaii Revised Statutes 103D-407 requires the use of recycled glass in paving materials whenever possible.

Landscaping: There was no discussion of landscaping in the draft EA. HRS 103D-408 requires the use of native Hawaiian flora whenever and wherever possible. Before finalizing your landscaping plan, consult the Division of Forestry & Wildlife of DLNR at 587-0166 or go to the Hawaii Ecosystems at Risk (HEAR) website at [www.hear.org](http://www.hear.org) to eliminate those species that may pose a threat to the environment.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,

  
GENEVIEVE SALMONSON  
Director

c: Ron Sato, SSFM

**BRYAN J. BAPTISTE**  
MAYOR



**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-6600

**GARY K. HEU**  
ADMINISTRATIVE ASSISTANT

DEPUTY COUNTY ENGINEER  
TELEPHONE 241-6600

**AN EQUAL OPPORTUNITY EMPLOYER**  
**COUNTY OF KAUAI**  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUAI, HAWAII 96766-1340

December 6, 2006

Ms. Genevieve Salmonson, Director  
Office of Environmental Quality Control  
State of Hawai'i  
235 South Beretania Street, Suite 702  
Honolulu, Hawai'i 96813

Dear Ms. Salmonson:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your letter dated September 21, 2006 providing comments on the Draft Environmental Assessment for the subject project. We have the following responses to your comments:

1. Safety. A staging area will on site for construction equipment would likely be established, however, the actual details of that will be determined by the contractor. Like other typical construction projects, the contractor will be responsible to implement necessary measures to protect his equipment and materials which will be reviewed by the County as part of the design and ministerial permits process. There is no public pedestrian access to or along the project site or along the State Department of Transportation's (DOT) extension of the temporary bypass road. Therefore, pedestrian safety at the project site during construction activities should not be a concern.
2. Pedestrian and bicycle paths. The project will provide bike racks for bicyclists and a pedestrian path around the perimeter of the site is planned. Accommodations are also being made to provide a pedestrian bridge across the Moikeha Canal to allow access to the Kapa'a New Park site.

However, off-site pedestrian and bike path improvements are outside the scope of this project and not directly applicable to the project's need and objectives. Such paths would include properties and other landowners outside of the County's project site. Thus, such bike path improvements would need to be implemented separately from this project since the State DOT is still developing plans and environmental documents for their Kapa'a Relief Route. Sidewalks along the park site will be considered during the project's design phase, however, such improvements would still be subject to final plans developed by the State DOT for their Kapa'a Relief Route.

Page (2)

3. Recycling. The contractor will be responsible for establishing a recycling plan for the removal of construction debris, and this plan will be developed during the project's design phase. Recycling bins for the park site will be considered and implemented as appropriate during the project's design.
4. Paving. The use of recycled glass in paving materials for construction will be considered during the project's design phase and incorporated if feasible and practicable.
5. Landscaping. The Draft EA did state that the project will include fencing and landscaping (trees, etc.). Further details associated with landscaping will be determined after the layout of the fields is finalized which will occur during project's design phase. The use of native Hawaiian flora will be considered during the project's design as part of the landscaping design plans developed. This will include consulting with the State Department of Land and Natural Resources, Division of Forestry and Wildlife as requested.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,



DONALD M. FUJIMOTO  
County Engineer

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
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

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September 28, 2006

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SEP 29 2006

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Mr. Ronald Saito, AICP  
SSFM International Inc.  
501 Summer St. Suite 620  
Honolulu, Hawai'i 96817

LOG NO: 2006.3203  
DOC NO: 0609NM22  
Archaeology

Dear Mr. Saito:

**SUBJECT: Chapter 6E-42 Historic Preservation Review (County) Draft EA for the Kapaa Soccer Park Project  
Kapaa, Kawaihau, Island of Kaua'i  
TMK: (4) 4-5-015: 036**

FILE

The aforementioned project consists of a soccer field park project.

We believe that "no historic properties will be affected" by this undertaking because:

- Intensive cultivation has altered the land
- Residential development/urbanization has altered the land
- Previous grubbing/grading has altered the land
- An accepted archaeological inventory survey (AIS) found no historic properties
- SHPD previously reviewed this project and mitigation has not been completed
- Other:

In the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Kauai Section, needs to be contacted immediately at (808) 742-7033.

Aloha,

Melanie Chinen, Administrator  
State Historic Preservation Division

NM:gvf

Cc: Mel Nishihara, Parks Division, DPW, County of Kauai

**BRYAN J. BAPTISTE**  
MAYOR



**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-8600

**GARY K. HEU**  
ADMINISTRATIVE ASSISTANT

DEPUTY COUNTY ENGINEER  
TELEPHONE 241-8600

**AN EQUAL OPPORTUNITY EMPLOYER**  
**COUNTY OF KAUAI**  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUAI, HAWAII 96766-1340

December 6, 2006

Ms. Melanie Chinen, Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
State of Hawai'i  
601 Kamokila Boulevard, Room 555  
Kapolei, Hawai'i 96707

Dear Ms. Chinen:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your letter dated September 28, 2006 providing comments on the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm your determination that "no historic properties will be affected" by this project based upon the criteria indicated in your letter.

In the event that Native Hawaiian cultural deposits including human skeletal remains are encountered during construction activities, all work will cease immediately and the State Historic Preservation Division, Kaua'i Section will be contacted immediately.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,

DONALD M. FUJIMOTO  
County Engineer

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

SSFM INTERNATIONAL INC  
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OCT 06 2006

CHIYOME L. FUKINO, M.D.  
DIRECTOR OF HEALTH

In reply, please refer to:  
EPO-06-158

October 2, 2006

Mr. Ronald Sato, AICP  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: Draft Environmental Assessment for the Proposed Kapa'a Soccer Park at  
Kawaihau, Kauai, Hawaii  
TMK: (4) 4-5-015: 036

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 no comments at this time. 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](http://www.state.hi.us/health/environmental/env-planning/landuse/landuse.html). Any comments specifically applicable to this application should be adhered to.

If there are any questions about these comments please contact Jiakai Liu with the Environmental Planning Office at 586-4346.

Sincerely,

KELVIN H. SUNADA, MANAGER  
Environmental Planning Office

c: EPO  
CWB  
EH-Kauai  
Mr. Mel Nishihara, Park Administrator, County of Kauai

**BRYAN J. BAPTISTE**  
MAYOR



**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-6600

**GARY K. HEU**  
ADMINISTRATIVE ASSISTANT

DEPUTY COUNTY ENGINEER  
TELEPHONE 241-6600

**AN EQUAL OPPORTUNITY EMPLOYER**  
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DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUAI, HAWAII 96766-1340

December 6, 2006

Mr. Kelvin H. Sunada, Manager  
Environmental Planning Office  
Department of Health  
State of Hawai'i  
P.O. Box 3378  
Honolulu, Hawai'i 96801-3378

Dear Mr. Sunada:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your letter dated October 2, 2006 providing comments on the Draft Environmental Assessment (Draft EA) for the subject project.

We note that the Draft EA was routed to the various branches of the Environmental Health Administration and have no comments at this time. Regarding the Standard Comments from your website referred to in your letter, we provide the following responses.

1. Clean Air Branch.
  - The project would not involve the renovation or demolition activities which may involve asbestos.
  - Project impacts associated with fugitive dust were addressed in the Draft EA and potential mitigative measures identified that could be implemented by the contractor.
  - Construction activities conducted by the contractor will be in compliance with your Administrative Rules on fugitive dust, and adequate measures implemented to control dust.
2. Clean Water Branch.
  - Consultation with the Department of Army was conducted to identify and address project impacts to waters under their jurisdiction. The results were included in the Draft EA. If a Section 401 Water Quality Certification is required for this project, design plans will be coordinated with this department as part of the permit process.
  - The project will not require an Individual Permit, but will require a Notice of Intent for general permit coverage under NPDES. This was addressed in the Draft EA.
  - A copy of the applicable NPDES permit application will be submitted to the State Historic Preservation Division for their review.
  - Discharges associated with the project will comply with the applicable State Water Quality Standards under your Administrative Rules and requirements of Subsection 342D-50(1), HRS.

3. Environmental Planning Office.
  - Any waterbodies affected by the project have been identified as indicated in the Draft EA.
  - NPDES permits and related permits required for this project were identified in the Draft EA.
  - There are no known specific prescriptions for water quality management identified at the project site and in affected waterbodies.
  - There are no known water bodies affected by the project which appear on the current List of Impaired Waters in Hawai'i.
  - The project would not affect water bodies on the list of impaired waters, therefore, information the site and watershed conditions and characteristics are not applicable.
  - The information requested on TMDLs would not be applicable to this project based upon the prior responses.
  - The Draft EA assessed the project impacts on hydrology, water quality, aquatic and riparian ecosystems at a reasonable and practicable scale given the nature of the project being proposed.
4. Hazard Evaluation and Emergency Response Office.
  - A Phase 1 Environmental Site Assessment is not warranted for this project site based upon available information on its historic background, soil classification, and existing surrounding uses.
  - The project site is not expected to contain arsenic contamination.
  - There is no known history of previous releases of hazardous materials for the site, thus, a "no further action" letter should not be required.
5. Noise, Radiation, and Indoor Air Quality Branch.
  - The project will comply with the pertinent Administrative Rules identified.
6. Safe Drinking Water Branch.
  - Coordination with the County Department of Water is being conducted to address necessary water system improvements.
  - New potable water sources are not included as part of this project, thus, the engineering report and other requirements identified would not be applicable.
  - Injection wells for wastewater disposal or surface runoff will not be needed for this project.
  - This project does not involve a golf course, thus, the groundwater guidelines identified are not applicable.
7. Solid and Hazardous Waste Branch.
  - A solid waste management plan will be developed during the project's design phase, and will address pertinent phases of the project.
  - Solid waste generated during project construction will be directed to a permitted disposal or recycling facility.
  - Recycling bins for the park site will be considered and implemented as appropriate during the project's design.
  - Roadway improvements implemented by this project will utilize the crushed glass aggregate discussed to the extent reasonable and practicable.
8. Wastewater Branch.
  - All wastewater improvements associated with this project will conform to the applicable provisions of your Department's Administrative Rules.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,



DONALD M. FUJIMOTO  
County Engineer

PHONE (808) 594-1888



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

SSFM INTERNATIONAL INC.  
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OCT 11 2006

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FAX (808) 594-1865

FILE \_\_\_\_\_ **FILE COPY**

HRD06/2376B

June 7, 2006

Ronald A. Sato, AICP  
Senior Project Planner  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, HI 96817

**RE: Draft Environmental Assessment for proposed Kapa'a Soccer Field Complex,  
Kapa'a, Kaua'i; TMK: 4-5-015:036**

Dear Ronald A. Sato,

The Office of Hawaiian Affairs (OHA) is in receipt of your Sept 12, 2006, request for comments on the above project, which would include the development of a new soccer field and associated park amenities within approximately 11.5 acres. OHA offers the following comments.

Our June 7, 2006 letter to the applicant states that "because this culturally significant area has been found to hold many burials and other cultural deposits, OHA requests an archaeological inventory survey, literature review, cultural consultation and that an archaeological monitor be on site during any ground disturbances."

Our staff thanks the applicant for contracting archaeological services that completed studies related to archaeological inventory, literature review and cultural consultation in support of the proposed project. However, our staff continues to recommend that the applicant draft an Archaeological Monitoring Plan to mitigate any adverse effects to potential material culture or iwi during construction activities. OHA asks this primarily so that the scope of work and procedures for inadvertent finds are specifically spelled-out prior to the commencement of ground disturbing activities.

Ronald A. Sato  
June 7, 2006  
Page 2

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](mailto:jessey@oha.org).

Sincerely,



Clyde W. Nāmu'o  
Administrator

C: Mel Nishihara  
Parks Division  
County of Kaua'i Department of Public Works  
4444 Rice Street,  
Mo'ikeha Building, Suite 275  
Līhu'e, Kaua'i 96766

**BRYAN J. BAPTISTE**  
MAYOR



**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-6600

**GARY K. HEU**  
ADMINISTRATIVE ASSISTANT

DEPUTY COUNTY ENGINEER  
TELEPHONE 241-6600

**AN EQUAL OPPORTUNITY EMPLOYER**  
**COUNTY OF KAUA'I**  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUA'I, HAWAII 96766-1340

December 6, 2006

Mr. Clyde W. Nāmu'o, Administrator  
Office of Hawaiian Affairs  
State of Hawai'i  
711 Kapi'olani Boulevard, Suite 500  
Honolulu, Hawai'i 96813

Dear Mr. Nāmu'o:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your letter dated June 7, 2006 providing comments on the Draft Environmental Assessment (Draft EA) for the subject project. We note the date of this letter should probably be after September 12, 2006.

Thank you for commenting on the archaeological inventory survey conducted. Based upon the State Historic Preservation Division's review of the inventory survey report, they determined that no historic properties will be affected by the soccer park project. As a result, an archaeological monitoring plan is not required for this project.

However, we share your concern for mitigating any adverse effects on cultural deposits including human skeletal remains. The contractor will be notified prior to the start of construction activities of proper procedures and regulatory requirements. In the event such cultural deposits or remains are encountered during construction activities, all work will cease immediately and the State Historic Preservation Division, Kaua'i Section will be contacted immediately.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,

DONALD M. FUJIMOTO  
County Engineer

**From:** Ed Tschupp  
**To:** Doug Haigh; Ronald Sato;  
**CC:** Mel Nishihara; Donald Fujimoto;  
**Subject:** RE: Kapaa Soccer Park Draft EA  
**Date:** Wednesday, September 13, 2006 2:33:24 PM  
**Attachments:**

---

Looks to me like it would be approx 1100 to 1200 lf of sewer main extension along the temp bypass to get to a place perpendicular to the restrooms, but only around 300 to the northeast property corner, which would allow "on-site" sewer line from that point. Suggest doing long term cost analysis to determine best approach, O & M on septic system vs possible higher initial costs of sewer plus monthly charges. Another consideration is whether DOT will allow sewer main extension in temp bypass.

Would love to have the new customer; septic system may be lower initial cost, but I should point out that if parcel ends up being "touched" by a sewer line in future, under DOH rules, County should abandon septic and connect to sewer at that time. I think public policy would favor sewer, if costs are relatively equal...

Edward Tschupp  
Chief, Wastewater Division  
Kauai Department of Public Works  
4444 Rice Street, Suite 275  
Lihue, Hawaii 96766  
(808) 241-6258  
[etschupp@kauai.gov](mailto:etschupp@kauai.gov)

**BRYAN J. BAPTISTE**  
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DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUAI, HAWAII 96766-1340

December 6, 2006

Mr. Edward Tschupp, Chief  
Wastewater Division  
Department of Public Works  
County of Kaua'i  
4444 Rice Street, Suite 275  
Lihue, Hawai'i 96766

Dear Mr. Tschupp:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your email response dated September 13, 2006 on the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate your input on the possible lengths of a possible sewer main extension to service the project, and the State Department of Health requirements for sewer connections.

The project's design phase would include a cost assessment to determine whether a sewer line connection or individual wastewater system is a more feasible and practicable solution for the County considering both long-term maintenance and initial construction costs. However, it is more probable that wastewater would be treated using an individual wastewater system such as a septic tank and mound system because of lower construction costs for its implementation. Appropriate design plans for the specific type of septic system would be coordinated with the County DPW and State DOH for review and approval.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,

DONALD M. FUJIMOTO  
County Engineer

**From:** Doug Haigh  
**To:** Ronald Sato;  
**CC:** Mel Nishihara; Ed Tschupp; Donald  
Fujimoto;  
**Subject:** Kapaa Soccer Park Draft EA  
**Date:** Wednesday, September 13, 2006 9:40:06 AM  
**Attachments:**

---

I have reviewed the subject document and have the following comments:

Pg. 18 - Please review the recommended slopes for soccer fields. The noted 2% may not meet standards.

Pg. 52 - How the soccer fields are to be irrigated needs to be discussed. There may be an opportunity to use water from the canal since there are grass varieties available that can tolerate salty water.

Pg. 53 - Providing a sewer connection to the Kapaa main sewer is a very expensive alternative. Since there is no wastewater service available to the lot use of an individual wastewater system should be an acceptable option. Do to the high water table it might be necessary to use a mound type individual wastewater system, but this should still be significantly less expensive than a sewer connection to the Kapaa main sewer.

Douglas Haigh, PE  
Chief, Building Division  
Phone: 808-241-6650, Fax: 808-241-6806  
[dhaigh@kauai.gov](mailto:dhaigh@kauai.gov)  
4444 Rice Street, Suite 175  
Lihue, HI 96766

**BRYAN J. BAPTISTE**  
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DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUA'I, HAWAII 96766-1340

December 6, 2006

Mr. Douglas Haigh, P.E., Chief  
Building Division  
Department of Public Works  
County of Kaua'i  
4444 Rice Street, Suite 175  
Lihu'e, Hawai'i 96766

Dear Mr. Haigh:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your email response dated September 13, 2006 on the Draft Environmental Assessment (Draft EA) for the subject project. We have the following responses to your comments.

1. A 2 percent slope is acceptable on most turf areas, but a 1 percent slope is also acceptable on native soil fields given play considerations. Thus, the project's design will determine the most appropriate slope given site condition and topographic survey data.
2. Further information on irrigation for the soccer fields have been added to the Final Environmental Assessment under the section addressing effects on water facilities. This also included discussion of the potential for using surface flow water from the Moikeha Canal.
3. The project's design phase would include a cost assessment to determine whether a sewer line connection or individual wastewater system is a more feasible and practicable solution for the County considering both long-term maintenance and initial construction costs. However, it is more probable that wastewater would be treated using an individual wastewater system such as a septic tank and mound system because of lower construction costs for its implementation. Appropriate design plans for the specific type of septic system would be coordinated with the County DPW and State DOH for review and approval.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,

**DONALD M. FUJIMOTO**  
County Engineer



Water has no substitute.....Conserve it

SSFM INTERNATIONAL, INC  
RECEIVED  
OCT 24 2006

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FILE

October 20, 2006

Mr. Ronald Sato  
SSFM International, Inc.  
501 Sumner Street, Suite 620  
Honolulu, HI 96817

**FILE COPY**

Dear Mr. Sato:

Subject: Draft Environmental Assessment (Draft EA) for Kapaa Soccer Park Project,  
TMK: 4-5-15:036, off-of Kuhio Highway, Kapaa Town, Kauai, Hawaii

This is in response to your letter dated September 7, 2006. We have no objections to the proposed Kapaa soccer park project. Water service will be limited to the existing water meter serving this parcel. Requests for additional water meters or an increase in water meter size will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time.

If you have any questions, please contact Mr. Edward Doi at (808) 245-5417.

Sincerely,

Gregg Fujikawa  
Chief of Water Resource and Planning Division

ED:ml  
26-371 Kapaa, Sato

c: Mel Nishihara, COK Public Works

**BRYAN J. BAPTISTE**  
MAYOR



**DONALD M. FUJIMOTO**  
COUNTY ENGINEER  
TELEPHONE 241-6600

**GARY K. HEU**  
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**AN EQUAL OPPORTUNITY EMPLOYER**  
**COUNTY OF KAUA'I**  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUA'I, HAWAII 96766-1340

December 6, 2006

Mr. Gregg Fujikawa, Chief  
Water Resource and Planning Division  
Department of Water  
County of Kaua'i  
4398 Pua Loke Street  
Līhu'e, Hawai'i 96766

Dear Mr. Fujikawa:

Subject: Kapa'a Soccer Park Project  
Draft Environmental Assessment Comments  
TMK: (4) 4-05-015: 036

Thank you for your letter dated October 20, 2006 providing comments on the Draft Environmental Assessment (Draft EA) for the subject project.

We note you have no objections to the proposed project along with your comments associated water service associated with the existing meter serving the parcel. Construction plans developed during the project's design phase will be coordinated with your department which will include necessary requests for water meters or meter size.

Should you have any questions, please contact Mr. Mel Nishihara of the County Department of Public Works, Parks Division at (808) 241-6671.

Very truly yours,

DONALD M. FUJIMOTO  
County Engineer

# APPENDIX B3

---

## *CHAPTER 6E-42 HISTORIC PRESERVATION REVIEW LETTER*

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
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

September 6, 2006

Dr. Hal Hammatt  
Cultural Surveys Hawaii  
P.O. Box 1114  
Kailua, Hawai'i 96734

LOG NO: 2006.2791  
DOC NO: 0609NM02  
Archaeology

Dear Dr. Hammatt:

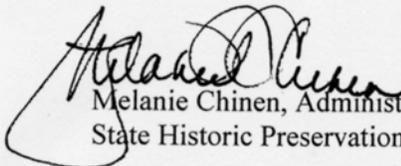
**SUBJECT: Chapter 6E-42 - Historic Preservation Review –Archaeological Assessment Report for an Approximately 11.5 Acre Parcel Proposed as a Soccer Park at Kapaa Ahupuaa, Kawaihau District, Island of Kauai, (O'Leary, O'Hare and Hammatt, CSH, 2006)  
Kapaa Ahupuaa, Kawaihau District , Island of Kaua'i  
TMK: (4) 4-5-015: 036**

---

Thank you for submitting the aforementioned report which we received on August 29, 2006. A 100% surface survey was conducted along with 8 backhoe trenches. No historic sites were found. No further archaeological work is recommended and we concur with this recommendation.

This report is approved. If you have any questions, please call Nancy McMahan, the Kauai Lead Archaeologist, at 742-7033.

Aloha,

  
Melanie Chinen, Administrator  
State Historic Preservation Division

NM:jen

# APPENDIX C

---

## *ARCHAEOLOGICAL INVENTORY SURVEY*

**Archaeological Inventory Survey  
for an Approximately 11.5 Acre Parcel Proposed as a  
Soccer Park at Kapa'a Ahupua'a, Kawaihau District  
(Puna Moku), Island of Kaua'i**

**TMK: 4-4-5-015:036**

Prepared for  
SSFM International

Prepared by  
Owen L. O'Leary, M.A.  
Constance R. O'Hare, B.A.  
and  
Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawai'i, Inc.  
Kailua, Hawai'i  
(Job Code: KAPAA 1)

August 2006

O'ahu Office  
P.O. Box 1114  
Kailua, Hawai'i 96734  
Ph.: (808) 262-9972  
Fax: (808) 262-4950

[www.culturalsurveys.com](http://www.culturalsurveys.com)

Maui Office  
16 S. Market Street, Suite 2N  
Wailuku, Hawai'i 96793  
Ph: (808) 242-9882  
Fax: (808) 244-1994

## Management Summary

<b>Reference</b>	Archaeological Inventory Survey for an Approximately 11.5 Acre Parcel Proposed as a Soccer Park at Kapa'a Ahupua'a, Kawaihau District (Puna Moku), Island of Kaua'i, TMK: [4] 4-5-015:036 (O'Leary et al. 2006).
<b>Date</b>	August 2006
<b>Project Number (s)</b>	Cultural Surveys Hawai'i (CSH) Job Code: KAPAA 1
<b>Investigation Permit Number</b>	CSH completed the inventory survey fieldwork under state archaeological permit No. 0606 issued by the State Historic Preservation Division (SHPD), per Hawai'i Administrative Rules (HAR) Chapter 13-13-282.
<b>Project Location</b>	TMK [4] 4-5-015:036, Kapa'a Ahupua'a, Kawaihau District (Puna Moku), Kaua'i Island. Mō'ikeha Canal bounds the triangular project area on the south, Kūhiō Highway on the east, and Cane Haul Road on the north.
<b>Land Jurisdiction</b>	The land is owned by the County of Kaua'i.
<b>Agencies</b>	State Historic Preservation Division / Department of Land and Natural Resources (SHPD / DLNR)
<b>Project Description</b>	The project proposes to construct one, possibly two, soccer fields within the project area. Restroom facilities will also be constructed which will necessitate excavation for building foundations as well as trenching for utility lines. In addition, one or two parking lots and landscaping will take place in several sections of the project area.
<b>Project Acreage</b>	11.5 acres
<b>Area of Potential Effect (APE) and Survey Acreage</b>	For this investigation, the project's area of potential effect (APE) is defined as the entire approximately 11.5-acre study area.
<b>Historic Preservation Regulatory Context</b>	The CSH study was conducted to fulfill the requirements set forth in the Hawai'i Administrative Rules (HAR) 13-276 regarding archaeological inventory surveys and reports and 13-275 regarding historic preservation review.
<b>Fieldwork Effort</b>	The fieldwork was conducted on June 20, 2006 with CSH staff archaeologists Owen L. O'Leary, M.A. and Corelle Nakamura, under the supervision of Hallett H. Hammatt, Ph.D. A total of 20 person-hours was expended in this effort.
<b>Number of Historic Properties Identified</b>	Zero

<b>Historic Properties Recommended Eligible to the Hawai'i Register of Historic Places (Hawai'i Register)</b>	None
<b>Historic Properties Recommended Ineligible to the Hawai'i Register</b>	None
<b>Effect Recommendation</b>	CSH's project specific effect recommendation is "no historic properties affected".
<b>Mitigation Recommendation</b>	Based upon the lack of historic properties or sedimentary deposits that might likely contain archaeological materials, CSH's project specific mitigation recommendation is that no further historic preservation work is necessary for this project area.

## Table of Contents

<b>Management Summary .....</b>	<b>ii</b>
<b>Section 1 Introduction .....</b>	<b>1</b>
1.1 PROJECT BACKGROUND .....	1
1.2 SCOPE OF WORK .....	1
1.3 ENVIRONMENTAL SETTING .....	7
1.3.1 Natural Environment .....	7
1.3.2 Built Environment .....	8
<b>Section 2 Methods .....</b>	<b>10</b>
2.1 FIELD METHODS .....	10
2.2 LABORATORY METHODS .....	10
2.3 DOCUMENT REVIEW .....	10
2.4 CONSULTATION .....	11
<b>Section 3 Background Research .....</b>	<b>12</b>
3.1 TRADITIONAL AND LEGENDARY ACCOUNTS OF KAPA'A .....	12
3.1.1 Ka Lulu o Mō'ikeha .....	12
3.1.2 Pāka'a and the wind gourd of La'amaomao (Keahiahi) .....	13
3.1.3 Kaweloleimākua .....	14
3.1.4 <i>Kalukahu</i> grass of Kapa'a .....	14
3.2 HEIAU OF KAPA'A .....	15
3.3 PRE-CONTACT AND EARLY POST-CONTACT LAND USE .....	16
3.4 THE MAHELE: KAPA'A LAND COMMISSION AWARDS .....	17
3.4.1 Land Use and Location of LCA Awards .....	17
3.4.2 Place Names in Land Commission Records and Other Sources .....	20
3.5 EARLY HISTORIC ACCOUNTS OF KAPA'A (1830'S-1900'S) .....	20
3.6 TWENTIETH CENTURY HISTORY OF KAPA'A (1900-PRESENT) .....	27
<b>Section 4 Previous Archaeological Research .....</b>	<b>29</b>
4.1 ARCHAEOLOGICAL STUDIES AND SITES IN KAPA'A AHUPUA'A .....	29
4.1.1 Pattern of Archaeological Sites in Kapa'a .....	29
4.1.2 Archaeological Studies on Kapa'a Settlement Pattern .....	29
4.2 BACKGROUND SUMMARY AND PREDICTIVE MODEL .....	37
4.2.1 Archaeological Projects In Kapa'a Concerned with Settlement Patterns .....	37
4.2.2 Summary of Kapa'a Settlement Pattern and Predictive Model .....	38
<b>Section 5 Results of Fieldwork .....</b>	<b>40</b>
5.1 SURVEY FINDINGS .....	40
5.2 TEST EXCAVATIONS FINDINGS .....	40
5.2.1 Trench 1 .....	40
5.2.2 Trench 2 .....	42
5.2.3 Trench 3 .....	43
5.2.4 Trench 4 .....	45
5.2.5 Trench 5 .....	46
5.2.6 Trench 6 .....	47

5.2.7 Trench 7 .....	49
5.2.8 Trench 8 .....	50
5.3 SITE DESCRIPTIONS .....	51
<b>Section 6 Results of Laboratory Analysis .....</b>	<b>52</b>
<b>Section 7 Summary and Interpretation.....</b>	<b>53</b>
<b>Section 8 Significance Assessments .....</b>	<b>54</b>
8.1 SIGNIFICANCE ASSESSMENTS .....	54
<b>Section 9 Project Effect and Mitigation Recommendations.....</b>	<b>55</b>
9.1 PROJECT EFFECT .....	55
9.2 MITIGATION RECOMMENDATIONS.....	55
9.3 DISPOSITION OF MATERIALS.....	55
<b>Section 10 References Cited .....</b>	<b>56</b>

## List of Figures

Figure 1. A portion of the 1996 Kapaa USGS 7.5-minute topographic quadrangle showing the project area location (hatched area) .....	2
Figure 2. Tax Map 4-5-15, showing project area (Lot 36) .....	3
Figure 3. Aerial photograph showing the project area with one possible configuration of the soccer field .....	4
Figure 4. Aerial photograph showing the project area with one possible configuration of the soccer field .....	5
Figure 5. Aerial photograph showing the project area with one possible configuration of the soccer field .....	6
Figure 6. Photograph of the project area, view to the east .....	9
Figure 7. Photograph of the project area, view to the north .....	9
Figure 8. Tax Map 4-5, showing location of LCA awards in Kapa'a .....	18
Figure 9. Portion of 1914 Hawaii Territory Survey map by Joseph Iao, showing relationship of project area to coastal and inland LCAs, with place names mentioned in LCA testimonies added .....	19
Figure 10. Portion of 1878 Hawaii Government Survey Map (drawn by C.S. Kittredge) showing approximate location of project area in Kapa'a; also shows agricultural fields (hatched area) <i>mauka</i> of the coastal marsh lands (adjacent to the project area).....	21
Figure 11. Portion of 1914 map by James S. Mann of Kapa'a Homesteads, showing location of project area in "Rice & Kula Lot" .....	26
Figure 12. USGS map, showing location previous archaeological studies in Kapa'a and neighboring <i>ahupua'a</i> (note: studies in Kapa'a are highlighted in red).....	33
Figure 13. US Geological Survey map, Kapaa Quad, showing previously documented archaeological sites in Kapa'a .....	36
Figure 14. Stratigraphic profile of the east wall of Trench 1 .....	40
Figure 15. A portion of the 1996 Kapaa USGS 7.5-minute topographic quadrangle showing the project area and the location of the eight backhoe trenches .....	41
Figure 16. Stratigraphic profile of the east wall of Trench 2 .....	42
Figure 17. Stratigraphic profile of the east wall of Trench 3 .....	43
Figure 18. Photograph showing an overview of Trench 3, view to NNW .....	44
Figure 19. Stratigraphic profile of the east wall of Trench 4 .....	45
Figure 20. Stratigraphic profile of the east wall of Trench 5 .....	46
Figure 21. Stratigraphic profile of the east wall of Trench 6 .....	47
Figure 22. Photograph of the east wall of Trench 6 showing the clay fill overlying the natural sediments, view to east .....	48
Figure 23. Stratigraphic profile of the east wall of Trench 7 .....	49
Figure 24. Stratigraphic profile of the east wall of Trench 8 .....	50

## List of Tables

Table 1. Individuals Included in the Cultural Consultation.....	11
Table 2. <i>Heiau</i> of Kapa'a.....	15
Table 3. <i>Mahele</i> Land Claims in Kapa'a Ahupua'a.....	17
Table 4. Place Names of Kapa'a.....	22
Table 5. Previous Archaeological Studies in Kapa'a.....	30
Table 6. Historic Properties in Kapa'a Ahupua'a.....	34

## Section 1 Introduction

### 1.1 Project Background

At the request of SSFM International, Cultural Surveys Hawai'i (CSH) has prepared this archaeological inventory survey report for an 11.5-acre parcel in Kapa'a Ahupua'a, Kawaihau District (Puna Moku), Island of Kaua'i (TMK [4] 4-5-015:036) (Figure 1 and Figure 2). The triangular project area is bounded by Mō'ikeha Canal on the south, Kūhiō Highway on the east, and Cane Haul Road on the north.

The project proposes to construct one, possibly two, soccer fields within the project area. There are currently three possible alternatives for the project area (Figure 3, Figure 4, and Figure 5). A comfort station will also be constructed which will necessitate excavation for building foundations as well as trenching for utility lines. In addition, one or two parking lots and landscaping will take place in several sections of the project area.

The proposed development of a soccer field constitutes a project requiring compliance with and review under State of Hawai'i historic preservation review legislation [Hawai'i Revised Statutes (HRS) Chapter 6E-7 and 6E-8 and Hawai'i Administrative Rules (HAR) 13-275]. At the request of SSFM International, CSH completed the archaeological inventory survey investigation, per the requirements of HAR Chapter 13-13-276, of the subject 11.5-acre parcel. This archaeological inventory report was prepared to support the proposed parcel's historic preservation review and any other project-related historic preservation consultation.

No historic properties were discovered within the project area during this archaeological inventory survey.

### 1.2 Scope of Work

The archaeological inventory survey and its accompanying report document all historic properties within the subject parcel. The prepared inventory survey is in compliance with state standards and has been submitted for review and approval to the State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR).

The following archaeological inventory survey scope of work satisfies the State and County requirements:

1. A complete ground survey of the entire project area for the purpose of site inventory was conducted. All sites were located, described, and mapped with evaluation of function, interrelationships, and significance. Documentation included photographs and scale drawings of selected sites and complexes. All sites were assigned State site numbers.
2. Subsurface testing with a backhoe was conducted to determine if subsurface deposits are located in the project area, and, if so, evaluate their significance.

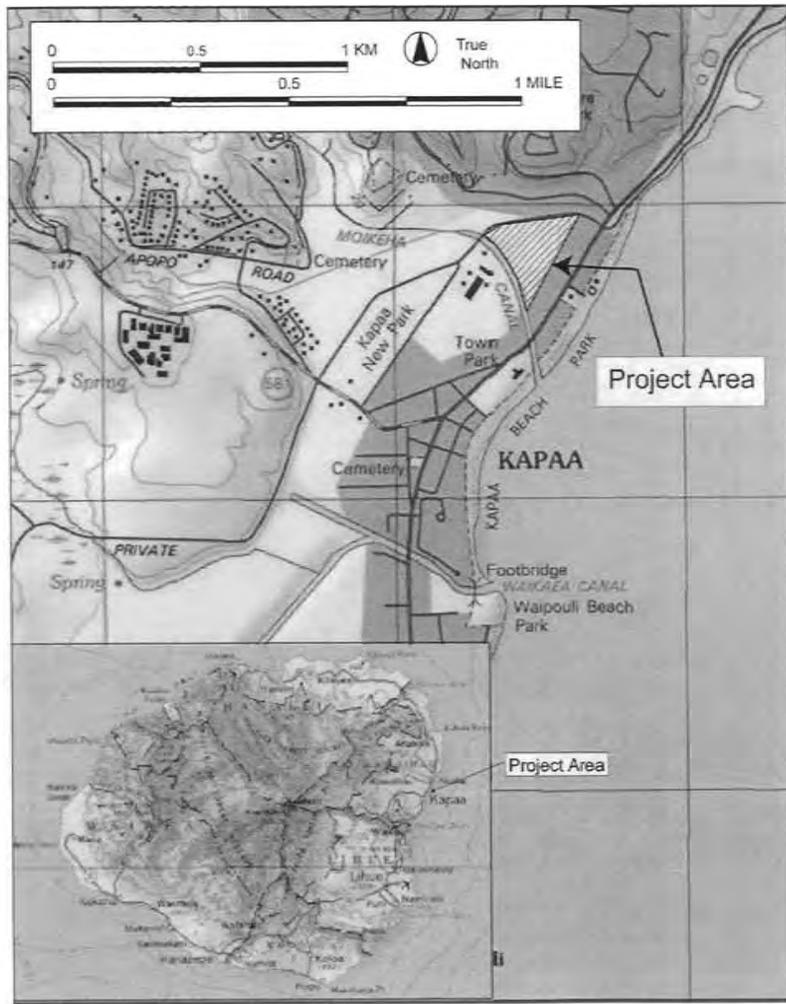


Figure 1. A portion of the 1996 Kapaa USGS 7.5-minute topographic quadrangle showing the project area location (hatched area)

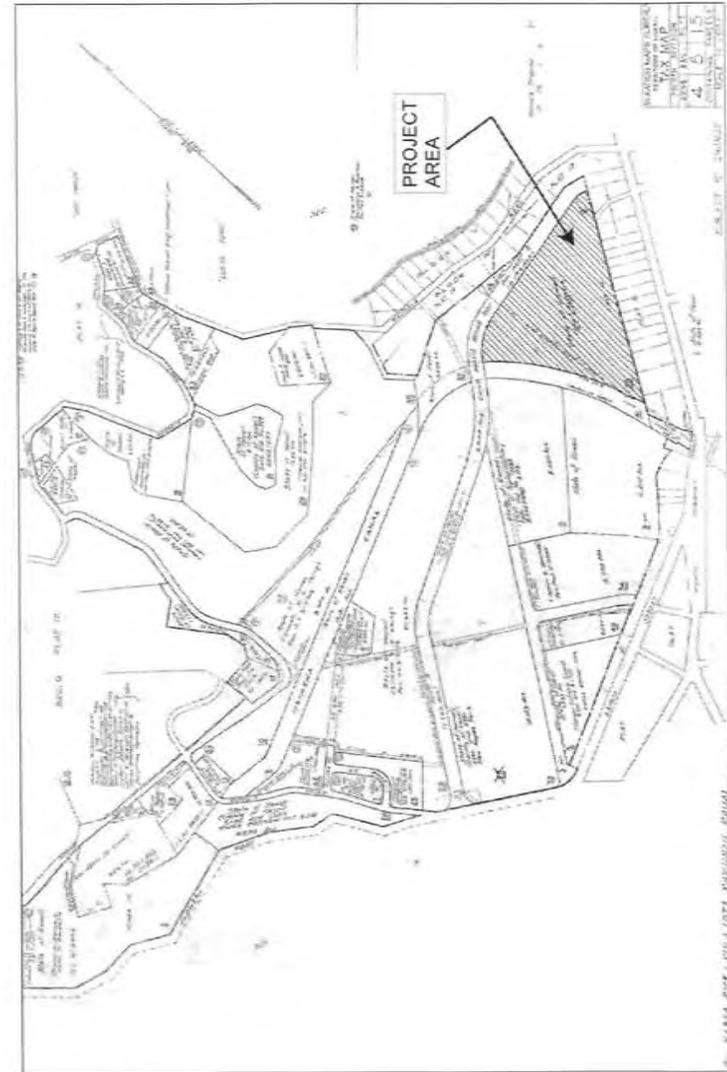


Figure 2. Tax Map 4-5-15, showing project area (Lot 36)





The natural sediment of the project area is described by Foote et al. (1972) as Fill Land (Fd), which can be found on the northern and eastern coastal plains of Kaua'i. This land type consists mostly of areas filled with bagasse and slurry from sugar mills or filled with material from dredging and from soil excavations. These materials are dumped and spread over marshes, low-lying areas along the coastal flats, coral sand, coral limestone, or areas shallow to bedrock (Foote et al. 1972).

The natural vegetation consists of *kiawe* (*Prosopis pallida*) *klu* (*Acacia farnesiana*), *koa haole* (*Leucaena leucocephala*), and bermudagrass (*Cynodon dactylon*) in the drier areas and napiergrass (*Pennisetum purpureum*), guava (*Psidium guajava*), and joeo (*Verbena litoralis*) in the wetter areas.

### 1.3.2 Built Environment

Mō'ikeha Canal comprises the southwest edge of the project area. A bridge crossing this canal is located at the western most tip of the project area. The northern edge of the project area is bounded by the newly-paved Cane Haul Road. The project area is separated from Kūhiō Highway on the southeast edge of the project area by a row of commercial businesses and residential homes.

At present, there are no standing structures within the project area. The project area can be seen in Figure 6 and Figure 7.



Figure 6. Photograph of the project area, view to the east



Figure 7. Photograph of the project area, view to the north

## Section 2 Methods

This section details the methods used by CSH field personnel during the field, laboratory, and writing portions of the preparation of this archaeological inventory survey report. The fieldwork was conducted on June 20, 2006 with Cultural Surveys Hawai'i staff archaeologists Owen L. O'Leary, M.A. and Corelle Nakamura, under the supervision of Hallett H. Hammatt, Ph.D. A total of 20 person-hours was expended in this effort.

CSH completed the inventory survey fieldwork under state archaeological permit No. 0606 issued by the State Historic Preservation Division (SHPD), per Hawai'i Administrative Rules (HAR) Chapter 13-13-282.

### 2.1 Field Methods

A pedestrian inspection of the surface of the project area was conducted.

Eight backhoe trenches were excavated within the project area. A single backhoe was used to dig all of the trenches, and thus they were all 80 cm wide. The locations of the backhoe trenches were selected based upon maps provided by the client (Figure 3, Figure 4, and Figure 5). CSH personnel placed the trenches in the areas where the construction of the comfort stations and their associated utility lines will require ground disturbance activities.

The location of each backhoe trench within the project area was recorded with a high precision GPS unit (Trimble Pro XR backpack GPS unit with a TSCI Datalogger). The data collected using the Trimble GPS unit was processed using ESRI's Arc Surveyor 5.0 and ArcGIS 9.1.

The stratigraphy was drawn and photographed, and sediments were described for each of the 8 trenches. Sediment descriptions include Munsell color, texture, consistence, structure, plasticity, cementation, origin of sediments, descriptions of any inclusions such as cultural material and/or roots and rootlets, lower boundary distinctiveness and topography, and other general observations.

Sediments excavated from sub-surface testing were not screened because no cultural material was observed.

### 2.2 Laboratory Methods

No laboratory work was necessary for this archaeological inventory survey.

### 2.3 Document Review

Historical documents, maps, and photographs were researched at: the Kaua'i Historical Society; the Hawai'i State Archives; the Survey Office of the Department of Accounting and General Services; the Hawai'i State Library; the Bernice Pauahi Bishop Museum archives and library; Hamilton Library at the University of Hawai'i Mānoa; the Mission Houses Museum Library; the State Historic Preservation Division (SHPD) library; and the library of Cultural Surveys Hawai'i in Waimanalo.

### 2.4 Consultation

CSH personnel Owen L. O'Leary, M.A., and Kehaulani Souza, B.A., attempted to contact five individuals as part of this cultural consultation. This section has been prepared to address the requirements set forth in the HAR § 13-276-5(g). Consultation letters describing the archaeological inventory survey and requesting any information they had about the project area were mailed on July 11 and 13, 2006. Several telephone calls were made to each recipient in an attempt to follow up on the letters.

Despite leaving messages on answering machines, CSH was unable to solicit a response from either Bobbie Farias or Kehau Kekua. CSH was unable to obtain a valid telephone number for Stanley Vasquez. Valentine Ako, a long-time local resident confirmed that the parcel was used for cattle ranching and that there were no *heiau* in the vicinity of the project area.

Table 1. Individuals Included in the Cultural Consultation

Individual	Affiliation	Methods of Contact*	Response
Nancy McMahon	SHPD, Kaua'i Island Archaeologist	L, TC	Recommended that we contact Bobbie, Farias, Stanley Vasquez, Valentine Ako, and Kehau Kekua.
Bobbie Farias	Long-time local resident	L, TM	No response.
Kehau Kekua	Kaua'i Cultural Center	L, TM	No response.
Valentine Ako	Long-time local resident	L, TC	Val commented that the parcel had been used for cattle ranching during the 1950's. He also mentioned that he was not aware of any <i>heiau</i> in the surrounding area.
Stanley Vasquez	Long-time local resident	L	No response. CSH Was not able to obtain a valid telephone number for this person.

\* L = Letter, TC = Telephone Conversation, TM = Telephone Message

In summary, no additional archaeological historic properties were identified as a result of this cultural consultation. No new or previously unknown information regarding the project area was obtained during the cultural consultation.

## Section 3 Background Research

The *ahupua'a* of Kapa'a belongs in the ancient district of Puna, one of five ancient *moku*, or districts, on Kaua'i (King 1935:228). Puna was the second largest district on Kaua'i, behind Kona, and extended from Kīpū, south of Līhu'e to Kamalomalō, just north of Keālia. For taxation, educational and judicial reasons, new districts were created in the 1840s. The Puna District, with the same boundaries, became the Līhu'e District, named for an important town in that district. In 1878, an act of King Kalākaua in securing a future and name for the new Hui Kawaihau, created the new district of Kawaihau (see Section 3.5 below). This new district encompassed the *ahupua'a* ranging from Olohena on the south to Kīlauea on the north. Subsequent alterations to district boundaries in the 1920s left Kawaihau with Olohena as its southernmost boundary and Molōa'a as its northernmost boundary (King 1935:222).

### 3.1 Traditional and Legendary Accounts of Kapa'a

#### 3.1.1 Ka Lulu o Mō'ikeha

Kapa'a was the home of the legendary *ali'i* (chief), Mō'ikeha. Born at Waipi'o on the island of Hawai'i, Mō'ikeha sailed to Kahiki (Tahiti), the home of his grandfather Maweke, after a disastrous flood. On his return to Hawai'i, he settled at Kapa'a. Kila, Mō'ikeha's favorite of three sons by the Kaua'i chiefess Ho'oiipoikamalani, was born at Kapa'a and was said to be the most handsome man on the island. It was Kila who was sent by his father back to Kahiki to slay his old enemies and retrieve a foster son, the high chief La'amaikahiki (Handy and Handy 1972:424; Beckwith 1970:352-358; Kalākaua 1888:130-135; Fornander 1917, vol. 4 pt.1:160). Mō'ikeha's love for Kapa'a is recalled in the *ōlelo no'eau*: *Ka lulu o Mō'ikeha i ka laulā o Kapa'a*. "The calm of Mō'ikeha in the breadth of Kapa'a" (Pukui 1983: 157).

"*Lulu-o-Mō'ikeha*" is described as being situated "near the landing and the school of Waimahanalua" (Akina 1913:5). The landing in Kapa'a was known as Makee Landing and was probably constructed in the late 1870s, along with the Makee Sugar Mill. Today, in place of the old Makee Landing, is a part of a breakwater located on the north side of Mō'ikeha Canal near the present day Coral Reef Hotel, which is located on the *makai* side of Kūhiō Highway, directly across the highway from the project area.

Akina (1913) tells the story of how Mō'ikeha's son, Kila, stocked the islands with the fish *akule*, *kawakawa* and *ōpelu*. When Kila traveled to Kahiki, he sought out his grandfather Maweke and explained that he was the child of Mō'ikeha. When Maweke asked Kila if Mō'ikeha was enjoying himself, Kila answered with the following chant:

My father enjoys the billowing clouds over Pōhaku-pili, The sticky and delicious poi, With the fish brought from Puna, The broad-backed shrimp of Kapalua, The dark-backed shrimp of Pōhakuhapai, The potent awa root of Maiaki'i,	<i>I walea no ku'u makuakāne i ke ao ho'okanunu, iluna o Pōhakupili I ka poi nouo ono ae no a, Me ka I'a i na mai o ka Puna, Ka opae hoainahanaha o Kapalua, Na opae kua hauli o Pohakuhapai, Na puawa ona mai no o Maiaki'i,</i>
--	---

The breadfruit laid in the embers at Makialo The large heavy taros of Keah'āpana The crooked surf of Makāiwa too The bending hither and thither of the reed and rush blossoms, The swaying of the <i>kalukalu</i> grasses of Puna The large, plump, private parts of my mothers, Of Ho'oiipoikamalani and Hinau-u, The sun that rises and sets, He enjoys himself on Kaua'i, All of Kaua'i is Mō'ikeha's [Akina 1913:6].	<i>Me ka ulu moelehu mai no o Makialo, Me na kalo pehi hua o Keahāpana, A i kekee nalu ae no hoi o Makaiwa, A i ke kahuli aku kahuli mai o ka pua uku me ka pua neki, A i ka mu'a ae no o ke kalukalu o Puna, A i na mea nui nepunepu no a ku'u mau makuahine. O Hoiipo ikamalana me Hinau-u, A i ka la hiki ae no a napoo aku, Walea ai no ka nohona ia Kaua'i Ua puna a puni Kaua'i ia Mō'ikeha</i>
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Maweke was delighted and when the boy was questioned as to his purpose, Kila told his grandfather he was seeking fish for his family. Maweke told Kila to lead the fish back to his homeland. This is how Kila led the *akule*, *kawakawa* and *ōpelu* to Hawai'i.

#### 3.1.2 Pāka'a and the wind gourd of La'amaomao (Keahiahi)

Kapa'a also figures prominently in the famous story of Pāka'a, and the wind gourd of La'amaomao. Pāka'a was the son of Kūanu'uauu, a high-ranking retainer of the Big Island ruling chief Keawenuia'umi (the son and heir to the legendary chief 'Umi), and La'amaomao, the most beautiful girl of Kapa'a and member of a family of high status *kahuna* (priestly or specialist class). Kūanu'uauu left the island of Hawai'i, traveled throughout the other islands, and finally settled on Kaua'i, at Kapa'a. It was there that he met and married La'amaomao, although he never revealed his background or high rank to her until the day a messenger arrived, calling Kūanu'uauu back to the court of Keawenuia'umi.

By that time, La'amaomao was with child, but Kūanu'uauu could not take her with him. He instructed her to name the child, if it turned out to be a boy, Pāka'a. Pāka'a was raised on the beach at Kapa'a by La'amaomao and her brother Ma'ilou, a bird snarer. He grew to be an intelligent young man, and it is said he was the first to adapt the use of a sail to small fishing canoes. Although Pāka'a was told by his mother from a very young age that his father was Ma'ilou, he suspected otherwise and after constant questioning, La'amaomao told her son the truth about Kūanu'uauu.

Intent on seeking out his real father and making himself known to him, Pāka'a prepared for the journey to the Big Island. His mother presented to him a tightly covered gourd containing the bones of her grandmother, also named La'amaomao, the goddess of the winds. With the gourd and chants taught to him by his mother, Pāka'a could command the forces of all the winds in Hawai'i. While this story continues on at length about Pāka'a and his exploits on the Big Island and later on Moloka'i, it will not be dwelt upon further here. It is important to note that several versions of this story do include the chants which give the traditional names of all of the winds at all the districts on all the islands, preserving them for this and future generations (Nakuina 1990;

Rice 1974:69-89; Beckwith 1970:86-87; Thrum 1923:53-67; Fornander 1918, Vol. 5, Pt.1:78-128). For Kaua'i, Pāka'a chants:

There, see the wind,  
A wind, the wind gourd of La'amaomao,  
The Kiu, the Ko'oluwahine breeze, where i left it,  
Calling out to the multitudes, to the row of mountains,  
A cloud sigh of the scattering wind,  
A cloud sign formed by winds gathering at Kapa'a,  
There they are, the winds of Kaua'i, ...  
Inuwai is of Waipouli,  
Ho'olua is the wind of Makaiwa,  
Kēhau is of Kapa'a,  
Malamalamamaikai is of Keālia ...  
[Nakuina 1990: 45-46].

Frederick Wichman (1998:84) writes that Pāka'a grew up on a headland named Keahiahi. Here, Pāka'a learned to catch *mālolo*, his favorite fish. After studying the ocean and devising his plan to fabricate a sail, Pāka'a wove a sail in the shape of a crab claw and tried it out on his uncle's canoe. One day, after going out to catch *mālolo*, he challenged the other fishermen to race to shore. He convinced them to fill his canoe with fish suggesting it was the only way he could truly claim the prize if he won:

The fishermen began paddling toward shore. They watched as Pāka'a paddled farther out to sea and began to fumble with a pole that had a mat tied to it. It looked so funny that they began to laugh, and soon they lost the rhythm of their own paddling. Suddenly Pāka'a's mast was up and the sail filled with wind. Pāka'a turned toward shore and shot past the astonished fishermen, landing on the beach far ahead of them. That night, Pāka'a, his mother, and his uncle had all the *mālolo* they could eat [Wichman 1998:85].

### 3.1.3 Kaweloleimākua

Kapa'a is also mentioned in traditions concerning Kawelo (Kaweloleimākua), Ka'ililauokekoa (Mo'ikeha's daughter, or granddaughter, dependent on differing versions of the tale), the *mo'o* Kalamainu'u and the origins of the *hīna'i hīnālea* or the fish trap used to catch the *hīnālea* fish, and the story of Lonoikamakahiki (Fornander 1917, Vol.4, Pt.2:318, Vol.4, Pt.3:704-705; Rice 1974:106-108; Thrum 1923:123-135; Kamakau 1976:80).

### 3.1.4 Kalukalu grass of Kapa'a

"*Kūmoena Kalukalu Kapa'a*" or "Kapa'a is like the *Kalukalu* mats" is a line from a chant recited by Lonoikamakahiki. *Kalukalu* is a sedge grass, apparently used for weaving mats (Fornander 1917, Vol. 4, Pt. 2: 318-19). Pukui (1983: 187) associates the *Kalukalu* with lovers in "*ke Kalukalu moe ipo o Kapa'a*; the *Kalukalu* of Kapa'a that sleeps with the lover". According to Wichman (1998:84), "a *Kalukalu* mat was laid on the ground under a tree, covered with a thick pile of grass, and a second mat was thrown over that for a comfortable bed," thus the association with lovers. Kaua'i was famous for this peculiar grass, and it probably grew around

the marshlands of Kapa'a. It is thought to be extinct now, but an old-time resident of the area recalled that it had edible roots, "somewhat like peanuts." Perhaps it was a famine food source (Kapa'a Elementary School 1933:VI).

## 3.2 Heiau of Kapa'a

During their expeditions around Hawai'i in the 1880s, collecting stories from *ka pō'e kahiko* (the people of old), Lahainaluna students stopped in Kapa'a and Keālia and gathered information regarding *heiau* of the region. All together, fourteen *heiau* were named in Kapa'a and Keālia, suggesting the two *ahupua'a* were probably more politically significant in ancient times. Table 2 lists the names of the ten *heiau* identified in the *ahupua'a* of Kapa'a, their location if known, their type, associated chief and priest, and any comments and the reference.

Table 2. *Heiau* of Kapa'a

Name	Location	Associated	Chief/Priest
<b>Mailehuna</b>	Kapa'a (Mailehuna is the area of the present day Kapa'a School)	Kiha, Kaumuali'i/ Lukahakona	Ref: Bishop Museum Archives (HEN I: 214) Lahainaluna Student Compositions
<b>Pueo</b>	Kapa'a	Kiha, Kaumuali'i/ Lukahakona	Ref: " "
<b>Pahua</b>	Kapa'a/Keālia	Kiha/ Lukahakona	Ref: " "
<b>Kumalae</b>	Kapa'a/Keālia	Kiha/ Lukahakona	Ref: " "
<b>Waiehumalama</b>	Kapa'a/Keālia	Kiha/ Lukahakona	Ref: " "
<b>Napuupaakai</b>	Kapa'a/Keālia	Kiha/ Lukahakona	Ref: " "
<b>Noeamakalii</b>	Kapa'a/Keālia	Unknown	" <i>heiau</i> for birth of Kaua'i Chiefs, like Holoholokū" Ref: " "
<b>Puukoa</b>	Kapa'a/Keālia	Unknown	" <i>umu</i> type <i>heiau</i> " Ref: " "
<b>Piouka</b>	Kapa'a/Keālia	Unknown	" <i>umu</i> type <i>heiau</i> ; <i>heiau</i> where standing chiefs quarreled over stream that flowed through them. When drought came, the water at Piouka dried up" Ref: " "
<b>Una</b>	Kapa'a/Keālia	Kiha/ Lukahakona	Ref: " "
<b>Mano</b>	Kapa'a/Keālia	Kiha/ Lukahakona	Ref: " "
<b>Kuahiahi</b>	Kapa'a (govn't school stands on site now)	Kaumuali'i/ Lukahakona	Bishop Museum Archives (HEN I:216)
<b>Makanalimu</b>	Upland of Kawaihau	Kaumuali'i	Ref: " "
<b>Kaluluo</b> <b>Mō'ikeha</b>	Kapa'a	Mō'ikeha	Ref: " "

The exact locations of these *heiau* are unknown. The locations of two of the *heiau* correlate with the locations of *wahi pana* that are known to be near the coast, Kuahiahi and Kaluluomō'ikeha. Kuahiahi (also spelled Kaahiahi and Keahiahi) is the rocky headland at the north end of Kapa'a where the first Kapa'a School was once located. Kaluluo Mō'ikeha is thought to be the general area near the Mō'ikeha Canal and the present day Coral Reef Hotel.

### 3.3 Pre-Contact and Early Post-Contact Land Use

E. Craighill Handy (1930) described the remains of agricultural sites in Kapa'a in the early part of the twentieth century:

There are extensive terrace areas on the flatlands below the mountains, watered by Kapahi, Makaleha, and Moalepi Streams, where the upper Kapaa homesteads are located. Kapaa river is formed by the union of these three streams. For 4 miles or more along the course of this river the pockets of flatland along the river bottom were built into terraces. A little way up Kaehulua, there were small terrace areas which are now either in cane or under grass. The flatlands of Waianuenue and coastal Kapaa, which are now mostly planted in sugar cane, were presumably terrace anciently, except perhaps the marshy sections [Handy 1940:68].

These agricultural fields were used to grow irrigated taro; Kapa'a once had a "highly developed irrigation system," and thus was one of the pre-Contact centers of population (Handy and Handy 1972:269). Handy also mentions that Kapaa is a district with a broad coastal plain bordering the sea "which would be suitable for sweet potato plantings; presumably a great many used to be grown in this section (Handy 1940:153). Yams were grown inland in all sections of Puna (Handy 1930:171). The farmers in the valleys of Puna practices "diversified farming: Taro, sweet potatoes, breadfruit, coconuts" (Handy and Handy 1972:423).

George Vancouver (1798:221-223) examined the east coast of the island from his ship in 1793 and stated that it was the "most fertile and pleasant district of the island ..." However, he did not anchor nor go ashore there due to inhospitable ocean conditions.

In 1840, Peale and Rich, with Charles Wilkes' United States Exploring Expedition (1844), traversed the coastline there on horseback heading north from Wailua:

The country on the way is of the same character as that already seen. They passed the small villages of Kuapau [Kapa'a], Keālia, Anehola, Mowaa, and Kauharaki, situated at the mouths of the mountain streams, which were closed with similar sand-bars to those already described. These bars afforded places to cross at, though requiring great precaution when on horseback. The streams above the bars were in most cases, deep, wide, and navigable a few miles for canoes. Besides the sugarcane, taro, et., some good fields of rice were seen. The country may be called open; it is covered with grass forming excellent pasture-grounds, and abounds in plover and turnstones, scattered in small flocks [Wilkes 1845:69].

### 3.4 The Māhele: Kapa'a Land Commission Awards

The Organic Acts of 1845 and 1846 initiated the process of the Māhele, the division of Hawaiian lands, which introduced private property into Hawaiian society. In 1848, the crown and the *ali'i* received their lands. The *maka'āinana*, or common people, received their *kuleana* (lots) in 1850. It is through records for Land Commission Awards (LCAs) generated during the Māhele that specific documentation of traditional life in Kapa'a Ahupua'a comes to light.

#### 3.4.1 Land Use and Location of LCA Awards

During the Māhele, Kapa'a was taken as Crown Lands (Office of the Commissioner of Public Lands of the Territory of Hawaii, 1929). The *'ili* of Paikahawai and Ulukiu in Kapa'a Ahupua'a were retained as Government Lands. The land claims during this period show that only six individuals were awarded land parcels in the relatively large *ahupua'a* of Kapa'a (Table 2; Figure 8 and Figure 9).

Table 3. Māhele Land Claims in Kapa'a Ahupua'a

LCA	CLAIMANT	LAND USE AND LOCATION	AWARD
3554 & 3599	Keo	(1) 15 <i>lo'i</i> in the entire <i>'ili</i> of Kahanui (2) House lot in Puhī Village	2 <i>'āpana</i> , 1 acre
3638	Huluili, Kahoīu (Kadaio)	(1) 15 <i>lo'i</i> and <i>kula</i> in Maele'ele <i>'Ili</i> (2) House lot in Kaloko (Kalolo) Village	2 <i>'āpana</i> , 5 acres, 1 rood, 19 rods
3971 & 3243	Honolii, Ioane	(1) 6 uncultivated <i>lo'i</i> in Kahana <i>'Ili</i> (2) House lot in Kupanīhi Village	2 <i>'āpana</i> , 2 acres, 1 rood, 1 rod
8247	Ehu	Approx. 20 <i>lo'i</i> lying waste, some orange trees at Moalepe <i>'Ili</i>	1 <i>'āpana</i> , 3 roods
8837	Kamapa'a	(1) 3 <i>lo'i</i> in Ulukiu <i>'Ili</i> (2) 2 <i>lo'i</i> in Awawaloa <i>'Ili</i> (2) House lot in Ulukiu Village	3 <i>'āpana</i> , 2 roods, 33 rods
8843	Kiau and son, Apahu	(1) 6 <i>lo'i</i> in Apopo <i>'Ili</i> (2) House lot in Kalolo Village	2 <i>'āpana</i> , 2.75 acres, 3 rods

The six awardees are Keo (LCA 3554/3599), Huluili (LCA 3638), Ioane Honolii (LCA 3971/3243), Ehu (LCA 8247), Kamapa'a (LCA 8837), and Kiau (LCA 8843). Five of the six awardees received multiple parcels, which show similarities. All five had *lo'i*, or irrigated *kalo* (taro) fields on the *maka* (inland) side of the lowland swampy area, sometimes extending a short distance up into small, shallow gulches and valleys. Many of these *lo'i* parcels name *pali*, or hills/cliffs, as boundaries. Each LCA also had a separate house lot located on the *makai* (seaward) side of the swamp, near the beach. Two of the land claims name ponds on their lands: Puhī Pond (LCA 3554) and fishponds in Kupanīhi *'Ili* (LCA 3971). The two *loko* are associated with house lots, situated on the *makai* edge of the Kapa'a swamps, suggesting modification of the natural swamplands.

Other natural and cultural resources mentioned in the LCAs include freshwater springs, pigpens, *hau* bushes, *hala* (pandanus) clumps, streams, *'auwai* (irrigation ditches), and *kula* (land used for pasture or dryland agriculture). Some of these natural features and the agricultural fields

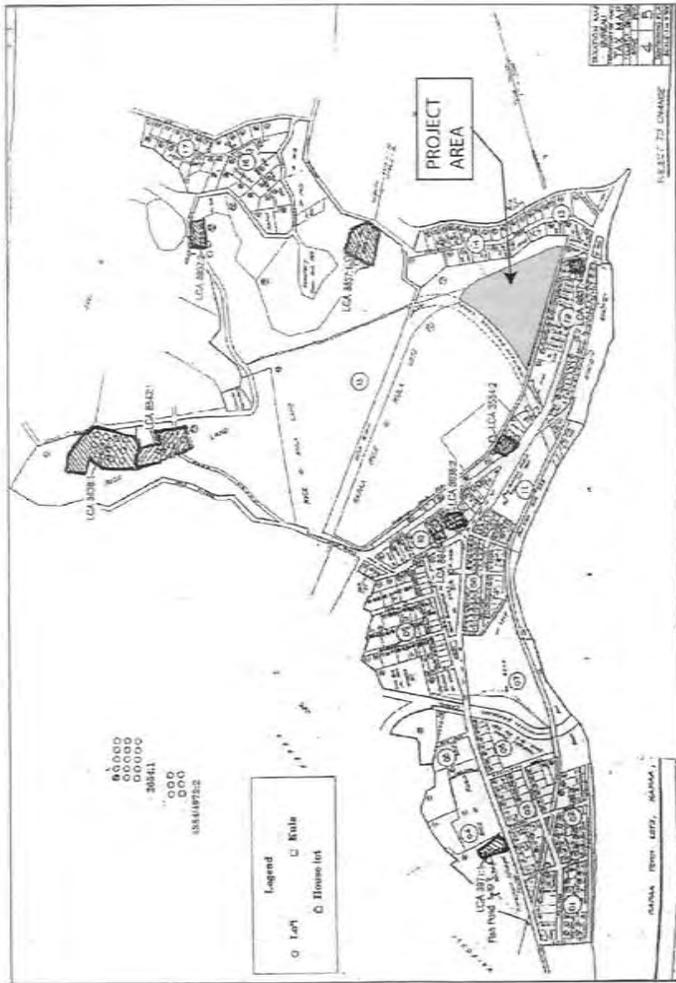


Figure 8. Tax Map 4-5, showing location of LCA awards in Kapa'a

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i  
 TMK 4-4-5-015-036

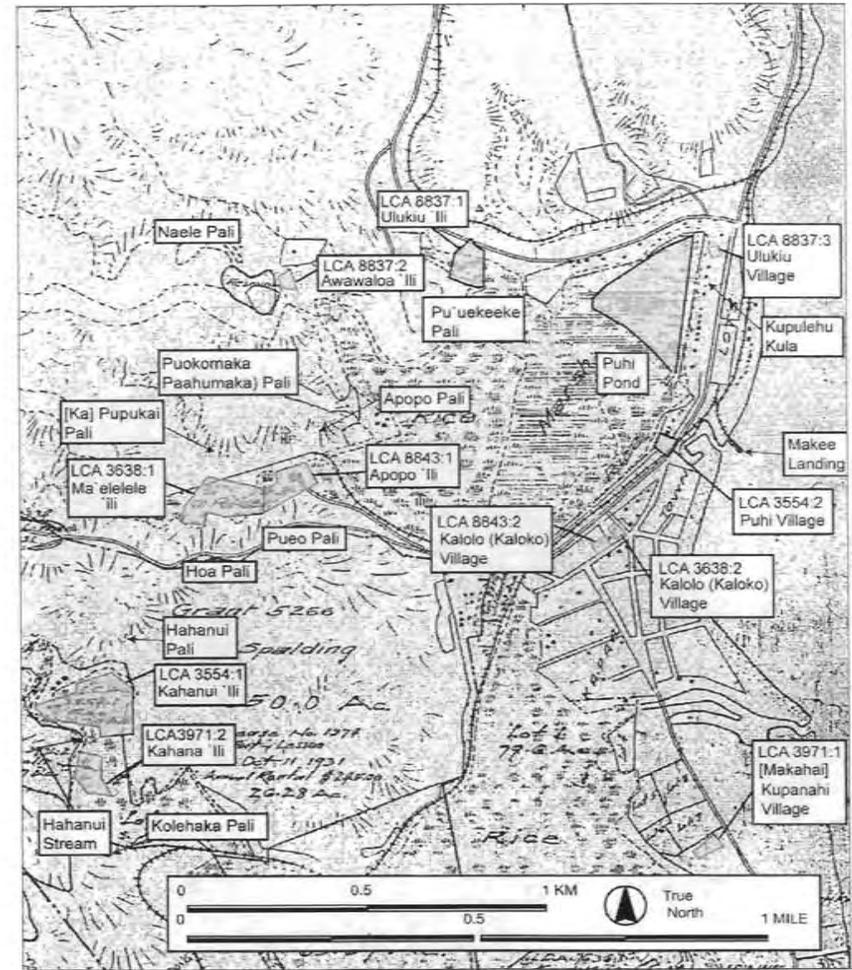


Figure 9. Portion of 1914 Hawaii Territory Survey map by Joseph Iao, showing relationship of project area to coastal and inland LCAs, with place names mentioned in LCA testimonies added

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i  
 TMK 4-4-5-015-036

*mauka* of the coastal marsh lands can be seen on an 1878 map of Kapa'a (Figure 10); the project area is adjacent to one of these large swamps.

Interestingly, the residential "village" of Kapa'a did not exist as a single entity, but was a series of probably small settlements, or compounds, perhaps even individual house lots, which stretched along the shoreline of the *ahupua'a* and included (south to north) Kupanihi (Makahaikupanihi), Kalolo (Kaulolo), Puhi, and Ulukiu. The current project area was probably in the *'ili* of Ulukiu adjacent to Ulukiu Village (see Figure 9)

The fifth individual, Ehu (LCA 8247), was the only person to be awarded a single parcel in the upland area of Kapa'a, in Moalepe Valley, approximately five miles *mauka* (not pictured in Figures 3 and 4). In 1848, when Ehu made his claim, he was the only one living there. A few years later, according to Honolii's testimony to support Ehu's claim, "There are no houses and no people now living on the land. Ehu found himself lonely there, all his neighbors having either died or left the land. Ehu now lives in Wailua." Evidently, Ehu may have been the last person to live at and cultivate, in the traditional way, the far *mauka* region of Kapa'a.

### 3.4.2 Place Names in Land Commission Records and Other Sources

Place names and *wahi pana* ("legendary place") (Pukui and Elbert 1968:376) are an integral part of Hawaiian culture. "In Hawaiian culture, if a particular spot is given a name, it is because an event occurred there which has meaning for the people of that time" (McGuire 2000:17). The *wahi pana* were then passed on through language and the oral tradition, thus preserving the unique significance of the place. Hawaiians named all sorts of objects and places, points of interest that may have gone unnoticed by persons of other cultural backgrounds.

Table 4 lists place names of Kapa'a, compiled from traditional literature (*mo'olelo*, chants), historical sources, maps and Māhele records. Almost all of the *'ili* names were taken from the Māhele Land Commission Awards. Lloyd Soehren (2002) recently compiled a list of all place names mentioned in LCA documents of Kaua'i, and this resource was used extensively to compile this list. The list includes, among others, names of: *ahupua'a* (large land divisions); *'ili* (smaller land divisions within an *ahupua'a*); *'ili kū* (*'ili kūpuna*, land unit that pays tribute to the chief of the district); *'auwai* (irrigation ditches); *kula* (land used for pasture or dryland agriculture); *lo'i* (irrigated agricultural patches); *kauhale* (group of houses belonging to one family); *heiau* (temples); *pu'u* (hills or mountains); and *pali* (cliffs). Soehren primarily used *Place Names of Hawai'i* (Pukui et al. 1974) for all place name translations. Where there were no known translations, a literal translation of the place name was sometimes made, using the *Hawaiian Dictionary* (Pukui and Elbert 1986). The approximate locations for these place names, based on the LCA testimonies, have been placed on a 1914 map of Kapa'a (see Figure 4).

## 3.5 Early Historic Accounts of Kapa'a (1830's-1900's)

Although most of the historic record documents for Kaua'i in this period revolve around missionary activities and the missions themselves, there was indication that the Kapa'a area was being considered for new sugar cane experiments, similar to those occurring in Kōloa. In a historic move, Ladd and Company received a 50-year lease on land in Kōloa from Kamehameha III and Kaua'i Governor Kaikio'ewa. The terms of the lease allowed the new sugar company "the right of someone other than a chief to control land" and had profound effects on "traditional

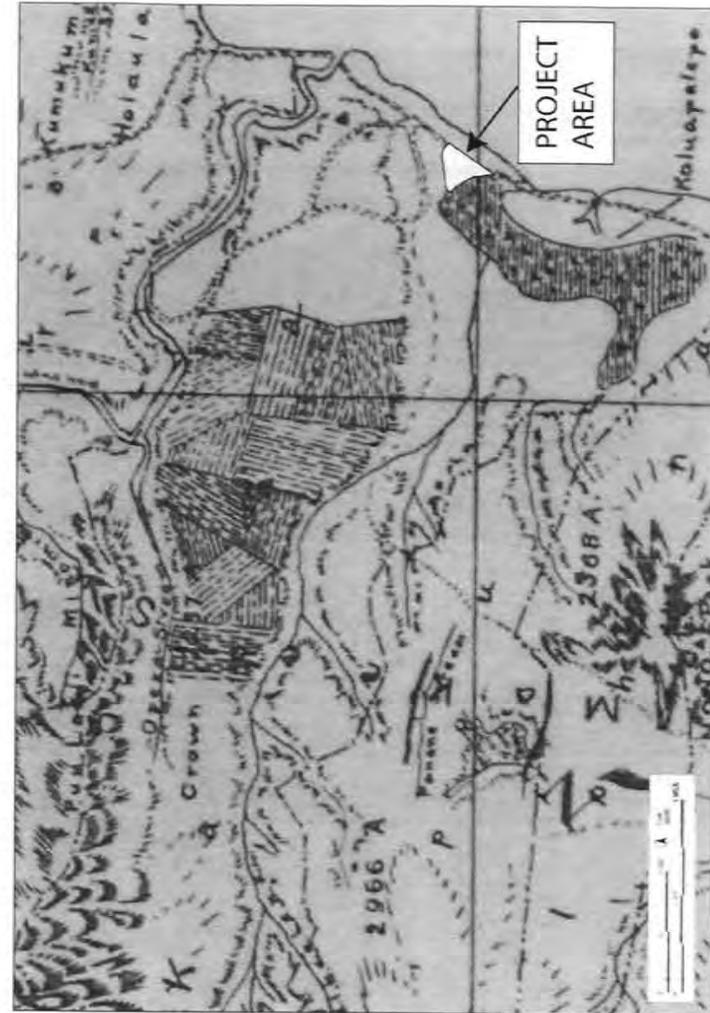


Figure 10. Portion of 1878 Hawaii Government Survey Map (drawn by C.S. Kittredge) showing approximate location of project area in Kapa'a; also shows agricultural fields (hatched area) *mauka* of the coastal marsh lands (adjacent to the project area)

Table 4. Place Names of Kapa'a

Name	Meaning	Type	Location
'Apōpō	tomorrow	'ili, pali	LCA 8343
Awāwaloa	long valley, gulch, ravine	'ili, pali	LCA 8837
Hāhānui/ Kahanui		'ili, pali, stream	LCA 3599 and 3554
Ho'opi'i		falls	
Hoa		pali	LCA 3638:1
Humuulu		pu'u, pu'u	
Kahana	Lit. cutting	'ili	LCA 3971, 3243
Kalolo/ Kaloko		kauhale, kula	LCA 3638:2, 8843:2
			Coastal swamp of Kapa'a and Waipouli
Kaloloku		swamp	
Kamahuna		pu'u	
Kamakīwa	the mother-of-pearl eyes	surf	
Kamali'i	children	ridge	
Kapa'a	the solid, or the closing	'ahupua'a, town, stream	
Kapahi	the knife	village, stream	
Kapeku	the kick	lo'i	LCA 8837:1
Kaulolo		kauhale, kula	LCA 3638:2, 8843:2
Keiwa	the ninth	ridge, boundary point	
Ko'alua	prob. two coral heads	surf	
Kolehaka		pali	3971, 3243
Kolouna		pali	8247
Kuahiahi/ Kaahiahi/ Keahiahi		rocky headland;	location of first Kapa'a School (1883-1908); location of Kuahiahi Heiau (HEN I:216), place where the legendary figure Paka'a, keeper of the wind gourd of La'amaomoa, grew up and fished (Wichman 1998:85).
Kupanihi		'ili, kauhale, fishpond	
Lauii		pu'u	
Mā'elele	numb	'ili	
Mailehuna		pu'u, heiau,	Hill where Kapaa School is now located; name of a former heiau on this location (HEN:214)

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i

TMK 44-5-015:036

22

Name	Meaning	Type	Location
Makaleha	eyes looking about as in wonder and admiration	stream, boundary point	corner of Kapaa, Kealia, and Kalihiwai; stream
Makanalimu	gift of seaweed	place (district or village?), heiau	old name for Kawaihau
Mākea	fallow land; a variety of kalo, a variety of kava	'aiwai	LCA 3599, 3554
Moalepe/ Maolepi	chicken with comb	'ili, stream	LCA 8247
Mō'ikeha		canal	Named after the chief Mō'ikeha
Naele	swamp bog	pali	LCA 8837:2
Paikahawai		'ili ku	An 'ili awarded and then returned by Ioane 'I'i and retained by the aupuni (government) at the Māhele
Po'o	head	surf	
Pōhāki'iki'i	tilted stone	pu'u	
Pāhakupili	joined stone	pu'u, boundary point	
Pu'u 'Eke'eke		pali	LCA 8837:1
Pu'u Lau'i'i	native fern (Doodia spp)		LCA 8837:1
Pueo	owl	pali	LCA 8843:1
Puhi	blow, or eel, etc.	kauhale, pond	LCA 3599, 3554
Puohomaka		pali	LCA 8837:2
Pupukai		pali	LCA 3638:1
Ulakui		'ili ku	LCA 8837:1, 2, 4
Waikaea		ditch	
Wailē'ia	abundant water	rock, boundary point	
Waimahanalua		stream	Located near the old Makee Landing near the Mō'ikea Canal

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i

TMK 44-5-015:036

23

notions of land tenure dominated by the chiefly hierarchy” (Donohugh 2001:88). In 1837, a very similar lease with similar terms was granted to Wilama Ferani, a merchant and U.S. citizen based in Honolulu (Hawai'i State Archives, Interior Dept., Letters, Aug. 1837). The lease was granted by Kauhikaouli for the lands of Kapa'a, Keālia, and Waipouli for twenty years for the following purpose:

... for the cultivation of sugar cane and anything else that may grow on said land, with all of the right for some place to graze animals, and the forest land above to the top of the mountains and the people who are living on said lands, it is to them whether they stay or not, and if they stay, it shall be as follows: They may cultivate the land according to the instructions of Wilama Ferani and his heirs and those he may designate under him . . . [Hawai'i State Archives, Interior Dept., Letters, Aug. 1837].

Unlike Ladd & Company, which eventually became the Kōloa Sugar Company, there is no further reference to Wilama Ferani and his lease for lands in Kapa'a, Keālia and Waipouli. In a brief search for information on the Honolulu merchant, Wilama Ferani, nothing was found. It is thought that perhaps Wilama Ferani may be another name for William French, a well known Honolulu merchant who is documented as having experimented with grinding sugar cane in Waimea, Kaua'i at about the same time the 1837 lease for lands in Kapa'a, Keālia and Waipouli was signed (Joesting 1984: 152).

In 1849, a son of a Wai'oli missionary, William P. Alexander, recorded a trip he took around Kaua'i. Although, he focuses on the larger mission settlements like Kōloa and Hanalei, he does mention Kapa'a.

A few miles from Wailua, near Kapa'a we passed the wreck of a schooner on the beach, which once belonged to Capt. Bernard. It was driven in a gale over the reef, and up on the beach, where it now lies. A few miles further we arrived at Keālia. We had some difficulty crossing the river at this place, owing to the restiveness of our horses. The country here near the shore was rather uninviting, except the valley which always contained streams of water [Alexander 1991:123].

In later years, the notorious Kapa'a reef was to become the location of many shipwrecks, particularly once a landing was built there in the 1880s.

In 1876, Captain James McKee and his son-in-law, Col. Z.S. Spaulding, bought the Ernest Krull cattle ranch for the sum of \$30,000.00. The first large scale agricultural enterprise in Kapa'a began on this property in 1877 by the two men and by the society, the Hui Kawaihau (Dole 1916: 8). The Hui Kawaihau was originally a choral society begun in Honolulu whose membership consisted of many prominent people, both Hawaiian and *haole* (non-Hawaiian). It was Kalākaua's thought that the Hui members could join forces with Makee, who had previous sugar plantation experience on Maui, to establish a successful sugar corporation on the east side of Kaua'i. Captain Makee built a mill in Kapa'a and agreed to grind cane grown by Hui members. Kalākaua declared the land between Wailua and Moloa'a, the Kawaihau District, a fifth district and for four years the Hui attempted to grow sugar cane at Kapahi, on the plateau lands above Kapa'a. After a fire destroyed almost one half of the Hui's second crop of cane and the untimely death of one of their principal advocates, Captain James Makee, the Hui began to

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disperse; property and leasehold rights passed on to Makee's son-in-law and the new Makee Plantation owner, Colonel Z.S. Spaulding (Dole 1916:14).

As part of the infrastructure of the new plantation, a sugar mill was erected, and Makee Landing was built in Kapa'a during the early years of the Makee Sugar Plantation. Following Captain Makee's death, Colonel Spaulding took control of the Plantation, and in 1885, he moved the mill to Keālia (Cook 1999: 51). The deteriorating stone smokestack and landing were still there well into the 1900s (Damon 1931). Condé and Best (1973:180) suggest that railroad construction for the Makee Plantation started just prior to the mid 1890s. There is one reference to a railroad line leading from the Kapa'a landing to Keālia in 1891. During Queen Liliuokalani's visit to Kaua'i in the summer of 1891, the royal party was treated to music by a band, probably shipped in from O'ahu. "The band came by ship to Kapa'a and then by train to Keālia" (Joesting 1984:252). This railroad line is depicted on a 1914 map (see Figure 4), which shows the line heading south from Keālia Mill and splitting near the present Coral Reef Hotel, one finger going to the old Kapa'a Landing (Makee Landing). The other line headed *mauka*, crossing the present Mō'ikeha Canal, traveling southwest up Lehua Street and through what is now goat pasture, along a plateau and into the *mauka* area behind Kapa'a swamplands. This railroad line was part of a twenty-mile network of plantation railroad with some portable track; it ran through a portion of Keālia Valley and into the *mauka* regions of the plateau lands north of Keālia (Condé and Best 1973:180).

By the late 1800s, Makee Plantation was a thriving business, with more than one thousand workers employed (Cook 1999:51). Hundreds of Portuguese and Japanese immigrants found work on Makee Plantation, and the new influx of immigrants required more infrastructure. In 1883, a lease for a school lot was signed between Makee Sugar Company and the Board of Education (Kapa'a School 1982:9). Stipulations found in the Portuguese immigrant contracts with Makee Sugar Company stated that "children shall be properly instructed in the public schools" (*Garden Island*, April 1, 1983). The original Kapa'a School was constructed in 1883 on a rocky point adjacent to the Makee Sugar Company railroad. Traditionally, this point was known as Kaahiahi (Kapa'a School 1982:10). In 1908, Kapa'a School was moved to its present site directly *mauka* and up the hill at Mailehune.

As in much of the rest of Hawai'i, the Chinese rice farmers began cultivating the lowlands of Kapa'a with increasing success in the latter half of the 1800s. Several Hawaiian *kuleana* owners leased or sold their parcels *mauka* of the swamp land to Chinese rice cultivators. One 1914 map (see Figure 4) indicates that while the current project area was still within or adjacent to marsh land, the areas just inland of this marsh were used to grown rice. A second 1914 map (Figure 11) labels the project area as "Rice & Kula lot." Other Chinese rice cultivators appealed to the government for swamplands, first leasing and later buying. As a result of the growing rice and sugar industries, the economic activity displaced the houses on the *makai* side of the marsh for increasing commercial and residential development (Lai 1985:148-161).

Narrow wagon roads gave way to macadamized roads in the early part of the twentieth century. This new road was called the Kaua'i Belt Road, and parts of it are thought to have followed the "Old Government Road" (Cook 1999). In Kapa'a, the present day Kūhiō Highway probably follows the same route as the original Government Road and subsequent Kaua'i Belt

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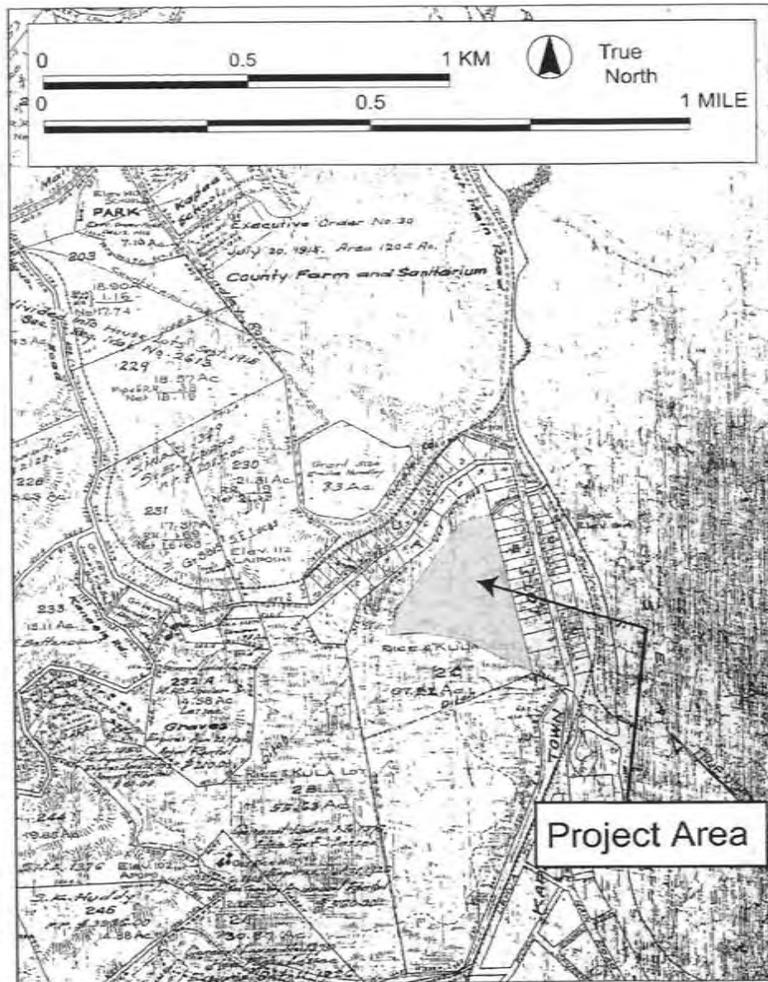


Figure 11. Portion of 1914 map by James S. Mann of Kapa'a Homesteads, showing location of project area in "Rice & Kula Lot"

Road. The location of the *kuleana* awards in Kapa'a indicates that the majority of the houselots were situated along the Government Road. LCA 3243 names a "road" as one of its boundaries.

### 3.6 Twentieth Century History of Kapa'a (1900-Present)

In the early 1900s, government lands were auctioned off as town lots in Kapa'a to help with the burgeoning plantation population. One *kama'āina* (old-time resident) mentioned that in the 1930s and 1940s, the area north of Mō'ikeha Canal in Kapa'a was mostly settled by Portuguese families (Bushnell et al. 2002). The Japanese were also very prominent in the 1920s and 1930s, largely replacing the Chinese merchants of the turn of the century in the Kapa'a business sector (Bushnell et al. 2002). The Board of Health, Territory of Hawaii ran a dispensary in Kapa'a at the *makai* edge of Niu Street near the Kapa'a Beach Park parking lot, starting in 1926. The lot is presently vacant. A fire station was once located in the area now occupied by the Coral Reef Hotel, and a Courthouse and jail cell once stood at the location of the present Kapa'a Neighborhood Center. It is not known when these structures were removed or abandoned.

In 1913, Hawaiian Canneries opened in Kapa'a at the site now occupied by Pono Kai Resort (Cook 1999:56). Through the Hawaiian Organic Act, Hawaiian Canneries Company, Limited purchased the land they were leasing, approximately 8.75 acres, in 1923 (Bureau of Land Conveyances, Grant 8248). A 1923 sketch of the cannery shows only four structures, one very large structure assumed to be the actual cannery and three small structures *makai* of the cannery. By 1956, 1.5 million cases of pineapple were being packed. By 1960, 3400 acres were in pineapple and there were 250 full time employees and 1000 seasonal employees for the Kapa'a Cannery (*Honolulu Advertiser*, March 20, 1960). In 1962, Hawaiian Canneries went out of business due to competition from canneries in third world countries.

The Ahukini Terminal & Railway Company was formed in 1920 to establish a railroad to connect Anahola, Keālia, Kapa'a to Ahukini Landing and "provide relatively cheap freight rates for the carriage of plantation sugar to a terminal outlet" (Condé and Best 1973:185). This company was responsible for extending the railroad line from Makee Landing, which was no longer in use, to Ahukini Landing, and for constructing the original Waika'e Railroad Bridge and the Mō'ikeha Makai Railroad Bridge.

In 1934, the Lihue Plantation Company absorbed the Ahukini Terminal & Railway Company and Makee Sugar Company (Condé and Best 1973:167). The railway and rolling stock formerly owned by Makee Sugar Company became the Makee Division of the Lihue Plantation. At this time, besides hauling sugar cane, the railroad was also used to haul plantation freight, including "fertilizer, etc . . . canned pineapple from Hawaiian Canneries to Ahukini and Nawiliwili, pineapple refuse from Hawaiian Canneries to a dump near Anahola and fuel oil from Ahukini to Hawaiian Canneries Co., Ltd." (Hawaiian Territorial Planning Board 1940:11). Former plantation workers and *kama'āina* growing up in Kapa'a remember when the cannery would send their waste to the pineapple dump, a concrete pier just north of Kumukumu Stream by railroad. The structure is built over the water where the rail cars would dump the pineapple waste. The current would carry the waste to Kapa'a, where the waste would attract fish and sharks (Bushnell et al. 2002).

Lihue Plantation was the last plantation in Hawai'i to convert from railroad transport to trucking. "By 1957 the company was salvaging a part of their plantation railroad, which was

being supplanted by roads laid out for the most part on or close to the old rail bed" (Condé and Best 1973:167). By 1959, the plantation had completely converted over to trucking.

Severe floods in Kapa'a in 1940 led to the dredging and construction of the Waika'ea and Mō'iheha Canals sometime in the 1940s (Hawaiian Territorial Planning Board 1940:7). Although the Waika'ea Canal, bordering the Kapa'a Pineapple Cannery, had been proposed as early as 1923, nothing was constructed until after the floods (Bureau of Land Conveyances, Grant 8248). A Master Plan for Kapa'a, published in 1940, asked the Territorial Legislature for funds to be set aside for the completion of a drainage canal and for filling *makai* and *mauka* of the canal (Hawaiian Territorial Planning Board 1940:7). In 1955, reports came out on the dredging for coral proposed for the reef fronting Kapa'a Beach Park (*Garden Island Newspaper*, September 21, 1955). The coral was to be used for building plantation roads. This dredging was later blamed for accelerated erosion along Kapa'a Beach (*Garden Island Newspaper*, October 30, 1963). Today, there are several sea walls along the Kapa'a Beach Park to check erosion. Old time residents claim the sandy beach in Kapa'a was once much more extensive than it is now (Bushnell et al. 2002).

Residents of Keālia Town slowly dispersed after the incorporation of Makee Sugar Company into Lihue Plantation in the 1930s. Many of the plantation workers bought property of their own and moved out of plantation camps. The plantation camps that bordered Kūhiō Highway were disbanded in the 1980s. The Lihue Plantation began to phase out in the last part of the twentieth century. Kapa'a Town suffered after the closing of the Kapa'a Cannery, however the growing tourist industry helped to ease the economic effects of the cannery's closing.

## Section 4 Previous Archaeological Research

### 4.1 Archaeological Studies and Sites in Kapa'a Ahupua'a

The following maps and tables present the archaeological research and historic properties identified in Kapa'a Ahupua'a. Table 5 provides a list of archaeological research conducted within Kapa'a Ahupua'a, including columns for source, location, nature of study, and findings; Figure 12 shows the location of these project. Table 6, a list of known historic properties within the *ahupua'a*, is comprised of columns for state site numbers, site type, location, and reference. The locations of identified sites within Kapa'a Ahupua'a are shown in Figure 12.

#### 4.1.1 Pattern of Archaeological Sites in Kapa'a

The pattern of archaeological studies in Kapa'a Ahupua'a is somewhat skewed, with a dozen projects in urban Kapa'a Town and very little work along the coast. Major archaeological sites have been found in the Kapa'a Town area, including extensive cultural layers with burials and other cultural features underlying Kūhiō Highway near All Saints Gym and near the older part of Kapa'a Town between Waika'ea Canal and Kapa'a Beach Park, *makai* of Kūhiō Highway (Hammatt 1991; Kawachi 1994; Creed et al. 1995; Jourdan 1995; Callis 2000). The *mauka-makai* extent of these cultural layers has not been clearly defined. These extensive cultural deposits associated with pre-historic and early historic habitation are known to exist in a relatively narrow sand berm that makes up the physiogeography of Kapa'a.

The areas *mauka* of Kapa'a Town are marshy, although much of it has been filled-in within recent decades. The five *kuleana* awarded during the Māhele are located adjacent to the present highway. The more *mauka* studies (Spear 1992; Chaffee et al. 1994a, 1994b; Hammatt, Ida & Chiogioji 1994, 1996; McMahon 1996) are thought to be located towards the *mauka* fringe of the sand berm, approaching more marshy conditions and have generally reported no significant or minimal findings. Less than 1.5 km to the south of Waika'ea Canal is another extensive subsurface cultural deposit that is associated with a pre-contact fishing encampment located at the southern boundary of Waipouli adjacent to Uhalekawa'a Stream (Waipouli Stream) and the ocean. (Hammatt et al. 2000).

#### 4.1.2 Archaeological Studies on Kapa'a Settlement Pattern

The first archaeologist to survey Kaua'i, William Bennett in 1928-1929, listed only one site for the entire ahupua'a:

Site 110. Taro terraces and bowl. Back of Kapa homesteads.

In the foothills of the mountains are many little valleys which contain taro terraces. Single rows of stone mark the divisions with some 2-foot terraces. Under a large mango trees was found a bowl [Bennett 1931:72].

Bennett (1931:73) also refers to "taro terraces and house sites" at Kapahi, approximately 5 miles from the shoreline.

Table 5. Previous Archaeological Studies in Kapa'a

Source	Location	Nature of Study	Findings
Bennett 1931	Island wide	Archaeological Reconnaissance	Identifies 2 sites: Site 110, taro terraces and bowl; and, Site 111, a large simple dirt Hawaiian ditch
Handy & Handy 1972	Archipelago-wide	Native Planter study	Discusses "highly developed irrigation system"
Ching 1976	Just south of the Waika'ea Drainage Canal	Archaeological Reconnaissance	No significant findings
Hammatt 1981	Upland Kapa'a (TMK 4-4-6-013:001)	Archaeological Reconnaissance	No significant findings
Tomonari-Tuggle 1984	Mt. Wekiu- upland Kapa'a (TMK 4-4-6-001:001)	Archaeological Reconnaissance	
Hammatt 1986	Upper reaches of the Makaleha Stream valley (4-4-6-001:001)	Archaeological Reconnaissance	No significant findings
Kam 1987	Makaleha Stream (4-4-6-001:001)	Field Inspection	
Hammatt 1991	Along Kūhiō Highway	Subsurface Testing	Identifies two sub-surface cultural layer sites
Kikuchi & Remoaldo 1992	Around Kapa'a Town	Cemeteries of Kaua'i	Identifies six cemeteries
Spear 1992	South side Waika'ea Canal, <i>mauka</i> of Kūhiō Highway. (TMK: 4-4-5-005:; -004:; -009:;)	Monitoring Report	Designated subsurface site 50-30-08-547
Chaffee et al. 1994a	A houselot near the corner of Kukui and Ulu Streets in <i>mauka</i> Kapa'a Town. (TMK: 4-4-5-009:010)	Archaeological Inventory Survey	No significant findings
Chaffee et al. 1994b	Māmane Street Kapa'a Town (TMK: 4-4-5-009:051)	Archaeological Inventory Survey	No significant findings
Hammatt, Ida & Chiogioji 1994a	Proposed bypass routes <i>mauka</i> of Kapa'a Town	Archaeological Assessment	No new field work, reviews literature
Hammatt, Ida & Folk 1994	South side Waika'ea Canal, <i>mauka</i> of Kūhiō Highway (TMK: 4-4-5-005:006)	Archaeological Inventory Survey	Weak cultural layer designated site 50-30-08-748

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i

30

TMK 44-5-015:036

Source	Location	Nature of Study	Findings
Kawachi 1994	Inia (Jasper) Street (TMK: 4-4-5-008:033)	Burial Report	Designates Site 50-30-08-871
McMahon 1994	"behind the armory in Kapa'a near the godstones." The location is uncertain & "Buzz's near the Coconut Marketplace"	Documents second hand report of burials in two locations	Bones in 3 places reported from behind the armory, 16 bodies reported from the Buzz's restaurant. No site numbers assigned
Pietrusewsky et al. 1994	Kapa'a Sewer Line	Osteological Study	
Creed et al. 1995	Kapa'a Sewerline project, Kūhiō Highway, south and central Kapa'a Town	Archaeological Monitoring Report	Documents cultural layer of site -1848 and (an enlarged) site -1849 & recovery of thirty burials at sites -867, -868, -871, & -1894
Jourdane 1995	1382-A Inia Street, <i>makai</i> of Kūhiō Highway, central Kapa'a Town (TMK: 4-5-0-110:008)	Burial Report	Site 626
Hammatt et al. 1996	Kūhiō Highway Bypass, Wailua, Olohena, Waipouli, & Kapaa	Archaeological Inventory Survey	Four test trenches were excavated inland of Kapa'a Town
McMahon 1996	South side Waika'ea Canal, <i>mauka</i> of Kūhiō Highway (TMK: 4-4-5-005:008)	Archaeological Inventory Survey	No significant cultural material
Borthwick & Hammatt 1999	Kapa'a Seventh-Day Adventist Church at 1132 Kūhiō Highway (TMK: 4-5-003:019)	Archaeological Monitoring & Burial Treatment Plan	Monitoring was indicated as this parcel lay within the designated Site 50-30-08-1848.
Bushnell & Hammatt 2000	Seventh-Day Adventist Church, <i>makai</i> of Kūhiō Highway, south of the Waika'ea Canal (TMK: 4-5-003:019)	Archaeological Monitoring Report	Minimal findings (one piece of worked bone)
Calis 2000	Kapa'a Beach Park	Human Burial Removal and Archaeological Monitoring Report	Human Remains
McIntosh & Cleghom 2000	398-acre parcel in Kapa'a (TMK: 4-4-3-003:005)	Inventory Survey	

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i

31

TMK 44-5-015:036



Table 6. Historic Properties in Kapa'a Ahupua'a

Site #	Site Type/ Name (if any)	Location	Comments	Reference
50-30-08-				
B001	Historic Cemetery	South of bend of Kapa'a Stream, a kilometer <i>maka</i> from Kāhō Highway	Appears to be a discrete historic cemetery	Kikuchi and Remoaldo 1992
B002	Historic Cemetery	Just <i>maka</i> from Kāhō Highway, south of Kapa'a Stream	Appears to be a discrete historic cemetery	Kikuchi and Remoaldo 1992
B003	Kapa'a Public Cemetery	South of Kanaele Road, approximately one kilometer inland of Kāhō Highway	Appears to be a discrete historic cemetery	Kanaele Road, Kikuchi and Remoaldo 1992
B004	Historic Cemetery	North of Apopo Road, approximately one kilometer inland of Kāhō Highway	Appears to be a discrete historic cemetery	Kikuchi and Remoaldo 1992
B013	Historic Cemetery	Just <i>maka</i> from Kāhō Highway, north of the Waikā'ea Canal	Appears to be a discrete historic cemetery	Kikuchi and Remoaldo 1992
B014	All Saints Episcopal Church Cemetery	Just <i>maka</i> from Kāhō Highway, south of the Waikā'ea Canal	Appears to be a discrete historic cemetery	Kikuchi and Remoaldo 1992:62-65
-547	Sub-surface features, including a firepit and a possible house foundation	South of bend of Waikā'ea Canal, <i>maka</i> of Kāhō Highway	Archaeological monitoring in the vicinity is recommended	Speare 1992:3
-626	Burial	Inia Street, <i>maka</i> of Kāhō Highway, central Kapa'a	Consultation and monitoring in vicinity indicated	Jourdane 1995
-748	Minimal findings, a weak cultural layer (buried A-horizon)	South of the bend of the Waikā'ea Canal, <i>maka</i> of Kāhō Highway	Considered no longer significant within project area	Hammatt, Ida & Folk 1994
-867	1 set of human remains	Kukui Street, just <i>maka</i> of Kāhō Highway, Kapa'a Town	Consultation and monitoring in vicinity indicated	Creed et al. 1995:50

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i

34

TMK 44-5-015:06

Cultural Surveys/Hawaii Job Code: KAPVA 1

Previous Archaeological Research

Site #	Site Type/ Name (if any)	Location	Comments	Reference
50-30-08-				
-868	1 set of human remains	Lehua Street <i>maka</i> of Kāhō Highway, Kapa'a Town	Consultation and monitoring in vicinity indicated	Creed et al. 1995:50
-871	13 sets of human remains (Creed et al. 1995:50)	Inia Street, <i>maka</i> of Kāhō Highway	Consultation and monitoring in vicinity indicated	Kawachi 1994, Creed et al. 1995:50
-1848	Cultural layer & sub	Along Kāhō Highway between Wana Road and the Waikā'ea Drainage Canal	Archaeological monitoring in the vicinity is recommended	Hammatt 1991, Creed et al. 1995, Dega & Powell 2003
-1849	Cultural layer & sub-surface features; Creed et al. 1995:53 expands boundaries to incl. burial sites, -626, -867, -868 - 871, and -1894	Along Kāhō Highway between Inia Street and Kauwila Street extending to the coast	Consultation and monitoring in vicinity indicated	Hammatt 1991, Creed et al. 1995, Dega & Powell 2003
-1894	11 sets of human remains	Ulu Street, just N of Kāhō Highway, Kapa'a Town	Consultation and monitoring in vicinity indicated	Creed et al. 1995:50

Inventory Survey for an 11.5-acre parcel in Kapa'a, Kaua'i

35

TMK 44-5-015:06

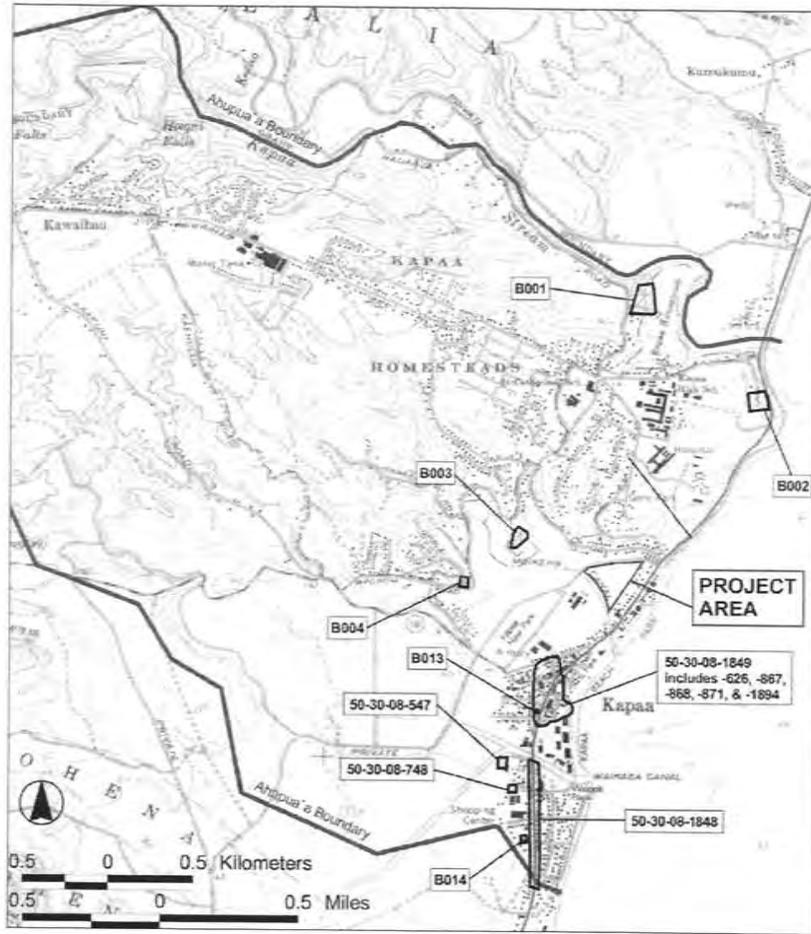


Figure 13. US Geological Survey map, Kapa'a Quad, showing previously documented archaeological sites in Kapa'a.

## 4.2 Background Summary and Predictive Model

### 4.2.1 Archaeological Projects In Kapa'a Concerned with Settlement Patterns

In the projects conducted in the inland sections of Kapa'a, Hammatt did not observe any archaeological sites during his reconnaissance of 52.56 acres of mostly *kula* land in upland Kapa'a (Hammatt 1981), nor were there any terraces or other sites apparent during a 1986 reconnaissance of the upper reaches of the Makaleha stream valley (Hammatt 1986).

Cultural Surveys Hawai'i excavated test trenches and sediment cores for the Kūhiō Highway Bypass project (Hammatt et al. 1997). Three trenches were excavated in the Kapa'a Marsh area near Waia'kea Canal and one was excavated in Kapa'a just south of the Mō'ikeha Canal (and thus near the current study area). In the Mō'ikeha trench, the marsh soil was represented by Stratum II, a highly organic very dark gray clay loam. One soil sample yielded a radiocarbon date of A.D. 1660 to 1950. No burials or artifacts were found associated with this stratum.

Surveys of coastal areas have been more productive. In 1991 during subsurface testing for the proposed Kapa'a sewer line, Hammatt (1991) obtained radiocarbon dates from a buried habitation deposit along Inia Street, which parallels the beach makai of Kūhiō Highway. This cultural deposit was radiocarbon dated to A.D. 1435 to 1665. Archaeological work on the Kapa'a Sewer line (Creed et al. 1995) encountered 26 burials associated with habitation locations, which ultimately totaled 30 individuals in the sewer line corridor, within the sand deposits underlying Kapa'a Town and Kūhiō Highway to the south.

In spite of urban development, large areas of undisturbed subsurface sediments remain under the streets and, presumably within the blocks (State site areas, site 50-30-08-1848) south of Kūhiō Highway and site 50-30-08-1849) and are associated with the habitation areas. The mauka east and west boundaries of the latter site can now be extended in Kapa'a Town to include a continuous stretch from 'Ōhia Street eastward to Lehua Street. These sites are expressed as preserved pre-contact A-horizon/cultural layers with artifactual and midden material, charcoal, and soil pits. On 'Inia Street, small deep pits probably represent postholes of pole and thatch dwellings. Five radiocarbon dates were recovered, three from the cultural layer of Site -1849, one from a burial pit on Ulu street, and one from a pit feature on the corner of Lehua and Niu Streets. These indicate a time spread from A.D. 1165 to 1950. Two of these dates are well within the pre-contact period: one from A.D. 1435 to 1665 and the other A.D. 1165 to 1400. Dega and Powell (2003:56) found additional features associated with previously identified Sites -1848 and -1849, one was a firepit dated to A.D. 1650-1810. All of these features were found in a segment that extended from Waipouli north to Olohena Street in Kapa'a. In a segment from Olohena Street to the Keālia border, Dega and Powell did not find any features or burials were found. The current study area would be adjacent (north of Olohena Street) to this unproductive segment.

The cultural layer, usually identified as Stratum II, was observed intact through large stretches of excavations under streets. Stratum II survives as a buried A-horizon/cultural layer with variable amounts of midden, charcoal, and artifactual material. The lower portion of this stratum is generally prehistoric in age with mixing of historic materials in the upper portions of the stratum. It represents continuous occupation on a stable beach sand surface from as early as A.D. 1165. Major erosional or depositional events to interrupt this stability were not apparent in the

stratigraphic profiles, such as storm surf, tsunami, flood events, etc., In almost all cases, burial pits could be traced to a origin somewhere in the Stratum II cultural layers. However, on Inia Street three burial occurred in pits which were sealed by sterile sand underling Stratum II and were probably slightly older. The five LCAs within Kapa'a Town are all right next to the present highway. Perhaps, because of the narrowness of this sandy strip and limited land available for habitation, the human burials and habitation areas (cultural layers) are not separate entities.

Materials from the historic development of Kapa'a town were seen in the trash pits from various localities in the present commercial district. Bottles and other historic materials were recovered associated with the clearing of debris after the well-known Dec. 22, 1923 Kapa'a town fire, which affected more than 25 buildings along Kukui, Lehua, Hululii and Niu Streets.

#### 4.2.2 Summary of Kapa'a Settlement Pattern and Predictive Model

The association of the *ahupua'a* of Kapa'a with legendary historical figures such as Mō'ikeha implies that the area was settled previous to Mō'ikeha's time (early fourteenth century), although the extent of this settlement is not known. Handy (1940) counts Kapa'a as one of the major settlement areas of Kaua'i in pre-contact times, and both Vancouver (1798) and Wilkes (1840) were impressed with this "most fertile and pleasant district" with its fields of "sugarcane, taro" and other crops. Through archaeology and other sources, it is known that at one time agricultural and domestic activities extended into the far *mauka* areas of Kapa'a, but these were totally abandoned by the mid-nineteenth century.

The LCA pattern in Kapa'a (as indicated by six awards) shows taro *lo'i* and *kula* on the rim of the swamplands and extending partly into watered valleys. Marshlands without known LCAs may have had *lo'i* along the edges. The six claimants had shoreline house lots *makai* of the swamp. We assume that permanent settlement existed in association with *mauka* agricultural lands in the prehistoric period, but this is not reflected in the LCA testimonies. The *mauka* settlements were probably abandoned before the nineteenth century. Permanent settlement occurred along the coast throughout late prehistory, as indicated by the presence of extensive and thick habitation deposits in the shore and backshore areas of Kapa'a, especially along Inia Street and Kūhiō Highway (Hammatt 1991). However, in the early twentieth century, the entire area behind Kapa'a Town was *rice* and *kula* lots. When flood control measures were instituted in the 1960s, these marsh lands, used previously for taro and then taken over by the rice farmers, were drained and became cane and pasture.

The current project area is adjacent, and perhaps overlapped, the large marsh area pictured on late nineteenth century and early twentieth century maps. It is unlikely, therefore, that this area was used for pre-Contact habitation or for burial, but the edges of the marshes could have been used to grow taro in *lo'i* and the area would have been used to gather other resources, such as the famous *Kalukalu* sedge grass, used for weaving mats. The project area is labeled as Fill Lands on soil maps. Subsurface soil strata representing wetland deposits may still be intact in portions of the project area. In a recent monitoring report (Dega and Powell 2003), the segment of Kapa'a south of the current project area to the border of Waipouli contained cultural strata and numerous burials, but the segment along Kūhiō Highway adjacent to the current project area that extended north to the border of Keālia did not contain any archaeological remains.

In the historic period, this parcel was surrounded by railroad tracks for the McKee Sugar plantation, with one spur ending at McKee Landing, located across Kūhiō Highway, directly *makai* of the project area. The study parcel was used as a rice field and *kula* in the early historic period, and was probably later planted in sugar cane. There may be trashpits associated with this sugar cane plantation use, and trash related to the nearby Kapa'a town.

## Section 5 Results of Fieldwork

This section presents the findings of the fieldwork conducted for this archaeological inventory survey.

### 5.1 Survey Findings

No historic properties were identified during the pedestrian survey of the project area.

### 5.2 Test Excavations Findings

The eight trenches that were excavated were uniform across the project area. Excavations confirmed what the background research presented above indicated. The project area is covered by at least 1.0 m of imported clay fill that overlies natural marsh/lagoonal sand sediments. No Jaucas Beach Sand, which often contains cultural layers and human burials, was observed within the project area.

The locations of the 8 backhoe trenches can be seen in Figure 15.

#### 5.2.1 Trench 1

Trench 1 was 5.0 m long, 0.80 m wide, and 1.7 m deep (Figure 14).

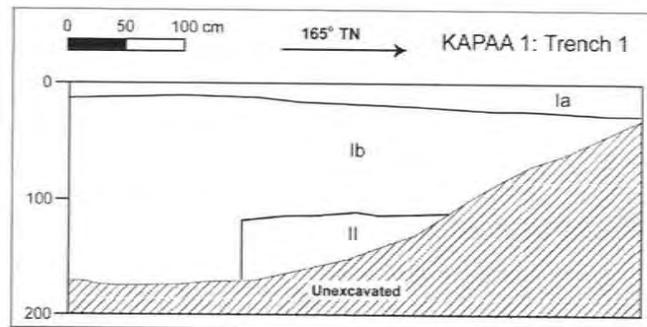


Figure 14. Stratigraphic profile of the east wall of Trench 1

Stratum Ia: 0 - 25 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.

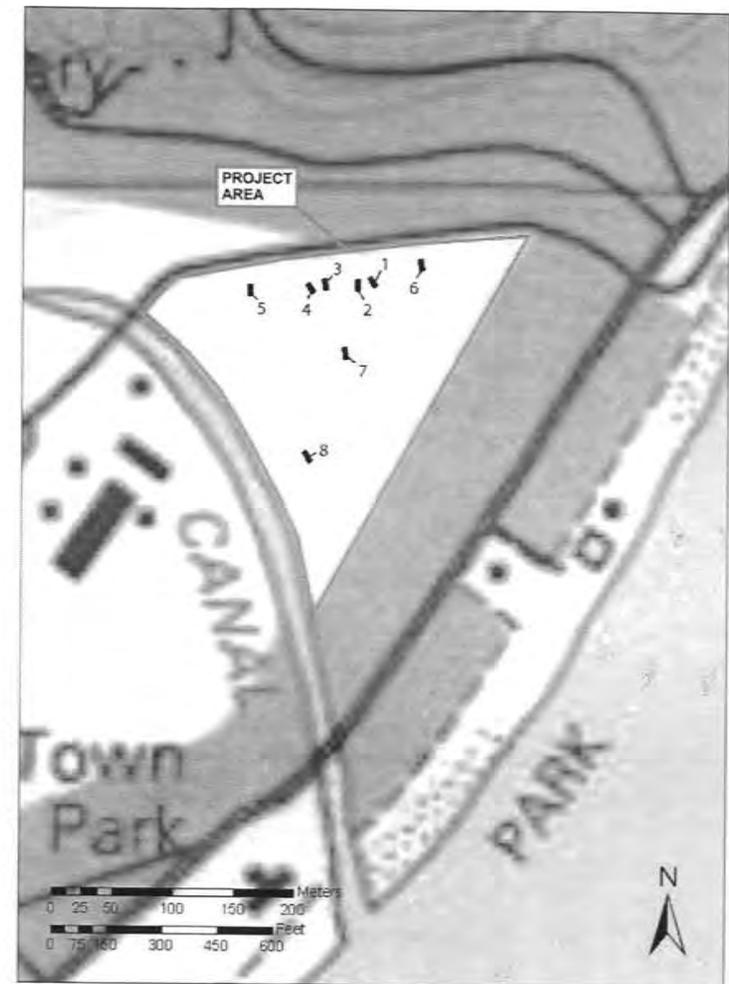


Figure 15. A portion of the 1996 Kapa'a USGS 7.5-minute topographic quadrangle showing the project area and the location of the eight backhoe trenches

Stratum Ib: 25 - 115/170 cmbs	Fill Horizon; 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; Massive clay layer.
Stratum II: 115 - 170 cmbs	A Horizon; 10 YR 3/2, very dark grayish brown; clay; structureless, sticky wet consistency; very plastic; no cementation; Original marsh land deposit where clay has filtered down into this layer from above.

### 5.2.2 Trench 2

Trench 2 was 5.5 m long, 0.80 m wide, and 1.3 m deep (Figure 16).

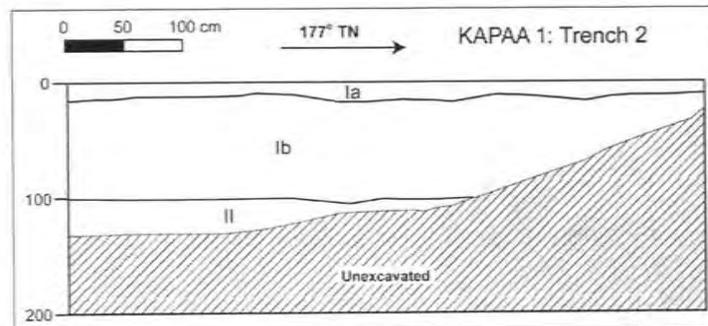


Figure 16. Stratigraphic profile of the east wall of Trench 2

Stratum Ia: 0 - 15 cmbs	Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.
Stratum Ib: 15 - 100 cmbs	Fill Horizon; 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; Massive clay layer.

Stratum II: 100 - 130 cmbs	A Horizon; 10 YR 3/2, very dark grayish brown; loamy clay; structureless, very sticky wet consistency; plastic; no cementation; Natural marsh sediments clay filtering down into this layer from above.
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### 5.2.3 Trench 3

Trench 3 is 6.0 m long, 0.8 m wide, and 1.8 m deep (Figure 17). An overview photograph of Trench 3 is included below (Figure 18). Two pockets of sand were found within this trench. The sand was angular and not homogenous in size. This indicates that the sand is not natural beach sand.

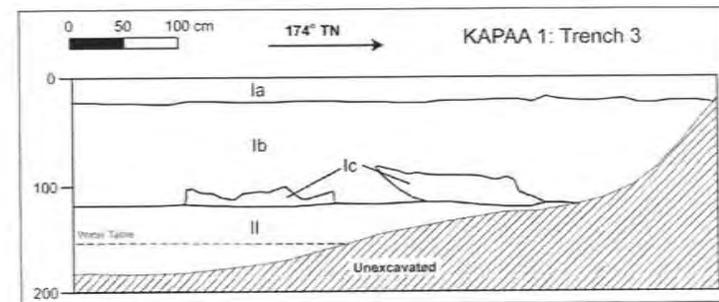


Figure 17. Stratigraphic profile of the east wall of Trench 3

Stratum Ia: 0 - 20 cmbs	Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.
Stratum Ib: 20 - 115 cmbs	Fill Horizon; 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; Massive clay layer.
Stratum Ic: 80 - 115 cmbs	Fill Horizon; 10 YR 8/4, Very pale brown; coarse sand; structureless; loose dry consistency, non-plastic; no cementation, abrupt wavy lower boundary. Portions of the sand have been oxidized to a 10 YR 5/8 yellowish brown. The sand is angular and not homogenous.

Stratum II: 115 - 180 cmbs

A Horizon; 10 YR 3/2, very dark grayish brown; loamy clay; structureless, very sticky wet consistency; plastic; no cementation; lower boundary; Natural marsh sediments where clay has filtered down into this layer from above.



Figure 18. Photograph showing an overview of Trench 3, view to NNW

#### 5.2.4 Trench 4

Trench 4 is 5.0 m long, 0.8 m wide, and 1.55 m deep (Figure 19). A pocket of sand was found within this trench. The sand was angular and not homogenous in size. This indicates that the sand is not natural beach sand.

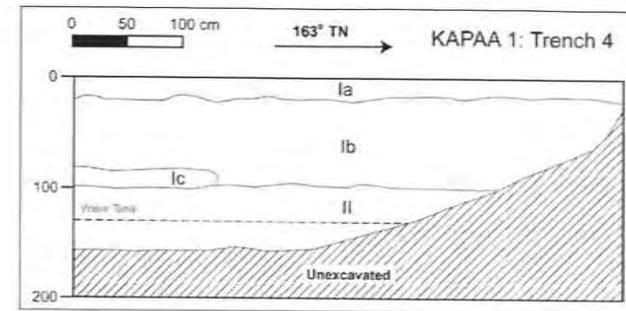


Figure 19. Stratigraphic profile of the east wall of Trench 4

Stratum Ia: 0 - 15 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.

Stratum Ib: 15 - 95 cmbs

Fill Horizon, 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; Massive clay layer.

Stratum Ic: 80 - 95 cmbs

Fill Horizon; 10 YR 8/4, Very pale brown; coarse sand; structureless; loose dry consistency, non-plastic, no cementation, abrupt wavy lower boundary. Portions of the sand have been oxidized to a 10 YR 5/8 yellowish brown. The sand is angular and not homogenous.

Stratum II: 95 - 155 cmbs

A Horizon; 10 YR 3/2, very dark grayish brown; loamy clay; structureless, very sticky wet consistency; plastic; no cementation; Natural marsh sediments where clay has filtered down into this layer from above.

### 5.2.5 Trench 5

Trench 5 is 7.0 m long, 0.8 m wide, and 2.2 m deep (Figure 20).

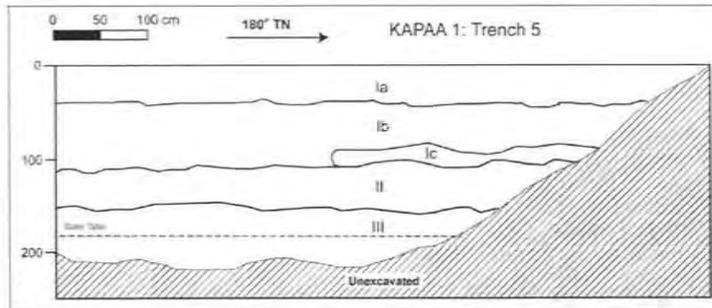


Figure 20. Stratigraphic profile of the east wall of Trench 5

Stratum Ia: 0 - 40 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.

Stratum Ib: 40 - 110 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; Massive clay layer.

Stratum Ic: 90 - 100 cmbs

Fill Horizon; 10 YR 7/1, light gray; medium, sand; structureless, loose moist consistency; non-plastic; no cementation; very abrupt wavy lower boundary; Subrounded very coarse sand to small pebbles.

Stratum II: 110 - 150 cmbs

A Horizon; 10 YR 2/1, black; clay loam; structureless, firm moist consistency; slightly plastic; no cementation; very abrupt smooth lower boundary; Organic marsh deposit.

Stratum III: 150 - 200 cmbs

C Horizon; 10 YR 6/1, gray; coarse, sand; structureless, non-sticky wet consistency; non-plastic; weak cementation; smooth lower boundary; Contains broken marine shell rounded coral pebbles lagoonal deposit (small bivalves).

### 5.2.6 Trench 6

Trench 6 is 6.0 m long, 0.8 m wide, and 2.03 m deep (Figure 21). The stratigraphy of Trench 6, showing the clay fill overlying the natural sediments, can be seen in Figure 22.

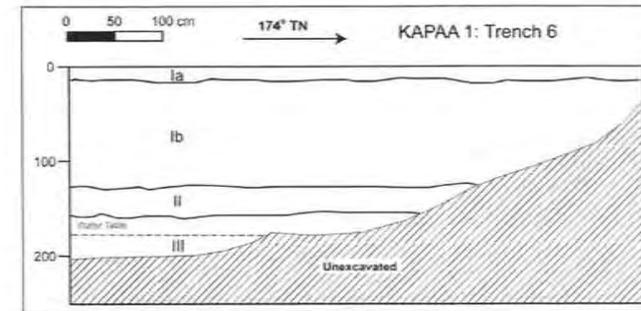


Figure 21. Stratigraphic profile of the east wall of Trench 6

Stratum Ia: 0 - 15 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.

Stratum Ib: 15 - 125 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; Massive clay layer.

- Stratum II: 125 - 155 cmbs  
A Horizon; 10 YR 3/2, very dark grayish brown; clay; structureless, sticky wet consistency; very plastic; no cementation; Original marsh land deposit where clay has filtered down into this layer from above.
- Stratum III: 155 - 200 cmbs  
B Horizon; 10 YR 5/1, gray; fine, sand; structureless, non-sticky wet consistency; non-plastic; no cementation; lower boundary; This is fine grained, rounded, homogenous lagoonal deposited sand. Excavation terminated at coral.

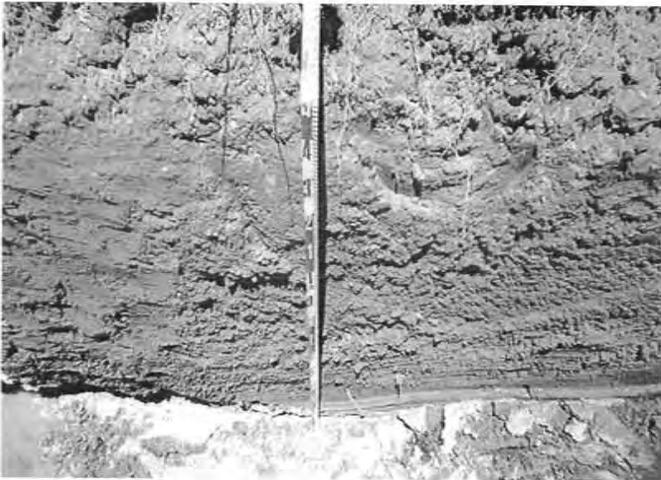


Figure 22. Photograph of the east wall of Trench 6 showing the clay fill overlying the natural sediments, view to east

### 5.2.7 Trench 7

Trench 7 is 6.0 m long, 0.8 m wide, and 2.1 m deep (Figure 23).

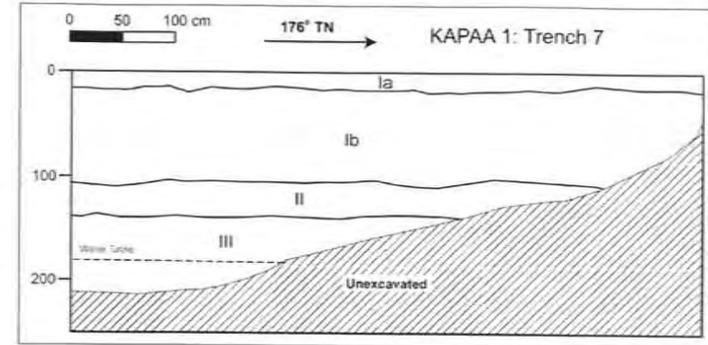


Figure 23. Stratigraphic profile of the east wall of Trench 7

- Stratum IA: 0 - 15 cmbs  
Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.
- Stratum IB: 15 - 105 cmbs  
Fill Horizon; 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; Massive clay layer.
- Stratum II: 105 - 135 cmbs  
A Horizon; 10 YR 3/2, very dark grayish brown; clay; structureless, sticky wet consistency; very plastic; no cementation; Original marsh land deposit where clay has filtered down into this layer from above.

Stratum III: 135 - 210 cmbs

B Horizon; 10 YR 5/1, gray, fine, sand; structureless, non-sticky wet consistency; non-plastic; no cementation; lower boundary; This is fine grained, rounded, homogenous lagoonal deposited sand. Excavation terminated at coral. Excavation terminated at coral

### 5.2.8 Trench 8

Trench 8 is 7.0 m long, 0.8 m wide, and 1.6 m deep (Figure 24).

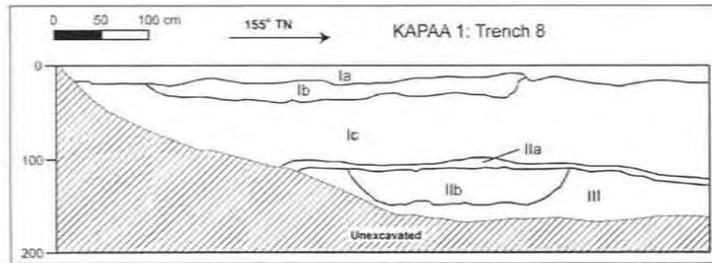


Figure 24. Stratigraphic profile of the east wall of Trench 8

Stratum Ia: 0 - 20 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; weak, fine, crumb structure; slightly hard dry consistency; plastic; no cementation; clear smooth lower boundary; Layer of soil formation on top of massive clay fill.

Stratum Ib: 20 - 40 cmbs

Fill Horizon; 10 YR 7/3, Very pale brown; coarse sand; structureless; loose dry consistency; non-plastic; no cementation; clear smooth lower boundary; a poorly sorted sand fill layer with crushed coral inclusions.

Stratum Ic: 20 - 100 cmbs

Fill Horizon; 5 YR 4/4, Reddish brown; clay; structureless, loose dry consistency; plastic; no cementation; clear smooth lower boundary; massive clay layer.

Stratum IIa: 100 - 110 cmbs

A Horizon; 10 YR 2/1, black; clay loam; structureless, sticky wet consistency; plastic; no cementation; very abrupt smooth lower boundary; High organic matter contains undecomposed organic matter

Stratum IIb: 110 - 150 cmbs

B Horizon; 10 YR 4/1, dark gray; medium, sand; structureless, non-sticky wet consistency; non-plastic; no cementation; very abrupt wavy lower boundary; Model disturbed mix of stratum 2 & 3

Stratum III: cmbs

C Horizon; 10 YR 5/1, gray; medium, sand; structureless, non-sticky wet consistency; non-plastic; no cementation; lower boundary; Color is partly gleyed

### 5.3 Site Descriptions

No historic properties were identified during the course of this archaeological inventory survey.

## Section 6 Results of Laboratory Analysis

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Laboratory analysis was not necessary as part of this archaeological inventory survey.

## Section 7 Summary and Interpretation

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Kapa'a has a rich oral history tradition that includes the histories of Mō'ikeha, Pāka'a, and the wind gourd of La'amaomao, Kaweloleimākua, and the *Kalukahu* grass of Kapa'a. The *ahupua'a* of Kapa'a was also the location of numerous *heiau*. Early accounts by European explorers noted that the Kapa'a region was fertile and had an extensive taro *lo'i* irrigation system.

Historically Kapa'a was principally used for the cultivation of sugar cane throughout the nineteenth and early portion of the twentieth centuries. As the twentieth century progressed the agricultural land slowly gave way to commercial and residential developments with tourist facilities along the coastline making up the most recent wave of changes to this portion of Kaua'i.

Most of the archaeological work in Kapa'a Ahupua'a has taken place in Kapa'a Town and not along the coast. Within the town several cultural layers and numerous human burials have been discovered. *Mauka* of the narrow coastal strip, the landscape is characterized by marsh and wetlands that have been filled in with imported sediment over the last 150 years. These areas have proven to have a dearth of archaeology by comparison.

The stratigraphy observed in the eight backhoe trenches excavated in the current project area was consistent with the historic records. Thick layers of imported clay fill for agriculture overlaid a thin layer of lagoonal sands. The subsurface investigations did not reveal any stratigraphic layers, such as Jaucas Sand, that are typically associated with cultural deposits and human remains. No historic properties were discovered within the project area.

The grading and leveling necessary for the soccer fields, landscaping, and parking lots is unlikely to penetrate the 1.0 m average thickness of fill sediments across the project area. The risk of encountering cultural remains during the trenching for comfort station utility lines is extremely low.

## Section 8 Significance Assessments

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### 8.1 Significance Assessments

No historic properties were discovered within the project area.

## Section 9 Project Effect and Mitigation Recommendations

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### 9.1 Project Effect

Because no historic properties were identified, Cultural Surveys Hawai'i's project-specific effect recommendation is "no historic properties affected".

### 9.2 Mitigation Recommendations

Based upon the lack of historic properties or sedimentary deposits that might likely contain archaeological materials, Cultural Surveys Hawai'i's project-specific mitigation recommendation is that no further historic preservation work is necessary for this project area. Should the proposed project change in the future these conclusions will need to be reevaluated.

### 9.3 Disposition of Materials

No materials were discovered that necessitate disposition.

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