DAVID Y. IGE
GOVERNOR

KEITH T. HAYASHI
SUPERINTENDENT

STATE OF HAWAI`I

DEPARTMENT OF EDUCATION

P.O. BOX 2360

HONOLULU, HAWAI`I 96804

OFFICE OF FACILITIES AND OPERATIONS

August 15, 2022

TO: Ms. Mary Alice Evans
Director, Office of Planning and Sustainable Development
Environmental Review Program

FROM: Edward S. Ige
Facilities Director, Facilities Development Branch

Subject: Draft Environmental Assessment – Anticipated Finding of No Significant Impact (DEA-AFONSI)
Kaimuki High School - Girl's Athletic Locker Room
Honolulu, Oahu, Hawaii
Tax Map Key: 2-7-024:001

The State of Hawaii Department of Education (Department) herewith transmits the subject Draft Environmental Assessment for which it Anticipates a Finding of No Significant Impact (DEA-AFONSI). The DEA-AFONSI has been prepared pursuant to Chapter 343, Hawai'i Revised Statutes and Chapter 11-200.1, Hawaii Administrative Rules. Please publish notice of this DEA-AFONSI in the upcoming issue of *The Environmental Notice*.

Included in the DEA-AFONSI are Draft Preliminary Civil Engineering Report, Geotechnical Report, and copies of comments received during pre-assessment consultation along with the corresponding responses regarding the subject project.

Should you have any questions, please contact our authorized agent of this project, Mr. Keola Cheng of Wilson Okamoto Corporation at (808) 946-2277 or Mitch Tamayori, Project Coordinator of the Facilities Development Branch, Project Management Section at (808) 784-5116.

ESI:mt

cc: Facilities Development Branch
Ms. Joleen Miranda-Pesquira, Ushijima Architects
Keola Cheng, Wilson Okamoto Corporation

From: webmaster@hawaii.gov
Sent: Monday, August 15, 2022 4:25 PM
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice

Follow Up Flag: Follow up
Flag Status: Flagged

Action Name
Kaimukī High School Girl's Athletic Locker Room
Type of Document/Determination
Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)
HRS §343-5(a) Trigger(s)
• (1) Propose the use of state or county lands or the use of state or county funds
Judicial district
Honolulu, Oʻahu
Tax Map Key(s) (TMK(s))
[1] 2-7-024:001
Action type
Agency
Other required permits and approvals
See Section 4.3 of DEA
Proposing/determining agency
State Department of Education
Agency contact name
Mitch Tamayori
Agency contact email (for info about the action)
Mitch.Tamayori@k12.hi.us
Email address or URL for receiving comments
publiccomment@wilsonokamoto.com
Agency contact phone
(808) 784-5116
Agency address
3633 Waialae Avenue Room B-201 Honolulu, Hawaii 96816 United States Map It
Was this submittal prepared by a consultant?
Yes
Consultant

Wilson Okamoto Corporation

Consultant contact name

Dalton Beauprez

Consultant contact email

DBeauprez@wilsonokamoto.com

Consultant contact phone

(808) 946-2277

Consultant address

1907 South Beretania Street
Suite 400
Honolulu, Hawaii 96826
United States
Map It

Action summary

The Proposed Project, as envisioned, will encompass approximately 5,000 square feet (SF) of lockers and meeting area, shower and toilet stalls, a drying room, a coach's office, equipment storage rooms, janitorial closets, and a unisex room. It is also anticipated that the Proposed Project would include a trainer's room and potentially a weight training area. The Proposed Project will be approximately 5,000 SF and approximately no more than 30 feet in height. The Proposed Project would also include new utility connections for water, sewer, and electrical. The Proposed Project would be an exclusive locker room for the female athletic teams offered at Kaimukī High School.

Reasons supporting determination

See Chapter 6

Attached documents (signed agency letter & EA/EIS)

- DEA-AFONSI-Letter-Kaimuki-HS.pdf
- KHS-Girls-Locker-Room-DEA-8.15.22.pdf

Action location map

- KHS_Boundary.zip

Authorized individual

Dalton Beauprez

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

Draft Environmental Assessment
Kaimukī, Oʻahu, Hawaiʻi
Kaimukī High School Girl's Athletic Locker Room
August 2022

Prepared For:

Ushijima Architects, Inc.
2226 Young Street, Suite A
Honolulu, HI 96826

And

State of Hawai ʻi
Department of Education
1390 Miller Street
Honolulu, HI 96813

Prepared By:

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaiʻi 96826
WOC Job No. 10627-01

Table of Contents

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

Preface and Summary

PREFACE

This Draft Environmental Assessment (EA) / Anticipated Finding of No Significant Impact (FONSI) has been prepared pursuant to Chapter 343, Hawai‘i Revised Statutes (HRS), and Title 11, Chapter 200.1, Hawai‘i Administrative Rules (HAR), Department of Health, State of Hawai‘i.

This EA is required because the Proposed Action is an “agency action” that involves the use of State lands and funds pursuant §343-5(a)(1) Hawai‘i Revised Statutes (HRS), “*Propose the use of state or county lands or the use of state or county funds, other than funds to be used for feasibility or planning studies for possible future programs or projects which the agency has not approved, adopted, or funded, or funds to be used for the acquisition of unimproved real property; provided that the agency shall consider environmental factors and available alternatives in its feasibility or planning studies.*” The proposing agency is the State of Hawai‘i Department of Education, which will also be responsible for determining if the Final EA can be filed as a Finding of No Significant Impact (FONSI).

The studies prepared in conjunction with this EA include a Draft Preliminary Civil Engineering Report and a Geotechnical Report. The aforementioned studies are appended to this EA. This Draft EA has also been prepared in consideration of the comments received in response to the Early Consultation Package mailed out on March 28, 2022, to the respective stakeholders listed in Chapter 7 of this EA.

(This page intentionally left blank)

Summary

SUMMARY SHEET

Project Name:	Kaimukī High School Girl's Athletic Locker Room
Proposing Agency:	State of Hawai'i Department of Education
Location:	Kaimukī, O'ahu, Hawai'i
Tax Map Keys (TMKs):	[1] 2-7-024:001
Recorded Fee Owner:	State of Hawai'i
Existing Use:	The Project Site is the home of Kaimukī High School which opened its doors in 1950. Kaimukī High School serves students in grades 9-12, with a total student enrollment of approximately 675 students for the 2020-2021 school year. The proposed Project Site for the Proposed Project is currently used as outdoor basketball courts.
State Land Use Classification:	Urban
County Zoning Designation:	According to the City and County of Honolulu Department of Planning and Permitting (DPP) zoning maps, the underlying zoning designation is Apartment A-2. However, the entire Kaimukī High School campus proper is considered a "Public Use and Structure" which is a permitted use in any zone.
Proposed Action:	The Proposed Project, as envisioned, will encompass approximately 5,000 square feet (SF) of lockers and meeting area, shower and toilet stalls, a drying room, a coach's office, equipment storage rooms, janitorial closets, and a unisex room. It is also anticipated that the Proposed Project would include a trainer's room and potentially a weight training area. The Proposed Project will be approximately 5,000 SF and approximately no more than 30 feet in height. The Proposed Project would also include new utility connections for water, sewer, and electrical. The Proposed Project would be an exclusive locker room for the female athletic teams offered at Kaimukī High School.
Impacts:	No significant impacts are anticipated to result from the Proposed Action. It is anticipated that the best management practices and mitigation measures discussed in Chapter 3 of the EA will minimize/reduce/eliminate any potential impacts to the various resource categories presented.

Anticipated Determination: Finding of No Significant Impact (FONSI)

Parties Consulted During Early Consultation:

Federal Agencies
U.S. Army Corps of Engineers, Honolulu District
U.S. Fish and Wildlife Services, Pacific Islands Fish and Wildlife Office

State of Hawai'i Agencies
Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Hawai'i State Energy Office
DBEDT, Land Use Commission
DBEDT, Office of Planning and Sustainable Development (OPSD)
DBEDT, OPSD – Environmental Review Program
Department of Agriculture
Department of Accounting and General Services
Department of Education (DOE)
DOE, Office of Facilities and Operations
Department of Defense
Department of Health (DOH)
DOH, Environmental Health Administration
Department of Land and Natural Resources (DLNR)
DLNR, State Historic Preservation Division
DLNR, Division of Forestry and Wildlife
DLNR, Land Division
Department of Hawaiian Home Lands
Office of Hawaiian Affairs
Department of Transportation (DOT)
DOT, Highways Division
DOT, Airports Division

City and County of Honolulu Agencies
Honolulu Fire Department
Department of Environmental Services
Department of Planning and Permitting
Department Parks and Recreation
Department of Design and Construction
Board of Water Supply
Honolulu Police Department
Department of Transportation Services
Department of Facility Maintenance

Government Officials
Senator Les Ihara Jr.
Representative Bertrand Kobayashi
Representative Jackson Sayama

Other Parties
Neighborhood Board No. 4 – Kaimukī
Neighborhood Board No. 5 – Diamond Head/Kapahulu/St. Louis Heights
Neighborhood Board No. 6 – Pālolo
Neighborhood Board No. 8 – McCully/Mōʻiliʻili
Neighborhood Board No. 9 - Waikīkī
Hawaiʻi State Library
Kaimukī Public Library
Hawaiian Telcom
Hawaii Gas
Hawaiian Electric Company
Spectrum Hawaii
Kaimukī High School Principal
Kaimukī High School Foundation

(This page intentionally left blank)

Chapter 1:

Introduction

CHAPTER 1: INTRODUCTION

1. INTRODUCTION

1.1 Background Information

Kaimukī High School opened its doors in 1950, and featured a then total of 45 classrooms, three shops, an administration building as well as a cafeteria. From 1951 to 1953 additional buildings were added to campus to house business education, agriculture, science, art, homemaking, and other programs offered in the school's educational curriculum. In 1956, the music building was constructed. Playcourts were constructed from 1957 to 1958. In 1961, a 50-meter Olympic swimming pool was added to the campus. In 1964, Kaimukī High School dedicated its new gymnasium and a separate auditorium to accommodate 600 students was also constructed.

The performing arts learning center was established in 1987. Today, the campus' major facilities encompass eight major classroom buildings that house approximately 82 classrooms, an administration building, library building, auditorium, and a cafeteria. Separate structures on campus include facilities for industrial arts, music, JROTC, and physical education. Athletic facilities include a 50-meter Olympic-size swimming pool, a gymnasium, outdoor basketball courts, tennis courts, and softball, soccer, baseball, football and track fields. It should also be noted that Kaimukī High School is one of two high school Performing Arts Centers on O'ahu.

Kaimukī High School is a part of the DOE Kaimukī-McKinley-Roosevelt Complex area along with McKinley High School and Roosevelt High School. The school boundaries include the communities of Kaimukī, Kapahulu, Mō'ili'ili, McCully, Pālolo Valley, St. Louis Heights, and Waikīkī. The area is comprised of apartment buildings, high-rise condominiums, small businesses, older residential neighborhoods, and community parks. The Kaimukī Complex consists of ten elementary and middle schools in addition to Kaimukī High School including the following:

- Ala Wai Elementary School
- Ali'iolani Elementary School
- Hōkūlani Elementary School
- Jarrett Middle School
- Jefferson Elementary School
- Kaimukī Middle School
- Kūhiō Elementary School
- Lunalilo Elementary School
- Pālolo Elementary School

- Washington Middle School

Kaimukī High School serves students in grades 9-12, with a total student enrollment of approximately 675 students for the 2020-2021 school year. The DOE is not expecting any significant increase or decrease, or any major changes to the projected school enrollment in the coming years and the Proposed Project is not expected to affect the school's current or future enrollment status.

1.2 Project Location and Surrounding Uses

Kaimukī High School is situated at 2705 Kaimuki Avenue in Kaimukī on the island of Oʻahu and is further identified by Tax Map Key (TMK) [1] 2-7-024:001 (See Figures 1-1 & 1-2). The Proposed Project is anticipated to be constructed adjacent to the existing gym, baseball field, and tennis courts, in an area where the existing outdoor basketball courts are situated (Project Site) (See Figure 1-3).

Kaimukī High School is bordered by the Mānoa-Pālolo Drainage Canal, Kapiolani Boulevard, Kaimuki Avenue, Crane Park, a residential neighborhood, and Date Street.

Nearby uses within a ½ mile radius include the Ala Wai Municipal Golf Course, Market City Shopping Center, Kapahulu Shopping Center, the private ʻIolani School, various small businesses and restaurants, and residential neighborhoods characterized by low-rise and high-rise buildings, as well as single family homes.

Other major uses in the region include Waikīkī approximately 0.6 miles to the south separated by the Ala Wai Canal, the University of Hawaiʻi at Mānoa approximately 0.6 miles to the north, Chaminade University of Honolulu approximately 0.75 miles to the northeast, the Kaimukī neighborhood to the east, and the McCully/Mōʻiliʻili neighborhood to the west.

1.3 Land Ownership

The Project Site is situated within the boundaries of the Kaimukī High School campus proper and is owned by the State of Hawai'i and operated under the direction of the State of Hawai'i Department of Education.

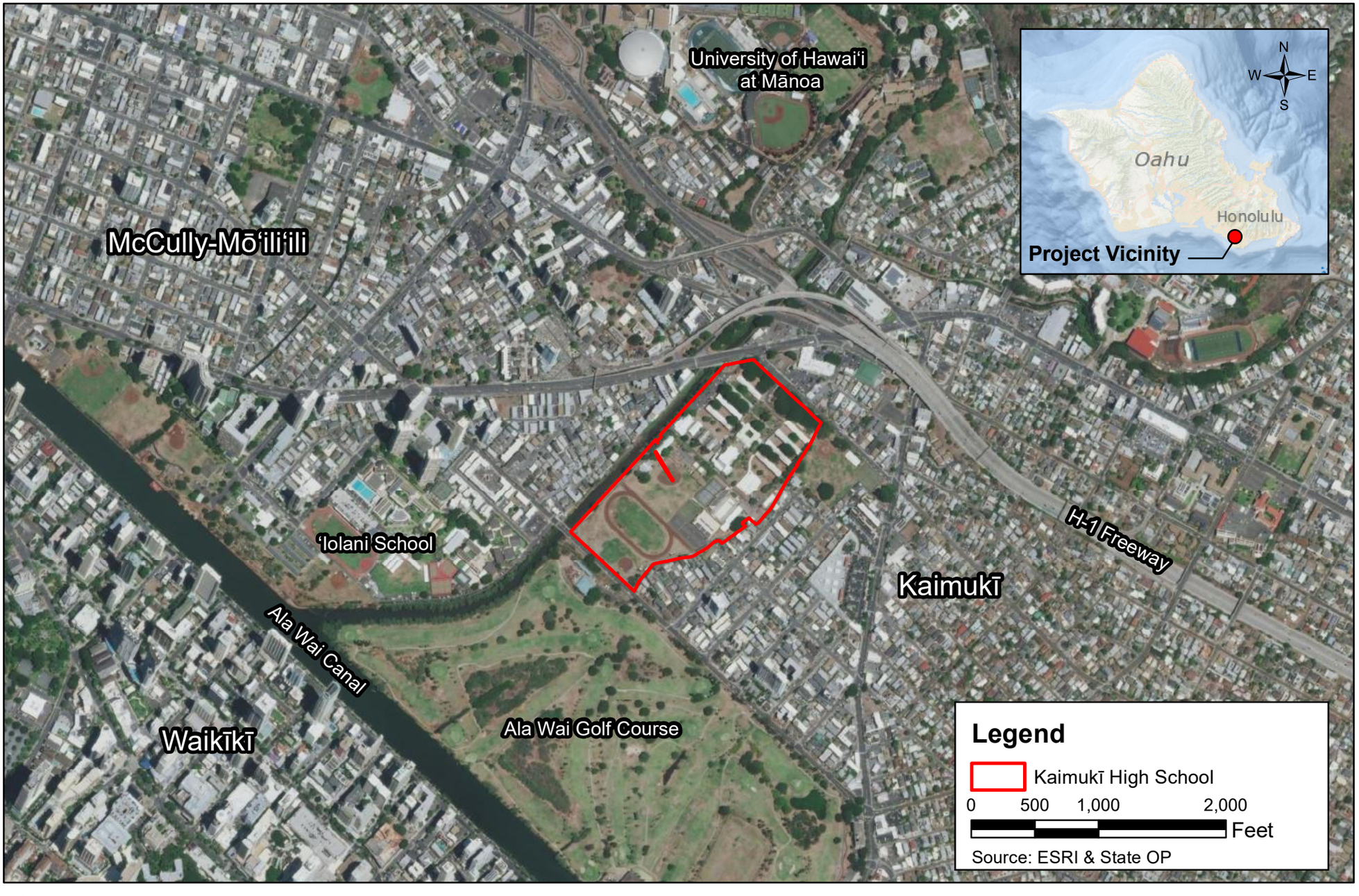


FIGURE 1-1

Project Location Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, O'ahu, Hawai'i

WILSON OKAMOTO CORPORATION

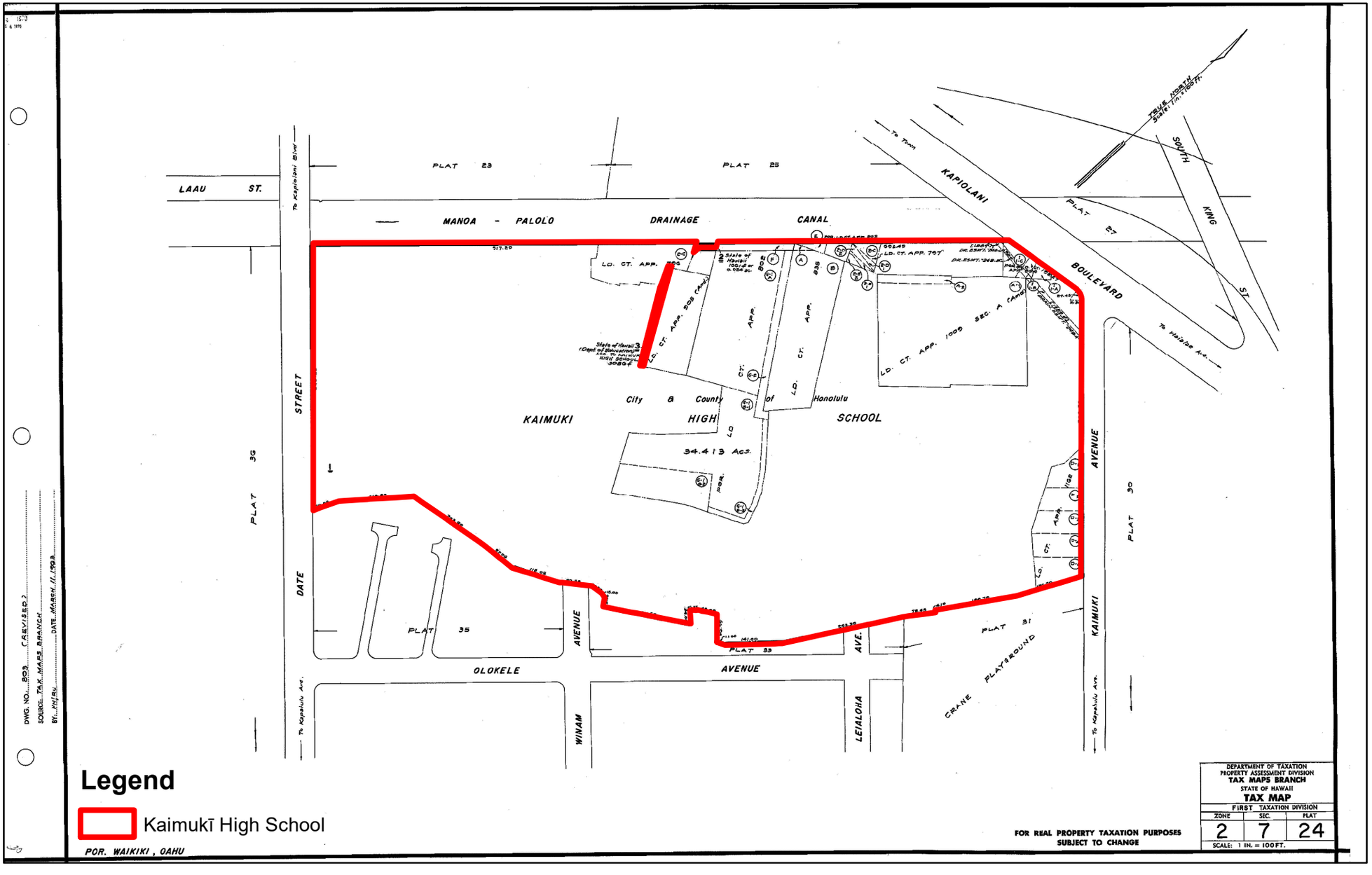
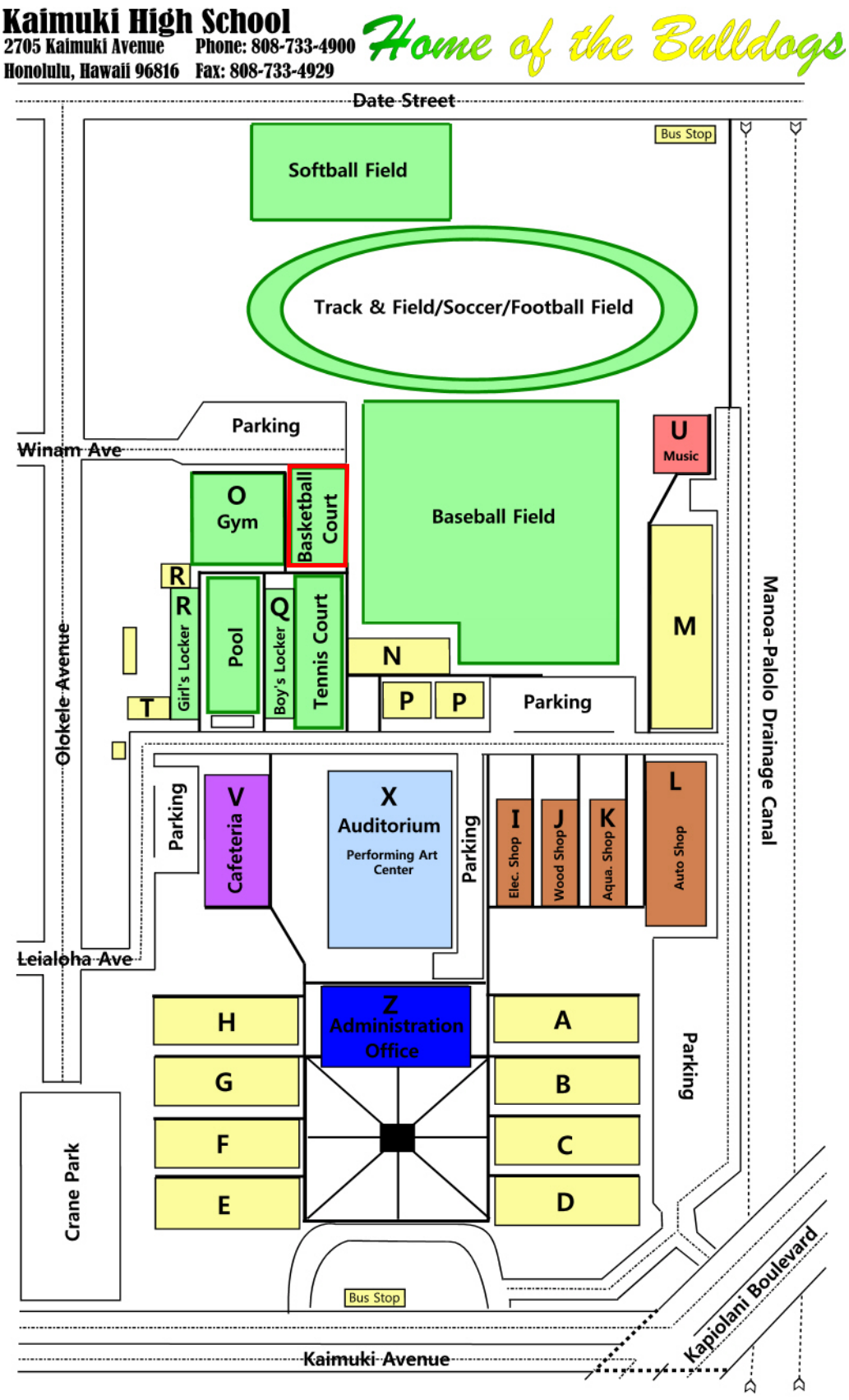


FIGURE1-2

Tax Plat Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION



Legend

Proposed Project Site

Figure 1-3 Kaimukī High School Campus Map

CHAPTER 2: PROJECT DESCRIPTION

2. PROJECT DESCRIPTION

2.1 PURPOSE AND NEED

Currently, Kaimukī High School's existing girl's locker room is outdated and overcrowded. The Proposed Project will provide the school with a much-needed modern facility that would serve its women's sports teams. The existing locker room will continue to be used for the general women's population at Kaimukī High School to serve physical education classes and curriculum.

Moreover, the Proposed Project will help meet Title IX requirements. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in any program or activity receiving Federal financial assistance. Title IX regulations require schools to achieve parity in terms of facilities that are provided for students. This includes facility elements such as locker rooms, bathrooms, showers, team rooms and lockers and pertains not only to quantity but also to quality of space and proximity to playing and practice fields. The intent of the Proposed Project is to provide gender equitable facility.

2.2 PROJECT DESCRIPTION

The Proposed Project, as envisioned, will encompass approximately 5,000 square feet (SF) of lockers and meeting area, shower and toilet stalls, a drying room, a coach's offa training room, a wet room, equipment storage rooms, janitorial closets, and a unisex room (See Figure 2-1). It is also anticipated that the Proposed Project would include a trainer's room and potentially a weight training area. The Proposed Project will be approximately 5,000 SF and approximately no more than 25 feet in height (See Figure 2-2 to 2-4). The Proposed Project would also include new utility connections for water, sewer, and electrical. The Proposed Project would be an exclusive locker room for the female athletic teams offered at Kaimukī High School.

The Proposed Project is designed to resource-efficient, taking into account the existing environmental conditions such as wind circulation and temperatures. The orientation of Proposed Project is perpendicular to the existing gym to allow passage of trucks to service the existing containers located between the gym and the pool; to enhance natural cross ventilation through the showers and locker room spaces; to minimize unwanted heat gain; and creation of a breezeway to allow immediate access to the facility from all sides including the tennis courts to the north, track from the south, gym to the east, and baseball field to the west.

Kaimukī High School currently offers the following female sports at both the Junior Varsity (JV) and Varsity levels: volleyball, cross country, air riflery, bowling, cheerleading, softball, basketball, swimming, wrestling, water polo, tennis, soft tennis, judo, track, and paddling. It should also be noted that Kaimukī High School also offers a female soccer team, however, for the past four years, not enough participants have come out to field a full team and was not included in Table 2-1 below. Although the exact team numbers change each year, roster expectations are communicated annually to head coach and generally consist of the following roster sizes:

Table 2-1: Kaimukī Female High School Sports Roster Sizes	
Sport	**Approximate Roster Size (JV and Varsity)**
Fall Sport (July – October)	
Volleyball	20
Cross Country	3
Air Rifle	8
Bowling*	4
Cheerleading	8
JV Softball (Fall Sport)	9 (JV only)
Winter Sport (October – February)	
Basketball	20
Swimming	3
Wrestling	3
Spring Sport (February – May)	
Varsity Softball (Spring Sport)	11 (Varsity only)
Water Polo	9
Tennis	4
Soft Tennis	4
Judo	3
Track	10
Paddling*	8

*An Off-Campus sport that would not use the proposed girl's locker room

Consequently, based on overlapping schedules of the various sports during the school year, it is anticipated that no more than approximately 60 occupants would be using the proposed locker room at any time.

2.3 Development Schedule

Following design and permitting, construction of the Proposed Project is anticipated to commence sometime in Q3 2023, with completion targeted for Q1 2024.

The forthcoming Draft EA will provide an overview of all required permits and approvals required in association with the implementation of the Proposed Action.

2.4 Project Costs

The Proposed Project is anticipated to cost approximately $4.7- $6 million to construct.

Figure 2-1 Proposed Floor Plan

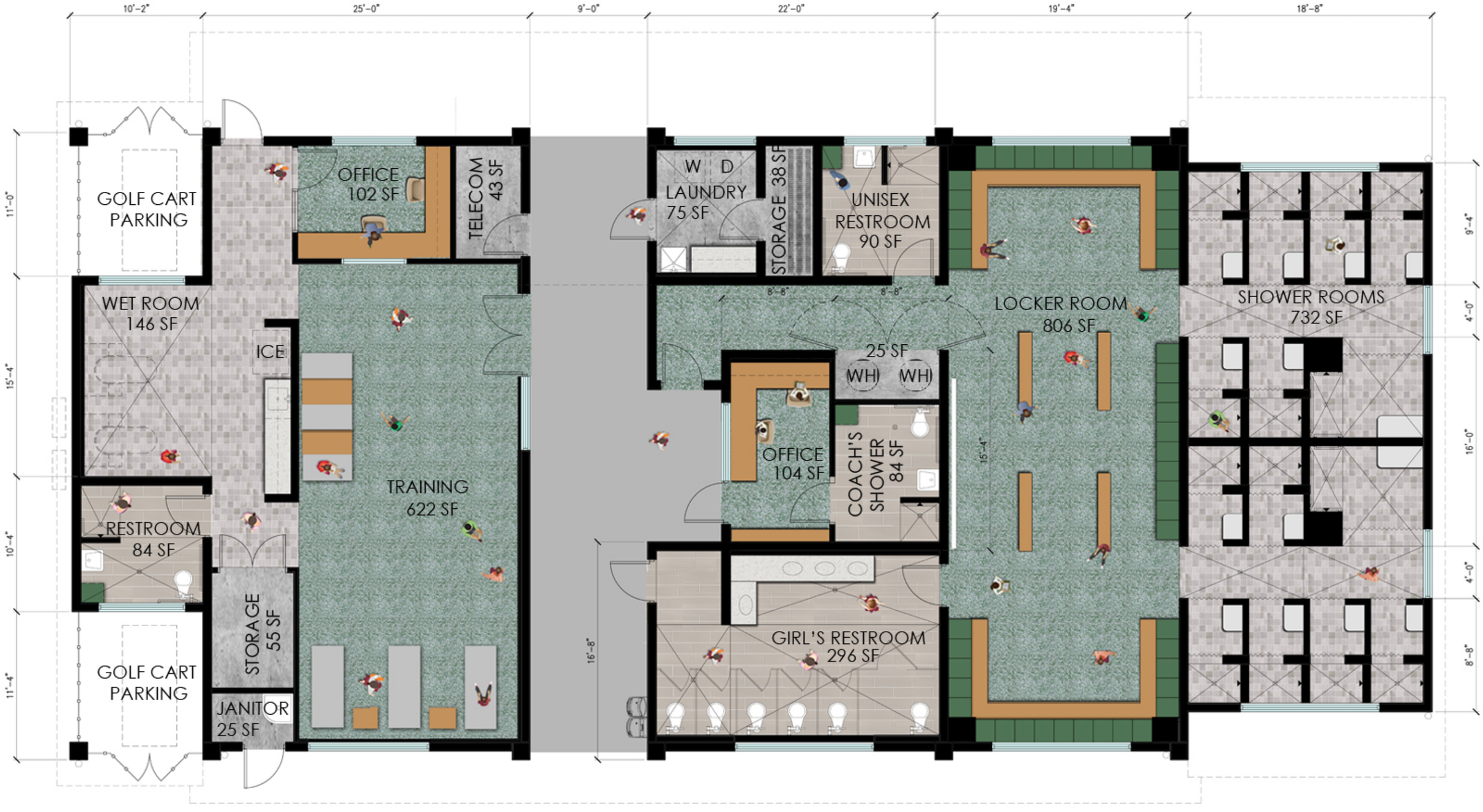
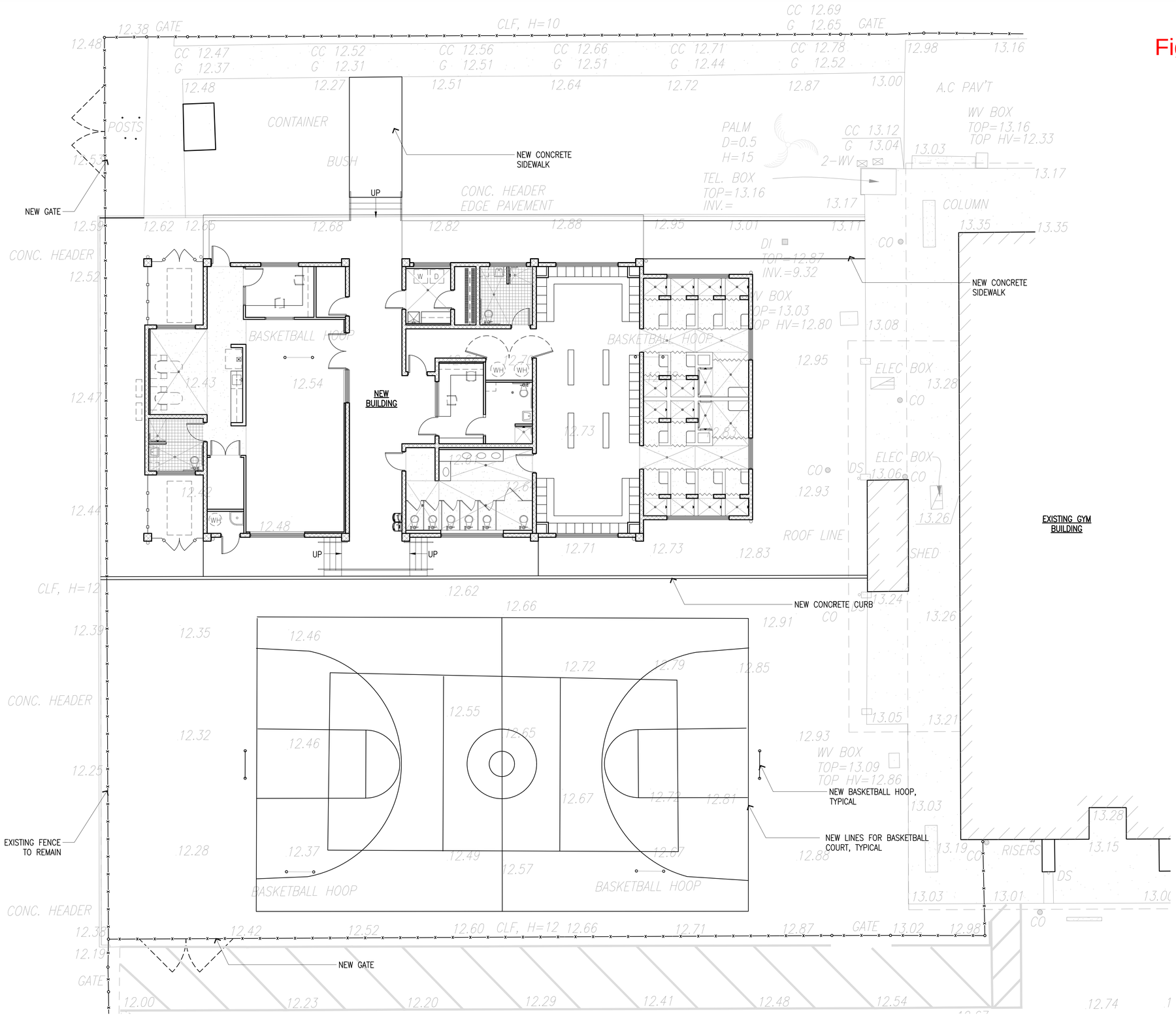


Figure 2-2 Site Plan



1 A002 **NEW SITE PLAN**
SCALE: 1/8" = 1'-0"

8 4 0 8 16
Graphic Scale (Scale: 1/8"=1'-0")

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVALS:

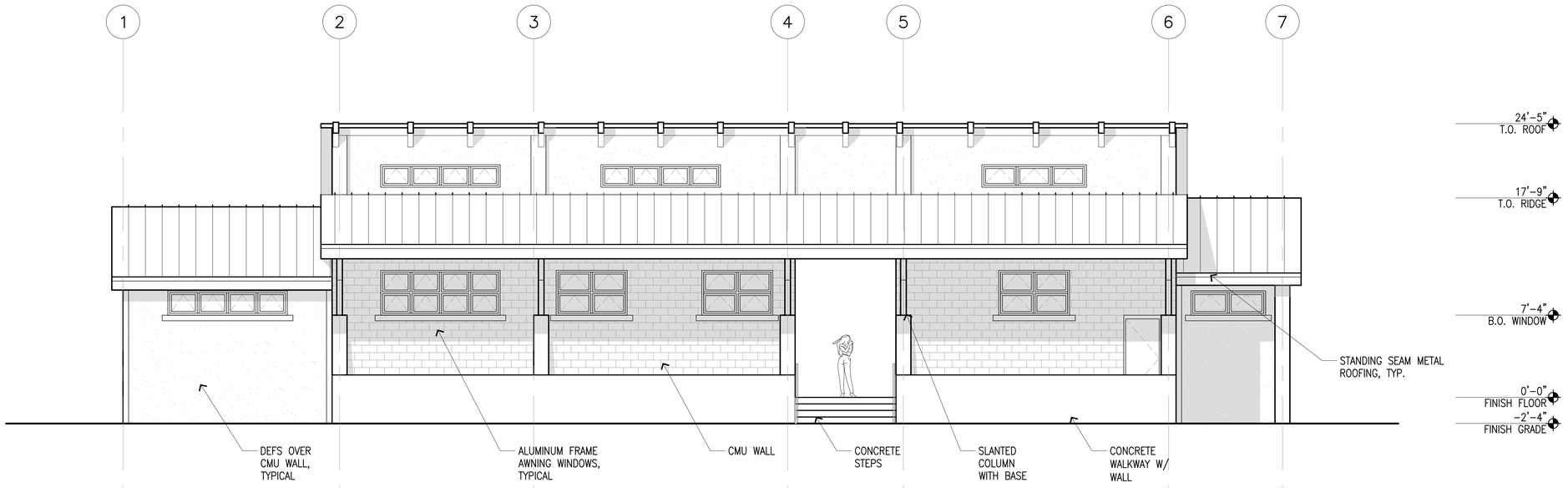
DEPARTMENT OF EDUCATION
STATE OF HAWAII

KAIMUKI HIGH SCHOOL
GIRLS ATHLETIC LOCKER ROOM
2705 KAIMUKI AVENUE, HONOLULU, OAHU, HAWAII
TAX MAP KEY: 2-7-024:001

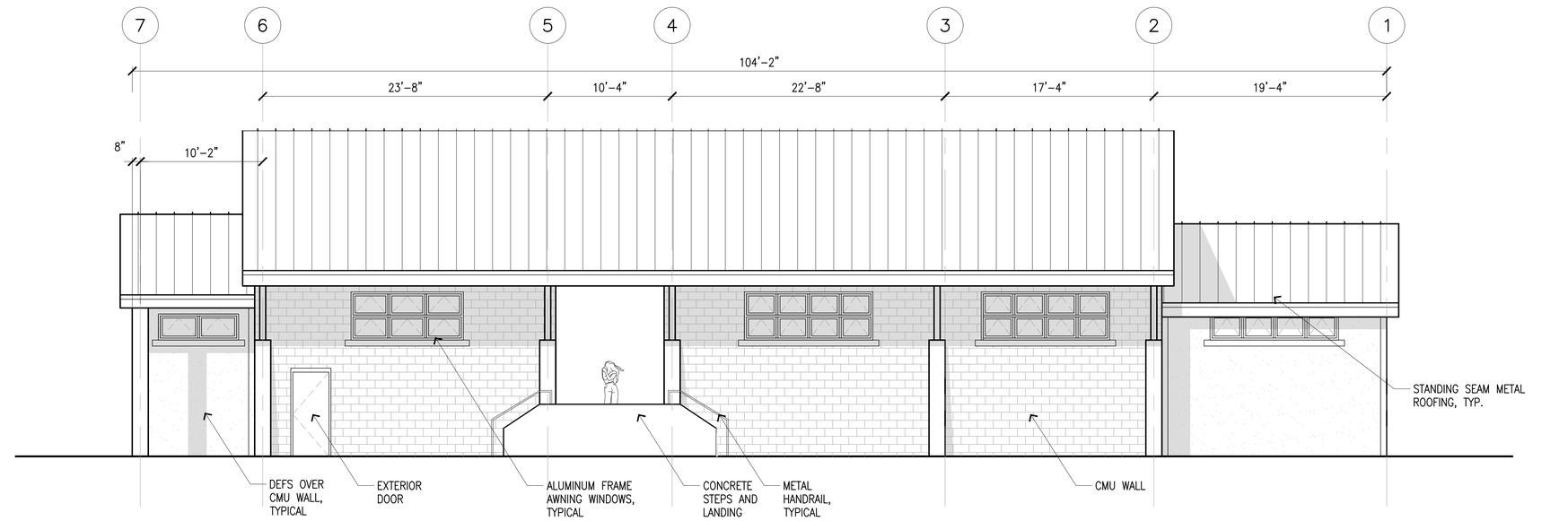
RESTROOMS & STORAGE BUILDING:
FLOOR, REFLECTED CEILING, ROOF PLANS & NOTES

USHIJIMA ARCHITECTS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: JMP	CHECKED BY: SU	Q24221-19	A002
DRAWN BY: UAI	APPROVED BY: SU	DATE	SHEET
SCALE: AS NOTED		MAY 2022	OF SHTS.

FILE _____ DRAWER _____ FOLDER _____



1 / A201 NORTH ELEVATION
SCALE: 3/16" = 1'-0"



2 / A201 SOUTH ELEVATION
SCALE: 3/16" = 1'-0"

Figure 2-3 North and South Elevations

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVALS:

DEPARTMENT OF EDUCATION
STATE OF HAWAII

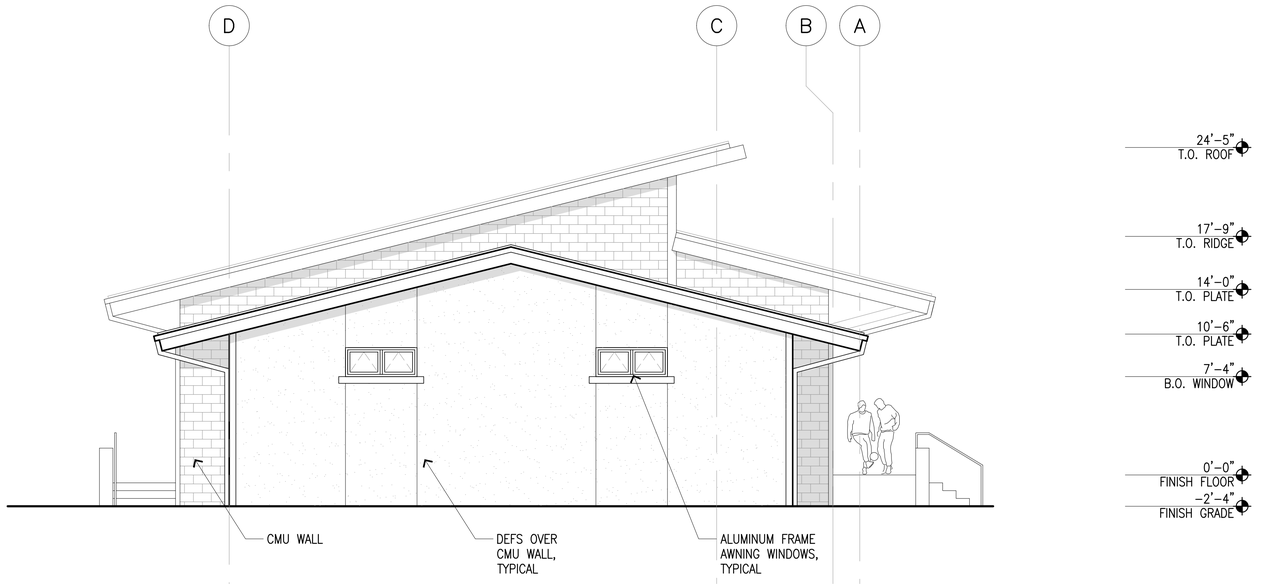
KAIMUKI HIGH SCHOOL
GIRLS ATHLETIC LOCKER ROOM
2705 KAIMUKI AVENUE, HONOLULU, OAHU, HAWAII
TAX MAP KEY: 2-7-024:001

RESTROOMS & STORAGE BUILDING:
FLOOR, REFLECTED CEILING, ROOF PLANS & NOTES

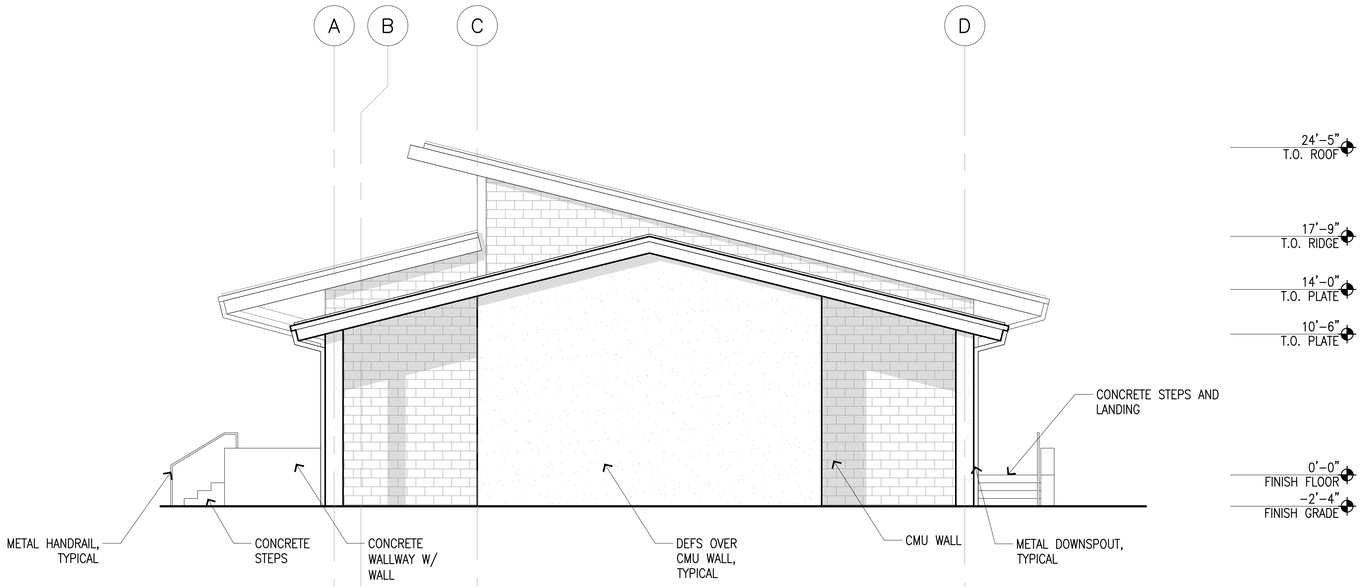
USHIJIMA ARCHITECTS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: JMP	CHECKED BY: SU	Q24221-19	A201
DRAWN BY: UAI	APPROVED BY: SU	DATE	SHEET
SCALE: AS NOTED		MAY 2022	OF SHTS.

4 2 0 4 8 12
Graphic Scale (Scale: 3/16"=1'-0")

FILE _____ DRAWER _____ FOLDER _____



1 A202 EAST ELEVATION
SCALE: 3/16" = 1'-0"



2 A202 WEST ELEVATION
SCALE: 3/16" = 1'-0"

Figure 2-4 East and West Elevations

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVALS:

DEPARTMENT OF EDUCATION
STATE OF HAWAII

KAIMUKI HIGH SCHOOL
GIRLS ATHLETIC LOCKER ROOM
2705 KAIMUKI AVENUE, HONOLULU, OAHU, HAWAII
TAX MAP KEY: 2-7-024:001

RESTROOMS & STORAGE BUILDING:
FLOOR, REFLECTED CEILING, ROOF PLANS & NOTES

USHIJIMA ARCHITECTS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: JMP	CHECKED BY: SU	Q24221-19	A202
DRAWN BY: UAI	APPROVED BY: SU	DATE	SHEET
SCALE: AS NOTED		MAY 2022	OF SHTS.

4 2 0 4 8 12
Graphic Scale (Scale: 3/16"=1'-0")

FILE _____ DRAWER _____ FOLDER _____

Chapter 3:

Description of Existing Environment, Impacts, and Mitigation Measures

CHAPTER 3: DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

3. DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

3.1 Climate, Greenhouse Gas Emissions, and Climate Change

The climate of Oʻahu is relatively moderate throughout most of the year and is characterized as semi-tropical with two seasons. The summer period runs from May through September and is generally warm and dry, with predominantly northeast trade winds. In contrast, the winter season runs from October through April and is associated with lower temperatures, higher rainfall and less prevalent trade winds.

The Proposed Project is located in urban Honolulu, in the area generally referred to as Kaimukī, which has a climate typical of the leeward coastal lowlands of Oʻahu. The area is characterized by abundant sunshine, persistent trade winds, relatively constant temperatures, moderate humidity, and the infrequency of severe storms. Northeasterly trade winds prevail throughout the year although its frequency varies.

Average daily minimum and maximum temperatures typically range from the mid-60s (degree Fahrenheit) to the mid-80s, depending on the time of the day and the season. Northeasterly trade winds prevail much of the time throughout the island of Oʻahu. These trade winds vary in frequency. Often times they last for weeks on end. Other times they are virtually absent. This is the general result due to the location of the North Pacific high-pressure system. During the spring and summer months, this system is larger, stronger and shifts farther to the north and produces stronger, more persistent trade winds. In the fall and winter months, this high-pressure system degrades and shifts to the southeast, at which time the general wind patterns become weaker and more variable. Typical wind velocities range between 8 and 15 miles per hour.

In recent years it has become widely acknowledged and accepted that the State of Hawaiʻi is being impacted by a myriad of climatic changes through rising sea levels, an increase in ocean acidity, changing rainfall patterns, a decrease in stream base flow, changing wind and wave patterns, and changing habitats and species distribution. There is no consensus, however, about the exact nature, magnitude, and timing of how these changes will occur. Generally speaking, there is an expectation of a rise in air and sea surface temperatures, a decrease in the prevailing northeasterly trade winds, a decline in average rainfall resulting in the continued decline in stream base flow, an increase in ocean acidity, and sea level rise (SLR) (UH Sea Grant, 2014).

The rate of warming air temperature in Hawaiʻi has quadrupled in the last 40 years to over 0.3°F (0.17°C) per decade. This warming could cause thermal stress for plants and animals, and heat-related illnesses in humans as well as expand the ranges for pathogens and invasive species. Increasing temperatures could lead to changing habitat ranges for various species of wildlife. Global mean temperature is projected to increase by at least 2.7°F (1.5°C) by the end of the century for intermediate to high future scenarios also referred to as representative concentration pathways. The difference between the nightly low and daytime high temperature, an important factor for many terrestrial species, is decreasing more rapidly in Hawaiʻi than the global mean (Safeeq et al., 2012). Hawaiʻi is projected to continue

warming, with a range of +4-5°F (2.2-2.8°C) for high emissions scenarios by the year 2085 (Keener et al., 2013). Endemic bird species, such as the Hawaiian honeycreeper, could decline in population due to the warming of high-elevation forests where risk of avian disease transmission was previously low.

The strongest ocean warming is projected to be felt in tropical and Northern Hemisphere subtropical regions, with increases up to 3.6°F (2.0°C) in the upper ocean levels above 650 ft. (200 m) by the end of the century. As an island, O'ahu has both a heavy economic and cultural dependency on the ocean. Sea surface temperatures have warmed between 0.13°F and 0.41°F (0.07°C and 0.23°C) per decade in the Pacific for the last 40 years. This trend is projected to accelerate, warming by 2.3°F to 4.9°F (1.3°C to 2.7°C) before the end of the century. This warming can influence ocean circulation and nutrient distribution having major impacts on ocean habitats such as coral reefs.

Coral reefs are a vital part of the ecosystem and provide a similar niche to the global ecosystem as do plants and trees. The coral reefs have the ability to absorb carbon dioxide and produce oxygen. Although as the water around Hawai'i continues to warm, rising temperatures harm the algae that live inside the coral. The algae are the main source of nutrients for the coral, a loss of algae weakens the coral and eventually kills them. This process is known as "Coral Bleaching", because the loss of algae causes the coral to turn white. Events of mass coral bleaching are becoming more frequent throughout Hawai'i and the rise of sea temperatures has also been linked to coral disease outbreaks. Along with the damaging effects of rising sea temperatures, the increase of ocean acidity also threatens the coral reefs. As ocean acidity increases, corals and shellfish that depend on the minerals in the water weaken. The acidity of the Pacific Ocean has increased by about 25 percent in the past three centuries and is likely to increase another 40 to 50 percent by 2100.

Rainfall in Hawai'i varies dramatically both temporally and spatially based on trade winds, topography, mid-latitude weather systems, storms and cyclones, El Niño-Southern Oscillation and Pacific Decadal Oscillation phases and much more (Schroeder, 1993). Climate change, natural variability, complex topography, land uses, and other factors combine to present a challenge to the accurate projection of future rainfall and runoff patterns. Trends and projections vary from island to island, and even valley to valley. The overarching past trend across the islands has been a decrease in total rainfall. The projections show a potential increase in frequency of extreme rain events. These projections have implications for stormwater infrastructure, sustainable yield from aquifers, and runoff into coastal waters. Hawai'i's total annual average rainfall, represented by the Hawai'i Rainfall Index, has decreased over the last century (Chu, 1995; Chu and Chen, 2005). Streamflow records also show a decline in base flow by 20-70% over the last century depending on the watershed suggesting a decrease in groundwater levels. Rainfall has become less intense for the western islands (O'ahu and Kaua'i) over the last 60 years but more intense for the island of Hawai'i (east). High intensity rainfall can cause flash flooding, which is common in Hawai'i due to the steep terrain and concrete stream channels and has occasionally resulted in multimillion dollars of damage to infrastructure. It can also affect nearshore ecosystems. Hawai'i has experienced longer droughts in recent years, as all the populated islands show an increasing trend in length of dry periods during 1980-2011, as compared with 1950-1970 (Chu et al., 2010). Prevailing northeasterly trade winds, which

drive orographic precipitation on windward coasts, have decreased in frequency since 1973 in Hawai'i (Collins et al., 2010; Tokinaga et al., 2012; Garza et al., 2012).

It is projected from coarse global models that the southerly main Hawaiian islands (Hawai'i and Maui) may become wetter towards the end of the 21st century while those in the north (Kaua'i and O'ahu) become slightly drier, though rainfall projections for Hawai'i are still quite uncertain (Keener et al., 2013). Timm et al., 2014 applied a statistical downscaling method described by Timm and Diaz, 2009, in order to find a connection between the large-scale atmospheric circulation over the Pacific with the rainfall over Hawai'i. It is concluded from the six-model ensemble that the most likely scenario for Hawai'i by the late 21st century is a 5%-10% reduction of the wet-season precipitation and a 5% increase during the dry season, as a result of changes in the wind field. Other models suggest that summer dry months will become wetter while winter wet months become drier in Hawai'i. (Lauer et al., 2013; Takahashi et al., 2011). It is still uncertain how this will translate over highly variable terrain in Hawai'i. If drought events continue to increase, dry areas could see more fire and problems with stressed water supplies.

Research indicates that two centuries of unabated greenhouse gas (GHG) emissions, which includes carbon dioxide, methane, nitrous oxide, and fluorinated gases, from anthropogenic sources is responsible for increases in global atmospheric temperatures and ocean warming over the past century GHGs absorb and "trap" solar radiation instead of reflecting it back into space. The main sources of GHG emissions resulting from human activity are from the following economic sectors, in order from most emissions to least: electricity and heat production; agriculture, forestry and other land-use activities; industrial activity; transportation; other energy production processes; and buildings (IPCC, 2014). In 2014, the United States was responsible for approximately 15 percent of global carbon dioxide emissions (Boden & Anders, 2017).

As assessed by the City and County of Honolulu's (CCH) Climate Change Commission in June 2018, the State of Hawai'i's contribution to GHGs consists of the following:

- In 2007, Hawai'i's total greenhouse gas emissions were 24 million metric tons of CO_2 equivalent.
- Total CO_2 emissions have slightly declined in the last decade, largely due to energy efficiency gains in the electricity sector.
- On O'ahu, 20.8 percent of net sales of electricity from sources were classified as renewable in 2017; the law requires 100 percent by 2045.
- Fossil fuel use for transportation continues to increase.
- Hawai'i's CO_2 emissions are 20 percent lower than the national average.
- United States CO_2 emissions per capita are over three (3) times the world average and Hawai'i's are approximately twelve (12) times larger than other Pacific Islands.
- Passed in 2018, HB 2182 established a GHG Sequestration Task Force and sets a 2023 deadline for crafting a plan to meet a zero emissions target by 2045.
- Also passed in 2018, HB 1986 directs the State Office of Planning to work with the task force to create a carbon offset program.

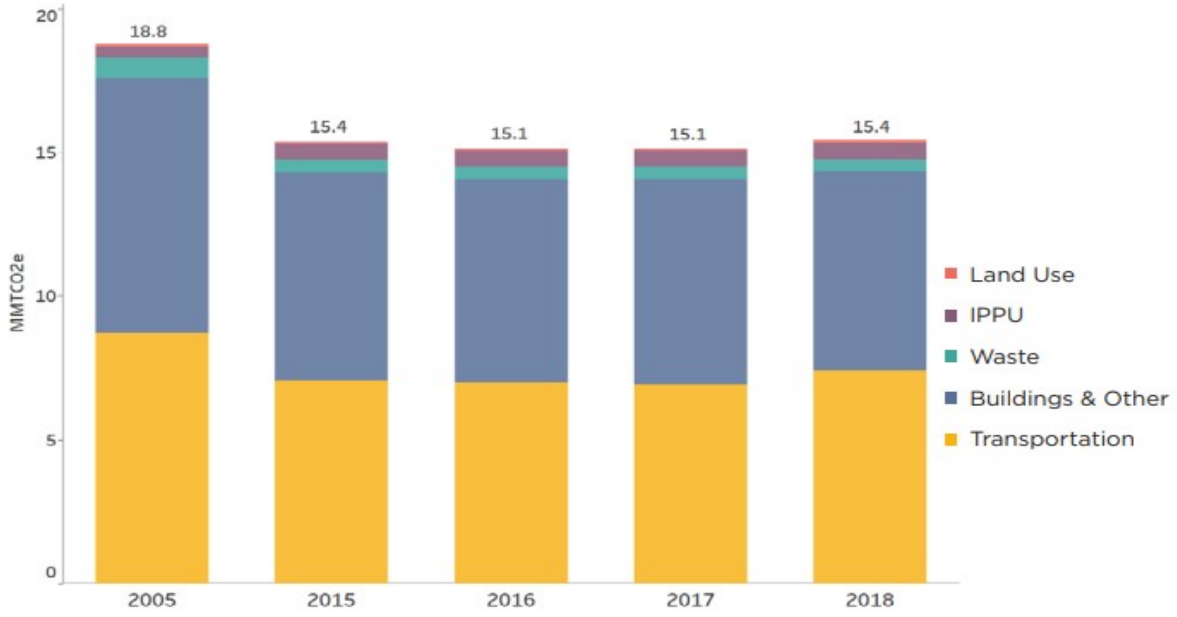
Planning for climate change is challenging as climate change is defined by constantly changing and largely unknown or undefined factors. The risks of climate change, as discussed earlier, include changes in rainfall intensity, SLR, temperature, groundwater levels, saltwater intrusion, and impacts from storm hazards.

The CCH has taken steps to plan for the impacts of climate change as outlined in the CCH's Climate Change Commission's Climate Change Brief which establishes the factual basis and impacts of climate change for the CCH. In July of 2018, the Mayor of CCH issued Directive 18-02, which requires each CCH department and agency to:

- Consider the need for both climate change mitigation and adaptation as pressing and urgent matters;
- Take a proactive approach in both reducing GHG and adapting to impacts caused by SLR; and
- Align programs whenever possible to help protect and prepare the infrastructure, assets, and citizens of the CCH for the physical and economic impacts of climate change.

In June 2021, the CCH City Council passed its first-ever Climate Action Plan (CAP). The CAP is a science-based, community-driven strategy for Oʻahu to combat climate change and eliminate GHG emissions. The CAP outlines that the CCH's GHG emissions have declined nearly 18% between 2005 and 2018. However, there was an increase from 2017 to 2018 due to transportation-related GHG emissions. Figure 3-1 below represents the CCH's GHG emissions by sector, which includes Land-Use, Industrial Processes and Product Use (IPPU), Waste, Buildings & Other, and Transportation.

Figure 3-1: CCH's GHG Emissions by Sector For 2005, 2015-2018



**The analysis and forecasting for the CAP was done before the availability of 2018 figures and is therefore based on 2005, 2015, 2016, and 2017 figures.*
**Source: Climate Action Plan (CAP). June 2021.*

In summary, CAP outlines a detailed list of programs, policies, and actions that the CCH can implement, alongside with State and Federal actions, to reduce GHG emissions by 45% over the next five years and reach the CCH's goal to be carbon neutral by 2045.

Impacts and Mitigation Measures

No significant impacts on climate at the Project Site are anticipated to result from the development and operation of the Proposed Project. The Proposed Project will be appropriately designed to take into consideration the context of the surrounding environment and are not anticipated to significantly influence or affect temperatures, wind, or rainfall levels at the Project Site or within the greater region. Moreover, the Proposed Project will not exacerbate the impacts associated with climate change at the Project Site, greater region, or State from the development and operation of the Proposed Project. In the short-term, it is anticipated that the various construction activities associated to the Proposed Project will result in the irrevocable release of GHGs. Construction related emissions include tailpipe emissions from construction equipment, delivery trucks, and workers commuting to and from the construction site. It is anticipated that the quantities of GHGs released from construction related activities will be negligible and usage of each piece of equipment would be sporadic and not simultaneous. Moreover, the contractors for the construction of the applicable projects will be required to prepare a dust control plan compliant with the provisions of Chapter 11-60.1, HAR, Air Pollution Control.

However, it is acknowledged that the exact nature of how the climate will change in the coming years is unknown. On a broader policy level, new information will continually need to be incorporated within future assessments to identify where efforts should be focused when developing adaptation strategies to climatic changes. It is anticipated that the Proposed Action will be flexible in order to conform with guidance set forth by best practices outlined by policies and research based on the best scientific data at the time as climate change science, technology, and policies evolve over time.

3.2 Physiography

3.2.1 Geology and Topography

The island of Oʻahu is a volcanic doublet formed by the Waiʻanae Range to the west and the younger Koʻolau Range to the east. Both are remnants of shield volcanoes, but the term "range" indicates that they have lost most of their original shield outlines and are now long, narrow ridges shaped largely by erosion. Later post-erosional eruptions sent lava down the valleys and resulted in the formation of volcanic cones such as Diamond Head and Tantalus.

Kaimukī is located in the Honolulu Volcanic Series of the Koʻolau Shield Volcano. The Honolulu Volcanic Series, occurring after a long absence of volcanic activity in the Koʻolau volcano, included a set of one-time volcanic eruptions in the Honolulu area probably between 800,000 and 30,000 years ago. These individual eruptions created some notable island

features including Diamond Head, Punchbowl Crater, and Hanauma Bay. The composition of these volcanic outflows is significantly different from those of the original volcanoes.

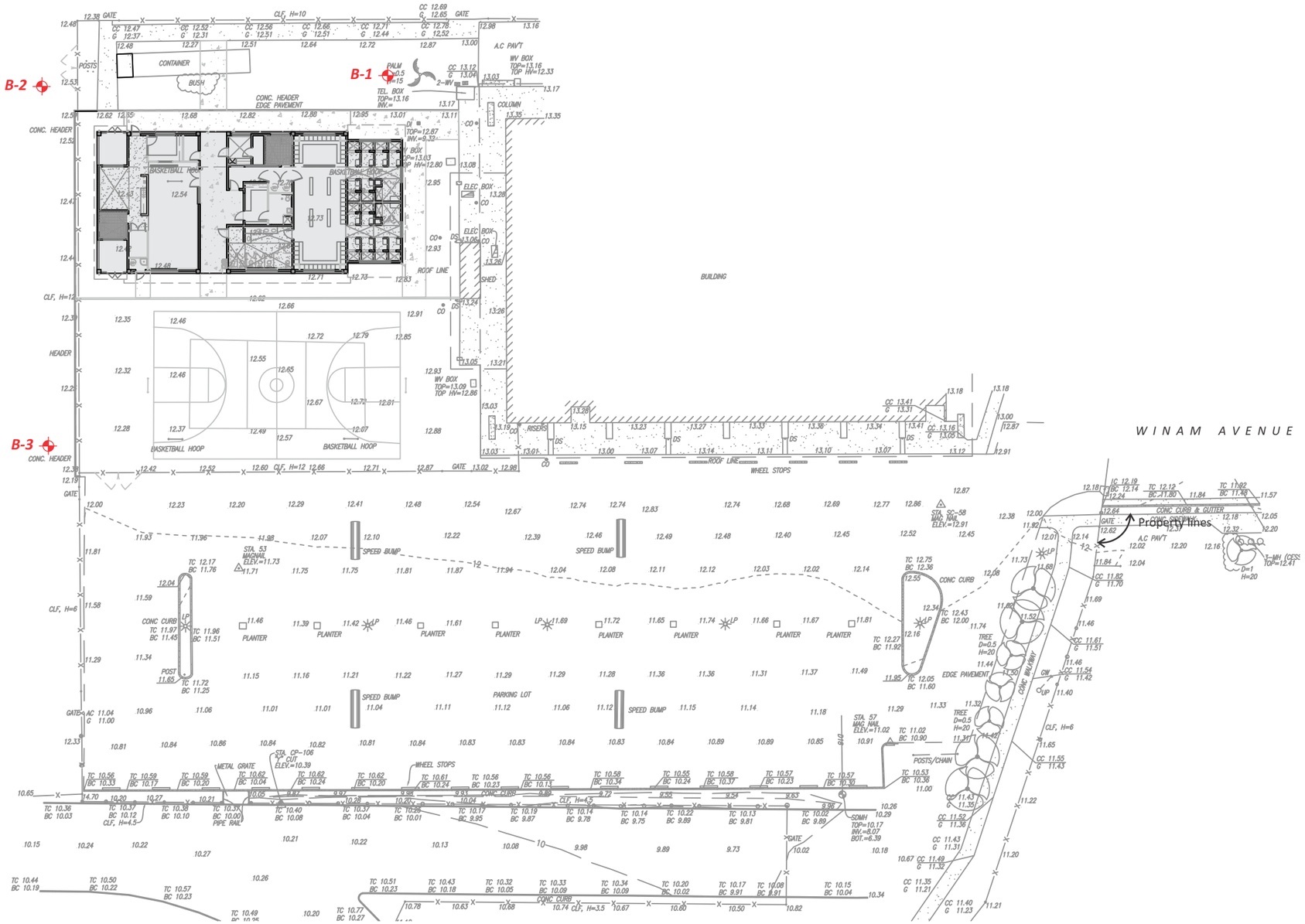
The Project Site is located on the fringes of buried marshes that historically occupied Waikīkī. The Project Site is relatively flat and has been developed over with outdoor basketball courts. Generally, the site slopes from the northeast to the southwest. Elevations within the Project Site range from 12-13 feet mean sea level (MSL) (See Figure 3-2).

Impacts and Mitigation Measures

No significant impacts on geology or topography are anticipated to result from the construction or operation of the Proposed Project. The Project Site is a previously developed site within the urban core of Honolulu. The Proposed Project's construction will not involve any major land disturbing activities involving mass grading or significant revisions to site contours. In the short-term, relatively minor grading activities may be required. The Project Site will be graded to provide positive drainage for storm water runoff to be directed away from the Proposed Project. The storm drainage patterns with reference to the existing drainage system will be taken into consideration when designing on-site grading elevations. However, all necessary permits will be obtained, and all applicable conditions to minimize any potential impacts related to geography and topography will be followed. Moreover, a Geotechnical Report was prepared by JPB Engineering in May 2022 to investigate the geotechnical characteristics of the Project Site (See Appendix A). In summary, the Geotechnical Report recommends the following to mitigate any potential impacts:

- Following the demolition of the structural elements, all remaining concrete slabs, foundations, and the like should be broken down into manageable sizes and the resulting debris hauled off site to an approved disposal area. Subsurface utility lines that interfere with the new construction should be dug out and removed, rerouted or capped in place. All surficial vegetation, including grasses, unwanted trees and plants, along with any roots over half an inch in diameter, should be removed from the proposed construction areas. Excavations and depressions resulting from clearing and grubbing operations should be dug out to firm soil and backfilled with suitable materials in accordance with the following recommendations.

- To provide uniform support, soils remaining at subgrade level should be scarified to a depth of six inches, brought to at least two percent over the optimum moisture content and compacted to not less than 95 percent relative compaction, in accordance with ASTM Designation D 1557-12. Inability to achieve the stipulated minimum level of compaction should be used as field criterion to identify areas of loose or disturbed soil that should be over excavated and replaced with engineered fill, processed, placed and compacted as described below; or, stabilized in accordance with the recommendations of the project geotechnical engineer.



JPB ENGINEERING, INC
Structural & Geotechnical Engineering

Base: Controlpoint Surveying, Inc., 2021, *Topographic Survey Map, DOE Kamuki High School, Softball Field Improvements, Kaimuki, Honolulu, Oahu, Hawaii, TMK: (1) 2-7-024:001* (scale: 1"=20'), dated October 22, 2021

SITE PLAN

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

Figure 3-2: Topography Map

PLATE NO. A2

- Fill material should be placed in horizontal lifts not exceeding eight inches in loose thickness. Each lift should be brought to at least the optimum moisture content and compacted to not less than 95 percent relative compaction, per ASTM Designation D 1557-12. All earthwork operations should be observed and the soils tested by the project geotechnical engineer or his representative. The further recommendations of this report are contingent upon adherence to this and the previous recommendations.

- The Proposed Project should be supported upon conventional, isolated, reinforced concrete foundations based in and underlain by undisturbed native soil. All foundations should be at least 16 inches wide and should extend to a minimum depth of 18 inches below lowest adjacent final grade. All footing excavations should be thoroughly clean and dry prior to placement of reinforcing steel and concrete. Foundations so established should be designed for maximum allowable net bearing values of 1,600 pounds per square foot for working load or 2,100 pounds per square foot for total load, including the effect of seismic or wind forces.

- The proposed concrete slab-on-grade floors should be at least four inches thick. The recommended minimum slab thickness is critical and must be stringently controlled. The slab should be underlain by a capillary break consisting of a blanket of crushed rock at least four inches thick. This material should consist of "3B fine" crushed rock conforming to ASTM C33-13, No. 67 gradation. An impervious membrane at least ten mils thick should be installed above the capillary break zone. A layer of damp, clean sand about two inches thick is suggested, although not required, as a buffer over the membrane to assist in protecting it from punctures during construction, and to promote curing of the overlying slab concrete. The slab should be reinforced with minimum No. 4 reinforcing bars spaced on maximum 18-inch centers in each direction, or galvanized, welded steel wire mesh conforming to 6" x 6"/WF1.4 x WF1.4 gauge or higher. All reinforcing should be positioned at slab mid-depth.

- The walkway slabs should be at least four inches thick. As stated above, the minimum recommended slab thickness is critical and must be stringently controlled. Each slab should be underlain by at least four inches of aggregate base or "3B fine" material conforming to ASTM C33-13, No. 67 gradation. These slabs also should be reinforced with minimum No. 4 reinforcing bars spaced on maximum 18-inch centers in each direction, or galvanized, welded steel wire mesh conforming to 6" x 6" / WF1.4 x WF1.4 gauge or higher. All reinforcing should be positioned at slab mid-depth. The slabs should be installed with construction joints consisting of ruled notches spaced on maximum five-foot centers.

- Discharge from the building roof lines as well as runoff from the exterior flatwork areas must be directed away from the foundation lines and away from the slope. The new roof system should be provided with flashing and

downspouts connected to collect and divert runoff through a closed piping system and away from any foundation. All drainage systems should be maintained on a routine basis

3.2.2 Soils

According to the U.S. Department of Agriculture, Natural Resource Conservation Service, soils at the Project Site and close proximity are classified as Kawaihapai clay loam (0 to 2 percent slopes) (KIA) (See Figure 3-3). This soil occurs in stream valleys and on alluvial fans at elevations from sea level to 533 m (1,750 feet).

The KIA series consists of well drained soils that formed in alluvium derived from basic igneous rock. KIA soils are in drainageways and on alluvial fans on the coastal plains and have slopes of 0 to 15 percent.

Impacts and Mitigation Measures

No significant impacts on soils are anticipated to result from the construction and operation of the Proposed Project. The Project Site is a previously developed site within the urban core of Honolulu. The Proposed Project's construction will not involve any major land disturbing activities involving mass grading or significant revisions to site contours. In the short-term, relatively minor grading activities may be required. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to soils and erosion. A National Pollutant Discharge Elimination System (NPDES) permit for stormwater runoff from construction activities would be required as individual and/or cumulative soil disturbances in a project area should it exceed one acre of land area. Any discharges related to the Proposed Action's construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, State Department of Health (DOH). All excavation and grading activities will be regulated by applicable provisions of the CCH's grading ordinances (Chapter 14, Articles 13-16, HAR). Excavation and grading activities will incorporate erosion control best management practices to preserve existing conditions including, but not limited to, temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, slope protection, stabilized construction vehicle entrance, grate inlet protection, truck wash down areas, and use of compost filter socks. Planting of landscaping and stabilization measures will be done as soon as possible on completed areas to help control erosion in the long-term.

3.3 Hydrology

3.3.1 Surface and Coastal Waters

The Project Site is located entirely within the Ala Wai watershed (See Figure 3-4). Approximately 0.1 miles to the west of the Project Site is the Mānoa-Pālolo drainage canal which discharges into the Ala Wai Canal before entering Māmala Bay (See Figure 3-5). The Ala Wai Canal also receives waters from the Mānoa, Pālolo, and Makiki Streams prior to entering Māmala Bay.

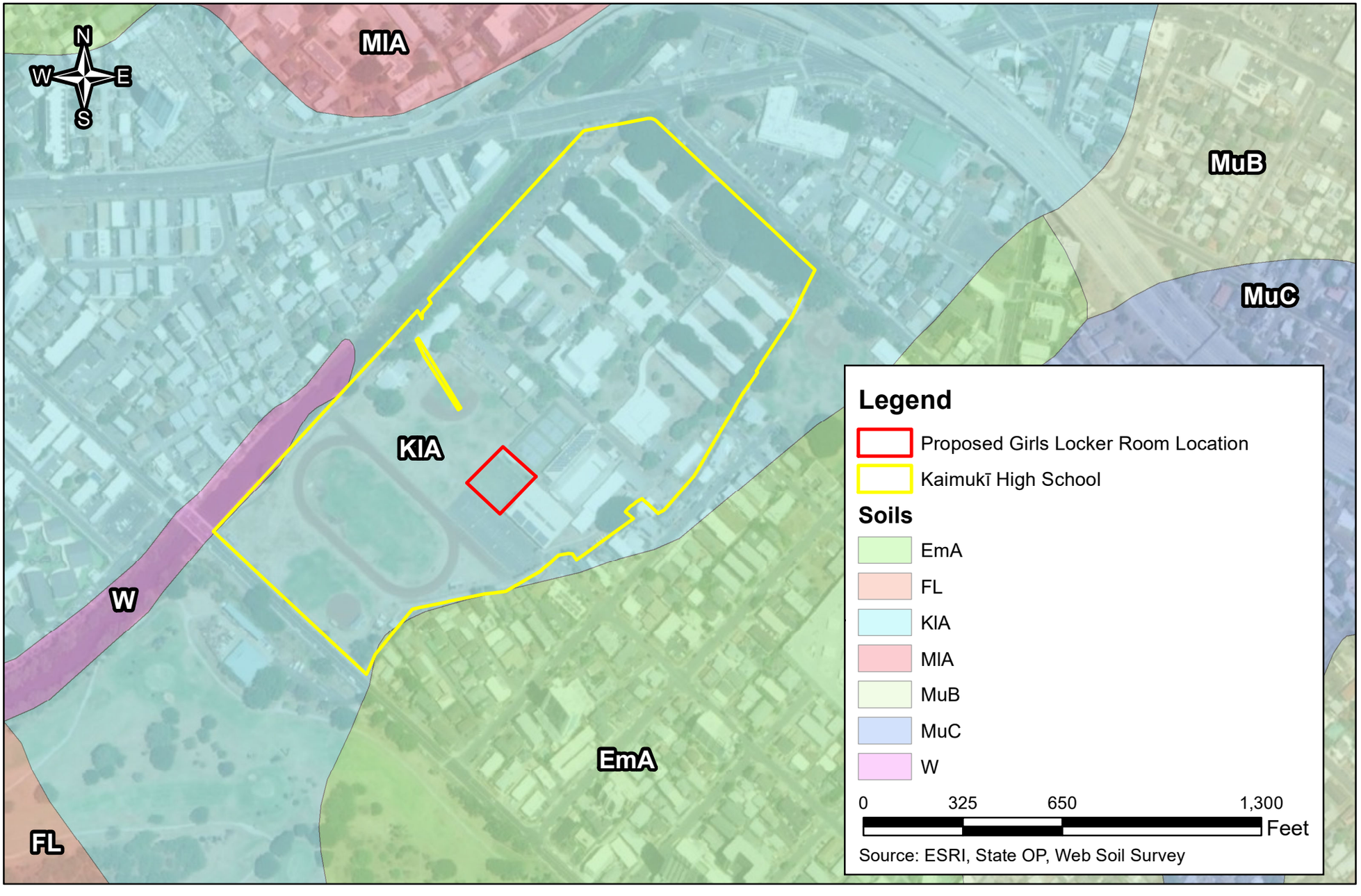


FIGURE 3-3

Soils Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

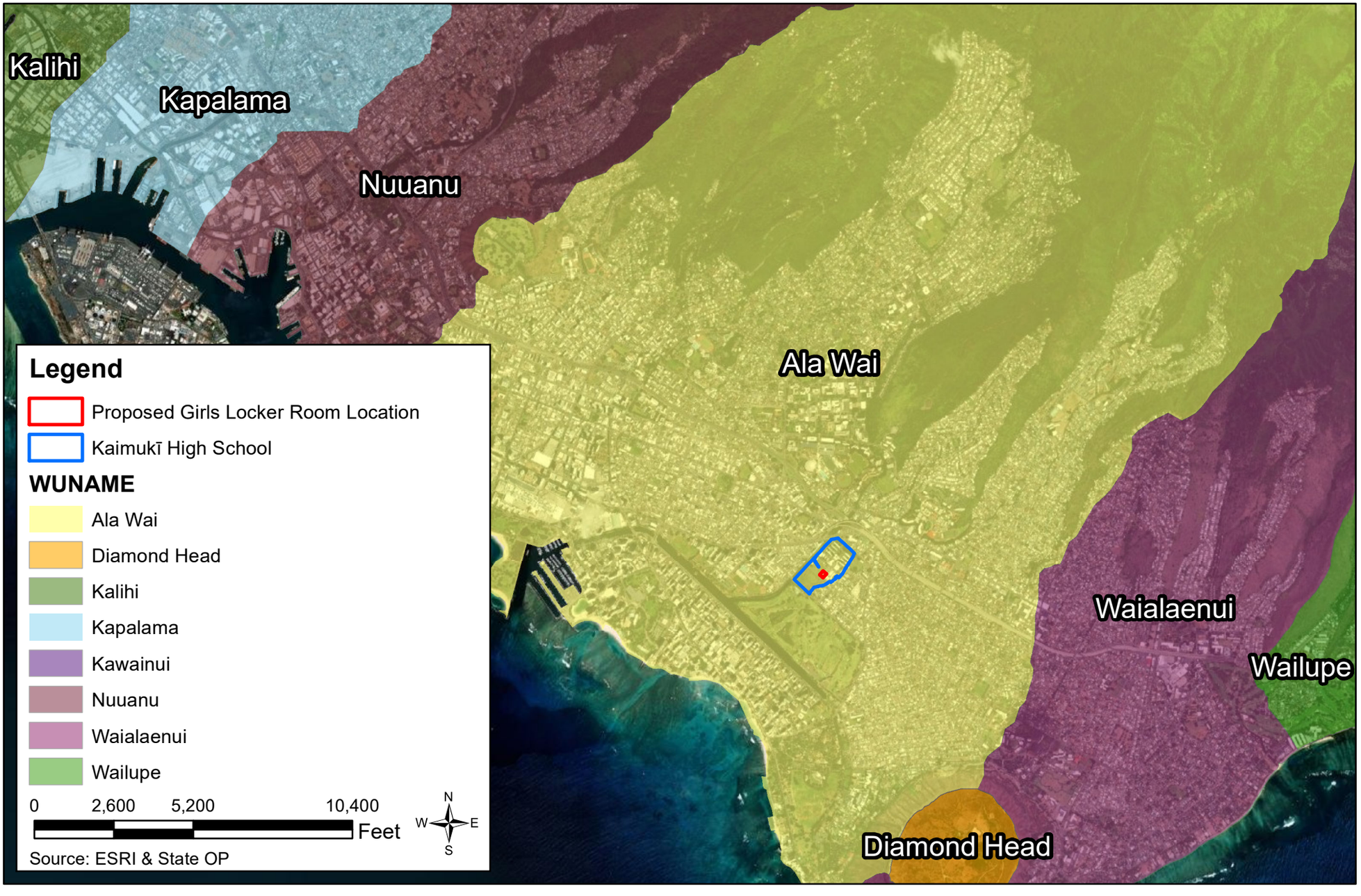


FIGURE 3-4

Watershed Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

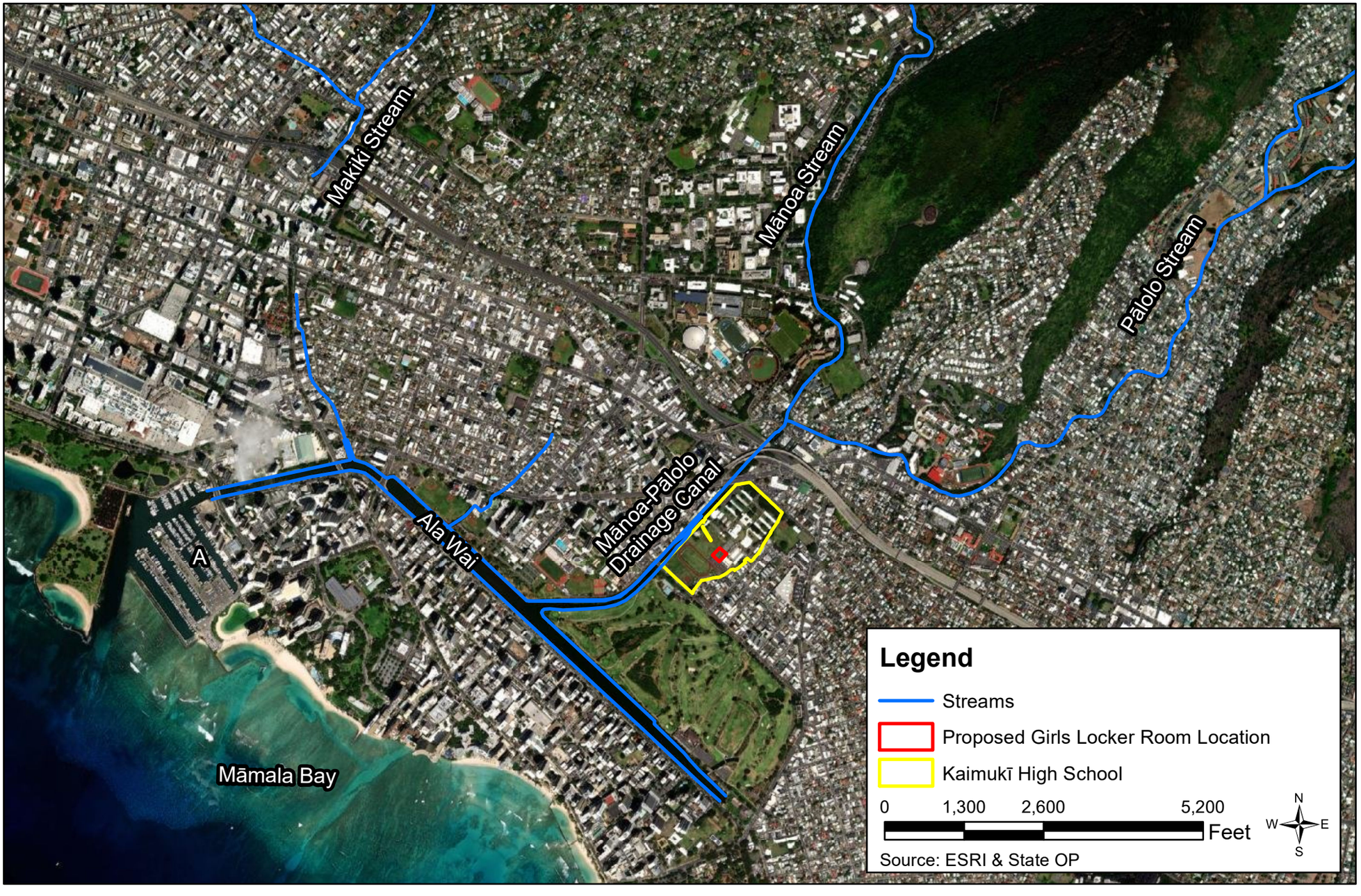


FIGURE 3-5

Stream Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

The nearest coastal water to the Project Site is Waikīkī Beach at Māmala Bay, located approximately 0.88 miles to the south. Pursuant to HAR Title 11, Chapter 54, Water Quality Standards, the coastal waters in the vicinity of the project area are classified as Class A marine waters (See Figure 3-6). Class A marine waters are recognized as waters to be used for "*recreational purposes and aesthetic enjoyment to be protected. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class*."

Impacts and Mitigation Measures

No significant impacts on surface or coastal waters are anticipated to result from the construction and operation of the Proposed Project. The Project Site is not in close proximity to the Mānoa-Pālolo drainage canal, a stream, or Māmala Bay.

The Proposed Project, however, will adhere to stringent best management practices during construction and operation to preserve surface water resources. Best management practices include, but are not limited to, temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, slope protection, stabilized construction vehicle entrance, grate inlet protection, truck wash down areas, and use of compost filter socks. Planting of landscaping and stabilization measures will be done as soon as possible on completed areas to help control erosion and runoff that could potentially enter the stream in the long-term. There will not any encroachments on any waters of the United States (U.S.), and therefore additional permitting with the Army Corps of Engineers is not required for the Proposed Project. Any discharges related to the construction or operation of the Proposed Action would comply with applicable State Water Quality Standards as specified in Sections 11-54 and 11-55, HAR. Moreover, an NPDES permit for stormwater runoff from construction activities would be required as individual and/or cumulative soil disturbances in a project area should it exceed one acre of land area.

3.3.2 Groundwater

The State Department of Land and Natural Resources (DLNR) Commission on Water Resource Management (CWRM) has established a groundwater hydrologic unit and coding system for groundwater resource management. The Project Site is located within the Honolulu Sector Area which is comprised of six aquifer system areas identified as Waiʻalae – East, Waiʻalae – West, Pālolo, Nuʻuanu, Kalihi and Moanalua. The Project Site is located within the Pālolo Aquifer System (30101) area which has an estimated yield of 5 million gallons per day (mgd) (See Figure 3-7). Usage in this aquifer includes consumption by a wide variety of users, including residential, commercial, industrial, manufacturing, government, tourism, parks, schools, and other public facilities.

Impacts and Mitigation Measures

No significant impacts on groundwater are anticipated to result from the construction and operation of the Proposed Action.

FIGURE 3-6

Water Quality Classification Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

FIGURE 3-7

Aquifer Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, O‘ahu, Hawai‘i

WILSON OKAMOTO CORPORATION

The Proposed Project lies just mauka of the Underground Injection Control Line and the Honolulu Board of Water Supply's No Pass Zone Line, both of which demarcate areas where wastewater disposal facilities would potentially adversely affect potable water supplies in the underlying aquifers. However, the Proposed Project will not include any wastewater injection wells that could result in adverse impacts to the groundwater.

In the short-term, construction activities are not likely to introduce to, nor release from the soils, any materials that could adversely affect the underlying groundwater. Any materials or wastes produced during the operation of the Proposed Project would be handled in compliance with the necessary City and State regulatory requirements.

3.4 Natural Hazards

The Disaster Mitigation Act of 2000 (FEMA, 2000), 44 Code of Federal Regulations, Hazard Mitigation Planning, required States and Counties to have approved hazard mitigation plans as of November 1, 2004 to receive Pre-Disaster Mitigation funding. The development of State and local hazard mitigation plans is critical for maintaining eligibility for future Federal Emergency Management Agency (FEMA) mitigation and disaster recovery funding.

Given Hawai'i's vulnerability to natural hazards and history of disasters, the State has maintained and implemented a comprehensive, multi-hazard mitigation strategy to reduce loss of life and property damage. This strategy is embodied in the *2018 State Multi-Hazard Mitigation Plan*. The 2018 State Hazard Mitigation Plan identifies the major natural hazards that affect the State, assesses the risk that each hazard poses, analyzes the vulnerability of the State's population, property and infrastructure to the specific hazard, and recommends actions that can be taken to reduce the risk and vulnerability to the hazard. The State Hazard Mitigation Plan also contains a description of programs, policy, statues and regulations applicable to hazard mitigation. It should be noted that the 2023 update to this plan has begun and is expected to be released at the end of 2023.

The CCH also maintains a Local Hazard Mitigation Plan, that the State of Hawai'i Emergency Management Agency reviews in accordance with The Disaster Mitigation Act of 2000 (FEMA, 2000), 44 Code of Federal Regulations and coordinates with the CCH to ensure compliance with the federal regulations.

The identified major natural hazards that could affect the State, as well as the CCH are Climate Change Effects (including SLR/coastal erosion), floods, tsunamis, strong windstorms/hurricanes, earthquakes, landslides/rockfalls, wildfires, and volcanic hazards.

3.4.1 Sea Level Rise

Climate change and its impacts are discussed in detail in Section 3.1 above. This section will focus on SLR and coastal erosion impacts.

The island of O'ahu is susceptible to flooding and SLR as it is home to the State's most populous city, Honolulu, which also serves as the State's capital. With approximately one million residents, O'ahu accounts for approximately 70% of the State's entire population. Thus, O'ahu also possesses many of the State's critical resources, infrastructure, and

services. A major impact from SLR on O'ahu could reverberate and result in major economic and social impacts for the islands and communities throughout the State.

Elevated water levels in the spring and summer of 2017 provided a glimpse of the near future when coastal flooding events are expected to occur more frequently and severely with continued SLR. Findings by the UH Sea level Center showed that the 2017 anomalously high-water levels resulted from an unprecedented combination of Pacific wide climate and ocean variability. The water levels in 2017 presented record highs. The rise in sea level caused localized flooding and coastal erosion throughout the State during the spring and summer of 2017.

Although coastal erosion is a naturally occurring event, as sea level continues to rise, the rate at which coastal erosion occurs is increasing which will have more severe impacts. Over the next 30 to 70 years, as sea level rises, homes and businesses located on or near the shoreline throughout the State will become exposed to chronic flooding.

Sea level is rising at increasing rates due to global warming of the atmosphere and oceans and melting of the glaciers and ice sheets. Rising sea level and projections of stronger and more frequent El Niño events and tropical cyclones in water surrounding Hawai'i indicate a growing vulnerability to coastal flooding and erosion. The Hawai'i Sea Level Rise Vulnerability and Adaptation Report (2017) modeled exposure to chronic coastal flooding and erosion using projections from the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report (IPCC, 2014) where the high-end scenario was up to 3.2-ft of sea level rise by the end of the century (Courtney et al., 2020). For O'ahu, the exposure area (SLR-XA) with 3.2 ft. of SLR is based on modeling passive inundation, coastal erosion, and annual high wave runup. According to a recent National Oceanic and Atmospheric Administration (NOAA) report, global SLR in the range of 6.4 ft. (2.0 m) to 8.8 ft (2.7 m) is "physically plausible" by the end of this century (Sweet et. al, 2017). The CCH Climate Commission issued SLR guidance for the County to use for areas exposed to 3.2 ft. of SLR as a planning benchmark for most developments, with consideration of 6 ft. of SLR as a planning benchmark for critical infrastructure with long expected lifespans and low risk tolerance (Climate Change Commission, 2018). The Proposed Project is not located within the 3.2 ft. or 6 ft. SLR exposure areas (See Figure 3-8).

Impacts and Mitigation Measures

No significant impacts on SLR at the Project Site are anticipated to result from the construction or operation of the Proposed Project. It should be noted that the Mānoa-Pālolo drainage canal adjacent to the Kaimukī High School campus may experience impacts from SLR. However, the overall campus and Project Site are not within the SLR exposure areas for both the 3.2 ft. or 6 ft. scenarios. Hence, the Proposed Project is not anticipated to experience significant impacts related to SLR.

However, much of the critical resources, infrastructure, and services that serve the Kaimukī High School campus, are within the exposure areas. In general, the consensus of the scientific community and from the studies mentioned above it is generally accepted that unless drastic measures are taken by governments on a global scale, sea-level will continue to rise as a result of climate change.

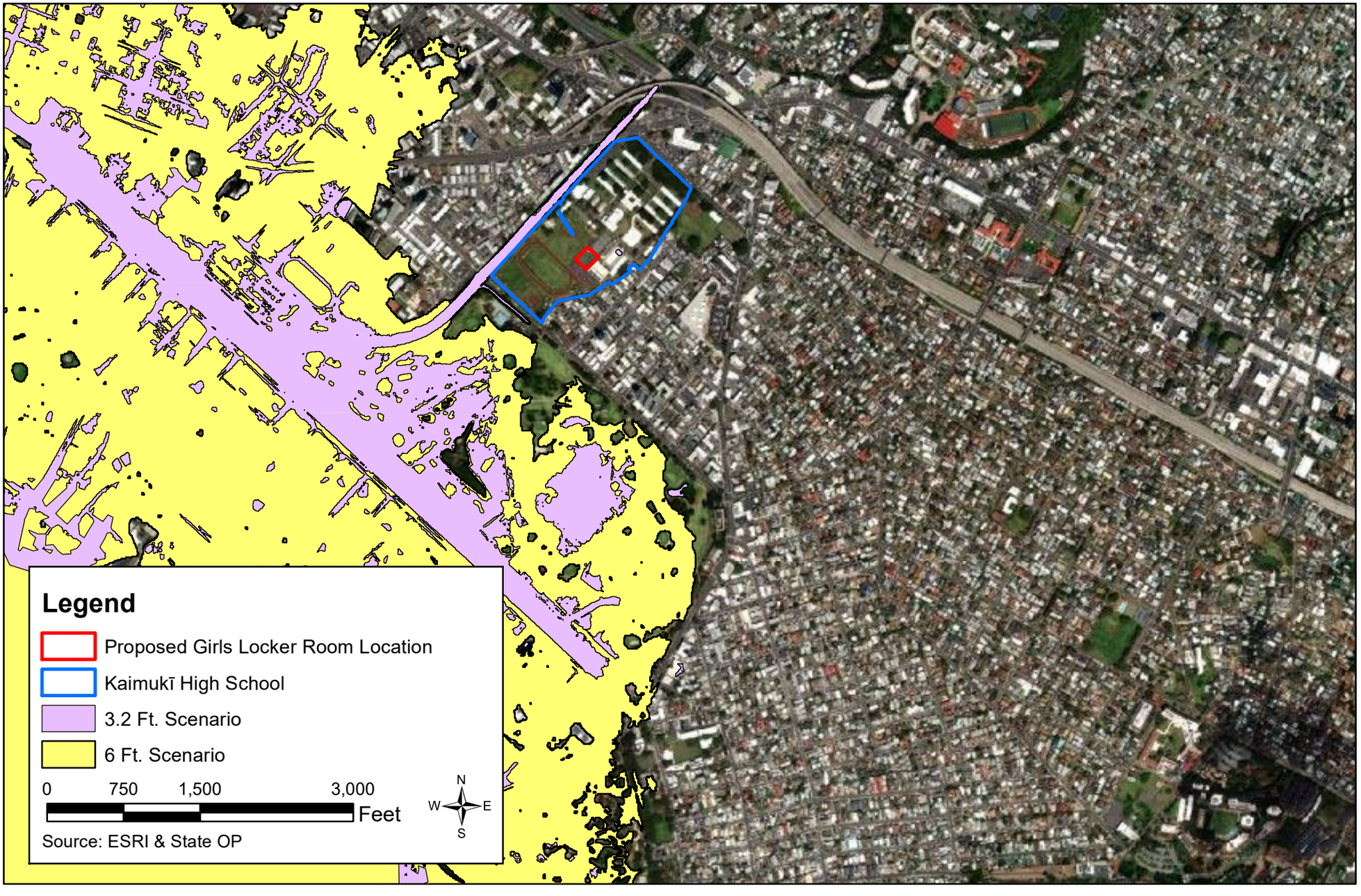


FIGURE 3-8

Sea Level Rise Exposure Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

On a broader policy level, new information will continually need to be incorporated within future assessments to identify where efforts should be focused when developing adaptation strategies to SLR impacts. It is anticipated that the Proposed Project will be flexible in order to conform with guidance set forth by best practices outlined by policies and research based on the best scientific data at the time as climate change science, technology, and policies evolve over time.

3.4.2 Flood and Tsunami Hazardous

Floods are the temporary inundation of land from excessive rainfall or other sources. Although floods are caused by natural events, most flood damage is a result of human occupation and development of lands that are susceptible to flooding without adequate protection. The CCH is vulnerable to flooding from storms, storm surge, high surf, and on rarer occasions, tsunamis. Every year flooding causes millions of dollars of damage. In the CCH, from about 1915 to 2018, floods caused by rainstorms, tsunamis, and hurricanes have claimed more than 140 lives and inflicted more than $200 million dollars of direct and indirect damage (DEM, 2020).

According the Flood Insurance Rate Map (FIRM), prepared by the Federal Emergency Management Agency (FEMA), Kaimukī High School is situated within two flood zone designations, Zone AE and Zone X. However, the Project Site itself is situated within Zone AE (See Figure 3-9). Zone AE includes areas subject to inundation by the 1-percent-annual-chance flood events. Zone AE is also within the Special Flood Hazard Area where mandatory flood insurance and floodplain management regulations apply. Zone X includes areas of minimal flood hazard where there is a 0.2 percent annual chance of flooding.

With regards to tsunami hazards, since the early 1800's, approximately 50 tsunami have inundated the State of Hawai'i's shores, including the 1946 tsunami that resulted in wave heights of 11 meters and killed 6 people on O'ahu alone. Additional tsunamis to impact O'ahu shores occurred in 1952, 1957, 1960, 1964, and 2011.

According to the Tsunami Evacuation Zone maps for O'ahu, Kaimukī High School is situated within both the Extreme Tsunami Evacuation Zone, as well as the Tsunami Safe Zone. However, the Project Site lies entirely within the Tsunami Safe Zone (See Figure 3-10).

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on flood hazards on the Proposed Project are anticipated as the proposed improvements are not anticipated to increase flood risks or cause any adverse flood-related impacts at the project area. The Proposed Project will be designed and constructed to applicable flood zone requirements.

Regarding tsunami hazards, while the Project Site is situated entirely within the Tsunami Safe Zone, a portion of the Kaimukī High School campus is situated within the Extreme Tsunami Evacuation Zone.

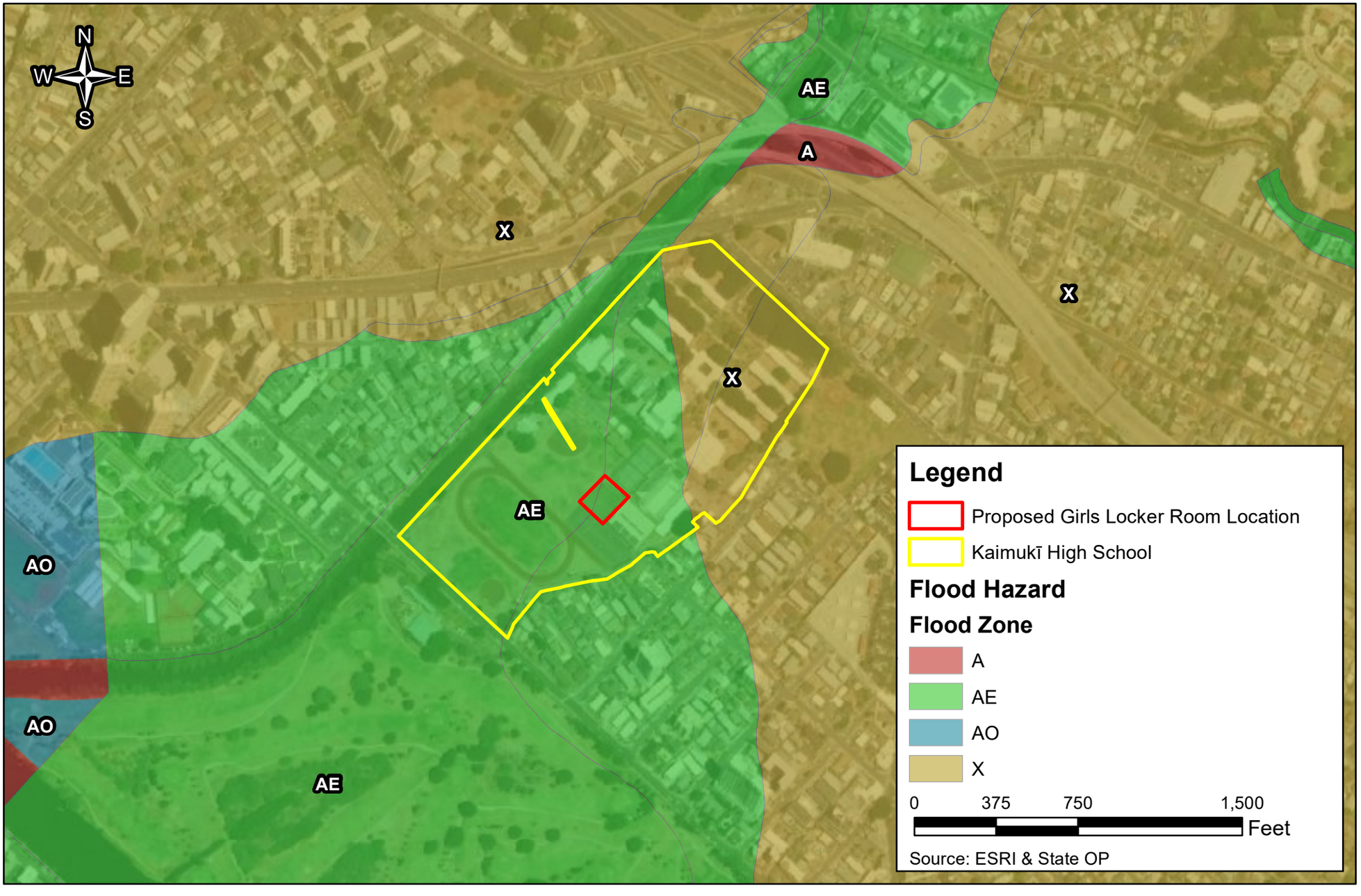


FIGURE 3-9

Flood Zone Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

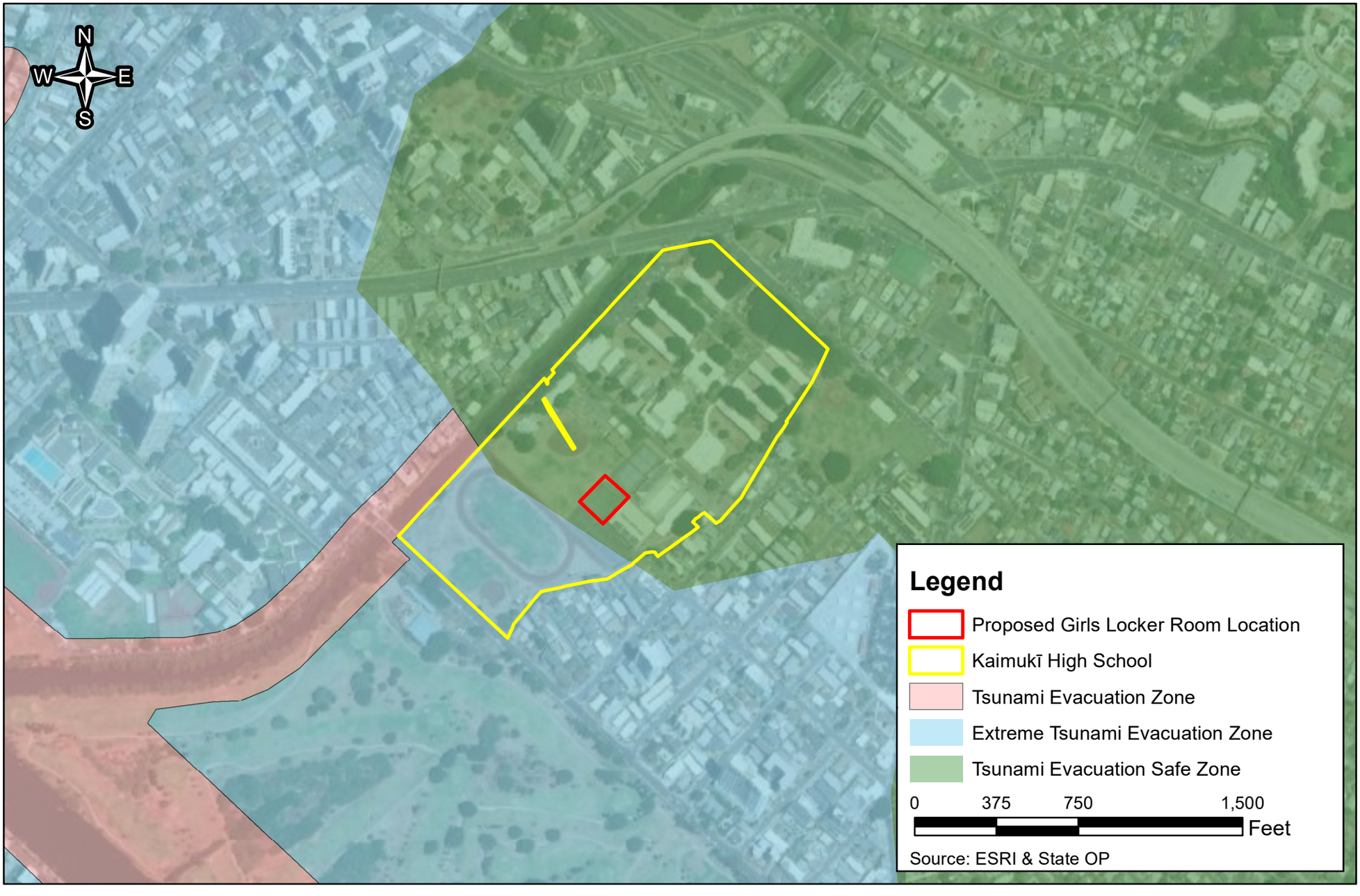


FIGURE 3-10

Tsunami Evacuation Zone Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

In the event of an Extreme Tsunami Warning, citizens evacuate out of both the tsunami evacuation zone and the extreme tsunami evacuation zone. To mitigate against tsunami impacts, the Proposed Project will be designed and constructed to current building codes and regulations.

For the development, all drainage improvements, excavation, drilling, and grading will be coordinated with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant impacts regarding flood and tsunami hazards.

3.4.3 Hurricane and Wind Hazard

The Hawaiian Islands are seasonally affected by Pacific hurricanes from the late summer to early winter months. The State has been affected twice since 1982 by significant hurricanes, ʻIwa in 1982 and ʻIniki in 1992. During hurricanes and storm conditions, high winds caused strong uplift forces on structures, particularly on roofs. Wind-driven materials and debris can attain high velocity and cause devastating property damage and harm to life and limb. Along the coastline, a surge of water, topped by battering waves can move ashore into low lying coastal areas. However, it is difficult to predict how hurricane-induced storm surge may impact a specific location due to differences in atmospheric pressure, tidal stage, coastal topography, and location relative to the eye of the hurricane. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events will occur. The Proposed Project is, however, no more or less vulnerable than the rest of the island to the destructive winds and torrential rains associated with hurricanes.

Impacts and Mitigation Measures

The potential for hurricanes, while relatively rare, is present across the State of Hawaiʻi. The Proposed Action's construction activities could potentially exacerbate the effect of hurricanes if loose materials are not secured prior to the event of a storm and become flying debris. To minimize this hazard, construction materials and equipment would be stored properly when not in use, consistent with construction best management practices.

To safeguard against hurricane damage in the long-term, the Proposed Project improvements would be designed in compliance with American Society of Civil Engineers and International Building Code standards for wind exposure.

3.4.4 Earthquake and Seismic Hazard

Seismic hazards are those related to ground shaking. Landslides, ground cracks, rock falls and tsunamis are all considered as seismic 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 Hawaiʻi, the Hawaiian Islands are not situated in a high seismic area subject to numerous earthquakes (Macdonald et al. 1983). Thousands of earthquakes occur every year in the State of Hawaiʻi. Earthquakes in the Hawaiian Islands are associated with volcanic eruptions or tectonic movements. Most of these earthquakes are closely related to volcanic processes and are so small they can only be detected by seismometers. One of the larger and more recent earthquakes occurred offshore of Puakō,

Hawai'i in 2006. The earthquake measured 6.7 on the Richter Scale and caused minor damages to structures and buildings on the island of O'ahu.

Engineers and other professionals have created a system of classifying seismic hazards on the basis of the expected strength of ground shaking and the probability of the shaking actually occurring within a specified time. The results are included in the International Building Code (IBC) seismic provisions. The IBC classifies the likelihood of seismic activity into zones ranging from 0 to 4. Seismic Zone 0 represents no chance of severe ground shaking and Seismic Zone 4 represents a 10 percent chance of severe shaking in a 50-year interval. The Project Site lies within the region of O'ahu classified as Seismic Zone 2A under the IBC. Strong shaking is associated with earthquakes in this zone and may result in negligible damage to buildings in good design and construction, slight to moderate damage in well-built ordinary structures, and considerable damage in poorly built structures. Thus, Kaimukī is assessed to have low vulnerability to earthquakes.

Volcanic hazards on O'ahu are considered minimal due to the extinct status of former volcanoes; however, the effects of earthquakes occurring on the islands of Hawai'i and Maui may be felt on the island of O'ahu.

Impacts and Mitigation Measures

O'ahu has not experienced significant seismic events in the modern era. The development of the Proposed Action would be subject to adherence to strict design requirements, to ensure that all developments of the Proposed Action would comply with geotechnical recommendations for seismic hazards and meet prevailing building codes by incorporating specifications to reduce vulnerability to earthquakes at that time.

3.4.5 Wildfire Hazards

Wildfires can threaten life and property, but they can also harm the environment and threaten important natural resources such as endangered species. While sometimes caused by lightning, nine out of ten wildfires are human-caused. Put simply, "wildfire" is the term applied to any unwanted and unplanned fire burning in forest, shrub or grass regardless of whether it is naturally or human induced (DEM, 2020).

On a global basis, the number of wildfires has significantly increased in the last decades. Such increase can be explained by four key factors:

1. Past fire suppression policies, including one of "total suppression," which allowed for the accumulation of fuel in the form fallen leaves, branches, and excessive plant overgrowth in forest and wild land areas.
2. Increasingly dry, hot weather.
3. Changing weather patterns.
4. Increased residential development in the wild land/urban interface

All the Hawaiian Islands are susceptible to wildfires, especially during prolonged drought and high winds. In recent years, the average annual cost to suppress wildfires in Hawai'i is about $1,100,000 - making it a Statewide risk (DEM, 2020). The greatest danger of fire is where the

wildland borders urban areas. Through August, 2018, wildfires in Hawai'i have burned 30,000 acres (about double the annual average). Historically, the majority of these fires have been directly caused by humans, either directly or by negligence. According to a map produced by Trauernicht (2014), Kaimukī is considered to be within a low-risk area for wildfires.

Impacts and Mitigation Measures

The Proposed Project is not anticipated to have impacts that could result in wildfire events as the Proposed Project is considered to be within a low-risk area. Moreover, the State Department of Land and Natural Resources-Division of Forestry and Wildlife (DLNR-DOFAW) has adopted a Fire Management Handbook, which specifies its standards for prevention, pre-suppression, and suppression. The document provides a structured approach in providing for public/firefighter safety and minimizing damage to Hawai'i's environment. Funding for the fire management program is provided by the State's general fund and federal cost share programs through the U.S. Forest Service. These programs include the Rural Community Fire Protection and Rural Fire Protection and Control programs. Additionally, the DLNR-DOFAW is a key agency within the State who can trigger provisions of the Stafford Act (Fire Suppression Assistance) which provides for FEMA funding assistance in situations where forest and grass fires on public or private lands threaten a major disaster to communities and economies. For DLNR-DOFAW to meet its legal fire protection mandate for State-owned lands and honor its partnership with other fire services, DLNR-DOFAW negotiated with its local fire departments and established a cooperative mechanism for prevention, pre-suppression and suppression measures by way of the current Memorandum of Agreements.

3.4.6 Volcanic Hazards

The island of O'ahu is formed from two principal volcanoes: Wai'anae and Ko'olau about 2.2 – 3.8 million years and 1.8 – 2.6 million years ago respectively. O'ahu is also riddled with a number of more recent smaller "rejuvenation" vents such as Diamond Head, Koko head, Punchbowl and many others, which are believed to have occurred between 70,000 and 500,000 years ago. Hence, volcanic hazards on O'ahu are considered minimal due to the extinct status of former volcanoes.

The Island of Hawai'i is composed of five volcanoes, two of which (Mauna Loa and Kīlauea) have been very active in the past 100 years and pose the most immediate threat to life and property. A third volcano, Hualalai, last erupted in 1801 and has the potential to erupt again within our lifetime. The other two are dormant. Mauna Kea last erupted approximately 3,500 years ago and is considered dormant but not extinct. Kohala, considered extinct, is the oldest volcano on the island and last erupted approximately 60,000 years ago. Hawaiian volcanoes are not as explosive as continental margin volcanoes (e.g., Rainier, Mt. St. Helens, Mt. Shasta) and are characterized by relatively quiet outflow of relatively fluid lava, therefore the probability of harmful volcanic rock debris and ashfall on O'ahu from the volcanoes on Maui and Hawai'i is negligible. Consequently, the only credible volcanic hazard on O'ahu is "VOG," short for "volcanic gas" or "volcanic smog," resulting from ongoing eruptions on Hawai'i.

VOG is a term used in Hawai'i to describe hazy conditions caused by gaseous emissions from Kīlauea Volcano. VOG is created when volcanic gases react with sunlight, oxygen, and moisture. The VOG plumes from Kīlauea contain a variety of compounds, at varying concentrations, that could have adverse impacts on the downwind communities and environment. During slack or southerly winds the entire island chain can be blanked in VOG. The VOG is most prevalent in the winter when Kona winds are most frequent.

Impacts and Mitigation Measures

The Proposed Project will not have an impact on volcanic hazards nor exacerbate the impacts associated with volcanic hazards. Any former volcanoes on O'ahu are now considered inactive and the probability of eruption on O'ahu is negligible. Therefore, only neighboring volcanoes on the Island of Hawai'i and possibly Haleakalā on Maui, which last erupted in the 1700's, are expected to have any impact on O'ahu. The main impact from volcanic hazards on O'ahu would occur from VOG.

VOG impacts are highly dependent on both proximity of the source to the affected area as well as the day-to-day climatic conditions. During trade-wind weather, VOG is carried from the Kīlauea vents is carried toward the southwest, around the southern tip of the island where some is trapped within an eddy system on the Leeward side of the island. Hence, during normal trade-wind conditions the southern and Kona communities on Hawai'i Island are most heavily impacted by VOG. During slack or southerly winds, the entire island chain can be blanked in VOG. However, due to the short half-life of sulfur dioxide (SO_2) and sulfuric acid in the environment, O'ahu is not expected to experience the elevated SO_2 levels that may be experienced on Hawai'i island (DEM, 2020). SO_2 levels are greatly reduced further away or upwind from the vents as the gas disperses and reacts with water to form sulfuric acid and then with ammonia to form ammonium sulfate which is eventually washed or settles out of the atmosphere. The visible "hazy" appearance of VOG is often intensified when the gases and particulate matter combine with high humidity due to the warmer tropical temperatures when brought up from the south.

Informational resources on VOG distributions can be found at this website, which provides modeled VOG plume trajectories based on current and projected weather conditions:

http://mkwc.ifa.hawaii.edu/vmap/

Other informational resources on VOG and mitigation actions that the public can take to reduce the impacts of VOG can be found at these websites:

https://vog.ivhhn.org/

https://hilo.hawaii.edu/natural-hazards/vog

3.5 Natural Environment

3.5.1 Flora and Fauna

The Project Site is located in a highly altered urban environment. Lawn areas at Kaimukī High School are a mixture of grass and weedy species. Species most commonly frequenting the site and vicinity are typical of urbanized areas and consist of common introduced flora and fauna. Avifauna and fauna present at the Project Site have adapted to the urban environment. Feral cats, dogs, chickens and rodents are common to the project area and are likely present at the Project Site.

No rare, threatened and/or endangered flora or fauna species are known to inhabit the project area. However, it was acknowledged by the State Department of Land and Natural Resources – Division of Forestry and Wildlife (DLNR-DOFAW) that the State listed Hawaiian Hoary Bat or ʻŌpeʻapeʻa (*Lasiurus cinereus semotus*) could potentially occur in the vicinity of the project area and may roost in nearby trees, the State threatened White Tern (*Gygis alba*) or Manu o Kū is known to nest in the vicinity of the Proposed Project, State-listed waterbirds such as the Hawaiian Duck (*Anas wyvilliana*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), Hawaiian Coot (*Fulica alai*), and Hawaiian Common Gallinule (*Gallinula chloropus sandvicensis*) could potentially occur in the vicinity of the Proposed Project.

Impacts and Mitigation Measures

Potential adverse impacts on flora and fauna are not anticipated. The project area is located within a highly altered urban environment. No listed or protected plant species are within the project area. It is recommended that the movement of plant or soil between worksites be minimized. Soil and plant material may contain invasive fungal pathogens (e.g., Rapid ʻŌhiʻa Death), vertebrate and invertebrate pests (e.g., Little Fire Ants, Coconut Rhinoceros Beetles), or invasive plant parts that could harm our native species and ecosystems. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Gear that may contain soil, such as work boots and vehicles, should be thoroughly cleaned with water and sprayed with 70% alcohol solution to prevent the spread of Rapid ʻŌhiʻa Death and other harmful fungal pathogens. It is also recommended that native plant species be used for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.).

Rare, threatened, or endangered fauna are not known to utilize the site for either habitat or foraging purposes. Construction activities may temporarily disrupt routine behavior of common faunal species in the immediate project area, but will not result in permanent displacement, or adversely affect regional distribution of affected fauna. Once project activities are complete, faunal activity in the vicinity of the work site is expected to return to pre-existing conditions.

No adverse impacts resulting from the project are anticipated. However, measures to prevent adverse effects to protected species include the following:

- Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by this type of fencing during flight.

- During construction activities, all nighttime lighting will be shielded and angled downward to reduce glare and disruption of bird flight. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. Following construction, permanent light sources will be shielded and angled downward to eliminate glare that could disturb or disorient birds in flight.

- If tree trimming or removal is planned, DLNR-DOFAW strongly recommends a qualified biologist survey for the presence of White Terns prior to any action that could disturb the trees.

- If any of the State-listed waterbirds are present during construction activities, then all activities within 100 feet (30 meters) should cease, and the bird should not be approached. Work may continue after the bird leaves the area of its own accord.

3.6 Historic and Archaeological Resources

The Proposed Project is located in the traditional moku (district) of Kona, within the ahupuaʻa (land division that typically extended from the mountains to the sea) of Waikīkī, and the ʻili (usually a subdivision of an ahupuaʻa) of Kaimukī. Kaimukī means "the oven for cooking the ti root" making reference to the Menehune that lived there at one time (Lyons in Sterling and Summers, 1978). Kaimukī was described as *"…the wild region of Ka-imu-ki, thickest with bowlders—a region at one time chosen by the dwarf Menehune as a sort of stronghold where they could safely plant their famous ti ovens and not be molested by the nocturnal depredations of the swinish Kama-puaʻa…*" by Emerson (n.d. in Sterling and Summers, 1978). Handy and Handy (1972) state that:

> In famine times ti roots were gathered from the forest in large quantities and steamed in great ovens, then grated, mashed, mixed with water, and drunk. It is said that there was a famous oven of this sort east of Honolulu at Kaimuki.

There are also many legends that refer to Hiʻiaka, Pele's sister, and her companions traveling around the Hawaiian Islands. One legend recounted in Ka Naʻi Aupuni Hawaiian language newspaper (June 28, 1906, in Sterling and Summers 1978) begins as Hi`iaka and her companions left their canoe at Waikīkī and traveled inland to a place known as Pāhoa, which was located in Kaimukī. The story provides a description of the natural setting of Kaimukī, providing numerous places names. Kaimukī is a naturally dusty, dry area that was not heavily populated during the precontact times due to a lack of water resources (Radke, 2014)

During the Māhele, the transition of the Hawaiian land system from a communal system to one of private property, documents indicate that there were about 250 Land Commission Award (LCA) claims for land in the Waikīkī ahupuaʻa. There were no LCA claims or awards for the ʻili of Kaimukī. However, there were 39 claims were made in the ʻili of Pāhoa, which was another name for the Kaimukī area (Pukui et al. 1974). Unfortunately, very little additional data is available pertaining to the use of Kaimukī during the early to mid 1800s. In the early 1800s, John Papa ʻĪʻī documented a series of trails extending from the southern portion of Makiki to the eastern boundary of the Waikīkī ahupuaʻa (ʻĪʻī, 1959) indicating it was a well-traveled area. Land grants indicate that much of Kaimukī was used as ranchland in the late 1800s before development occurred in the early 1900s.

There are a limited amount of archaeological studies conducted in the ʻili of Kaimukī. One of the earliest archaeological surveys on Oʻahu was conducted by J. Gilbert McAllister in the early 1930s, under the auspices of the Bernice P. Bishop Museum (McAllister, 1933). During this survey, McAllister (1933) was not able to relocate Kukuionapehā Heiau, which was initially described by Thrum (1908) as located "[a]t the town side of old signal station. All destroyed." Nor was McAllister able to relocate Maumau Heiau, which was located above Kaimukī, in Pālolo. Maumau Heiau was initially documented by Thrum (1908) as "[a] medium-sized heiau of pookanaka [human sacrifice] class, credited at the time to Olopana. Foundations only remain." According to A. Grove Day (1984), Olopana was an aliʻi from Oʻahu and the uncle of Kamapuaʻa, the legendary demigod.

In 1994, SCS conducted an Archaeological Assessment of four Hausten Street Lots in Mōʻiliʻili (Chaffee and Spear, 1994). As the area had been subjected to extensive development previously no historic properties were identified. The report also discusses the controversy over identifying the exact location of the legendary Kumalae Spring and tries to answer the question of whether Kumalae Spring is the same spring as the pool at the Willows Restaurant. Chaffee and Spear (1994) indicated that several individuals have placed Kumalae Spring at the present day location of the St. Louis Alumni Club (916 Coolidge Street), rather than at the Willows Restaurant (901 Hausten Street). Based on the information presented by informants, Chaffee and Spear (1994) concluded that Kumulae Spring was most likely located at the site of the present St. Louis Alumni Club, a short distance from the Hausten Street site. It is possible that the spring referenced as being Kumulae Spring at the Willows Restaurant site did have historical significance at one time, but may have been known by a different name. The spring has since been destroyed.

In 1996, Paul H. Rosendahl, Ph.D., Inc. conducted an Archaeological Inventory Survey for the Kamoku-Pukele 138-kV Transmission Line Alignments (Wolforth et al., 1996). One newly identified site, PHRI Site 1726.1, a complex associated with the Kawao Community Park, was located within the project area. Two newly identified sites (State Site 50-80-14-5463, an agricultural enclosure, and State Site 50-80-14-4266, a pre-Contact burial complex) were located outside of the project area. Four previously identified sites were relocated within the project area: State Site 50-80-14-4266 consisted of a pre-Contact burial complex initially identified by Hammatt and Shideler (1991); State Site 50-80-14-4998 consisted of an ʻauwai initially identified by Liston and Burtchard 1996); State Site 50-80-14-9749, the Church of the Crossroads, which was placed on the Historic Register of Historic Properties June 28, 1991, and on the National Register of Historic Properties November 20, 1992; and State Site 50-

80-14- 1352, University of Hawai'i buildings (Wist Hall), which was placed on the National Register of Historic Properties March 19, 1984.

In 2013 SCS conducted an Archaeological Field Inspection of the Kaimukī Pumping Station property in order to assess the potential presence of historic properties (Dagher and Spear 2014, in prep). Based on historic records and photographs, archaeological documentation was recommended for the Kaimukī Pumping Station and for two associated rock walls (a 1952 aerial photograph showed shadows along the edges of the property that seem to indicate the presence of these walls).

In 2013 SCS conducted a Cultural Impact Assessment of the Kaimukī Pumping Station property to identify potential effects by the proposed improvement project to cultural resources, places or beliefs, analysis of the potential effect of the project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which might alter the setting in which cultural practices take. Based on the response from those organizations and individuals contacted, the proposed project area had not been used for traditional cultural purposes within recent times. Based on historical research and the response from those organizations and individuals contacted, it was concluded that Hawaiian rights related to gathering, access or other customary activities within the project area would not be affected and there would be no adverse effect upon cultural practices or beliefs.

In 2020, as a part of the Ala Wai Canal Flood Risk Management Study Environmental Impact Statement, an assessment and inventory of archaeological resources was conducted for the Ala Wai Watershed, which includes Kaimukī High School. The assessment also included a historical architectural assessment. Kaimukī High School is considered to be eligible as a historic property under Criteria C, "Embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or possess high artistic value."

Impacts and Mitigation Measures

No adverse impacts are anticipated to result from the Proposed Project to historical or archaeological resources. The Proposed Project will be constructed over the existing outdoor basketball courts and will not expand beyond the existing footprint. Hence, the Proposed Project would not impact any of the existing structures. Moreover, the Proposed Project is situated in highly altered urban environment at Kaimukī High School that was developed in the 1950s. Any historic or archaeological resources that may have existed have most likely been destroyed due to the development that has occurred at the Project Site.

However, in general, open trenching has the potential to result in the greatest impact to archeological and historic resources as it involves linear areas of disturbance in the layers of soil and subsoil that typically hold cultural materials associated with subsurface archeological sites. Tunneling, microtunneling, and horizontal drilling all involve less disturbance of the soils closer to the surface that may contain cultural materials; these would primarily result in impacts from the construction of shafts, which represent a smaller footprint of ground disturbance than open trenching. In order to minimize any potential impact on these resources, construction contractors would be required to adhere to standard best management practices regarding the

protection of archeological resources, including identification, stop work, and notification measures. Should archeological resources be discovered, all appropriate measures would be adhered to for their protection; and as a result, long-term impacts to archeological resources would be expected to be minor as irreversible ground disturbance has the potential to impact archeological sites permanently.

3.7 Cultural Resources and Practices

Cultural resources are defined for the purposes of this EA as those associated with cultural practices and traditions. Cultural practices are activities imbued with cultural or spiritual meaning; they can be traditional or modern. They may include traditional Hawaiian practices, but also the cultural practices of other communities and ethnic groups. Assessment of the Proposed Project's impacts on cultural practices, per HRS 343, Hawai'i Register of Historic Places Criterion E, and Act 50, consider effects on a cultural practitioners' ability to access the locations and resources needed to undertake cultural practices. Also, considered here are the wahi pana (storied places) that are imbued with cultural significance through their appearance in mo'olelo, mele (songs), oli (chants), and other oral history traditions associated with the Project Area.

The Project Site does not contain any known sites of cultural significance. The Project Site is currently an outdoor basketball court and is not used for any other purpose. While the Project Site is situated within the traditional boundaries of ahupua'a of Waikīkī, the 'ili of Kaimukī is a naturally dusty, dry area that was not heavily populated during the precontact times due to a lack of water resources.

Impacts and Mitigation Measures

Based on the above, potential adverse impacts to traditional and cultural practices in the vicinity of the Project Site are not anticipated.

Construction of the Proposed Project will not disturb traditional sacred sites or traditional cultural objects; will not result in the degradation of resources used by Native Hawaiians for subsistence or traditional cultural practices; will not obstruct culturally significant landforms or way-finding features; and, will not result in loss of access to the shoreline or other areas customarily used by Native Hawaiians or others for resource gathering or traditional cultural practices. No mitigation measures are proposed. As noted above in Section 3.6, should any unidentified archaeological resources be encountered during construction, all work will cease, and the State Historic Preservation Office will be contacted for review and approval of mitigation measures.

3.8 Air Quality

The State of Hawai'i DOH, Clean Air Branch, monitors the ambient air quality in the State for various gaseous and particulate air pollutants. The U.S. Environmental Protection Agency has set national ambient air quality standards (NAAQS) for six principle air pollutants (referred to as criteria pollutants) that are common outdoor air, considered harmful to public health and the environment, and that come from numerous and diverse sources. The six criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), ozone (O_3), and particulate matter (PM_{10} and PM_2). Hawai'i has also established a

state ambient air standard for hydrogen sulfide (H_2S) related to volcanic activity on Hawai'i Island. The primary purpose of the Statewide monitoring network is to measure ambient air concentrations of these pollutants and ensure that these air quality standards are met. Areas where concentrations of criteria pollutants are below the NAAQS are designated by the EPA as being in "attainment", whereas areas where concentrations of criteria pollutants exceed the NAAQS are designated as being in "nonattainment." The CCH has never been classified as nonattainment for any criteria pollutant.

Air pollution in Hawai'i is caused by many different anthropogenic and natural sources. There are industrial sources of pollution, such as power plants and petroleum refineries; mobile sources, such as cars, trucks and buses; agricultural sources, such as crop burning, and natural sources, such as windblown dust and volcanic activity. The DOH Clean Air Branch is responsible for regulating and monitoring pollution sources to ensure that the levels of criteria pollutants remain well below the State and Federal ambient air quality standards. At the State level, air quality standards ("HIAQS") are defined in Section 11-59, HAR, Ambient Air Quality Standards.

The State of Hawai'i DOH, Clean Air Branch maintains and operates three air quality monitoring sites on the island of O'ahu: Honolulu, Pearl City, and Kapolei. The monitoring sites measure ground-level concentrations of criteria pollutants where most commercial, industrial and transportation activities and their associated air quality effects occur. Hawaiian Electric Company's downtown power plant is the primary stationary source, while vehicular traffic represents the principal mobile contributor. Emissions from the power plant are in compliance with State and Federal air pollution control regulations. Air quality at the Project Site, is generally considered to be good due to its location in relation to major thoroughfares and the typical flow of fairly constant northeasterly trade winds that disperse pollutants seaward.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on air quality are anticipated as a result of the construction and operation of the Proposed Project. In the short-term, it is anticipated that the various construction activities associated to the Proposed Project will result in the irrevocable release of GHGs. Construction related emissions include tailpipe emissions from construction equipment, delivery trucks, and workers commuting to and from the construction site. It is anticipated that the quantities of GHGs released from construction related activities will be negligible and usage of each piece of equipment would be sporadic and not simultaneous. Wind erosion of inactive areas of the site that have been disturbed could be controlled by mulching or by the use of chemical soil stabilizers. Dirt-hauling trucks should be covered when traveling on roadways to prevent windage. As deemed appropriate, planting of landscaping will be done as soon as possible on completed areas to also help control dust. Moreover, the contractors for the construction of the applicable projects will be required to prepare a dust control plan compliant with the provisions of Chapter 11-60.1, HAR, Air Pollution Control.

3.9 Noise

The existing noise environment at the Project Site is characteristic of an urban setting. Ambient noise in the area is predominantly attributed to vehicular traffic traveling along adjacent roadways and various activities at Kaimukī High School. Noise generated by the Proposed Project will likely be due to construction related activities such as trucking, hauling and power equipment. It is anticipated that all construction will take place during daylight hours.

Impacts and Mitigation Measures

In the short-term, the potential for adverse noise impacts from short-term construction activities exist, particularly during school classroom hours when construction activities occur. Construction noise levels are typically highest during earthwork (75 to 85 dBA at 100 feet). The use of sound attenuating barriers between the construction site and classroom buildings are recommended to be used during classroom hours, as appropriate.

Construction noise impacts will be mitigated by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" regulations. These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels stated in the DOH Administrative Rules. It shall be the contractor's responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits. Also, the guidelines for heavy equipment operation and noise curfew times, as set forth by the DOH noise control rules, will be adhered to; or, if necessary, a noise permit shall be obtained. In the long-term, operation of the Proposed Project is not anticipated to result in adverse noise impacts.

3.10 Hazardous Materials

A hazardous material item is generally characterized as any item or agent (physical, chemical, or biological) which has the potential to cause harm to humans, animals, or the environment, either independently or through interaction with other factors. Toxic materials are specific hazardous materials identified in regulations. Hazardous wastes are specifically defined or determined as such based on their ignitability, corrosiveness, reactivity, and toxicity. The potential impacts hazardous materials and waste have on human health and the environment are largely dependent upon their types, quantities, toxicities, and management practices.

Hazardous wastes may take the form of a solid, liquid, contained gas, or semi-solid. In general, any combination of wastes that poses a substantial present or potential hazard to human health or the environment that has been discarded or abandoned is a hazardous waste.

EPA and Hawai'i universal waste regulations streamline hazardous waste management standards for Federally-designated "universal wastes," which include: batteries, pesticides and mercury-containing materials. Universal wastes are considered hazardous, however, they are subject to less restrictive waste disposal regulations than for hazardous wastes.

Hazardous wastes, including used oils, antifreeze and solvents associated with construction are handled and disposed of by licensed contractors.

Construction activities associated with the implementation of the Proposed Action improvements may involve the use of materials and processes that involve chemical agents or materials typical to construction that could be considered hazardous. These materials are primarily associated with vehicle and/or equipment maintenance that typically include flammable and combustible liquids, acids, aerosols, batteries, corrosives, solvents, paints, and hydraulic fluids.

In conjunction with the implementation of the Proposed Project, a Hazardous Material Survey is expected to be conducted prior to any construction activities. They survey will test the basketball court surface as that is the only area that will be impacted due to required demolition activities.

Impacts and Mitigation Measures

No significant impacts are anticipated to result from the Proposed Project with regards to hazardous materials. As noted above, a Hazardous Material Survey is expected to be conducted prior to any construction activities. This survey would identify any potential hazardous materials and recommend appropriate mitigation measures to handle and dispose of the hazardous materials. These remediation activities would comply with all established regulations and procedural guidelines. Design features specific to the reduction of the potential effects of hazardous spills will be implemented, where appropriate. No significant impacts to hazardous waste disposal are anticipated to result from the implementation and operation of the Proposed Project.

3.11 Traffic

Surrounding Roadway Network

The Project Site is located at Kaimukī High School which is bounded by Kaimuki Avenue to the north, Kapiolani Boulevard to the northeast, Date Street to the south, and Olokele Avenue to the west. Winam Avenue and Leialoha Avenue terminate directly into the campus. Access to the campus is also provided via driveways from Kaimuki Avenue and Kapiolani Boulevard (See Figure 3-11).

Kaimuki Avenue is a two-lane, two-way roadway generally oriented in the east-west direction. Northwest of the Project Site, Kaimuki Avenue intersects with Kapiolani Boulevard. At this signalized intersection, the westbound approach of Kaimuki Avenue includes an exclusive left-turn lane, and a shared left-turn and right-turn lane.

Kapiolani Boulevard serves as one of the main access roads through urban Honolulu and is generally oriented in the east-west direction. Northeast of the Project Site, at the intersection with Kaimuki Avenue, Kapiolani Boulevard is predominantly a six-lane roadway. At the signalized intersection with Kaimuki Avenue, the northbound approach of Kapiolani Boulevard includes three lanes, two through lanes and an exclusive right-turn lane. The southbound approach includes three lanes, two through lanes and an exclusive left-turn lane.

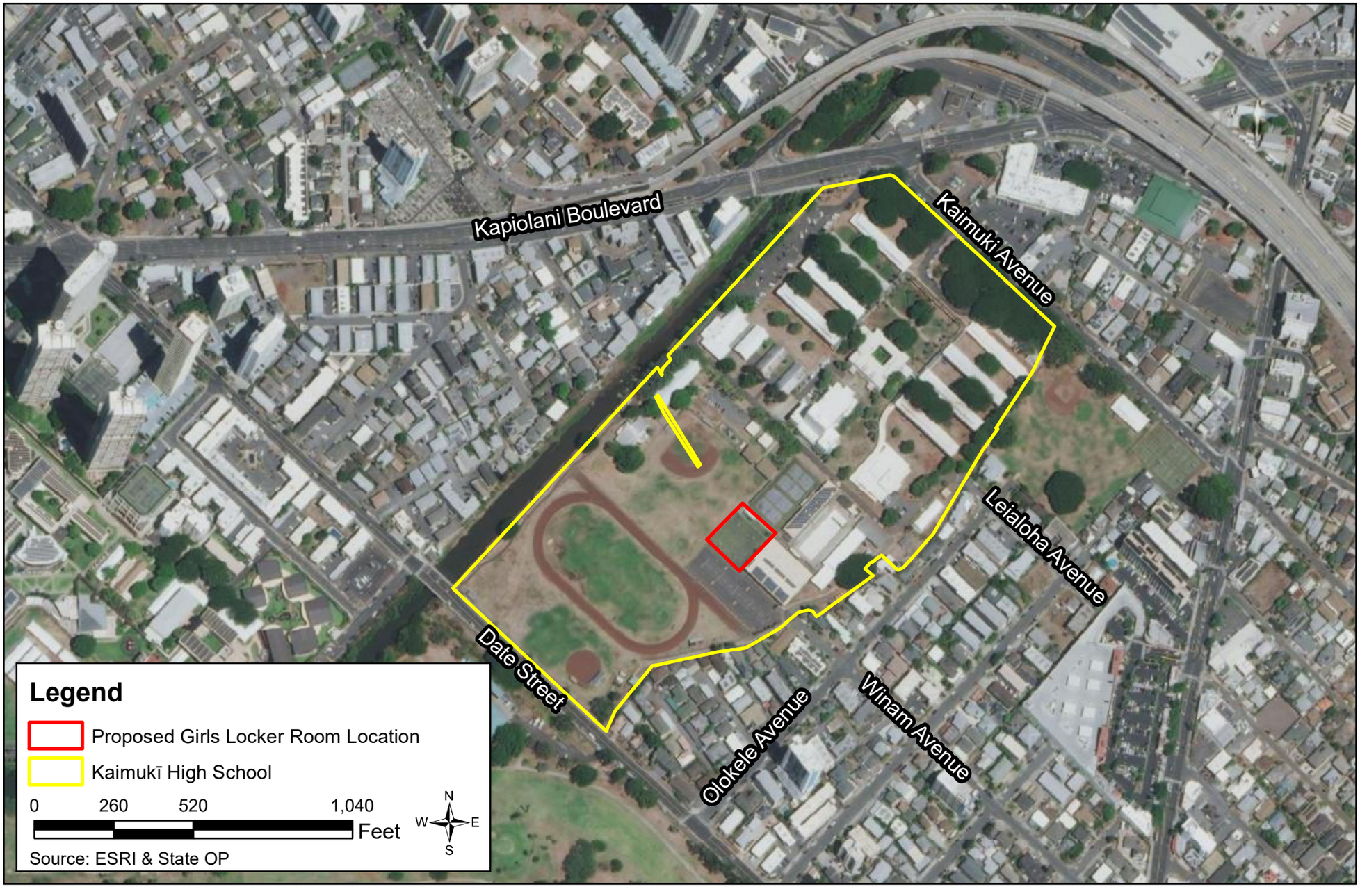


FIGURE 3-11

Surrounding Roadway Network Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

Date Street is predominantly a four-lane roadway, generally oriented in the east-west direction. Southeast of the Project Site, Date Street intersects with Olokele Avenue. At this signalized intersection, the eastbound approach of Date Street includes a shared through and left run, and an exclusive through lane. The westbound approach of Date Street includes a shared through and right-turn lane, and an exclusive through lane.

Olokele Avenue is predominantly a two-lane roadway, generally oriented in the north-south direction that runs between Date Street and Leialoha Avenue.

Both Winam Avenue and Leialoha Avenue are predominantly two-lane roadways, generally oriented in east-west direction. Leialoha Avenue terminates at KaimukI High School where it transitions into an internal campus road. Winam Avenue also terminates at Kaimukī High School where it transitions into a parking lot adjacent to the Project Site.

Transportation Facilities

Transit within the vicinity of the Project Site is provided by "The Bus" which is operated by the O'ahu Transit Service (OTS) for the City and County of Honolulu Department of Transportation Services. There are 14 bus stop locations within a quarter mile radius of the Project Site (See Figure 3-12).

Bike Facilities

In the vicinity of the Project Site there are existing bike facilities along Date Street, Kapahulu Avenue, and a bike path that traverses the campus, connecting Date Street with Kapiolani Boulevard. It should be noted that according to the information provided in the City and County of Honolulu's O'ahu Bike Plan (updated 2019), there are future plans to extend the existing bike path along Date Street further east, and provide bike lanes along Kaimuki Avenue and Kapiolani Boulevard (See Figure 3-13).

Pedestrian Facilities

In the vicinity of the Project Site, Kapiolani Boulevard has sidewalks and street lighting along both sides of the roadway. Crosswalks and curb ramps are provided at the intersection of Kapiolani Boulevard with Kaimuki Avenue. Kaimuki Avenue also has sidewalks and street lighting along the eastbound side of the road. Date Street, similar to Kapiolani Boulevard, has sidewalks and street lighting along both sides of the roadway. Crosswalks and curb ramps are provided at the intersection of Date Street with Olokele Avenue. Olekele Avenue has sidewalks on both sides of the roadway with street lighting on the northbound side of the road. Olokele provides curb ramps along the sidewalks but there are no crosswalks.

Parking Facilities

Currently, Kaimukī High School has a total of 102 standard parking stalls and five ADA stalls that are adjacent to the Project Site, as well as other parking lot facilities spread throughout the campus proper.

Impacts and Mitigation Measures

The Proposed Project is intended to serve the existing student population and is not projected to change the current sports activities at Kaimukī High School.

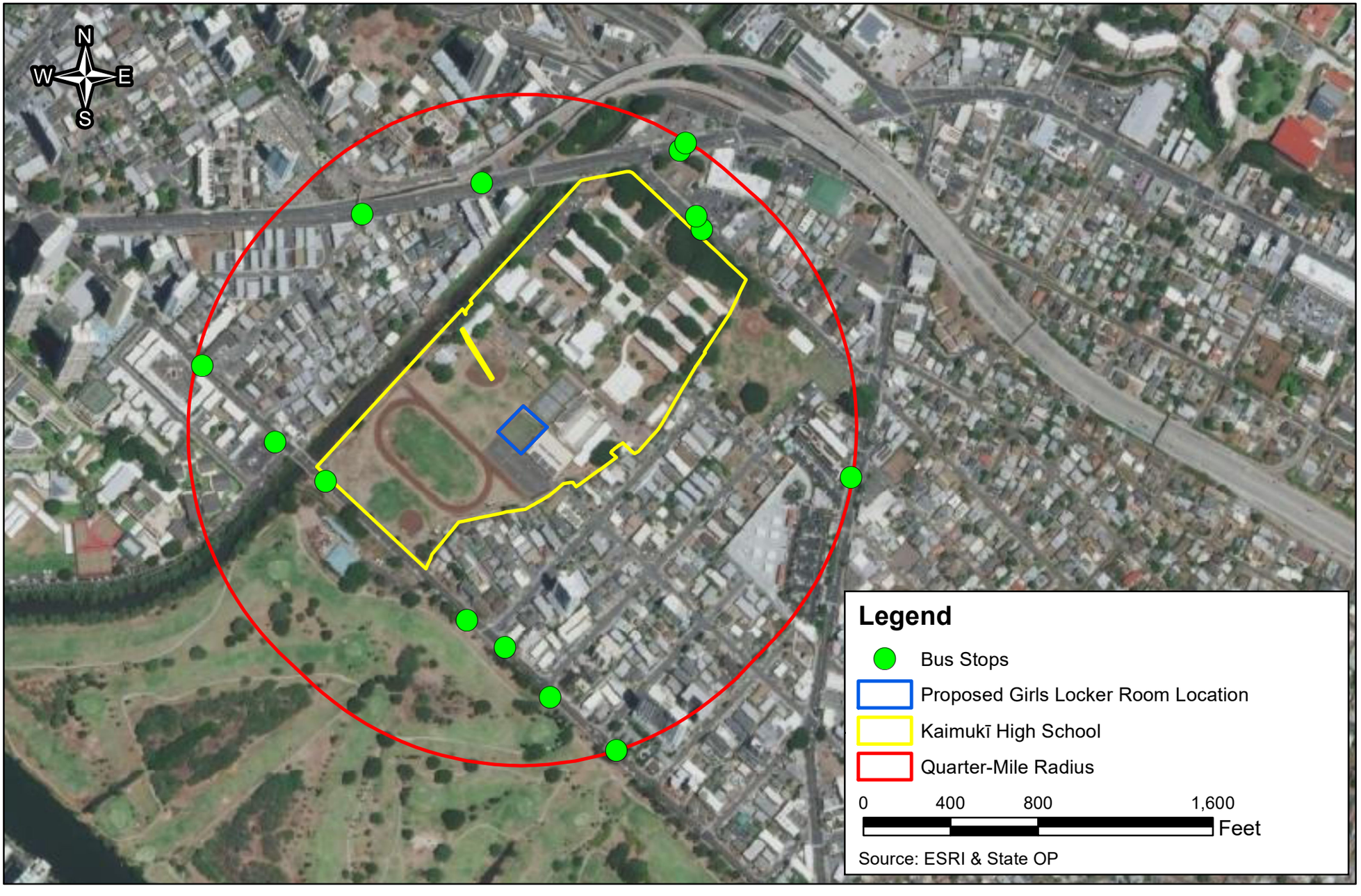


FIGURE 3-12

Transportation Facilities Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

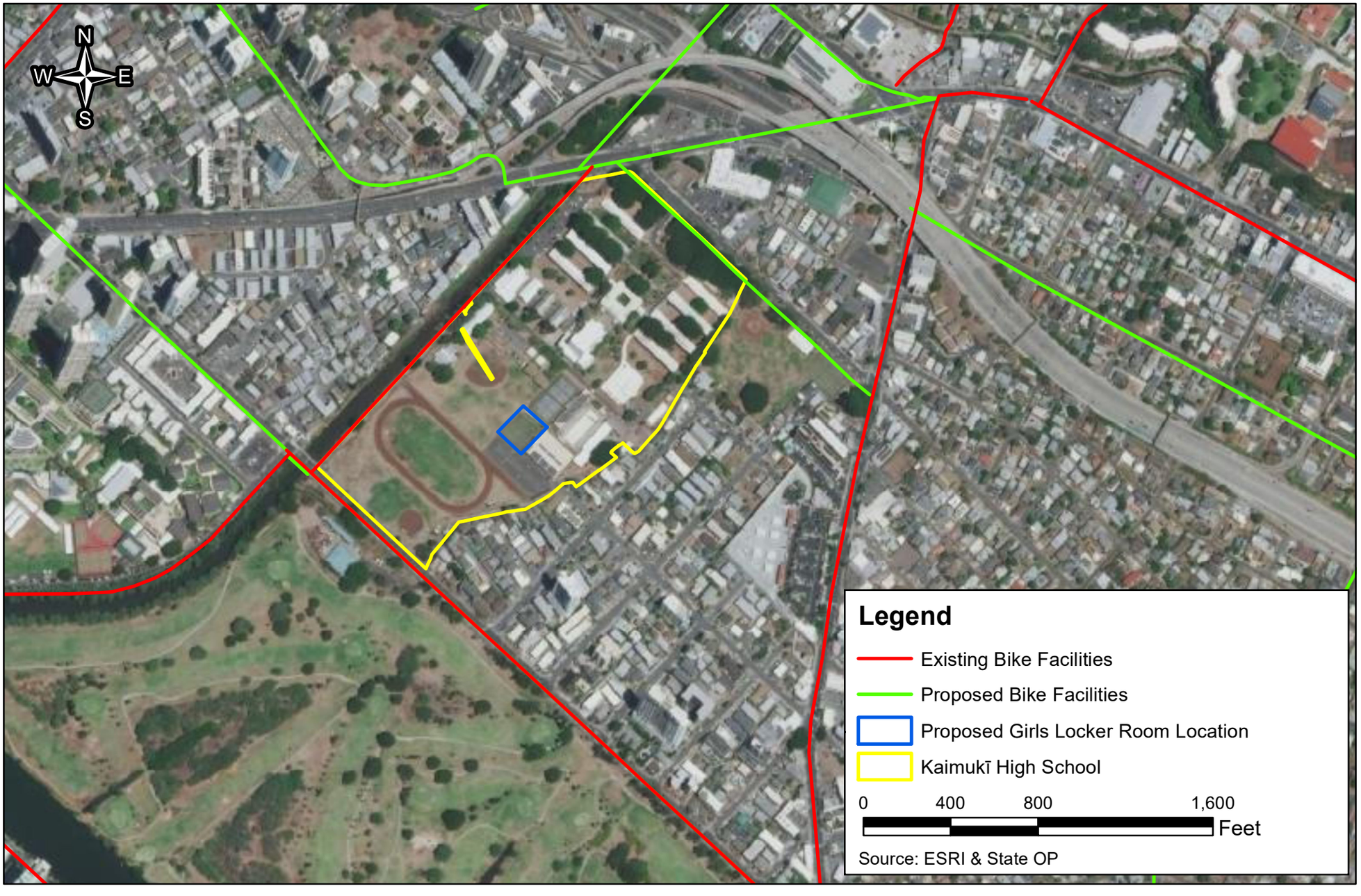


FIGURE 3-13

Bike Facilities Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

Therefore, the Proposed Project is not expected to result in an increase in student enrollment and is not expected to generate any new vehicle trips to the Project Site. Accordingly, long-term transportation impacts are not anticipated. Most of the potential traffic impacts would be short-term, occurring during the construction of the facility, and would be caused by construction traffic. These would be temporary impacts, only occurring during construction. These impacts would no longer occur once the Proposed Project is complete. Potential traffic impacts associated with construction vehicles, construction workers, and construction parking demand would be mitigated through the construction traffic management plan. The construction traffic management plan would identify appropriate parking areas for construction workers and constructions vehicles that will park within the project area and, thus will not affect traffic flow along adjoining roadways except while traveling to and from the Project Site. Construction contractor(s) will be required to mitigate potential vehicular and pedestrian traffic impacts through appropriate traffic control measures and safety devices. Examples of such measures that may be implemented include:

- Publishing newspaper notices to alert the public of construction projects;
- Providing signage and other warning to alert approaching motorists and pedestrians to construction activities ahead;
    - Providing barriers, cones, signage, lighting, non-skid covering over trenches, adequate and safe sidewalk widths, adequate intersection visibility and other provisions to promote safe passage of vehicles and pedestrians through construction zones;
    - Restricting transport of construction vehicles during school and commuter peak traffic hours. To the extent possible, require construction vehicles to use available main routes/roads as alternate routes to the project site rather than local streets, to minimize impacts to area residents;
    - Providing flaggers and/or police officers, when necessary, to control traffic and pedestrian flow;
    - Notifying providers of emergency services (fire, ambulance, police) prior to implementation of any required detours or street closures;
    - Coordinating with the City Department of Transportation Services (DTS) and O'ahu Transit Services of any detours or street closures; and,
    - Providing appropriate barriers as necessary to deter the public from unauthorized entry into restricted or hazardous construction zones during working and nonworking hours.

Within the project area, provisions will be implemented for the safe passage of pedestrians around the project site during construction activities. The contractor may implement necessary measures such as temporary chain-link fences to protect materials and construction-related equipment areas would be clearly marked and temporary fences used to keep unauthorized persons out.

Moreover, the Proposed Project will not result in additional classroom or office space (triggering additional off-street parking requirements), or an increase to faculty, staff,

student enrollment, or visitors to the campus and, therefore, will not have any long-term impacts on the availability of parking on the campus. However, short-term parking impacts may result from construction access or staging, particularly through the parking lot located adjacent to the Project Site. Prior to construction, parking areas and/or alternatives for faculty, staff, and visitors should be determined to minimize impacts to on-campus parking or on-street parking on streets in the vicinity of the campus.

3.12 Visual Resources

Hawai'i's visual resources are important to the State's tourism industry and the quality of life enjoyed by the State's residents. The State's visual resources include a broad range of natural and developed areas and a tremendous variety of land uses, water bodies, and vegetation types. These visual resources also include urbanized areas that range from small rural towns to the metropolitan center of Honolulu.

The visual characteristics of Kaimukī High School by an urban setting. The built environment includes several mid-sized buildings that accommodate classrooms, offices, recreational facilities, and residential activities at the campus and in the surrounding neighborhoods. Scenic resources accessible from the campus include views of the Ko'olau Mountain Range.

Impacts and Mitigation Measures

No short- and long-term significant impacts are anticipated on visual resources. The Proposed Project will be located in the middle of campus and is not anticipated to exceed 25 feet in height, which is comparable with the surrounding facilities. Hence, the Proposed Project will not obstruct any view of scenic resources that exist and will remain consistent with the existing visual character of the campus and surrounding area.

3.13 Socio-Economic Characteristics

The CCH accounts for 68.8% of the State's total resident population, down from 69.7% just a few years ago. Based on the latest population projections, Honolulu's population is expected to continue climbing, but at a slower rate than the other counties. By 2045, the county is projected to be home to nearly 1.074 million residents. However, the average annual growth rate is predicted to slow from 0.4% between 2020 and 2030 to 0.1% by 2045. The projected population increases will result in increased demand for housing and public services across the island.

The Proposed Project is located within the Urban Honolulu Census Designated Place (CDP). Demographic and other information was reviewed from the U.S. Census 2010 for the Urban Honolulu CDP and the CCH provided by the State of Hawai'i Department of Business, Economic Development, and Tourism (See Table 3-1 below).

Table 3-1: Demographic Characteristics		
Subject	**Urban Honolulu CDP**	**City and County of Honolulu**

	Number	Percent	Number	Percent
Total Population	**337,256**	**100**	**953,207**	**100**
AGE				
Under 5 years	16,677	4.9	61,261	6.4
5-19 years	50,395	15	174,309	18.3
20-64 years	210,022	62.3	579,147	60.8
65 years and over	60,162	17.8	138,490	14.5
Median age (years)	41.3	--	37.8	--
RACE				
White	60,409	17.9	198,732	20.8
Black or African American	4,974	1.5	19,256	2.0
American Indian and Alaskan Native	743	0.2	2,438	0.3
Asian	184,950	54.8	418,410	43.9
Native Hawaiian or other Pacific Islander	28,260	8.4	90,878	9.5
Two or more races	55,080	16.3	213,036	22.3
Other	2,840	0.8	10,457	1.1
HOUSEHOLD (BY TYPE)				
TOTAL HOUSEHOLDS	**129,408**	**100**	**311,047**	**100**
Family households (families)	74,688	57.7	328,953	70.0
Married-couple family	52,431	40.5	161,172	51.8
With own children under 18 years	2,062	1.6	65,995	21.2
Female householder, no husband present	15,689	12.1	39,435	12.7
With own children under 18 years	5,321	4.1	15,027	4.8
Nonfamily household	54,720	42.3	93,205	30.0
Average household size	2.51	--	2.95	--
HOUSING OCCUPANCY AND TENURE				
Total Housing Units	**143,173**	**100**	**336,889**	**100**
Occupied Units	129,408	90.4	311,047	92.3
By owner	56,742	43.8	174,387	56.1
By renter	72,666	56.2	136,660	43.9
Vacant Units	13,765	9.6	25,852	7.7

Based upon the data shown on the table, the Urban Honolulu CDP has a slightly older population than the City and County of Honolulu. The median age of the population for the Urban Honolulu CDP was 41.3 versus 37.8 for the County.

By racial mix, the Urban Honolulu CDP has a higher percentage of Asians (54.8%) than the County (43.9%). The Urban Honolulu CDP has a lower percentage of Whites (17.9%) and those of two or more races (16.3%) than the County (20.8% and 22.3%, respectively). These

three races (Asian, Whites, and those with two or more races) make up the majority of proportion than the County as a whole, with 8.4% and 9.5%, respectively.

According to the 2010 Census, the Urban Honolulu CDP has a slightly lower occupancy rate, 90.4%, than the County, 92.3%. Housing units in this region are largely occupied by renters at 56.2%. The County data is slightly different from that of the Urban Honolulu CDP in that a larger proportion of housing units are occupied with owners.

Impacts and Mitigation Measures

No significant impacts are anticipated to result from the construction or operation of the Proposed Project. In the short- term, construction expenditures related to the Proposed Project will provide positive benefits to the local economy. This would include creation of construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities. In the long-term, the Proposed Project will also provide a much-needed facility to support the various girl athletic programs offered at the Kaimukī High School which will provide students the opportunity to be successful to pursue their socio-economic aspirations. Moreover, the Proposed Project will help meet Title IX requirements. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in any program or activity receiving Federal financial assistance. Title IX regulations require schools to achieve parity in terms of facilities that are provided for students. This includes facility elements such as locker rooms, bathrooms, showers, team rooms and lockers and pertains not only to quantity but also to quality of space and proximity to playing and practice fields.

3.14 Public Services and Facilities

3.14.1 Police Fire, and Medical Services

Police protection is provided by the City's Honolulu Police Department. The Project Site is located within Beat 756 of Honolulu Police Department's Patrol District 7. This district uses the department's downtown headquarters on Beretania Street as its headquarters as well as for dispatching its patrol vehicles on emergency calls.

The Honolulu Fire Department provides emergency service to Kaimukī High School from its Waikīkī Fire Station located approximately 0.85 miles southeast on Kapahulu Avenue. Support could come from the Kaimukī Fire Station, located approximately 1.28 miles east of the school or from the McCully Fire Station on Date Street, approximately 0.5 miles west of the Project Site.

The nearest full-service hospital is Straub Hospital, located approximately 2.4 miles from the Project Site.

Emergency medical service is provided by the City's Emergency Services Department, Emergency Medical Services (EMS) Division. The Department has 22 ambulance units under two districts. All ambulance units are designated as advanced life support units, meaning they are staffed by at least two people. The Project Site is served by an EMS ambulance unit based at the Waikīkī Fire Station.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on police, fire, and medical services are anticipated.

In the long-term, the Proposed Project may require occasional police and fire protection, as well as medical services, however it would likely not represent a significant amount relative to the overall regional demand.

The Proposed Project will be designed and built-in compliance with the applicable County fire code requirements.

3.14.2 Education

Kaimukī High School is a part of the DOE Kaimukī-McKinley-Roosevelt Complex area along with McKinley High School and Roosevelt High School. The school boundaries include the communities of Kaimukī, Kapahulu, Mōʻiliʻili, McCully, Pālolo Valley, St. Louis Heights, and Waikīkī. The area is comprised of apartment buildings, high-rise condominiums, small businesses, older residential neighborhoods, and community parks. The Kaimukī Complex consists of ten elementary and middle schools in addition to Kaimukī High School including the following:

- Ala Wai Elementary School
- Aliʻiolani Elementary School
- Hōkūlani Elementary School
- Jarrett Middle School
- Jefferson Elementary School
- Kaimukī Middle School
- Kūhiō Elementary School
- Lunalilo Elementary School
- Pālolo Elementary School
- Washington Middle School

Kaimukī High School serves students in grades 9-12, with a total student enrollment of approximately 675 students for the 2020-2021 school year. The DOE is not expecting any significant increase or decrease, or any major changes to the projected school enrollment in the coming years and the Proposed Project is not expected to affect the school's current or future enrollment status.

Impacts and Mitigation Measures

The Proposed Project will directly benefit the public school system by providing additional facilities to Kaimukī High School. Currently, Kaimukī High School's existing girl's locker room is outdated and overcrowded. The Proposed Project will provide the school with a much-needed modern facility that would serve its women's sports teams. The existing locker room will continue to be used for the general women's population at Kaimukī High School to serve physical education classes and curriculum. Moreover, the Proposed Project will help meet Title IX requirements. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in any program or activity receiving Federal financial assistance. Title IX regulations require schools to achieve parity in terms of facilities that are provided for students. This includes facility elements such as locker rooms, bathrooms, showers, team rooms and lockers and pertains not only to quantity but also to quality of space and proximity to playing and practice fields. The intent of the Proposed Project is to provide gender equitable facility. Additionally, the Proposed Project will have no impact on enrollment or operations of other nearby public or private schools and no mitigation measures are proposed.

3.14.3 Recreational Facilities

The City and County Department of Parks and Recreation operates parks and recreational facilities throughout the island. The nearest City and County facilities to the Project Site include the following:

- Crane Community Park which includes basketball courts and a softball field located adjacent to Kaimukī High School to the east;
- Ala Wai Golf Course located adjacent to the south, separated by Date Street;
- Honolulu Zoo and Kapi'olani Park located to the southeast approximately one-mile from the Project Site.

Kaimukī High School also provides several recreational facilities and programs for the school community. Kaimukī High School includes the following recreational facilities: tennis courts; a baseball field; a pool; an indoor gymnasium; a softball field; an outdoor basketball courts; a track and field used for soccer and football; and supporting locker room facilties.

Impacts and Mitigation Measures

No significant impacts are anticipated to occur from the construction or operation of the Proposed Project. While the Proposed Project is sited to be constructed where the current outdoor basketball courts are, the outdoor basketball courts will be relocated to a different location. Thus, no recreational facilities will be displaced or impaced. Moreover, Title IX regulations require schools to achieve parity in terms of facilities that are provided for students. This includes facility elements such as locker rooms, bathrooms, showers, team rooms and lockers and pertains not only to quantity but also to quality of space and proximity to playing and practice fields. Hence, the Proposed Project will benefit Kaimukī High School by providing a brand new facility that will meet gender equity requirements.

3.14.4 Solid Waste Collection and Disposal

Solid waste collection and disposal service is provided by the ENV for incineration at the Campbell Industrial Park H-POWER Plant that generates electricity, followed by disposal of ash and non-combustibles at the Waimanalo Gulch Sanitary Landfill.

Construction and demolition material is disposed of at the privately-owned PVT landfill in Waiʻanae. The exceptions are the student housing and food service programs, which separately contract out refuse collection to private refuse disposal firms. The bulk of "green waste" from the UHM campus is now composted and is not disposed of as refuse. Recycling programs exist on campus and are managed by separate schools and programs.

Impacts and Mitigation Measures

No short-term significant impacts to municipal solid waste collection and disposal facilities are anticipated as a result of the construction and operation of the proposed project. However, the project is anticipated to impact the long-term waste generation in the area, however, it is not expected to overtax current capacity as operations of all of the proposed elements of the project will include recycling measures.

3.15 Infrastructure and Utilities

3.15.1 Water System

Fukunaga & Associates, Inc. prepared a Preliminary Engineering Report for the Proposed Project that performed a cursory evaluation of the capacity of the utilities for water, sewer, and drainage which is included as Appendix B. Water for domestic use and fire protection is provided to the Kaimukī High School and surrounding area through the City and County Board of Water Supply (BWS) municipal water system which draws only from groundwater sources. The Project Site is situated within the boundaries of the Primary Urban Center Water Plan area. The BWS water system in the vicinity of the project site consists of a system of distribution mains and fire hydrants.

On June 7, 2022, the BWS provided comments on the Pre-Assessment Consultation Package for the Proposed Project, superseding their April 19, 2022, stating that based on current data, the existing water system is adequate to accommodate the Proposed Project.

The total estimated water demand based on the increase in building floor area square footage for the Proposed Project (5,000 square feet) is approximately 600 gallons per day or 219,000 gallons per year, indicating a 0.4 percent increase over present annual consumption. This calculated increase in water demand based on building square footage is conservative since campus population remains relatively unchanged and activities in the new building are those being transferred from the existing girl's locker room.

Impacts and Mitigation Measures

No short- or long-term significant impacts are anticipated to result from the development and operation of the Proposed Project. On-site water system improvements will be required to accommodate the Proposed Project. The final line size and location will be determined during the design phase of the project. Proposed

connections and improvements will be confirmed when construction drawings for the Proposed Project are developed and submitted to BWS for review and approval. It is anticipated that the connection would be a connection to either the existing adjacent 2" water or nearby 6" water in the baseball field. Trenching and backfilling of proposed water lines will follow BWS standards and the Soils Engineer's recommendations. Waterlines should be located in accessible and open areas such as roadways, grass areas, and mall areas to facilitate maintenance and minimize conflicts with any future improvements.

3.15.2 Wastewater System

Fukunaga & Associates, Inc. prepared a Preliminary Engineering Report for the Proposed Project that performed a cursory evaluation of the capacity of the utilities for water, sewer, and drainage which is included as Appendix B. The existing sewer system near the Project Site consists of sewer lines with 4-inches in diameter connecting into the City and County of Honolulu's sewer mains. There is a 4-inch sewer line to the north of the existing gymnasium and a 4-inch sewer line that runs near the baseball field. There is also an 8-inch sewer main along Winam Avenue.

The on-campus sewage flow is generated primarily from domestic use and ground water infiltration. The average daily wastewater flow may be estimated using 80 gallons per day per resident and 25 gallons per day per student, faculty, or support staff member. The calculations and campus populations are reflected in Table 3-2 below:

TABLE 3-2: AVERAGE DAILY FLOW CALCULATIONS

Average Daily Wastewater Flow	Campus Population (A)	Average Daily Flow From Students (A) X 25 gallons/day	Average Daily Flow Total (gallons)
Existing (Design Student Population)	750	18,750	18,750
Proposed Project	750	18,750	18,750

Fukunaga & Associates, Inc. also calculated peak flow demands which are reflected in Table 3-3 below:

TABLE 3-3: DESIGN PEAK FLOW CALCULATIONS

Average Daily Wastewater Flow	Campus Area (Acres) (A)	Campus Population (B)	Average Daily Flow From Students (B) X 25 gallons/day	Average Daily Flow Total (gallons)	Max Flow Factor	Max Flow (gallons)	Dry Weather I/I (B) x 35 gallons	Wet Weather I/I (A) x 2,750 (gallons)	Design Peak Flow (gallons)
Existing (Design Student Population)	34	750	18,750	18,750	2.5	46,875	26,250	93,500	166,625
Proposed Project	34	750	18,750	18,750	2.5	46,875	26,250	93,500	166,625

Impacts and Mitigation Measures

No significant impacts are anticipated on the existing wastewater system as a result of the construction and operation of the Proposed Project. The above design peak flow calculations confirm that based on the existing student, faculty and staff population, the Proposed Project will not have any anticipated impacts to existing sewer flow. New sewer lines should be designed to carry the peak flow of sewage without surcharging (rule of thumb: 85% of max. capacity) in accordance with Sewer Standards. The sewer lines shall also be designed to provide mean velocities of not less than 2.5 feet per second when flowing full to provide adequate scouring.

3.15.3 Drainage System

The existing underground drain lines near the Project Site are 6 inches in diameter and lead to a drywell to the north of the existing gymnasium. The parking lot adjacent to the Project Site features a 12 inch-drain line discharging to drywells. There are storm drain inlets on Winam Avenue which connect to the 24- inch line connecting to the box culvert on Date Street. The box culvert on Date Street drains to a ditch and into the Mānoa-Pālolo drainage canal.

Based on hydraulic calculations the Proposed Project is anticipated to have a total runoff of 0.62 cfs, based on a 10-year recurrence interval, 1-hour duration rainfall. There is no increase in stormwater for the Proposed Project since its location is at an existing impermeable asphalt concrete surface.

Impacts and Mitigation Measures

No short- or long-term significant impacts on the quantity or quality of drainage in the project vicinity are anticipated during construction or operation of the Proposed Project. Construction of the Proposed Project will not involve major land disturbing activities that will significantly alter site contours. Applicable erosion control measures and best management practices will be implemented in order to mitigate any possible adverse effects relating to runoff. As applicable for each phase, these may include but are not be limited to: temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, slope protection, stabilized construction vehicle entrance, grate inlet protection, truck wash down areas, and use of compost filter socks. Planting of landscaping also will be done as soon as possible on completed areas to help control erosion. Permanent sediment control measures will be used once construction is completed.

Drainage runoff rates and improvements for the proposed improvements will be determined based on the City and County of Honolulu Department of Planning and Permitting, Storm Drainage Standards, dated August 2017. There will be no increase in stormwater for the Proposed Project since its location is at an existing impermeable asphalt concrete surface. The new drainage system will consist of new drain lines ranging from 8-12 inches and an underground storm drainage detention system if required. Drain lines should be located in accessible and open areas such as roadways, grass areas, and mall areas to facilitate maintenance and minimize conflicts with any future improvements. A new underground detention system such as

drywell or underground storage chambers can be installed to address localized ponding or retain any increase in storm water runoff if required.

Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant impacts related to drainage.

3.15.4 Electrical and Communications Systems

Electrical power on the island of O'ahu is provided by Hawaiian Electric Company (HECO). A significant electrical source for the area is the Downtown Power Plant.

Telephone service in the area is provided by Hawaiian Telcom.

Spectrum is the local CATV provider in the region.

Impacts and Mitigation Measures

In the short- and long-term, the proposed project is not anticipated to impact or increase overall demand on electrical and communication systems in the area.

(This page intentionally left blank)

Chapter 4:

Relationship to Plans, Policies, and Controls

CHAPTER 4: RELATIONSHIP TO PLANS, POLICIES AND CONTROLS

4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Pursuant to HAR Section 11-200.1-24, this section describes the relationship of the Proposed Project to "*land use and natural or cultural resource plans, policies, and controls for the affected area*." Discussed is how the Proposed Project "*may conform or conflict with objectives and specific terms of approved or proposed land use and resource plans, policies, and controls, if any, for the affected area."* Where a conflict or inconsistency exists, described is the extent to which the Proposed Project has been reconciled *"with the plan, policy, or control, and the reasons why*" the proposing agency (DOE) *"…has decided to proceed, notwithstanding the absence of full reconciliation."*

To facilitate describing the relationships of the Proposed Action to the numerous land use and natural or cultural resource plans, policies, and controls for the affected area, some of those plans, policies, and controls are presented in tabular form, and are described with text and/or the following letter code:

S = Supportive, NS = Not Supportive, N/A = Not Applicable

4.1. State Land Use Plans and Policies

4.1.1. Hawai‘i State Plan

The Hawai‘i State Plan, Chapter 226, HRS, as amended, provides goals, objectives, policies, and priorities for the State. The purpose of the Hawai‘i State Plan is to set forth a plan that shall serve as a guide for the future long-range development of the State; identify the goals, allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; improve coordination of Federal, State, and County plans, policies, programs, projects, and regulatory activities; and, to establish a system for plan formulation and program coordination to provide for an integration of all major State, and County activities. The State Plan is divided into three sections. Part 1 is Overall Theme, Goals, Objectives and Policies. Part 2 is Planning Coordination and Implementation. Part 3 is Priority Guidelines. The Proposed Action's consistency with applicable goals, objectives and policies of Part 1 is discussed in Table 4-1, and an assessment of conformance with Part 3 is discussed in Table 4-1. Part 2 of the State Plan, which primarily covers internal government affairs, is not related to the Proposed Action.

Table 4-1: The Hawai‘i State Plan	S	NS	N/A
§226-4 State goals. In order to ensure, for present and future generations, those elements of choice and mobility that ensure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:			
(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai‘i’s present and future generations.	**X**		
(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.	**X**		

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(3) Physical, social, and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life.	X		
Discussion: The Proposed Project will support the State's goals, for present and future generations, to ensure individuals and groups may approach their desired levels of self-reliance and self-determination. The Proposed Project will support the State of Hawai'i economy by providing the creation of construction, construction support jobs, and the purchase of materials. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will enhance the mental and physical well-being of the female students.			
§226-5 Objectives and policies for population. (a) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter. To achieve the population objective, it shall be the policy of this State to:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.			X
(2) Encourage an increase in economic activities and employment opportunities on the Neighbor Islands consistent with community needs and desires.			X
(3) Promote increased opportunities for Hawai'i's people to pursue their socio-economic aspirations throughout the islands.	X		
(4) Encourage research activities and public awareness programs to foster an understanding of Hawai'i's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawai'i's population.			X
(5) Encourage federal actions that will promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			X
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			X
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.	X		
Discussion: The Proposed Project will support the objectives and policies of the State for population. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will may provide more opportunities for female students. It is possible that the lack of a new, modern facility has lessened the participation of female students in the sports programs at Kaimukī High School. The Project Site is situated in an area where urban development for desired levels of growth has been planned for. Using the existing space within the Kaimukī High School campus proper for improved educational facilities is an efficient use of land and existing infrastructure Moreover, the Proposed Project is not anticipated to result in population growth or increase enrollment at the school.			
§226-6 Objectives and policies for the economy--in general. (a) Planning for the State's economy in general shall be directed toward achievement of the following objectives: (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i's people. (2) A steady growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.			

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(b) To achieve the general economic objectives, it shall be the policy of this State to:			
(1) Promote and encourage entrepreneurship within Hawai'i by residents and nonresidents of the State.			X
(2) Expand Hawai'i's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.			X
(3) Promote Hawai'i as an attractive market for environmentally and socially sound investment activities that benefit Hawai'i's people.			X
(4) Transform and maintain Hawai'i as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.			X
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii.			X
(6) Seek broader outlets for new or expanded Hawai'i business investments.			X
(7) Expand existing markets and penetrate new markets for Hawai'i's products and services.			X
(8) Assure that the basic economic needs of Hawai'i's people are maintained in the event of disruptions in overseas transportation.			X
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.	X		
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawai'i's small scale producers, manufacturers, and distributors.			X
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			X
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii.			X
(13) Foster greater cooperation and coordination between the public and private sectors in developing Hawai'i's employment and economic growth opportunities.			X
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.			X
(15) Maintain acceptable working conditions and standards for Hawai'i's workers.	X		
(16) Provide equal employment opportunities for all segments of Hawai'i's population through affirmative action and non-discrimination measures.			X
(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			X
(18) Encourage businesses that have favorable financial multiplier effects within Hawai'i's economy, particularly with respect to emerging industries in science and technology.			X
(19) Promote and protect intangible resources in Hawai'i, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.			X
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new, potential growth industries in particular.			X
(21) Foster a business climate in Hawai'i- including attitudes, tax and regulatory policies, and financial and technical assistance programs-that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			X
Discussion: The Proposed Project will support the objectives and policies of the State for the economy – in general.			

Table 4-1: The Hawai'i State Plan	S	NS	N/A
In the short-term, project construction expenditures will confer positive benefits on the local economy. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. The Proposed Project will not result in a large increase in square footage, as it is envisioned to make efficient use of the space on campus. These improvements will provide Kaimukī High School with a new, needed facility that is currently lacking at Kaimukī High School for female students.			
§226-7 Objectives and policies for the economy--agriculture. (a) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives: (1) Viability of Hawaii's sugar and pineapple industries. (2) Growth and development of diversified agriculture throughout the State. (3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being To achieve the agriculture objectives, it shall be the policy of this State to:			
(1) Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.			X
(2) Encourage agriculture by making the best use of natural resources.			X
(3) Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture.			X
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			X
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawai'i's economy.			X
(6) Seek the enactment and retention of federal and state legislation that benefits Hawai'i's agricultural industries.			X
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawai'i's food producers and consumers in the State, nation, and world.			X
(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products.			X
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			X
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			X
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			X
(12) In addition to the State's priority on food, expand Hawai'i's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.			X
(13) Promote economically competitive activities that increase Hawai'i's agricultural self-sufficiency, including the increased purchase and use of Hawaii-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104.			X
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture			X
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			X
(16) Facilitate the transition of agricultural lands in economically non-feasible agricultural production to economically viable agricultural uses.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko iʻa, māla, and irrigated loʻi, and growth of traditional Hawaiian crops, such as kalo, ʻuala, and ʻulu.			X
(18) Increase and develop small-scale farms.			X
Discussion: The Proposed Project will not affect the objectives and policies related to the economy and agriculture.			
226-8 Objective and policies for the economy--visitor industry. (a) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawai'i's economy. (b) To achieve the visitor industry objective, it shall be the policy of this State to:			
(1) Support and assist in the promotion of Hawai'i's visitor attractions and facilities.			X
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawai'i's people.			X
(3) Improve the quality of existing visitor destination areas by utilizing Hawaii's strengths in science and technology.			X
(4) Encourage cooperation between the public and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			X
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawai'i's people.			X
(6) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the visitor industry.			X
(7) Foster a recognition of the contribution of the visitor industry to Hawai'i's economy and the need to perpetuate the aloha spirit.			X
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawai'i's cultures and values.			X
Discussion: The Proposed Project will not affect the objectives and policies related to the economy and visitor industry.			
§226 9 Objective and policies for the economy--federal expenditures. (a) Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawai'i's economy. (b) To achieve the federal expenditures objective, it shall be the policy of this State to:			
(1) Encourage the sustained flow of federal expenditures in Hawai'i that generates long-term government civilian employment.			X
(2) Promote Hawaii's supportive role in national defense, in a manner consistent with Hawaii's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawaii's economy.			X
(3) Promote the development of federally supported activities in Hawai'i that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawai'i's environment.			X
(4) Increase opportunities for entry and advancement of Hawai'i's people into federal government service.			X
(5) Promote federal use of local commodities, services, and facilities available in Hawai'i.			X
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawai'i.			X
(7) Pursue the return of federally controlled lands in Hawai'i that are not required for either the defense of the nation or for other purposes of national importance, and			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			
Discussion: The Proposed Project will not affect the objectives and policies related to the economy and Federal expenditures.			
§226-10 Objective and policies for the economy--potential growth and innovative activities. (a) Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawai'i's economic base. (b) To achieve the potential growth activity objective, it shall be the policy of this State to:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaii's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.			X
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawai'i through the export of services or products or substitution of imported services or products.			X
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements.			X
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity.			X
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus.			X
(6) Expand Hawai'i's capacity to attract and service international programs and activities that generate employment for Hawai'i's people.			X
(7) Enhance and promote Hawai'i's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.			X
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, and underground resources and solid waste.			X
(9) Promote Hawai'i's geographic, environmental, social, and technological advantages to attract new economic activities into the State.			X
(10) Provide public incentives and encourage private initiative to attract new industries that best support Hawai'i's social, economic, physical, and environmental objectives.			X
(11) Increase research and the development of ocean related economic activities such as mining, food production, and scientific research.			X
(12) Develop, promote, and support research and educational and training programs that will enhance Hawai'i's ability to attract and develop economic activities of benefit to Hawai'i.			X
(13) Foster a broader public recognition and understanding of the potential benefits of new, growth oriented industry in Hawai'i.			X
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives.			X
(15) Increase research and development of businesses and services in the telecommunications and information industries.			X
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(17) Recognize and promote health care and health care information technology as growth industries.			X
Discussion: The Proposed Project will not affect the objectives and policies related to the economy and potential growth and innovative activities.			
226-10.5 Objectives and policies for the economy--information industry. (a) Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawai'i as a leader in broadband and wireless communications and applications in the Pacific Region. (b) To achieve the information industry objective, it shall be the policy of this State to:			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawai'i and between Hawai'i and the world, and make high speed communication available to all residents and businesses in Hawaii			X
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawai'i to accommodate future growth and innovation in Hawaii's economy.			X
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii.			X
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaii, using technology to communicate with their headquarters, offices, or customers located out-of-state.			X
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry.			X
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.			X
(7) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry.			X
(8) Foster a recognition of the contribution of the information industry to Hawaii's economy.			X
(9) Assist in the promotion of Hawai'i as a broker, creator, and processor of information in the Pacific**.**			X
Discussion: The Proposed Project will not affect the objectives and policies related to the economy and the information industry.			
§226-11 Objectives and policies for the physical environment--land-based, shoreline, and marine resources. (a) The land-based, shoreline, and marine resources objectives are: (1) Prudent use of Hawai'i's land-based, shoreline, and marine resources. (2) Effective protection of Hawai'i's unique and fragile environmental resources. (b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:			
(1) Exercise an overall conservation ethic in the use of Hawai'i's natural resources.			X
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.			X
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	X		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			X
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawai'i.			X
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			X
(8) Pursue compatible relationships among activities, facilities, and natural resources.	X		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.	X		
Discussion: The Proposed Project will support the objective and policies for the physical environment – land-based, shoreline, and marine resources. No short- or long-term significant impacts on surface and/or coastal waters are anticipated to result from the construction and operation of the Proposed Project. The Proposed Project is repurposing previously developed area used as outdoor basketball courts. As such, this represents prudent use of Hawai'i's land-based resources. The Project Site is located within a highly altered urban environment. Applicable erosion control measures and best management practices will be implemented in order to mitigate any possible adverse effects relating to runoff. As applicable, these may include but are not be limited to: temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, slope protection, stabilized construction vehicle entrance, grate inlet protection, equipment wash down areas, and use of compost filter socks. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant impacts. No listed or protected plant species are known from the project area. Rare, threatened, or endangered fauna are not known to utilize the site for either habitat or foraging purposes. However, measures to prevent adverse effects to protected species are discussed in Section 3.5.1 of the EA.			
§226-12 Objective and policies for the physical environment--scenic, natural beauty, and historic resources. (a) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources (b) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:			
(1) Promote the preservation and restoration of significant natural and historic resources.			X
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			X
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.			X
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.			X
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.			X
Discussion: The Proposed Project will not affect the objectives and policies related to the physical environment and the scenic, natural beauty, and historic resources.			
§226-13 Objectives and policies for the physical environment--land, air, and water quality. (a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives: (1) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources. (2) Greater public awareness and appreciation of Hawai'i's environmental resources. (b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:			

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(1) Foster educational activities that promote a better understanding of Hawai'i's limited environmental resources.			X
(2) Promote the proper management of Hawai'i's land and water resources.	X		
(3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.			X
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.			X
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.			X
(6) Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.	X		
(7) Encourage urban developments in close proximity to existing services and facilities.	X		
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawai'i's people, their cultures and visitors.			X
Discussion: The Proposed Action supports objectives and policies related to the physical environment for land, air, and water quality by fully utilizing the existing infrastructure at Kaimukī High School which is within close proximity to existing services and facilities.			
§226-14 Objective and policies for facility systems--in general. (a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives. (b) To achieve the general facility systems objective, it shall be the policy of this State to :			
(1) Accommodate the needs of Hawai'i's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.	X		
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			X
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			X
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			X
Discussion: The Proposed Project supports the objectives and policies for facility systems in general by providing facilities by maintaining the parcel's "Urban" State Land Use designation and existing use as a high school. Hence the Proposed Project is in consonance with both State and County Plans.			
§226-15 Objectives and policies for facility systems—solid and liquid wastes. (b) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives: (1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes. (2) Provision of adequate sewerage facilities of physical and economic activities that alleviate problems in housing, employment, mobility, and other areas. (c) To achieve solid and liquid waste objectives, it shall be the policy of this State to:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			X
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.			X
(3) Promote research to develop more efficient and economical treatment and disposals of solid and liquid wastes.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
Discussion: The Proposed Project will not affect the objectives and policies related to facility systems and solid and liquid wastes. The Proposed Project will utilize existing management systems for liquid and solid waste at Kaimukī High School.			
§226-16 Objective and policies for facility systems--water. (a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities. (b) To achieve the facility systems water objective, it shall be the policy of the State to:			
(1) Coordinate development of land use activities with existing and potential water supply.			X
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			X
(3) Reclaim and encourage the productive use of runoff water and waste water discharges.			X
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			X
(5) Support water supply services to areas experiencing critical water problems.			X
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.			X
Discussion: The Proposed Project will not affect the objectives and policies for facility systems related to water.			
§226-17 Objectives and policies for facility systems--transportation. (a) Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives: (1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods. (2) A statewide transportation system consistent with planned growth objectives throughout the State (b) To achieve the transportation objectives, it shall be the policy of this State to:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter.			X
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives.			X
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties.			X
(4) Provide for improved accessibility to shipping, docking, and storage facilities.			X
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs.			X
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities.			X
(7) Encourage a variety of carriers to offer increased opportunities and advantages to inter-island movement of people and goods.			X
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs.			X
(9) Encourage the development of transportation, systems and programs which would assist statewide economic growth and diversification.			X
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawai'i's natural environment.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(11) Encourage safe and convenient uses of low-cost, energy-efficient, non-polluting means of transportation.			X
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives.			X
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			X
Discussion: The Proposed Project will not affect the objectives and policies for facility systems related to transportation.			
§226-18 Objectives and policies for facility systems—energy. (a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all: (1) Dependable, efficient, and economical statewide energy and telecommunication systems capable of supporting the needs of the people. (2) Increased energy self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation; (3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems; (4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and (5) Utility models that make the social and financial interests of Hawaii's utility customers a priority.. (b) To achieve the energy objectives, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable energy services to accommodate demand (c) To further achieve the energy objectives, it shall be the policy of this State to:			
(1) Support research and development as well as promote the use of renewable energy sources.			X
(2) Ensure a sufficient supply of energy to enable power systems to support the demands of growth.			X
(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits.			X
(4) Promote all cost-effective conservation of power and fuel supplies through measures, including: (A) Development of cost-effective demand-side management programs; (B) Education; (C) Adoption of energy-efficient practices and technologies; and (D) Increasing energy efficiency and decreasing energy use in public infrastructure.			X
(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies.			X
(6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies.			X
(7) Promote alternate fuels and transportation energy efficiency.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications.			X
(9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives.			X
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects.			X
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources.			X
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii.			X
Discussion: The Proposed Project will not affect the objectives and policies for facility systems related to energy.			
§226-18.5 Objectives and policies for facility systems--telecommunications. (a) Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people. (b) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand. (c) To further achieve the telecommunications objective, it shall be the policy of this State to:			
(1) Facilitate research and development of telecommunication systems and resources.			X
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunication planning.			X
(3) Promote efficient management and use of existing telecommunication systems and services.			X
(4) Facilitate the development of education and training of telecommunication personnel.			X
Discussion: The Proposed Project will not involve facility systems related to telecommunications.			
§226-19 Objectives and policies for socio-cultural advancement--housing. (a) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives: (1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more rental and for sale affordable housing is made available to extremely low-, very low-, lower-, moderate-, and above moderate-income segments of Hawaii's population. (2) The orderly development of residential areas sensitive to community needs and other land uses. (3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people. (b) To achieve the housing objectives, it shall be the policy of this State to:			
(1) Effectively accommodate the housing needs of Hawai'i's people.			X
(2) Stimulate and promote feasible approaches that increase affordable rental and for sale housing choices for extremely low-, very low-, lower-, moderate-, and above moderate-income households.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			X
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			X
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			X
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			X
(7) Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the cultures and values of the community.			X
(8) Promote research and development of methods to reduce the cost of housing construction in Hawai'i.			X
Discussion: The Proposed Action will not affect the objectives and policies for socio-cultural advancement related to housing.			
§226-20 Objectives and policies for socio-cultural advancement--health. (a) Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives: (1) Fulfillment of basic individual health needs of the general public. (2) Maintenance of sanitary and environmentally healthful conditions in Hawai'i's communities. (3) Elimination of health disparities by identifying and addressing social determinants of health. (b) To achieve the health objectives, it shall be the policy of this State to:			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			X
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			X
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			X
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			X
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.			X
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement			X
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.			X
Discussion: The Proposed Action will not affect the objectives and policies for socio-cultural advancement related to health.			
§226-21 Objective and policies for socio-cultural advancement--education.			

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(a) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations. (b) To achieve the education objective, it shall be the policy of this State to:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	X		
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.	X		
(3) Provide appropriate educational opportunities for groups with special needs.			X
(4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.			X
(5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.			X
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.			X
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			X
(8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			X
(9) Support research programs and activities that enhance the education programs of the State.			X
Discussion: The Proposed Action will support the objectives and policies of the State for the economy – in general. In the short-term, project construction expenditures will confer positive benefits on the local economy. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will enhance the mental and physical well-being of the female students.			
§226-22 Objective and policies for socio-cultural advancement--social services. (a) Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being. (b) To achieve the social services objective, it shall be the policy of this State to:			
(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.			X
(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.			X
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities			X
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			X
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			X
Discussion: The Proposed Project will not affect the objectives and policies for socio-cultural advancement related to social services.			
§226-23 Objective and policies for socio-cultural advancement--leisure. (a) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations. (b) To achieve the leisure objective, it shall be the policy of this State to:			
(1) Foster and preserve Hawai'i's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.			X
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.			X
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.			X
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved			X
(5) Ensure opportunities for everyone to use and enjoy Hawai'i's recreational resources.	X		
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs			X
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawai'i's people.	X		
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			X
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawai'i's population to participate in the creative arts.			X
(10) Assure adequate access to significant natural and cultural resources in public ownership.			X
Discussion: The Proposed Project will support the objectives and policies for socio-cultural advancement related to leisure. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will enhance the mental and physical well-being of the female students.			
§**226-24 Objective and policies for socio-cultural advancement--individual rights and personal well-being.** (a) Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations. (b) To achieve the individual rights and personal wellbeing objective, it shall be the policy of this State to:			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			X
(2) Uphold and protect the national and state constitutional rights of every individual.	X		
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(4) Ensure equal opportunities for individual participation in society.	X		
Discussion: The Proposed Project will support the objectives and policies for socio-cultural advancement related to individual rights and personal well-being. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will enhance the mental and physical well-being of the female students.			
§226-25 Objective and policies for socio-cultural advancement--culture. (a) Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawai'i's people. (b) To achieve the culture objective, it shall be the policy of this State to:			
(1) Foster increased knowledge and understanding of Hawai'i's ethnic and cultural heritages and the history of Hawai'i.			X
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the life styles of Hawai'i's people and which are sensitive and responsive to family and community needs.			X
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community life styles in Hawai'i.			X
(4) Encourage the essence of the aloha spirit in people's daily-activities to promote harmonious relationships among Hawai'i's people and visitors.			X
Discussion: The Proposed Project will not affect the objectives and policies for socio-cultural advancement related to culture.			
§226-26 Objectives and policies for socio-cultural advancement--public safety. (a) Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives: (1) Assurance of public safety and adequate protection of life and property for all people. (2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances. (3) Promotion of a sense of community responsibility for the welfare and safety of Hawai'i's (b) To achieve the public safety programs objectives, it shall be the policy of this State to:			
(1) Ensure that public safety programs are effective and responsive to community needs.			X
(2) Encourage increased community awareness and participation in public safety programs.			X
(c) To achieve the public safety programs objectives, it shall be the policy of this State to:			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			X
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			X
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			X

Table 4-1: The Hawai'i State Plan	S	NS	N/A
(d) To further achieve public safety objectives related to emergency management, it shall be the policy of this State to:			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war related, natural, or technological disasters and civil disturbances at all times.			X
(2) Enhance the coordination between emergency management programs throughout the State.			X
Discussion: The Proposed Project will not affect the objectives and policies for socio-cultural advancement related to public safety.			
§226-27 Objectives and policies for socio-cultural advancement--government. (a) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives: (1) Efficient, effective, and responsive government services at all levels in the State. (2) Fiscal integrity, responsibility and efficiency in the state government and county governments. (b) To achieve the government objectives, it shall be the policy of this State to:			
(1) Provide for necessary public goods and services not assumed by the private sector.	X		
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			X
(3) Minimize the size of government to that necessary to be effective.			X
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawai'i.			X
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.	X		
(6) Provide for a balanced fiscal budget.			X
(7) Improve the fiscal budgeting and management system of the State.			X
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			X
Discussion: The Proposed Project will involve the use of state funds to provide a public good, which fulfill the goals of the government and the needs of students at Kaimukī High School.			

PART III. PRIORITY GUIDELINES

Part III of the Hawai'i State Plan establishes the overall priority guidelines to address areas of statewide concern. Under HRS § 226-102, "The State shall strive to improve the quality of life for Hawai'i's present and future population through the pursuit of desirable courses of action in seven major areas of Statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation."

Table 4-2: Part III of The Hawai'i State Plan	S	NS	N/A
§226-103 Economic priority guidelines. (a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawai'i's people and achieve a stable and diversified economy:			

Table 4-2: Part III of The Hawai'i State Plan	S	NS	N/A
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.			X
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			X
(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			X
(5) Streamline the building and development permit and review process, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where public health, safety, and welfare would not be adversely affected.			X
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawai'i's small-scale producers, manufacturers, and distributors.			X
(7) Continue to seek legislation to protect Hawai'i from transportation interruptions between Hawai'i and the continental United States.			X
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics: (a) An industry that can take advantage of Hawai'i's unique location and available physical and human resources. (b) A clean industry that would have minimal adverse effects on Hawai'i's environment. (c) An industry that is willing to hire and train Hawai'i's people to meet the industry's labor needs. (d) An industry that would provide reasonable income and steady employment.			X
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawai'i business.			X
(10) Enhance the quality of Hawai'i's labor force and develop and maintain career opportunities for Hawai'i's people through the following actions: (a) Expand vocational training in diversified agriculture, aquaculture, and other areas where growth is desired and feasible. (b) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities. (c) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired. (d) Promote career opportunities in all industries for Hawai'i's people by encouraging firms doing business in the State to hire residents. (e) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities. (f) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			X
(b) Priority guidelines to promote the economic health and quality of the visitor industry:			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawai'i's residents and visitors.			X
(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring			X

Table 4-2: Part III of The Hawai'i State Plan		S	NS	N/A
	communities and activities and which provides for adequate shoreline setbacks and beach access.			
(3)	Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			X
(4)	Encourage visitor industry practices and activities which respect, preserve, and enhance Hawai'i's significant natural, scenic, historic, and cultural resources.			X
(5)	Develop and maintain career opportunities in the visitor industry for Hawai'i's people, with emphasis on managerial positions.			X
(6)	Support and coordinate tourism promotion abroad to enhance Hawai'i's share of existing and potential visitor markets.			X
(7)	Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			X
(8)	Support law enforcement activities that provide a safer environment for both visitors and residents alike.			X
(c)	Priority guidelines to promote the continued viability of the sugar and pineapple industries:			
(1)	Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			X
(2)	Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawai'i.			X
(3)	Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			X
(d)	Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			
(1)	Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			X
(2)	Assist in providing adequate, reasonably priced water for agricultural activities.			X
(3)	Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			X
(4)	Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			X
(5)	Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawai'i's agricultural community			X
(6)	Seek favorable freight rates for Hawai'i's agricultural products from interisland and overseas transportation operators.			X
(7)	Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			X
(8)	Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			X
(9)	Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			X
(e)	Priority guidelines for water use and development:			
(1)	Maintain and improve water conservation programs to reduce the overall water consumption rate.			X
(2)	Encourage the improvement of irrigation technology and promote the use of non-potable water for agricultural and landscaping purposes.			X
(3)	Increase the support for research and development of economically feasible alternative water sources.			X
(4)	Explore alternative funding sources and approaches to support future water development programs and water system improvements.			X
(f)	Priority guidelines for energy use and development:			

Table 4-2: Part III of The Hawai'i State Plan	S	NS	N/A
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			X
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			X
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			X
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			X
(g) Priority guidelines to promote the development of the information industry:			
(1) Establish an information network, with an emphasis on broadband and wireless infrastructure and capability that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawaii.			X
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			X
(3) Encourage the development of small businesses in the information field such as software development; the development of new information systems, peripherals, and applications; data conversion and data entry services; and home or cottage services such as computer programming, secretarial, and accounting services.			X
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			X
(5) Encourage research activities, including legal research in the information and telecommunications fields.			X
(6) Support promotional activities to market Hawaii's information industry services.			X
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.			X
Discussion: The Proposed Project will not affect the objectives and policies related economic priority guidelines.			
§226-104 Population growth and land resources priority guidelines.			
(a) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawai'i's people.			X
(2) Manage a growth rate for Hawai'i's economy that will parallel future employment needs for Hawai'i's people.			X
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.	X		
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			X
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			X
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			X
(7) Support the development of high technology parks on the neighbor islands.			X
(b) Priority guidelines for regional growth distribution and land resource utilization:			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public	X		

Table 4-2: Part III of The Hawai'i State Plan	S	NS	N/A
expenditures and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.			
(2) Make available marginal or non-essential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			X
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			X
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			X
(5) In order to preserve green belts, give priority to state capital improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a non-contiguous new urban core.			X
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			X
(7) Pursue rehabilitation of appropriate urban areas.			X
(8) Support the redevelopment of Kaka'ako into a viable residential, industrial, and commercial community.			X
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.	X		
(10) Identify critical environmental areas in Hawai'i to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.			X
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			X
(12) Utilize Hawai'i's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.	X		
(13) Protect and enhance Hawai'i's shoreline, open spaces, and scenic resources.			X
Discussion: The Proposed Project will be constructed in the primary urban corridor at Kaimukī High School which is situated within a highly altered urban environment. The Proposed Project will provide a much needed that will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School away from critical environments and land uses.			
§226-105 Crime and criminal justice Priority guidelines in the area of crime and criminal justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			X
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			X
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			X
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			X

Table 4-2: Part III of The Hawai'i State Plan	S	NS	N/A
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			X
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			X
Discussion: The priority guidelines related to crime and criminal justice are not applicable to the Proposed Project.			
§226-106 Affordable housing Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or non-essential agricultural land and public land to meet housing needs of low and moderate-income and gap-group households.			X
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			X
(3) Improve information and analysis relative to land availability and suitability for housing.			X
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawai'i's low and moderate-income households, gap-group households, and residents with special needs.			X
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawai'i's people for the purchase of initial owner-occupied housing.			X
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			X
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			X
(8) Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii.			X
Discussion: The priority guidelines related to affordable housing are not applicable to the Proposed Project.			
§226-107 Quality education. Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.	X		
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs.			X
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force.			X
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			X
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for: (A) The electronic exchange of information; (B) Statewide electronic mail; and (C) Access to the Internet. Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives.			X
(6) Pursue the establishment of Hawai'i's public and private universities and colleges as research and training centers of the Pacific.			X

Table 4-2: Part III of The Hawai'i State Plan	S	NS	N/A
(7) Develop resources and programs for early childhood education.			X
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education.			X
(9) Strengthen and expand educational programs and services for students with special needs.			X
Discussion: The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will enhance the mental and physical well-being of the female students.			
§226-108 Sustainability. Priority guidelines and principals to promote sustainability:			
(1) Encouraging balanced economic, social, community, and environmental priorities.			X
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State.			X
(3) Promoting a diversified and dynamic economy.			X
(4) Encouraging respect for the host culture.			X
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations.			X
(6) Considering the principles of the ahupua'a system.			X
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawai'i.			X
Discussion: The priority guidelines related to sustainability are not applicable to the Proposed Project.			
§226-109 Climate change adaption. Priority guidelines for climate change adaption:			
(1) Ensure that Hawaii's people are educated, informed, and aware of the impacts climate change may have on their communities.			X
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies.			X
(3) Invest in continued monitoring and research of Hawaii's climate and the impacts of climate change on the State.			X
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change.			X
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change.			X
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments.			X
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options.			X

Table 4-2: Part III of The Hawai'i State Plan	S	NS	N/A
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities.			X
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans.			X
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.			X
Discussion: The Priority Guidelines related to climate change adaptation are not applicable to the Proposed Project.			

4.1.2. State Functional Plans

The Hawai'i State Plan directs appropriate State agencies to prepare Functional Plans which address Statewide needs, problems, and issues, and recommend policies and actions to mitigate those problems. The Functional Plans are prepared to further define and implement statewide goals, objectives, policies, and priority guidelines contained in the Hawai'i State Plan. Thirteen Functional Plans were prepared to implement the State Plan provisions in the areas of agriculture, conservation lands, education, employment, energy, health, higher education, historic preservation, housing, human services, recreation, tourism, and transportation.

Table 4-3: Hawai'i State Functional Plans		S	NS	N/A
1	**Agricultural State Functional Plan (1991)**			
Purpose: Continued viability of agriculture throughout the State				X
Discussion: The Agricultural State Functional Plan is not applicable to the Proposed Project. The Project Site lies within the State Land Use District classified as Urban District and do not involve the use of agricultural lands.				
2	**Conservation Lands State Functional Plan (1991)**			
Purpose: Addresses issues of population and economic growth and its strain on current natural resources; broadening public use of natural resources while protecting lands and shorelines from overuse; additionally, promotes the aquaculture industry				X
Discussion: The Conservation Land State Functional plan is not applicable to the Proposed Project. The Project Site lies within the State Land Use District classified as Urban District and do not involve the use of conservation lands.				
3	**Education State Functional Plan (1989)**			
Purpose: Improvements to Hawai'i's educational curriculum, quality of educational staff, and access to adequate facilities		X		
Discussion: The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will enhance the mental and physical well-being of the female students.				
4	**Employment State Functional Plan (1990)**			
Purpose: Improve the qualifications, productivity, and effectiveness of the State's workforce through better education and training of workers as well as efficient planning of economic development, employment opportunities, and training activities				X
Discussion: The Proposed Project will not impact the objectives and policies of the Employment State Functional Plan. However, in the short-term, project construction expenditures will confer positive benefits on the local economy.				

These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials.				
5	**Energy State Functional Plan (1991)**			
Purpose: Lessen the reliance on petroleum and other fossil fuels in favor of alternative sources of energy so as to keep up with the State's increasing energy demands while also becoming a more sustainable island state; achieving dependable, efficient, and economical statewide energy systems				**X**
Discussion: The Energy State Functional Plan is not applicable to the Proposed Project.				
	Health State Functional Plan			
Purpose: Improve the health care system by providing for those who do not have access to private health care providers; increasing preventative health measures; addressing 'quality of care' elements in private and public sectors to cut increasing costs				**X**
Discussion: The Health State Functional Plan is not directly applicable to the Proposed Action. Nonetheless, the development of the Proposed Action will not conflict with the policies of the State Functional plan for Health.				
7	**Higher Education Functional Plan (1984)**			
Purpose: Prepare Hawai'i's citizens for the demands of an increasingly complex world through providing technical and intellectual tools.				**X**
Discussion: The Higher Education Functional Plan is not applicable to the Proposed Project.				
8	**Historic Preservation State Functional Plan (1991)**			
Purpose: Preservation of historic properties, records, artifacts and oral histories; provide public with information/education on the ethnic and cultural heritages and history of Hawai'i		**X**		
Discussion: The Proposed Action conforms to the purpose and intent of the Historic Preservation State Functional Plan. The Project Site consists of a highly developed urban environment and has been successively altered over the past century. Moreover, the Project Site and its surrounding environs do not represent a natural setting. The Proposed Project is consequently termed as "infill" development on a previously developed site that is complementary to the existing urban environment.				
9	**Housing State Functional Plan (1989)**			
Purpose: Provide affordable rental and for-sale housing; increase homeownership and amount of rental housing units; acquiring public and privately-owned lands for future residential development; maintain a statewide housing data system.				**X**
Discussion: The Housing State Functional Plan is not applicable to the Proposed Project.				
10	**Human Services State Functional Plan (1991)**			
Purpose: Refining support systems for families and individuals by improving elderly care, increasing preventative measures to combat child/spousal abuse and neglect; providing means for 'self-sufficiency.'				**X**
Discussion: The Human Services State Functional Plan is not applicable to the Proposed Project.				
11	**Recreation State Functional Plan (1991)**			
Purpose: Manage the use of recreational resources via addressing issues: (1) ocean and shoreline recreation, (2) mauka, urban, and other recreation, (3) public access to shoreline and upland recreation areas, (4) resource conservation and management, (5) management of recreation programs/facilities/areas, and (6) wetlands protection and management		**X**		
Discussion: The Proposed Project is generally consistent with the intent of the Recreation State Functional Plan. **The** Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Education and sport activities are elements that provide for a better socio-economic well-being. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students, which in turn, will enhance the mental and physical well-being of the female students.				

12	**Tourism State Functional Plan (1991)**			
Purpose: Balance tourism/economic growth with environmental and community concerns; development that is cognizant of the limited land and water resources of the islands; maintaining friendly relations between tourists and community members; development of a productive workforce and enhancement of career and employment opportunities in the visitor industry				**X**
Discussion: The Tourism State Functional Plan is not applicable to the Proposed Project				
13	**Transportation State Functional Plan (1991)**			
Purpose: Development of a safer, more efficient transportation system that also is consistent with planned physical and economic growth of the state; construction of facility and infrastructure improvements; develop a transportation system balanced with new alternatives; pursue land use initiatives which help reduce travel demand				**X**
Discussion: The Transportation State Functional Plan is not applicable to the Proposed Project.				

4.1.3. State Land Use District

The State Land Use Law, Chapter 205, HRS, establishes an overall framework of land use management whereby all lands in the State of Hawai'i are classified into one of four land use districts: Urban District, Agricultural District, Conservation District, and Rural District. The State Land Use Commission (LUC) is responsible for preserving and protecting Hawaii's lands and encouraging those uses to which lands are best suited.

Discussion:

The Project Site is situated entirely in the Urban State Land Use District (See Figure 4-1). Urban District lands generally include lands characterized by "city-like" concentrations of people, structures, and services. This District also includes vacant areas for future development. Jurisdiction of Urban Districts lie primarily with the county. In general, lot sizes and uses permitted in the district area are established by the county through ordinances or rules. The purpose and intent of the Proposed Project are consistent with the Urban State Land Use District.

4.1.4. Hawai'i Coastal Zone Management Program

The National Coastal Zone Management (CZM) Program was created through passage of the Coastal Zone Management Act of 1972. The U.S. Congress enacted the CZM Act to assist states in better managing coastal and estuarine environments. The CZM Act provides grants to states that develop and implement federally approved CZM plans. The goal of the CZM Act is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." Hawai'i's CZM Act, adopted as Chapter 205A, HRS, provides a basis for protecting, restoring and responsibly developing coastal communities and resources.

In Hawai'i, the "coastal zone management area" refers to all lands within the area extending seaward from the shoreline to the furthest limit of the State's police power and management authority, including the territorial sea.

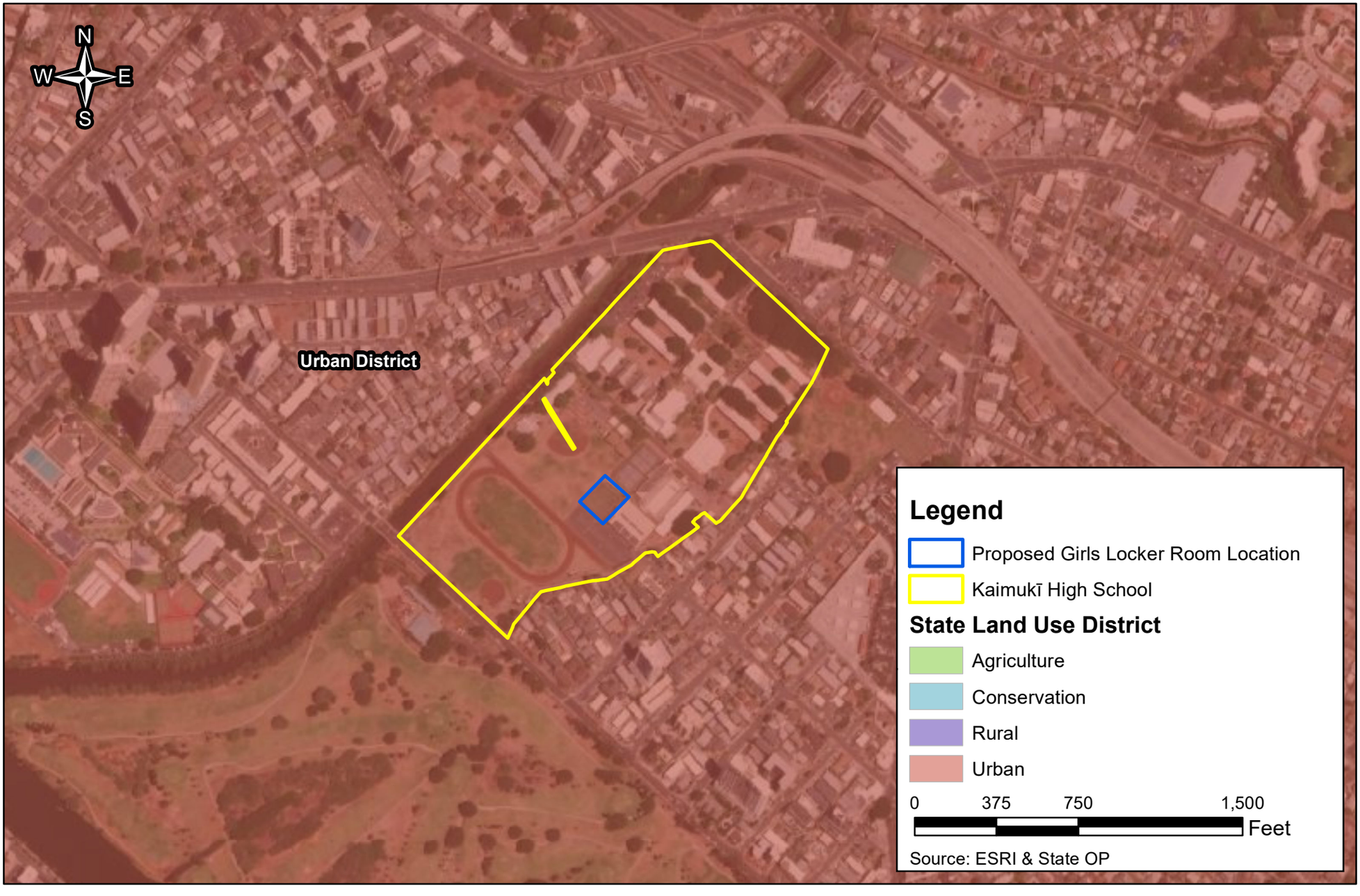


FIGURE 4-1

State Land Use District Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

The Proposed Project's conformance with the ten objectives and numerous policies of the State of Hawai'i CZMP is set forth in Table 4-4 below. The Proposed Project does include the use of land that is within the Special Management Area (SMA) designated by the CCH (See Figure 4-2). Therefore, SMA permits are not needed to implement the Proposed Project.

Table 4-4: Hawai'i Coastal Zone Management Act	S	NS	N/A
Recreational Resources			
Objective: Provide coastal recreational opportunities accessible to the public.			
Policies:			
(A) Improve coordination and funding of coastal recreational planning and management; and			**X**
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			**X**
i. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			**X**
ii. Requiring restoration of coastal resources that have significant recreational and ecosystem value, including, but not limited to, coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when restoration is not feasible or desirable;			**X**
iii. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			**X**
iv. Providing an adequate supply of shoreline parks and other recreational facilities suitable public recreation;			**X**
v. Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;			**X**
vi. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;	**X**		
vii. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			**X**
viii. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting that ~~such~~ dedication against the requirements of section 46-6.			**X**

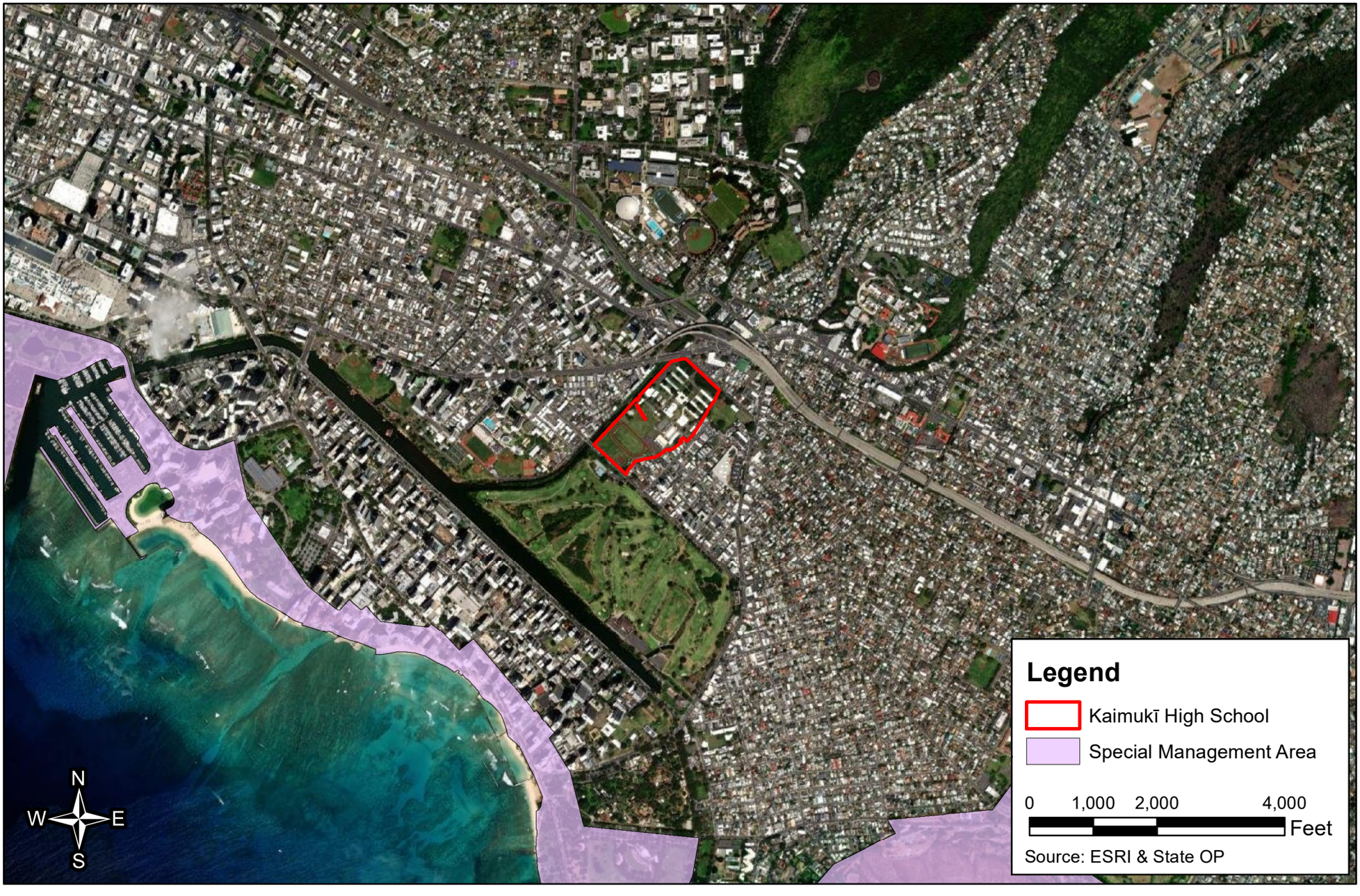


FIGURE 4-2

Special Management Area Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

Table 5-4: Hawai'i Coastal Zone Management Act	S	NS	N/A
Recreational Resources			
Objective: Provide coastal recreational opportunities accessible to the public.			
Discussion: The Proposed Project is not a coastal dependent development and will not adversely impact the shoreline and as such would not affect coastal recreational opportunities accessible to the public. The Project Site is not located along the coastline, and is not in the SMA; therefore the policies regarding shoreline recreation resources are not applicable; however, the Mānoa-Pālolo drainage canal runs adjacent to Kaimukī High School and empties into the nearby Ala Wai Canal. Construction of the Proposed Project will implement applicable BMPs to mitigate construction impacts to protect marine water quality downstream of the Project Site. Applicable erosion control measures and BMPs will be implemented in order to mitigate any possible adverse effects relating to runoff are described in detail in Section 3.3. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Soil disturbances in excess of one acre would require an NPDES Individual Permit for Stormwater Associated with Construction Activity, administered by the State DOH, will be required to control storm water discharges. Any discharges related to Proposed Action's construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, DOH. Excavation and grading activities will be regulated by applicable provisions of the County's grading ordinance.			
Historic Resources			
Objective: Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.			
Policies:			
(A) Identify and analyze significant archaeological resources;			**X**
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and			**X**
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.	**X**		
Discussion: The Proposed Project will support the policies of Historic resources. The Project Site consists of a highly developed urban environment and has been successively altered over the past century. Moreover, the Project Site and its surrounding environs do not represent a natural setting. The Proposed Project is consequently termed as "infill" development on a previously developed site that is complementary to the existing urban environment. Due to the extensive disturbance that the Project Site has experienced during the development of the existing campus, it is unlikely that subsurface historic resources are present. Should any archaeological or cultural remains be encountered during construction, all work in the immediate vicinity of the find will cease and the State Historic Preservation Division will be contacted for establishment of appropriate mitigation in accordance with Chapter 6E, HRS.			
Scenic and Open Space Resources			
Objective: Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.			
Policies:			
(A) Identify valued scenic resources in the coastal zone management area;			**X**
(B) Ensure that new developments are compatible with their visual environment by designing and locating those developments to minimize the alteration of natural land forms and existing public views to and along the shoreline;;	**X**		
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and			**X**

(D) Encourage those developments that are not coastal dependent to locate in inland areas.			**X**
Discussion: The Proposed Site consists of a highly developed urban environment and has been successively altered over the past century. Moreover, the site and its surrounding environs do not represent a natural setting. The Proposed Action is consequently termed as "infill" development on a previously developed site that is complementary to the existing urban environment. As discussed in Section 3.12 (Visual Resources) the Proposed Project is not expected to have an impact on the objectives and policies for the physical environment – scenic, natural beauty, and visual resources.			
Coastal Ecosystems			
Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.			
Policies:			
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;			**X**
(B) Improve the technical basis for natural resource management;			**X**
(C) Preserve valuable coastal ecosystems of significant biological or economic importance, including reefs, beaches, and dunes;			**X**
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and			**X**
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.	**X**		
Discussion: The Proposed Project will not have an adverse effect on the coastal systems. The Project Site is not located along the coastline, and is not in the SMA; therefore the policies regarding shoreline recreation resources are not applicable; however, the Mānoa-Pālolo drainage canal runs adjacent to Kaimukī High School and empties into the nearby Ala Wai Canal. Construction of the Proposed Project will implement applicable BMPs to mitigate construction impacts to protect marine water quality downstream of the Project Site. Applicable erosion control measures and BMPs will be implemented in order to mitigate any possible adverse effects relating to runoff are described in detail in Section 3.3. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Soil disturbances in excess of one acre would require an NPDES Individual Permit for Stormwater Associated with Construction Activity, administered by the State DOH, will be required to control storm water discharges. Any discharges related to Proposed Action's construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, DOH. Excavation and grading activities will be regulated by applicable provisions of the County's grading ordinance.			
Economic Uses			
Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.			
Policies:			
(A) Concentrate coastal dependent development in appropriate areas;			**X**
(B) Ensure that coastal dependent development and coastal related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts in the coastal zone management area; and			**X**

(C) Direct the location and expansion of coastal development to areas designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of presently designated areas when:			**X**
i. Use of designated locations is not feasible;			**X**
ii. Adverse environmental effects and risks from coastal hazards are minimized; and			**X**
iii. The development is important to the State's economy;			**X**
Discussion: The Proposed Project is not in the SMA and is not expected to have any adverse effects on any public or private facilities in coastal areas that are important to the State's economy.			
Coastal Hazards			
Objective: Reduce hazard to life and property from coastal hazards.			
Policies:			
(A) Develop and communicate adequate information about the risks of coastal hazards;			**X**
(B) Control development, including planning and zoning control, in areas subject to coastal hazards;			**X**
(C) Ensure that developments comply with requirements of the National Flood Insurance Program; and	**X**		
(D) Prevent coastal flooding from inland projects.			**X**
Discussion: As discussed in Section 3.4 (Natural Hazards) the Project Site is not in an area prone to erosion, flooding, tsunami, hurricanes, earthquake, volcanic eruptions, or other hazards and the Proposed Project will not exacerbate any natural hazard conditions. The Project Site is not located in a Tsunami Inundation Zone and is not likely to be damaged in the event of flooding. All of the Proposed Project's structures will be designed in compliance with the CCH's building code. Impacts from natural hazards can be further mitigated by adherence to appropriate civil defense evacuation procedures.			
Managing Development			
Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
Policies:			
(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;			**X**
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			**X**
(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.	**X**		
Discussion: This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the Proposed Project, will comply with the policy on managing development. The Early Consultation Package discussed in Chapter 7 sought to inform interested parties of the Proposed Project and seek relevant public comment on subjects of concern for EA documentation. The filing and publication of the Draft EA with the ERP will be followed by a 30-day public comment period. All relevant public comments received during the 30-day public comment period will receive a written response for inclusion and use in the preparation in the Final EA. Comments and responses are reproduced in Appendix C.			
Public Participation			
Objective: Stimulate public awareness, education, and participation in coastal management.			

Policies:			
(A) Promote public involvement in coastal zone management processes;	**X**		
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and	**X**		
(C) Organize workshops, policy dialogues, and site-specific mitigation to respond to coastal issues and conflicts.			**X**
Discussion: This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the Proposed Project, will comply with the policy on managing development. The Early Consultation Package discussed in Chapter 7 sought to inform interested parties of the Proposed Project and seek relevant public comment on subjects of concern for EA documentation. The filing and publication of the Draft EA with the ERP will be followed by a 30-day public comment period. All relevant public comments received during the 30-day public comment period will receive a written response for inclusion and use in the preparation in the Final EA. Comments and responses are reproduced in Appendix C.			
Beach and Coastal Dune Protection			
Objective: (A) Protect beaches and coastal dunes for:. (i) Public use and recreation; (ii) The benefit of coastal ecosystems; and (iii) Use as natural buffers against coastal hazards; and (B) Coordinate and fund beach management and protection.			
Policies:			
(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;			**X**
(B) Prohibit construction of private shoreline hardening including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities; and			**X**
(C) Minimize the construction of public shoreline hardening ~~erosion protection~~ structures including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;.			**X**
(D) Minimize grading of and damage to coastal dunes;			**X**
(E) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and			**X**
(F) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.			**X**
Discussion: The Proposed Project is not anticipated to have a significant impact on beach and shoreline processes. The development of the Proposed Project does not occur on any public beaches.			
Marine and Coastal Resources			
Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.			
Policies:			

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;			**X**
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			**X**
(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;			**X**
(D) Promote research, study, and understanding of ocean and coastal processes, impacts of climate change and sea level rise, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how coastal development activities relate to and impact ocean and coastal resources; and			**X**
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			**X**

Discussion: The Proposed Action is not anticipated to adversely affect marine, coastal, or aquatic resources.

The Project Site is not located along the coastline, and is not in the SMA; therefore the policies regarding shoreline recreation resources are not applicable; however, the Mānoa-Pālolo drainage canal runs adjacent to Kaimukī High School and empties into the nearby Ala Wai Canal. Construction of the Proposed Project will implement applicable BMPs to mitigate construction impacts to protect marine water quality downstream of the Project Site. Applicable erosion control measures and BMPs will be implemented in order to mitigate any possible adverse effects relating to runoff are described in detail in Section 3.3.

Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Soil disturbances in excess of one acre would require an NPDES Individual Permit for Stormwater Associated with Construction Activity, administered by the State DOH, will be required to control storm water discharges. Any discharges related to Proposed Action's construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and 11-55 Water Pollution Control, DOH. Excavation and grading activities will be regulated by applicable provisions of the County's grading ordinance.

4.2. City and County of Honolulu Land Use Plans and Policies

4.2.5. City and County of Honolulu General Plan

The CCH last updated its General Plan (1992 edition) in October 2002. The General Plan is intended to be a dynamic document, expressing the aspirations of the residents of O'ahu. It sets forth the long-range objectives and policies for the general welfare and, together with the regional development plans, provides a direction and framework to guide the programs and activities of the CCH. It is a written commitment by the CCH government to a future for the island of O'ahu that it considers desirable and attainable. The General Plan is a two-fold document: First, it is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of O'ahu. These objectives contain both statements of desirable conditions to be sought over the long run and statements of desirable conditions that can be achieved within an approximately 20-year time horizon. Second, the General Plan is a statement of broad policies that facilitate the attainment of the objectives of the General Plan.

The General Plan is a guide for all levels of government, private enterprise, neighborhood and citizen groups, organizations, and individual citizens in eleven areas of concern:

(1) Population;
(2) Economic Activity;
(3) Natural Environment;

(4) Housing;
(5) Transportation and utilities;
(6) Energy;
(7) Physical development and urban design;
(8) Public safety;
(9) Health and Education;
(10) Culture and recreation; and
(11) Government operations and fiscal management.

The Proposed Project is relevant and consistent with the following applicable goals, objectives, policies, and actions of the *City and County of Honolulu General Plan*:

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
I. Population			
Objective A. To control the growth of O'ahu's resident and visitor populations in order to avoid social, economic, and environmental disruptions.			
(1) Participate in State and Federal programs which seek to develop social, economic, legal, and environmental controls over population growth.			**X**
(2) Seek a balance between the rate of immigration and the rate of outmigration by reducing immigration.			**X**
(3) Support Federal policies providing for a more even distribution of immigrants throughout the country.			**X**
(4) Seek to maintain a desirable pace of physical development through City and County regulations.			**X**
(5) Encourage family planning.			**X**
(6) Publicize the desire of the City and County to limit population growth.			**X**
Discussion: The Proposed Project will not have an effect on the City and County of Honolulu's General Plan, in regards to Population, Objective A.			
Objective B. To plan for future population growth.			
(1) Allocate efficiently the money and resources of the City and County in order to meet the needs of O'ahu's anticipated future population.			**X**
(2) Provide adequate support facilities to accommodate future growth in the number of visitors to O'ahu.			**X**
Discussion: The Proposed Project will not have an effect on the City and County of Honolulu's General Plan, in regard to Population, Objective B.			
Objective C. To establish a pattern of population distribution that will allow the people of O'ahu to live and work in harmony.			
(1) Facilitate the full development of the primary urban center.	**X**		
(2) Encourage development within the secondary urban center at Kapolei and the 'Ewa and Central O'ahu urban-fringe areas to relieve developmental pressures in the remaining urban-fringe and rural areas and to meet housing needs not readily provided in the primary urban center.			**X**

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(3) Manage physical growth and development in the urban-fringe and rural areas so that: a. An undesirable spreading of development is prevented; and b. Their population densities are consistent with the character of development and environmental qualities desired for such areas.			
(4) Direct growth according to Policies 1, 2, and 3 above by providing land development capacity and needed infrastructure to seek a 2025 distribution of Oahu's residential population as follows: **Location** — **% Share of 2025 Islandwide Population** Primary Urban Center 46% 'Ewa 13% Central O'ahu 17% East Honolulu 5.3% Ko'olaupoko 11.6% Ko'olauloa 1.4% North Shore 1.7% Wai'anae 4.0% **Total 100%**			**X**
Discussion: The Proposed Project will support Objective C related to Population. The Proposed Project is situated within the Primary Urban Center.			
II. Economic Activity			
Objective A. To promote employment opportunities that will enable all the people of O'ahu to attain a decent standard of living.			
(1) Encourage the growth and diversification of O'ahu's economic base.			**X**
(2) Encourage the development of small businesses and larger industries which will contribute to the economic and social well-being of O'ahu residents.			**X**
(3) Encourage the development in appropriate locations on O'ahu of trade, communications, and other industries of a nonpolluting nature.			**X**
(4) Encourage the development of local, national, and world markets for the products of O'ahu-based industries.			**X**
(5) Encourage the wider distribution of available employment opportunities through such methods as shortening the work week and reducing the use of overtime.			**X**
(6) Encourage the continuation of a significant level of Federal employment on O'ahu.			**X**
Discussion: The Proposed Project will not have an effect on the City and County of Honolulu's General Plan, in regard to Economic Activity, Objective A.			
Objective B. To maintain the viability of O'ahu's visitor industry.			
(1) Provide for the long-term viability of Waikiki as O'ahu's primary resort area by giving the area priority in visitor industry related public expenditures.			**X**
(2) Provide for a high quality and safe environment for visitors and residents in Waikiki.			**X**
(3) Encourage private participation in improvements to facilities in Waikiki.			**X**

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(4) Prohibit major increases in permitted development densities in Waikiki.			X
(5) Prohibit further growth in the permitted number of hotel and resort condominium units in Waikiki.			X
(6) Permit the development of secondary resort areas in West Beach, Kahuku, Makaha, and Laie.			X
(7) Manage the development of secondary resort areas in a manner which respects existing lifestyles and the natural environment, and avoids substantial increases in the cost of providing public services in the area.			X
(8) Preserve the well-known and widely publicized beauty of Oahu for visitors as well as residents.			X
(9) Encourage the visitor industry to provide a high level of service to visitors.			X
Discussion: The Proposed Project will not have an effect on maintaining the viability of O'ahu's visitor industry.			
Objective C. To maintain the viability agriculture on O'ahu.			
(1) Assist the agricultural industry to ensure the continuation of agriculture as an important source of income and employment.			X
(2) Support agricultural diversification in all agricultural areas on O'ahu.			X
(3) Support the development of markets for local products, particularly those with the potential for economic growth.			X
(4) Provide sufficient agricultural land in Ewa, Central Oahu, and the North Shore to encourage the continuation of sugar and pineapple as viable industries.			X
(5) Maintain agricultural land along the Windward, North Shore, and Waianae coasts for truck farming, flower growing, aquaculture, livestock production, and other types of diversified agriculture.			X
(6) Encourage the more intensive use of productive agricultural land.			X
(7) Encourage the use of more efficient production practices by agriculture, including the efficient use of water.			X
(8) Encourage the more efficient use of non- potable water for agricultural use.			X
Discussion: The Proposed Project will not influence Objective C of the City and County of Honolulu General Plan related to Economic Activity.			
Objective D. To make full use of the economic resources of the sea.			
(1) Assist the fishing industry to maintain its viability.			X
(2) Encourage the development of aquaculture, ocean research, and other ocean- related industries.			X
(3) Focus the development of ocean related economic activities in the Northwestern Hawaiian Islands on those which are compatible with preserving the area's unique environmental, marine, and wildlife assets.			X
Discussion: The Proposed Project will not influence Objective D of the City and County of Honolulu General Plan related to Economic Activity.			
Objective E. To prevent the occurrence of large scale unemployment.			

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(1) Encourage the training and employment of present residents for currently available and future jobs.			X
(2) Make full use of State and Federal employment and training programs.			X
(3) Encourage the provision of retraining programs for workers in industries with planned reductions in their labor force.			X
Discussion: The Proposed Project will not influence Objective E of the City and County of Honolulu General Plan related to Economic Activity.			
Objective F. To increase the amount of federal spending on O'ahu.			
(1) Take full advantage of Federal programs and grants which will contribute to the economic and social well-being of O'ahu's residents.			X
(2) Encourage the Federal government to pay for the cost of public services used by Federal agencies.			X
(3) Encourage the Federal government to lease new facilities rather than construct them on tax-exempt public land.			X
(4) Encourage the military to purchase locally all needed services and supplies which are available on O'ahu .			X
Discussion: The Proposed Project will not have an effect on Objective F of the City and County of Honolulu General Plan related to Economic Activity as the Project does not involve any federal funds.			
Objective G. To bring about orderly economic growth on O'ahu.			
(1) Direct major economic activity and government services to the primary urban center and the secondary urban center at Kapolei.			X
(2) Permit the moderate growth of business centers in the urban-fringe areas.			X
(3) Maintain sufficient land in appropriately located commercial and industrial areas to help ensure a favorable business climate on O'ahu.			X
(4) Encourage the continuation of a high level of military-related employment in the Hickam-Pearl Harbor, Wahiawa, Kailua-Kaneohe, and Ewa areas.			X
Discussion: The Proposed Project will not have an effect on Objective F of the City and County of Honolulu General Plan related to Economic Activity.			
III. Natural Environment			
Objective A. To protect and preserve the natural environment.			
(1) Protect O'ahu's natural environment, especially the shoreline, valleys, and ridges, from incompatible development.			X
(2) Seek the restoration of environmentally damaged areas and natural resources.			X
(3) Retain the Island's streams as scenic, aquatic, and recreation resources.			X
(4) Require development projects to give due consideration to natural features such as slope, flood and erosion hazards, water- recharge areas, distinctive land forms, and existing vegetation.	X		
(5) Require sufficient setbacks of improvements in unstable shoreline areas to avoid the future need for protective structures.			X
(6) Design surface drainage and flood-control systems in a manner which will help preserve their natural settings.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(7) Protect the natural environment from damaging levels of air, water, and noise pollution.	X		
(8) Protect plants, birds, and other animals that are unique to the State of Hawai'i and the Island of O'ahu.	X		
(9) Protect mature trees on public and private lands and encourage their integration into new developments.			X
(10) Increase public awareness and appreciation of O'ahu's land, air, and water resources.			X
(11) Encourage the State and Federal governments to protect the unique environmental, marine, and wildlife assets of the Northwestern Hawaiian Islands.			X
Discussion: The Proposed Action will support the Objective A of Section III of the City and County of Honolulu General Plan. The Proposed Project gives due consideration to the natural features and environment of the site and surrounding area through this environmental assessment. Potential impacts to the natural setting and will be mitigated through BMPs during the implementation of the Proposed Project. This will minimize any potential impacts to plants, birds, and other animals unique to the island of O'ahu and State of Hawai'i.			
Objective B. To preserve and enhance the natural monuments and scenic views of O'ahu for the benefit of both residents and visitors.			
(1) Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers, and streams; shoreline, fishponds, and bays; and reefs and offshore islands.			X
(2) Protect O'ahu's scenic views, especially those seen from highly developed and heavily traveled areas.			X
(3) Locate roads, highways, and other public facilities and utilities in areas where they will least obstruct important views of the mountains and the sea.			X
(4) Provide opportunities for recreational and educational use and physical contact with O'ahu's natural environment.			X
Discussion: The Proposed Project will not affect Objective B of Section III of the City and County of Honolulu General Plan.			
IV. Housing			
Objective A. To provide decent housing for all the people of O'ahu at prices they can afford.			
(1) Develop programs and controls which will provide decent homes at the least possible cost.			X
(2) Streamline approval and permit procedures for housing and other development projects.			X
(3) Encourage innovative residential development which will result in lower costs, added convenience and privacy, and the more efficient use of streets and utilities.			X
(4) Establish public, and encourage private, programs to maintain and improve the condition of existing housing.			X
(5) Make full use of State and Federal programs that provide financial assistance for low- and moderate-income homebuyers.			X
(6) Expand local funding mechanisms available to pay for government housing programs.			X
(7) Provide financial and other incentives to encourage the private sector to build homes for low- and moderate-income residents.			X
(8) Encourage and participate in joint public-private development of low- and moderate- income housing.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(9) Encourage the preservation of existing housing which is affordable to low- and moderate-income persons.			X
(10) Promote the construction of affordable dwellings which take advantage of O'ahu's year-round moderate climate.			X
(11) Encourage the construction of affordable homes within established low-density communities by such means as 'ohana' units, duplex dwellings, and cluster development.			X
(12) Encourage the production and maintenance of affordable rental housing.			X
(13) Encourage the provision of affordable housing designed for the elderly and the handicapped.			X
(14) Encourage equitable relationships between landowners and leaseholders, between landlords and tenants, and between condominium developers and owners.			X
Discussion: The Proposed Project will not affect Objective A of Section IV of the City and County of Honolulu General Plan.			
Objective B. To reduce speculation in land and housing.			
(1) Encourage the State government to coordinate its urban-area designations with the developmental policies of the City and County.			X
(2) Discourage private developers from acquiring and assembling land outside of areas planned for urban use.			X
(3) Seek public benefits from increases in the value of land owing to City and State developmental policies and decisions.			X
(4) Require government-subsidized housing to be delivered to appropriate purchasers and renters.			X
(5) Prohibit the selling or renting of government-subsidized housing for large profits.			X
Discussion: The Proposed Project will not affect Objective B of Section IV of the City and County of Honolulu General Plan related to housing.			
Objective C. To provide the people of O'ahu with a choice of living environments which are reasonably close to employment, recreation, and commercial centers and which are adequately served by public utilities.			
(1) Encourage residential developments that offer a variety of homes to people of different income levels and to families of various sizes.			X
(2) Encourage the fair distribution of low- and moderate-income housing throughout the Island.			X
(3) Encourage residential development near employment centers.			X
(4) Encourage residential development in areas where existing roads, utilities, and other community facilities are not being used to capacity.			X
(5) Discourage residential development where roads, utilities, and community facilities cannot be provided at a reasonable cost.			X
(6) Preserve older communities through self-help, housing-rehabilitation, improvement districts, and other governmental programs.			X
Discussion: The Proposed Project will not affect Objective C of Section IV of the City and County of Honolulu General Plan related to housing.			
V. Transportation & Utilities			

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
Objective A. To create a transportation system which will enable people and goods to move safely, efficiently, and at a reasonable cost; serve all people, including the poor, the elderly, and the physically handicapped; and offer a variety of attractive and convenient modes of travel.			
(1) Develop and maintain an integrated ground-transportation system consisting of the following elements and their primary purposes:			
a. Public transportation-for travel to and from work, and travel within Central Honolulu;			X
b. Roads and highways-for commercial traffic and travel in nonurban areas;			X
c. Bikeways-for recreational activities and trips to work, schools, shopping centers, and community facilities; and			X
d. Pedestrian walkways-for getting around Downtown and Waikiki, and for trips to schools, parks, and shopping centers.			X
(2) Provide transportation services to people living within the Ewa, Central O'ahu , and Pearl City-Hawai'i Kai corridors primarily through a mass transit system including exclusive right-of-way rapid transit and feeder-bus components as well as through the existing highway system with limited improvements as may be appropriate.			X
(3) Provide transportation services outside the Ewa, Central O'ahu , and Pearl City-Hawai'i Kai corridors primarily through a system of express- and feeder-buses as well as through the highway system with limited to moderate improvements sufficient to meet the needs of the communities being served.			X
(4) Improve transportation facilities and services in the Ewa corridor and in the trans-Ko'olau corridors to meet the needs of Ewa and Windward communities.			X
(5) Improve roads in existing communities to reduce congestion and eliminate unsafe conditions.			X
(6) Consider both environmental impact as well as construction and operating costs as important factors in planning alternative nodes of transportation.			X
(7) Promote the use of public transportation as a means of moving people quickly and efficiently, of conserving energy, and of guiding urban development.			X
(8) Make available transportation services to people with limited mobility: the young, the elderly, the handicapped, and the poor.			X
(9) Promote programs to reduce dependence on the use of automobiles.			X
(10) Discourage the inefficient use of the private automobile, especially in congested corridors and during peak-hours.			X
(11) Make public, and encourage private, improvements to major walkway systems.			X
(12) Encourage the provision of separate aviation facilities for small civilian aircraft.			X
(13) Facilitate the development of a second deep-water harbor to relieve congestion in Honolulu Harbor.			X
Discussion: The Proposed Project will not affect Objective A of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
Objective B. To meet the needs of the people of O'ahu for an adequate supply of water and for environmentally sound systems of waste disposal.			
(1) Develop and maintain an adequate supply of water for both residents and visitors.			X
(2) Develop and maintain an adequate supply of water for agricultural and industrial needs.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(3) Encourage the development of new technology which will reduce the cost of providing water and the cost of waste disposal.			X
(4) Encourage a lowering of the per-capita consumption of water and the per-capita production of waste.			X
(5) Provide safe, efficient, and environmentally sensitive waste-collection and waste- disposal services.			X
(6) Support programs to recover resources from solid-waste and recycle wastewater.			X
(7) Require the safe disposal of hazardous waste.			X
Discussion: The Proposed Project will not affect Objective B of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
Objective C. To maintain a high level of service for all utilities.			
(1) Maintain existing utility systems in order to avoid major breakdowns.			X
(2) Provide improvements to utilities in existing neighborhoods to reduce substandard conditions.			X
(3) Plan for the timely and orderly expansion of utility systems.			X
(4) Increase the efficiency of public utilities by encouraging a mixture of uses with peak periods of demand occurring at different times of the day.			X
Discussion: The Proposed Project will not affect Objective C of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
Objective D. To maintain transportation and utility systems which will help O'ahu continue to be a desirable place to live and visit.			
(1) Give primary emphasis in the capital- improvement program to the maintenance and improvement of existing roads and utilities.			X
(2) Use the transportation and utility systems as a means of guiding growth and the pattern of land use on O'ahu.			X
(3) Encourage the study and use of telecommunications as an alternative to conventional transportation facilities.			X
(4) Evaluate the social, economic, and environ- mental impact of additions to the transportation and utility systems before they are constructed.			X
(5) Require the installation of underground utility lines wherever feasible.			X
(6) Seek improved taxing powers for the City and County in order to provide a more equitable means of financing transportation and utility services.			X
Discussion: The Proposed Project will not affect Objective D of Section V of the City and County of Honolulu General Plan related to transportation and utilities.			
VI. Energy			
Objective A. To maintain an adequate, dependable, and economical supply of energy for O'ahu residents.			
(1) Develop and maintain a comprehensive plan to guide and coordinate energy conservation and alternative energy development and utilization programs on O'ahu.			X
(2) Establish economic incentives and regulatory measures which will reduce O'ahu's dependence on petroleum as its primary source of energy.			X
(3) Support programs and projects which contribute to the attainment of energy self- sufficiency on O'ahu.			X
(4) Promote and assist efforts to establish adequate petroleum reserves within Hawai'i's boundaries.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(5) Give adequate consideration to environ- mental, public health, and safety concerns, to resource limitations, and to relative costs when making decisions concerning alternatives for conserving energy and developing natural energy resources.			X
(6) Work closely with the State and Federal governments in the formulation and implementation of all City and County energy-related programs.			X
Discussion: The Proposed Project will not affect Objective A of Section VI of the City and County of Honolulu General Plan related to energy.			
Objective B. To conserve energy through the more efficient management of its use.			
(1) Ensure that the efficient use of energy is a primary factor in the preparation and administration of land use plans and regulations.			X
(2) Provide incentives and, where appropriate, mandatory controls to achieve energy- efficient siting and design of new developments.			X
(3) Carry out public, and promote private, programs to more efficiently use energy in existing buildings and outdoor facilities.			X
(4) Promote the development of an energy- efficient transportation system.			X
Discussion: The Proposed Project will not affect Objective B of Section VI of the City and County of Honolulu General Plan related to energy.			
Objective C. To fully utilize proven alternative sources of energy.			
(1) Encourage the use of commercially available solar energy systems in public facilities, institutions, residences, and business developments.			X
(2) Support the increased use of operational solid waste energy recovery and other biomass energy conversion systems.			X
Discussion: The Proposed Project will not affect Objective C of Section VI of the City and County of Honolulu General Plan related to energy.			
Objective D. To develop and apply new, locally available energy resources.			
(1) Support and participate in research, development, demonstration, and commercialization programs aimed at producing new, economical, and environmentally sound energy supplies from:			
a. solar insolation;			X
b. biomass energy conversion;			X
c. wind energy conversion;			X
d. geothermal energy; and			X
e. ocean thermal energy conversion.			X
(2) Secure State and Federal support of City and County efforts to develop new sources of energy.			X
Discussion: The Proposed Action will not affect Objective D of Section VI of the City and County of Honolulu General Plan related to energy.			
Objective E. To establish a continuing information program.			
(1) Supply citizens with the information they need to fully understand the potential supply, cost, and other problems associated with O'ahu's dependence on imported petroleum.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(2) Foster the development of an energy conservation ethic among O'ahu residents.			X
(3) Keep consumers informed about available alternative energy sources and their costs and benefits.			X
(4) Provide information concerning the impact of public and private decisions on future energy use.			X
Discussion: The Proposed Action will not affect Objective E of Section VI of the City and County of Honolulu General Plan related to energy.			
VII. Physical Development and Urban Design			
Objective A. To coordinate changes in the physical environment of O'ahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.			
(1) Plan for the construction of new public facilities and utilities in the various parts of the Island according to the following order of priority: first, in the primary urban center; second, in the secondary urban center at Kapolei; and third, in the urban- fringe and rural areas.	X		
(2) Coordinate the location and timing of new development with the availability of adequate water supply, sewage treatment, drainage, transportation, and public safety facilities.	X		
(3) Phase the construction of new developments so that they do not require more regional supporting services than are available.			X
(4) Require new developments to provide or pay the cost of all essential community services, including roads, utilities, schools, parks, and emergency facilities that are intended to directly serve the development.			X
(5) Provide for more compact development and intensive use of urban lands where compatible with the physical and social character of existing communities.	X		
(6) Encourage the clustering of developments to reduce the cost of providing utilities and other public services.			X
(7) Locate new industries and new commercial areas so that they will be well related to their markets and suppliers, and to residential areas and transportation facilities.			X
(8) Locate community facilities on sites that will be convenient to the people they are intended to serve.			X
(9) Exclude from residential areas, uses which are major sources of noise and air pollution.			X
(10) Establish danger zones to exclude incompatible uses from hazardous areas surrounding airfields, electromagnetic- radiation sources, and storage places for fuel and explosives.			X
(11) Prohibit new airfields, electromagnetic- radiation sources, and storage places for fuel and explosives from locating on sites where they will endanger or disrupt nearby communities.			X
Discussion: The Proposed Project will support Objective A of Section VII of the City and County of Honolulu General Plan related to physical development and urban design. The Proposed Project will be constructed in the primary urban corridor at Kaimukī High School which is situated within a highly altered urban environment. The Proposed Project will provide a much needed that will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School where adequate utility infrastructure is available.			
Objective B. To develop Honolulu (Waialae-Kahala to Halawa), Aiea, and Pearl City as the Island's primary urban center.			
(1) Stimulate development in the primary urban center by means of the City and County's capital improvement program and State and Federal grant and loan programs.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(2) Provide for the expanded development of low-rise multi-unit housing.			X
(3) Encourage the establishment of mixed-use districts with appropriate design and development controls to insure an attractive living environment and compatibility with surrounding land uses.			X
(4) Provide downtown Honolulu and other major business centers with a well-balanced mixture of uses.			X
(5) Encourage the development of attractive residential communities in downtown and other business centers.			X
(6) Maintain and improve downtown as the financial and office center of the Island, and as a major retail center.			X
(7) Provide for the continued viability of the Hawai'i Capital District as a center of government activities and as an attractive park-like setting in the heart of the City.			X
(8) Foster the development of Honolulu's waterfront as the State's major port and maritime center, as a people-oriented mixed-use area, and as a major recreation area.			X
(9) Facilitate the redevelopment of Kakaako as a major residential, as well as commercial and light industrial area.			X
Discussion: The Proposed Action will not affect Objective B of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.			
Objective C. To develop a secondary urban center with its nucleus in the Kapolei area.			
(1) Allocate funds from the City and County's capital-improvement program for public projects that are needed to facilitate development of the secondary urban center at Kapolei.			X
(2) Encourage the development of a major residential, commercial, and employment center within the secondary urban center at Kapolei.			X
(3) Encourage the continuing development of Barbers Point as a major industrial center.			X
(4) Coordinate plans for the development of the secondary urban center at Kapolei with the State and Federal governments and with the sugar industry.			X
(5) Cooperate with the State and Federal governments in the development of a deep water harbor at Barbers Point.			X
(6) Encourage the development of the Ewa Marina Community as a major residential and recreation area emphasizing recreational boating activities through the provision of a major marina and a related maritime commercial center containing light-industrial, commercial, and visitor accommodation uses.			X
Discussion: The Proposed Action will not affect Objective C of Section VII of the City and County of Honolulu General Plan related to physical development and urban design as the Project is situated in Kaimukī.			
Objective D. To maintain those development characteristics in the urban-fringe and rural areas which make them desirable places to live.			
(1) Develop and maintain urban-fringe areas as predominantly residential areas characterized by generally low rise, low density development which may include significant levels of retail and service commercial uses as well as satellite institutional and public uses geared to serving the needs of households.			X
(2) Coordinate plans for developments within the Ewa and Central O'ahu urban-fringe areas with the State and Federal governments and with the sugar, pineapple, and other emerging agricultural industries.			X
(3) Establish a green belt in the Ewa and Central O'ahu areas of O'ahu in the Development Plans.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(4) Maintain rural areas as areas which are intended to provide environments supportive of lifestyle choices which are dependent on the availability of land suitable for small to moderate size agricultural pursuits, a relatively open and scenic setting, and/or a small town, country atmosphere consisting of communities which are small in size, very low density and low rise in character, and may contain a mixture of uses.			X
Discussion: The Proposed Action will not affect Objective D of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.			
Objective E. To create and maintain attractive, meaningful, and stimulated environments throughout O'ahu.			
(1) Prepare and maintain a comprehensive urban-design plan for the Island of O'ahu.			X
(2) Integrate the City and County's urban- design plan into all levels of physical planning and developmental controls.			X
(3) Encourage distinctive community identities for both new and existing districts and neighborhoods.			X
(4) Require the consideration of urban-design principles in all development projects.			X
(5) Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas.	X		
(6) Provide special design standards and controls that will allow more compact development and intensive use of lands in the primary urban center.			X
(7) Promote public and private programs to beautify the urban and rural environments.			X
(8) Preserve and maintain beneficial open space in urbanized areas.			X
(9) Design public structures to meet high aesthetic and functional standards and to complement the physical character of the communities they will serve.			X
(10) Establish a review process to evaluate the design of major development projects.			X
Discussion: The Proposed Action will support Objective E of Section VII of the City and County of Honolulu General Plan related to physical development and urban design. The design approach of the Proposed Project will ensure that it is compatible with the existing campus and surrounding community.			
Objective F. To promote and enhance the social and physical character of O'ahu's older towns and neighborhoods.			
(1) Encourage new construction to complement the ethnic qualities of the older communities of O'ahu.			X
(2) Encourage, wherever desirable, the rehabilitation of existing substandard structures.			X
(3) Provide and maintain roads, public facilities, and utilities without damaging the character of older communities.			X
(4) Seek the satisfactory relocation of residents before permitting their displacement by new development, redevelopment, or neighborhood rehabilitation.			X
Discussion: The Proposed Action will not affect Objective F of Section VII of the City and County of Honolulu General Plan related to physical development and urban design.			
VIII. Public Safety			

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
Objective A. To prevent and control crime and maintain public order.			
(1) Provide a safe environment for residents and visitors on O'ahu.			X
(2) Provide adequate criminal justice facilities and staffing for City and County law- enforcement agencies.			X
(3) Emphasize improvements to police and prosecution operations which will result in a higher proportion of wrongdoers who are arrested, convicted, and punished for their crimes.			X
(4) Keep the public informed of the nature and extent of criminal activity on O'ahu.			X
(5) Establish and maintain programs to encourage public cooperation in the prevention and solution of crimes.			X
(6) Seek the help of State and Federal law- enforcement agencies to curtail the activities of organized crime syndicates on O'ahu.			X
(7) Conduct periodic reviews of criminal laws to ensure their relevance to the community's needs and values.			X
(8) Cooperate with other law-enforcement agencies to develop new methods of fighting crime.			X
(9) Encourage the improvement of rehabilitation programs and facilities for criminals and juvenile offenders.			X
Discussion: The Proposed Action will not affect Objective A of Section VIII of the City and County of Honolulu General Plan related to public safety.			
Objective B. To protect the people of O'ahu and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe conditions.			
(1) Keep up-to-date and enforce all City and County safety regulations.			X
(2) Require all developments in areas subject to floods and tsunamis to be located and constructed in a manner that will not create any health or safety hazard.			X
(3) Participate with State and Federal agencies in the funding and construction of flood- control projects.			X
(4) Cooperate with State and Federal agencies to provide tsunami warning and protection for O'ahu.			X
(5) Cooperate with State and Federal agencies to provide protection from war, civil disruptions, and other major disturbances.			X
(6) Reduce hazardous traffic conditions.			X
(7) Provide adequate fire protection and effective fire prevention programs.			X
(8) Provide adequate search and rescue and disaster response services.			X
(9) Design safe and secure public buildings.	X		
(10) Provide adequate staff to supervise activities at public facilities.			X
(11) Develop civil defense plans and programs to protect and promote public health, safety and welfare of the people.			X
(12) Provide educational materials on civil defense preparedness, fire protection, traffic hazards and other unsafe conditions.			X
Discussion: The Proposed Project will support Objective B of Section VIII of the City and County of Honolulu General Plan related to public safety.			

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
It is anticipated the Proposed Project will be a safe and secure facility and will not impact the safety and security of other facilities on the campus.			
IX. Health and Education			
Objective A. To protect the health of the people of O'ahu.			
(1) Encourage the provision of health-care facilities that are accessible to both employment and residential centers.			X
(2) Encourage prompt and adequate ambulance and first-aid services in all areas of O'ahu.			X
(3) Coordinate City and County health codes and other regulations with State and Federal health codes to facilitate the enforcement of air-, water-, and noise-pollution controls.			X
Discussion: The Proposed Project will not affect Objective A of Section IX of the City and County of Honolulu General Plan related to health and education.			
Objective B. To provide a wide range of educational opportunities for the people of O'ahu.			
(1) Support education programs that encourage the development of employable skills.			X
(2) Encourage the provision of informal educational programs for people of all age groups.			X
(3) Encourage the after-hours use of school buildings, grounds, and facilities.	X		
(4) Encourage the construction of school facilities that are designed for flexibility and high levels of use.	X		
(5) Facilitate the appropriate location of learning institutions from the preschool through the university levels.			X
Discussion: The Proposed Project will support Objective B of Section IX of the City and County General Plan relating to health and education. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Hence, it is expected that the facility will be used after school hours and will be designed for flexibility.			
Objective C. To make Honolulu the center of higher education in the Pacific.			
(1) Encourage continuing improvement in the quality of higher education in Hawai'i.			X
(2) Encourage the development of diverse opportunities in higher education.			X
(3) Encourage research institutions to establish branches on O'ahu.			X
Discussion: The Proposed Project will not affect Objective C of Section IX of the City and County of Honolulu General Plan related to health and education.			
X. Culture and Recreation			
Objective A. To foster the multiethnic culture of Hawai'i.			
(1) Encourage the preservation and enhancement of Hawai'i's diverse cultures.			X
(2) Encourage greater public awareness, understanding, and appreciation of cultural heritage and contributions to Hawai'i made by the City's various ethnic groups.			X
(3) Encourage opportunities for better interaction among people with different ethnic, social, and cultural backgrounds.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(4) Encourage the protection of the ethnic identities of the older communities of O'ahu .			X
Discussion: The Proposed Project will not affect Objective A of Section X of the City and County of Honolulu General Plan related to culture and recreation.			
Objective B. To protect O'ahu's cultural, historic, architectural, and archaeological resources.			
(1) Encourage the restoration and preservation of early Hawaiian structures, artifacts, and landmarks.			X
(2) Identify, and to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.			X
(3) Cooperate with the State and Federal governments in developing and implementing a comprehensive preservation program for social, cultural, historic, architectural, and archaeological resources.			X
(4) Promote the interpretive and educational use of cultural, historic, architectural, and archaeological sites, buildings, and artifacts.			X
(5) Seek public and private funds, and public participation and support, to protect social, cultural, historic, architectural, and archaeological resources.			X
(6) Provide incentives for the restoration, preservation, and maintenance of social, cultural, historic, architectural, and archaeological resources.			X
Discussion: The Proposed Project will not affect Objective B of Section X of the City and County of Honolulu General Plan related to culture and recreation.			
Objective C. To foster the visual and performing arts.			
(1) Encourage and support programs and activities for the visual and performing arts.			X
(2) Encourage creative expression and access to the arts by all segments of the population.			X
(3) Provide permanent art in appropriate City public buildings and places.			X
Discussion: The Proposed Project will not affect Objective C of Section X of the City and County of Honolulu General Plan related to culture and recreation.			
Objective D. To provide a wide range of recreational facilities and services that are readily available to all residents of O'ahu.			
(1) Develop and maintain community-based parks to meet the needs of the different communities on O'ahu.			X
(2) Develop and maintain a system of regional parks and specialized recreation facilities.			X
(3) Develop and maintain urban parks, squares, and beautification areas in high density urban places.			X
(4) Encourage public and private botanic and zoological parks on O'ahu to foster an awareness and appreciation of the natural environment.			X
(5) Encourage the State to develop and maintain a system of natural resource-based parks, such as beach, shoreline, and mountain parks.			X
(6) Provide convenient access to all beaches and inland recreation areas.			X
(7) Provide for recreation programs which serve a broad spectrum of the population.			X
(8) Encourage ocean and water-oriented recreation activities that do not adversely impact on the natural environment.			X
(9) Require all new developments to provide their residents with adequate recreation space.			X

Table 4-5: City and County of Honolulu: General Plan – Objectives and Policies	S	NS	N/A
(10) Encourage the private provision of recreation and leisure-time facilities and services.			X
(11) Encourage the after-hours, weekend, and summertime use of public schools facilities for recreation.	X		
(12) Provide for safe and secure use of public parks, beaches, and recreation facilities.			X
(13) Encourage the safe use of O'ahu 's ocean environments.			X
(14) Encourage the State and Federal governments to transfer excess and underutilized land to the City and County for public recreation use.			X
Discussion: The Proposed Project will support Objective D of Section X of the City and County General Plan relating to health and education. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Hence, it is expected that the facility will be used after school hours.			
XI. Government Operations and Fiscal Management			
Objective A. To promote increased efficiency, effectiveness, and responsiveness in the provision of government services by the City and County of Honolulu.			
(1) Maintain City and County government services at the level necessary to be effective.			X
(2) Promote consolidation of State and City and County functions whenever more efficient and effective delivery of government programs and services can be achieved.			X
(3) Ensure that government attitudes, actions, and services are sensitive to community needs and concerns.			X
(4) Prepare, maintain, and publicize policies and plans which are adequate to guide and coordinate City programs and regulatory responsibilities.			X
Discussion: The Proposed Action will not affect Objective A of Section XI of the City and County of Honolulu General Plan related to government operations and fiscal management.			
Objective B. To ensure fiscal integrity, responsibility, and efficiency by the City and County government in carrying out its responsibilities.			
(1) Provide for a balanced budget.			X
(2) Allocate fiscal resources of the City and County to efficiently implement the policies of the General Plan and Development Plans.			X
Discussion: The Proposed Action will not affect Objective B of Section XI of the City and County of Honolulu General Plan related to government operations and fiscal management.			

4.2.6. Primary Urban Center Development Plan

The Proposed Project is located within the Primary Urban Center (PUC) Development Plan (DP) area, which extends from downtown Honolulu to Pearl City in the west to Wai'alae-Kahala in the east. The PUC is home to almost half of O'ahu's population and three quarters of all jobs. The PUCDP (June 2004) provides a vision for the PUC in the areas of land use, transportation, infrastructure, and public facilities. It also provides policies and guidelines for achieving that vision. The City's Land Use Map indicates that the project area lands are designated for Institutional uses. The proposed project is consistent with the following guidelines, policies and principles contained in the PUC DP:

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
3. Land Use and Transportation			
3.1 Protecting and Enhancing Natural, Cultural, and Scenic Resources			
3.1.2 Policies			
Preserve historic and cultural sites. Preserve and protect sites that have high preservation value because of their good condition or unique features. Protection includes planning and design of adjacent uses to avoid conflicts or abrupt contrasts that detract from or destroy the physical integrity and historic or cultural value of the site. Retain, whenever possible, significant vistas associated with historic, natural and man-made features. Allow adaptive reuse of historic buildings to serve a new function and/or enhance interpretive value without destroying the historic value of a site.			X
Preserve and protect natural resource and constraint areas. Establish an Urban Community Boundary to define the area for urban development. Place large contiguous areas of natural resource and constraint areas designated for Preservation, including all lands within the State Conservation District, outside of the Urban Community Boundary.			X
Preserve panoramic views of natural landmarks and the urban skyline. Preserve views of the Koolau and Waianae Mountain Ranges, Punchbowl, Diamond Head, Pearl Harbor and other natural landmarks. Maintain important view corridors within and across urban Honolulu and keep Downtown as the most prominent feature of the urban skyline. Views along the Pearl Harbor shoreline and the Pearl Harbor Historic Trail toward the mountains, shoreline, significant landmarks, and adjacent communities should be created and maximized wherever possible and appropriate.	X		
Improve access to shoreline and mountain areas. Provide continuous lateral access along the Honolulu waterfront and around the East Loch of Pearl Harbor, where urban activity is most intense. Maintain access to mountain hiking trails and increase opportunities for nature education and camping.			X
Provide parks and active recreation areas. Develop and maintain parks and other outdoor public spaces in a manner that expands opportunities for both active and passive recreation. Increase and enhance recreational open space in the most densely settled parts of the PUC.			X
Discussion: The Proposed Project will support historic and cultural sites relating to Section 3.1.2. As discussed in Section 3.12 (Visual Resources) the Proposed Project is not expected to have an impact on the objectives and policies for the physical environment – scenic, natural beauty, and visual resources.			
3.2 Neighborhood Planning and Improvement			
3.2.2 Policies			
3.2.2.1 Neighborhood Planning			
Develop a system for collaborative neighborhood planning. Planning for neighborhood improvement must be undertaken at the neighborhood level. Neighborhood planning is a collaborative enterprise involving residents, business and property owners, government agencies, and others who have a stake in the neighborhood.			X
Cultivate existing and new "neighborhood centers." Neighborhoods need central places where people gather for shopping, entertainment, and/or recreation. The center of a neighborhood could be a public plaza or a recreation complex, or a commercial town center, with a grocery store and other shops and services. It could have a public park or a plaza linked to shops. Cultivating neighborhood centers entails investment in parks and pedestrian street improvements.			X
Promote mixed land uses. Office, retail, and community service uses can coexist with residential uses; and there are a number of opportunities for them to support each other. In traditional single-family neighborhoods, groupings of small stores provide convenient service and a place to meet neighbors. In the PUC's in-town			X

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
neighborhoods, both residential and office development support retail and other services. Neighborhoods with a strong mix of uses have activity 24 hours a day. Residences providing "eyes on the street" contribute to neighborhood safety.			
Create parks that draw people and activity. The PUC should have a range of parks. While all provide open space and relief from buildings and traffic, some should provide for organized sports and fitness activities, and others should function more as neighborhood gathering places. In the PUC, development of one or two large sports complexes with substantial parking could provide for league play of all kinds, while smaller parks could be used in inventive ways to meet the needs of their surrounding neighborhoods. Like other cities throughout the world, plazas and open spaces that attract people and activity are integrated with churches, shops, and other buildings.			X
Make streets "pedestrian-friendly." There are many opportunities to create street environments that invite pedestrian use, such as widening sidewalks, planting trees to provide shade and buffer pedestrians from vehicular traffic, and narrowing intersections to provide shorter and safer pedestrian crossings. The Land Use Maps (Maps A.4, A.5 and A.6) show primary pedestrian routes. These streets and others identified through neighborhood planning should be given high priority for pedestrian improvement.			X
Make major streets which connect communities convey neighborhood identity. The identifying characteristics that give neighborhoods their unique visual signatures or identities should be emphasized and conveyed by the streets that connect them to other places. To help accomplish this, landscape and other streetscape design for major streets which serve as principal routes connecting two or more neighborhoods should reflect the unique identities of each neighborhood and, where possible, should provide open spaces between them which create significant public views or access to mauka or shoreline resources.			X
3.2.2.2 Mauka Residential Neighborhoods			
Density. Lower-density residential areas may have single-family residences and townhouse apartments at a density of five to 12 dwelling units per acre, with predominantly two-story building heights. Areas zoned for apartment use may have higher densities.			X
Appropriate Building Design. For institutional and other nonresidential uses allowed within lower-density residential areas, provide guidelines for the location and design of buildings, service areas, and pedestrian and vehicular access. In general, street-facing building elements should be attractive, designed for human scale, and have clear points of entry. Service and utility elements should be located out of sight from the street and away from residences.			X
3.2.2.3 In-Town Residential Neighborhoods			
Density. Areas close to transit lines and the major east-west arterials should be zoned for medium-density residential, which may range from 13 to 90 units per acre, or high-density residential mixed use, which may range up to 140 units per acre. Neighborhoods in these zones would also include reinforcing uses which support resident lifestyle and livelihood choices, such as convenience or neighborhood stores, dining establishments, professional and/or business services, or other similar activities.			X
Building Heights. Establish maximum desired building heights in apartment-zoned districts on the basis of viewplane studies to preserve views of natural landmarks as indicated in Section 3.1. Otherwise, the maximum building height for districts zoned low-density apartment should be approximately four stories or 40 feet. For areas zoned medium-density apartment, the maximum desired building height should be either 60 feet or the present height of the building occupying the lot. It is expected that with these criteria, building heights for most in-town residential neighborhoods, including Moiliili, McCully, and other established neighborhoods between Ala Moana			X

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
and the University of Hawaii would not exceed currently allowed heights. Given market conditions, development feasibility, and future incentives and standards encouraging the enhancement and development of livable neighborhoods, such districts may experience lower than currently sanctioned building heights.			
Building Design and the Streetscape Environment. Neighborhood plans should distinguish between principal or "front door" streets that give a neighborhood the opportunity to "put on its best face," and secondary or local streets where a variety of activities are appropriate or where service is the main function. Utilitarian elements such as service yards, parking lots, or utilities should be located on nonprincipled streets in ways that support efficient patterns of circulation.			X
3.2.2.4 Shopping and Retail Business Districts			
Community/Neighborhood Commercial. These commercial areas should be located within and should primarily serve lower-density residential neighborhoods. Generally 10 acres or less in land area, these districts or clusters of establishments typically have service stations, grocery and sundry stores, and other small businesses serving residential customers. Buildings are generally one or two stories in height. While they vary greatly in total size and number of business establishments, a Community/Neighborhood Commercial area typically has no more than 200,000 square feet of commercial floor area.			X
District Commercial. District Commercial includes a wide variety of commercial uses located in the core areas of the Primary Urban Center. These districts typically have larger facilities and serve larger populations than community/neighborhood commercial districts. They may include major office buildings, shopping centers, and older commercial streets that serve a district-wide, regional or island wide population. Mixed uses, including medium to higher density residential uses where appropriate, and higher densities are encouraged in these areas. Downtown should have the tallest buildings on Oahu. In other areas, maximum building heights should be established on the basis of viewplane studies to preserve views of natural landmarks.			X
Commercial streets. Enliven commercial streets by providing wide sidewalks and trees for shade and encouraging property owners to build to the sidewalk edge. Vital urban neighborhoods rely on high pedestrian activity. Storefronts create interest and stimulate pedestrian activity along the street, especially when they are built to the property line and meet the public sidewalk.			X
District-wide parking. Support older commercial districts and the continued use and rehabilitation of small commercial lots by providing conveniently located municipal parking. In the past, the City organized parking improvement districts and built centralized parking in Downtown and Kaimuki.			X
Integration of shopping centers with adjacent neighborhoods. Ensure that all shopping areas integrate well with adjacent residential neighborhoods. Require safe, pleasant, pedestrian connections between shopping establishments and their host neighborhoods. Encourage the planning and development of centers or clusters of shopping establishments to have their shops rather than parking lots face and be adjacent to abutting neighborhoods. Wherever possible and appropriate, encourage compatible or seamless design and landscape treatment of public routes and thoroughfares between residential and shopping areas. To the greatest extent possible, avoid placing service uses adjacent to resident areas and major frontages. Efforts should be made to appropriately locate and distinguish between front door and service zones.			X
Discussion: The Proposed Project will not affect the objectives and policies relating to Section 3.2.2.			

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
3.3 In-Town Housing Choices			
3.3.2 Policies			
Promote people-scaled apartment and townhouse dwellings in low- or mid-rise buildings oriented to the street. Promote buildings that are modest in height and have a pedestrian entrance facing the street. Encourage the use of ground-floor space for shops that will serve residents and contribute to a pedestrian-oriented neighborhood. This policy entails revising zoning regulations.			X
Improve the feasibility of redeveloping small lots. Remove disincentives for townhouse and low-rise apartment development on smaller lots zoned for multifamily dwellings. This policy entails revising zoning regulations.			X
Reduce costs for apartment homes. Reduce construction costs and promote low-rise buildings by allowing less expensive building construction types while maintaining health and safety. Reduce land costs by allowing greater dwelling unit density while limiting building volume consistent with promoting livable neighborhoods. This policy entails revising building and zoning regulations.			X
Provide adequate parks and schools for in-town neighborhoods. Community parks and recreation facilities should be provided in and near residential neighborhoods. To attract young families, access to elementary schools must be assured.			X
Expand the capacity of infrastructure, including water supply, sewers, and storm drains. Government needs to lead both planning and investment in renewing and expanding infrastructure. To remedy district- or neighborhood-scale infrastructure constraints is beyond the capability of individual landowners. Likewise, paying for relief lines and larger-scale projects that will benefit multiple landowners requires government leadership in providing long-term financing and apportioning costs.			X
Support the retention, rehabilitation, and improvement of older, low-rent apartment buildings. Many older, walk-up apartment buildings constructed prior to the 1969 Comprehensive Zoning Code do not conform to current zoning or building standards but collectively comprise a valuable reservoir of low-cost rental housing. The City should relax zoning requirements to encourage the rehabilitation and improvement of these buildings.			X
Preserve the current inventory of affordable rental housing units. The City should assure that the current inventory of affordable rental units, whether owned by the city or not, is preserved and retained as affordable rentals.			X
Provide for special needs housing. Allow housing for people with special needs, such as group homes for the disabled or congregate living and care homes for the elderly, subject to special development standards or permit review. Promote the dispersal of special needs housing among various neighborhoods and avoid overconcentrating facilities in just a few areas.			X
Provide incentives and cost savings for affordable housing. Provide exemptions from zoning and building codes for housing projects that meet established standards of affordability, on a case-by-case basis.			X
Provide for high-density housing options in mixed-use developments around transit stations. This type of "transit-oriented development" facilitates transit use and allows for increased densities without generating increased vehicular congestion.			X
Discussion: The Proposed Project will not affect the objectives and policies relating to Section 3.3.2.			
3.4 The Pacific's Leading City			
3.4.2 Policies			
3.4.2.1 Honolulu and Pearl Harbor Waterfronts			
Create public open space along the Pearl Harbor waterfront and strengthen the physical and visual connections between the urban center and the water			X
Improve mauka-makai pedestrian and bicycle circulation across Kamehameha Highway. Developing physical access to the Pearl Harbor waterfront demands			X

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
substantial improvements to pedestrian and bicycle access across Kamehameha Highway.			
Redevelop the Downtown/Iwilei waterfront. Reroute through traffic to a new Sand Island parkway and harbor tunnel thoroughfare, and replace the makai portion of Nimitz Highway with a new shoreline pedestrian promenade and mixed-use commercial/recreational/residential complexes. Adopt appropriate measures to enhance the attractiveness of the Nimitz corridor and public and private responsibilities to implement and maintain such improvements. By creating a new parkway across Sand Island and a tunnel beneath the Harbor entrance, Airport-to-Waikiki traffic (and all other through traffic not destined for the Iwilei/Downtown area) will bypass this unsightly industrial section and significantly reduce the traffic demand on Nimitz Highway through town. This will enable the Ewa-bound mauka section of the highway to be converted to a two-way local access street. It will also allow the Waikiki-bound makai section to be converted to a major shoreline promenade and waterfront activity area, providing space for restaurants, shops, indoor and outdoor entertainment, and recreation areas. This area would also hold potential for development of low- to mid-rise housing.			X
3.4.2.2 Visitor Facilities			
Adopt and implement a plan for a vibrant and livable Waikiki. This plan needs to address the quality of the resident experience as well as the quality of the visitor experience. Based on development parameters set by the Waikiki Special District, the plan should encompass mobility, the quality of the street environment for pedestrians, public spaces, the scale and design of new buildings, and Waikiki's relationship to the Convention Center and neighboring districts.			X
Support attractions that are of interest to both residents and visitors in the Ala Moana/Kakaako/Downtown corridor. Opportunities include State sponsored waterfront commercial and cultural attractions around the Kewalo Basin area; retail/entertainment facilities around Ala Moana Center, Victoria Ward Centers and Kamehameha Schools properties; and improvements to serve visitors in the Capitol District, Aloha Tower, and Chinatown.			X
Provide opportunities for the development of visitor units in the Ala Moana/Kakaako/Downtown corridor. Hotels serving the Convention Center should be within a 5-minute walk (one-quarter mile) and located on commercially zoned parcels along major thoroughfares. Those in the Downtown area should be in the area zoned BMX-4 or the Aloha Tower complex.			X
Provide a transit link along the Ala Moana/Kakaako/Downtown corridor. The City should assure that there is convenient transit service between visitor accommodations and the visitor attractions along the corridor. Visitor oriented transit should utilize at-grade trolley types of vehicles and could be publicly or privately operated.			X
Provide opportunities for the development of smaller-scale visitor accommodations (i.e., inns and lodges) in existing commercial centers. These could serve resident and business needs (visiting family, friends and business associates) as well as visitors looking for an alternative to the resort enclave. Potential areas include Kapahulu, Kaimuki, the King/Beretania corridor, Kapalama, Pearlridge, and Pearl City. Development of such facilities should consider the community's preferences and be integrated with the surrounding neighborhood.			X
Allow Bed & Breakfast establishments (but not transient vacation units or TVU's) in residential neighborhoods. With adequate parking, community involvement, and other regulatory controls, B&Bs provide a highly integrated, well-supervised, low-impact form of visitor accommodation. For residents, operating a B&B is a viable home occupation and a means to retain and reuse homes in older neighborhoods.			X
3.4.2.3 Technology Business, Office Facilities			
Stimulate development of high technology and knowledge-based industries. Take advantage of Honolulu's active urban ambience to attract high-technology businesses. Use State lands in Kakaako for a campus dedicated to biomedical research and other high-technology businesses. Encourage investment in infrastructure in commercial buildings to accommodate and attract high-technology and biotechnology businesses.			X

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
Encourage street-front retail. Office buildings should have retail stores, entrances, and windows fronting the principal street.			X
Provide usable open space. Zoning requirements and bonus provisions for open space associated with larger office buildings should specify design guidelines for usable plazas, parks, and arcades. Key elements of usable open space are enclosure, shade, seating, and location at street level.			X
3.4.2.4 Military, Airport, Harbor, and Industrial			
Support continuation of military uses. National defense objectives and budget priorities determine the military bases and functions located in the Primary Urban Center and the state as a whole. The City should support long-range land use planning by the military services and coordinate with them to achieve common goals of employment, housing, and recreation.			X
Integrate civilian and military residential communities. The City should work with the military services to link adjacent residential communities through the use of connecting roadways, bikeways, walkways, landscape features, and/or architectural scale and character.			X
Allow a mix of industrial and commercial uses. Allow a broader mix of commercial uses in the Airport and Bougainville industrial districts. The Airport district should include office, hotel, and retail uses that are compatible with airport operations, as well as existing light industrial uses. The Bougainville district should include uses that support surrounding residential neighborhoods.			X
Enhance Honolulu Harbor and harbor-related uses. Reserve areas around Honolulu Harbor, particularly around Kapalama Basin and the Sand Island container yards, for harbor-related uses.			X
Support industrial uses in Kalihi-Palama industrial districts. Commercial uses along the Nimitz, Dillingham, King, Kalihi, and Waiakamilo corridors should be recognized and encouraged. In industrial districts where residential uses have endured for many years – i.e., Kalihi Kai and Kapalama – such uses should be allowed to continue, and should be rehabilitated and improved.			X
Promote compatibility with the surrounding urban and natural environment. Where industrial uses are mixed with or adjacent to residential communities or natural areas, mitigate visual, noise, and other environmental impacts by adopting performance standards.			X
Support development of adequate warehousing facilities to support increased economic activity. Encourage development and maintenance of warehouse space of sufficient quality to prevent shortages and support growing businesses.			X
3.4.2.5 Aiea-Pearl City Town Centers			
Define the role of town centers. Establish the "Pearlridge" area as the Pearl Harbor Regional Town Center, and strengthen the physical and visual connection between this urban activity center and the Pearl Harbor waterfront. Other town centers at Pearl City, Waimalu, Aiea, and Halawa should serve as more localized or specialized activity and service areas.			X
Promote mixed land use. Town centers should support some form of mixed land use to respond more flexibly to market needs and to reduce dependency on the private automobile for local travel. The Pearl Harbor Regional Town Center should be designated for a greater diversity of uses than the other town centers, emphasizing an integration of medium- or higher-density residential and commercial development. Land use designations and design standards should be oriented toward assuring compatibility of building forms and uses, creating street connections, and providing a smooth transition between town centers and adjacent residential neighborhoods.			X
Facilitate pedestrian, transit, and bicycle improvements. There should be major improvements to transportation facilities and services, with particular emphasis on pedestrian, bicycle, and public transit modes along Kamehameha Highway, and commuter travel on the H-1 Freeway and in the Aloha Stadium vicinity (see Figure 3.17: Pedestrian Network Concept for Pearl Harbor). Design standards for new development in the town centers – especially the Pearl Harbor Regional Town Center – should encourage pedestrian and transit travel.			X

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
Discussion: The Proposed Project will not affect the objectives and policies of Section 3.4.2.			
3.5 Develop a Balanced Transportation System			
3.5.2 Policies			
Implement land use strategies to achieve a balanced transportation system. To improve the quality of life in the Primary Urban Center and to accommodate growth, development initiatives and regulatory controls should promote the growth of sustainable and appropriate alternative urban travel modes such as transit, walking, and bicycling.			X
Improve the public transit system, including development of a rapid transit component. Improvements to the transit system should be targeted to accommodating trans-PUC travel and making neighborhood service more convenient. A rapid transit component is needed to serve the high-volume east-west corridor, connect activity centers, and provide transportation capacity in place of increased roadways.			X
Implement Transportation Demand Management strategies. Due to limited land area and high costs, it is increasingly necessary to shift from increasing roadway and parking capacity to policies and practices that reward use of transit and other alternative modes.			X
Review existing plans and establish priorities for roads and road improvements. Conduct a comprehensive review of roads and designate those which should receive priority treatment for transit, bike routes, and pedestrian routes, as well as the principal arterial and collector network for automobile travel.			X
Implement the Honolulu Bicycle Master Plan. Institutionalize the policy that every street and highway on which bicycles are permitted to operate is a "bicycle street," designated and maintained to accommodate shared use by bicycles and motor vehicles.			X
Enhance and improve pedestrian mobility. Create special pedestrian districts and corridors and a regional network of pedestrian facilities. Comprehensively address pedestrian safety concerns related to vehicle speeding and excessive volumes on local streets and neighborhood collector streets.			X
Encourage the full use of existing private and public parking garages. Encourage private parking garage owners to rent underused parking stalls within commercial buildings and large-scale residential projects.			X
Discussion: The Proposed Project will not affect the objectives and policies of Section 3.5.2.			
4. Infrastructure and Public Facilities			
4.1 Water Allocation and System Development			
4.1.2 Policies			
Integrate resource management of all potable and nonpotable water sources, including groundwater, stream water, storm water, and wastewater effluent.			X
Adapt water conservation practices in the design of new developments and modification of existing uses, including landscaped areas.			X
Implement upgrades and capacity improvements to serve projected population increases.			X
Protect and maintain watersheds to ensure an adequate supply of high quality water with sufficient infiltration recharge into groundwater aquifers.			X
Discussion: The Proposed Project will not affect the objectives and policies of Section 4.1.2.			

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
4.2 Wastewater System			
4.2.2 Policies			
Implement wastewater collection system improvements to provide adequate service and sound facilities to existing neighborhoods and timely increases in system capacity to areas planned to undergo improvement or change in use.			X
Implement adequate and timely upgrades/expansion of wastewater treatment facilities to meet the growth demands of the PUC.			X
Discussion: The Proposed Project will not affect the objectives and policies of Section 4.2.2.			
4.3 Electrical Power			
4.3.2 Policies			
Support retention and upgrade of the Waiau and Honolulu Power Plants as part of a strategic plan to improve the reliability of the Primary Urban Center's electrical power system.			X
Promote and implement energy conservation measures and integrated resource planning.			X
Planning and building of new or relocated transmission lines should take into consideration system and cost concerns, and the impacts on the environment. Options to place utility lines underground should be considered, and priorities should be established.			X
Discussion: The Proposed Action will not have affect Section 4.3.2 of the Primary Urban Development Plan.			
4.4 Telecommunications Facilities			
4.4.2 Policies			
Minimize the visual impacts and potential health hazard of new facilities.			X
Discussion: The Proposed Action will not have affect Section 4.4.2 of the Primary Urban Development Plan.			
4.5 Solid Waste			
4.5.2 Policies			
Reduce the solid waste stream by encouraging recycling and reuse.			X
Reduce dependence on landfills by encouraging alternative waste disposal technologies.			X
Discussion: The Proposed Action will not have affect Section 4.5.2 of the Primary Urban Development Plan.			
4.6 Stormwater Systems			
4.6.2 Policies			
Require methods of retaining or detaining stormwater for gradual release into the ground as the preferred strategy for the management of stormwater. Where feasible, utilize open spaces including parking lots, landscaped areas, parks, and golf courses to detain or infiltrate stormwater flows to reduce their volume and runoff rates. (City Council Resolution No. 94-296).			X

Table 4-6: Primary Urban Center Development Plan	S	NS	N/A
Manage stormwater flows through best management practices to minimize stormwater runoff and peak discharge rates.			X
Preserve stream and estuarine habitats.			X
Discussion: The Proposed Action will not have affect Section 4.6.2 of the Primary Urban Development Plan.			
4.7 School and Library Facilities			
4.7.2 Policies			
Support the development of a high quality educational system of schools and post-secondary institutions that increase the attractiveness of the Primary Urban Center as a place to live and work.	X		
Work with the Department of Education to develop innovative shared-use facilities, particularly on City-owned school properties.			X
Discussion: The Proposed Action will support Section 4.7.2 of the Primary Urban Development Plan. The Proposed Project will provide a better standard for educational and sports programs for current and future female students at Kaimukī High School. Moreover, the Proposed Project will meet Title IX requirements, by providing a new, needed facility that is currently lacking at Kaimukī High School for female students.			
4.8 Civic and Public Safety Facilities			
4.8.2 Policies			
Provide adequate staffing and facilities to ensure effective and efficient delivery of basic governmental service and protection of public safety.			X
Discussion: The Proposed Action will not have affect Section 4.6.2 of the Primary Urban Development Plan.			

4.2.7. City and County of Honolulu Zoning

The purpose and intent of the City and County of Honolulu Land Use Ordinance is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the O'ahu General Plan and development plans, and to promote and protect the public health, safety, and welfare.

Discussion:

According to the CCH LUO, the Project Site is situated within the A-2 Apartment Medium Density zoning designation (See Figure 4-3). On O'ahu, the City & County of Honolulu, Department of Planning and Permitting would generally administer zoning regulations under its Land Use Ordinance.

The Proposed Project is considered a "Public Use and Structure" which is a permitted use in any zone. The maximum height for this A-2 Apartment Medium Density zoning designation is 150 feet. The Proposed Project is anticipated to be no more than 30 feet in height. Thus, the Proposed Project is in alignment with the LUO.

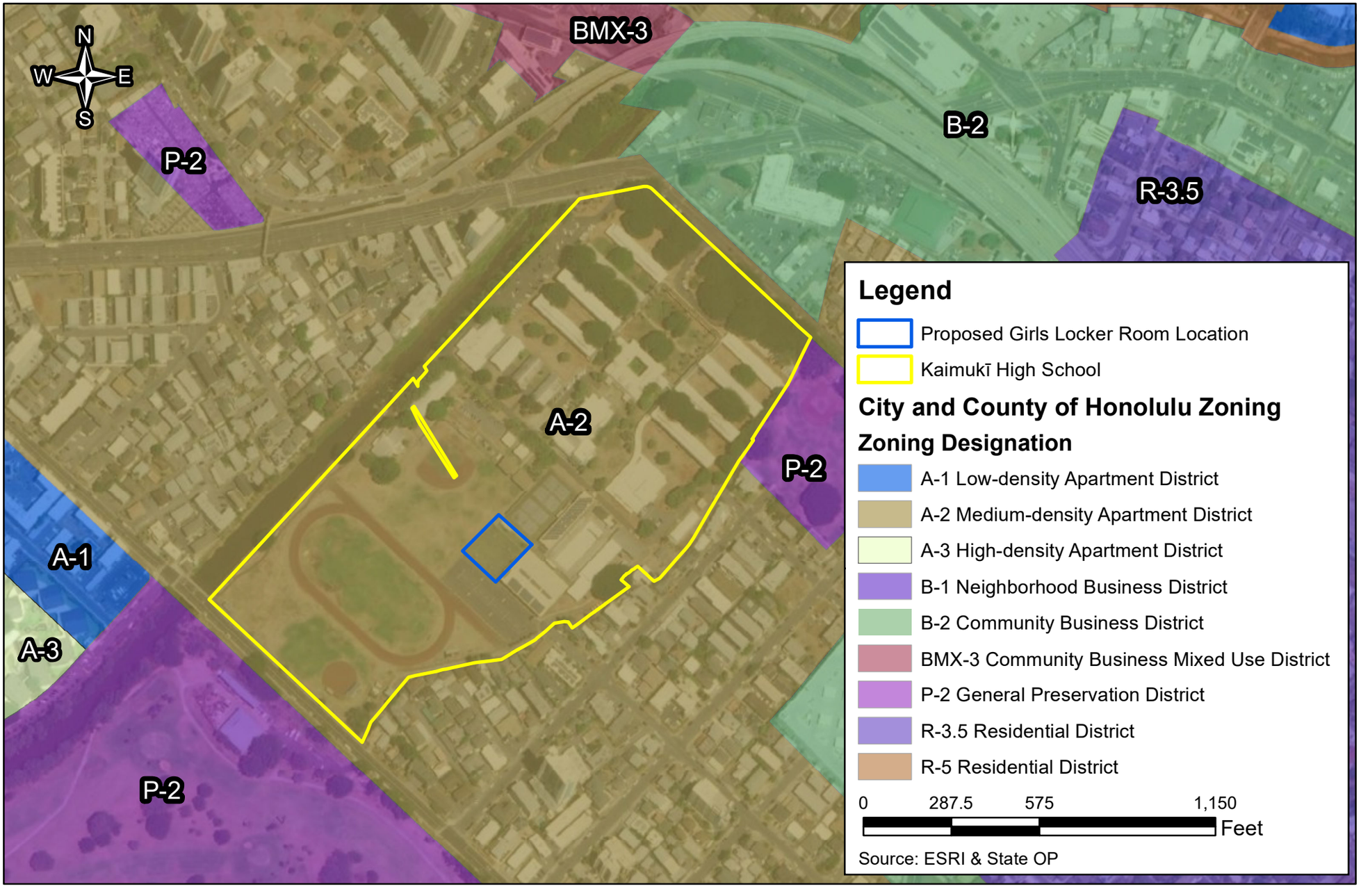


FIGURE 4-3

City and County of Honolulu Zoning Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

WILSON OKAMOTO CORPORATION

4.3. Permits and Approvals

The following is a list of permits, approvals, and reviews that may be required prior to construction and operation of the Proposed Project.

Federal
Federal Emergency Management Agency
- Title 44 of the Code of Federal Regulations (44CFR) Compliance

State of Hawai'i
Department of Land and Natural Resources
- Chapter 6E, HRS, State Historic Preservation Law

Department of Health
- Disability and Communication Access Board
- Pollution Control - Noise Permit

City and County of Honolulu
Department of Planning and Permitting
- Building Permit
- Grading Permit/Trenching Permit
- Erosion and Sediment Control Plan
- Certificate of Occupancy
- Construction Dewatering
- Wastewater Sewer Connection
- Stormwater Drain Connection

Board of Water Supply
- Water Connection
- Water System Facilities Charges

Honolulu Fire Department
- Plan Review

Department of Environmental Services
- Sewer Connection

(This page intentionally left blank)

Chapter 5:

Alternatives

CHAPTER 5: ALTERNATIVES

5. ALTERNATIVES

Hawai‘i Administrative Rules (HAR) § 11-200.1-18(d)(7) requires an environmental assessment to identify and consider alternative means to realize the purpose and need of the Proposed Project.

Alternatives eliminated from consideration include no action, and alternative design schemes, and locations.

5.1 No Action Alternative

Under the No Action Alternative, the Proposed Project would not be constructed and the project site would remain in its existing condition.

The No Action Alternative would preclude permit approvals, as well as costs for design and construction which would otherwise be required for the Proposed Project. The No Action Alternative would also avoid insignificant environmental impacts that would occur as a result of implementing the Proposed Project along with appropriate mitigation measures, as discussed in Chapter 3. However, this alternative would also not meet the objective of the Proposed Project:

> *...the Proposed Project will help meet Title IX requirements. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in any program or activity receiving Federal financial assistance. Title IX regulations require schools to achieve parity in terms of facilities that are provided for students. This includes facility elements such as locker rooms, bathrooms, showers, team rooms and lockers and pertains not only to quantity but also to quality of space and proximity to playing and practice fields. The intent of the Proposed Project is to provide gender equitable facility.*

Hence, this alternative would fail to satisfy the purpose and need of the Proposed Project, and thus is not a feasible alternative.

5.2 Alternative Design Schemes and Locations

In the course of developing the Proposed Project, the design team considered several different alternative design schemes to meet the goals and objectives of the Proposed Project, while considering existing environmental conditions such as wind circulation and temperatures. Specifically, alternative density and design configurations were considered under the scope of the Proposed Project, however, the proposed design scheme was selected to serve as the basis of impact assessment. The orientation of Proposed Project is perpendicular to the existing gym to allow passage of trucks to service the existing containers located between the gym and the pool; to enhance natural cross ventilation through the showers and locker room spaces; to minimize unwanted heat gain; and creation of a breezeway to allow immediate access to the facility from all sides including the tennis courts to the north, track from the south, gym to the east, and baseball field to the west. Alternative locations on campus were also considered but were dismissed due to the Proposed Project’s proximity to existing infrastructure and other athletic facilities on campus. Alternative locations would have similar impacts to climate, topography, soils, hydrology, natural hazards, flora and fauna, archaeological and cultural resources, transportation, noise, air quality, visual resources, social characteristics, and public services and facilities as the current Project Site.

(This page intentionally left blank)

Chapter 6:

Anticipated Determination of FONSI

CHAPTER 6: ANTICIPATED DETERMINATION OF FONSI

6. ANTICIPATED DETERMINATION OF FONSI

The proposed project involves the construction and operation of a new girl's athletic locker room for female athletes at Kaimukī High School. Potential impacts of the proposed improvements have been evaluated in accordance with the significance criteria of §11-200.1-13 of the Department of Health's Administrative Rules. Discussion of the project's conformance to the criteria is presented as follows:

(1) Irrevocably commit a natural, cultural, or historic resource;

The Project Site is the existing site for the outdoor basketball courts, adjacent to the existing gymnasium. Since the project area is comprised of heavily disturbed soils, it is unlikely that there are any natural, cultural, or historic resources and/or human skeletal remains potentially subject to irrevocable loss as a result of construction and operation of the Proposed Project. In the event of unexpected discovery of historic or archaeological resources, the SHPD will be immediately notified for appropriate response and action.

(2) Curtail the range of beneficial uses of the environment;

The Proposed Project will not curtail the range of beneficial uses of the environment. The operations and uses associated with the Proposed Project are generally consistent with the character of the adjacent / surrounding neighborhood and are anticipated to seamlessly integrate with the Kaimukī High School campus and support various girls' sport programs.

(3) Conflict with the State's environmental policies or long-term environmental goals established by law;

The State's environmental policies enumerated in Chapter 344, HRS promote conservation of natural resources, and an enhanced quality of life for all citizens. The Proposed Project does not conflict with the State's long-term environmental policies, goals, or guidelines as expressed in Chapter 344, HRS, and will not significantly impact natural resources due to the fact that the Project Site is already disturbed and has been subject to intense human utilization since the project area was developed for current educational uses.

(4) Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State;

In the short term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities, but not at a level that would generate any significant population expansion.

In the long-term, the Proposed Project will have a positive social impact by meeting Title IX requirements. Title IX regulations require schools to achieve parity in terms of facilities that are provided for students. This includes facility elements such as locker rooms, bathrooms, showers, team rooms and lockers and pertains not only to quantity but also to quality of space and proximity to playing and practice fields.

(5) Have a substantial adverse effect on public health;

No identifiable adverse short- or long-term impacts on public-health are anticipated to result from the construction and operation of the Proposed Project. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated, however, they will be temporary in nature and will comply with Federal, State, and County regulations. Moreover, the DOE's practice to build sustainably will help to ensure that the Proposed Project will not negatively affect public health.

(6) Involve adverse secondary impacts, such as population changes or effects on public facilities;

Substantial impacts to public facilities are not anticipated to result from the construction and operation of the Proposed Project. Moreover, the Proposed Project is not anticipated to induce population growth in the area or region, nor will it increase enrollment at the school. The Proposed Project is proposed to address needs at the current and planned enrollment levels. Existing public water, wastewater, drainage, and utility infrastructure have served the area for many years, and are expected to have sufficient capacity to serve project demands. Agencies with jurisdiction over their respective infrastructure systems will be consulted as the Proposed Project proceeds to assure that it can be accommodated.

(7) Involve a substantial degradation of environmental quality;

The Proposed Project is not anticipated to substantially degrade environmental quality. Long-term impacts to air and water quality, noise levels and natural resources will be minimal. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated, but will be temporary and will comply with State and County regulations. Moreover, the DOE's practice to build sustainably will help to ensure that the Proposed Project will not result in the degradation of environmental quality.

(8) Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions;

The Proposed Project will not have any substantial negative secondary impacts on the environment. Implementation of the Proposed Project will not commit the DOE to any other larger actions, and will not generate any additional actions that could have a cumulative effect on the environment.

(9) Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat;

No rare, threatened and/or endangered flora or fauna species are known to inhabit the project area. However, it was acknowledged by the State Department of Land and Natural Resources – Division of Forestry and Wildlife (DLNR-DOFAW) that the State listed Hawaiian Hoary Bat or ʻŌpeʻapeʻa (*Lasiurus cinereus semotus*) could potentially occur in the vicinity of the project area and may roost in nearby trees, the State threatened White Tern (*Gygis alba*) or Manu o Kū is known to nest in the vicinity of the Proposed Project, State-listed waterbirds such as the Hawaiian Duck (*Anas wyvilliana*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), Hawaiian Coot (*Fulica alai*), and Hawaiian Common Gallinule (*Gallinula chloropus sandvicensis*) could potentially occur in the vicinity of the Proposed Project.

No adverse impacts resulting from the project are anticipated. However, measures to prevent adverse effects to protected species include the following:

- Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by this type of fencing during flight.

- During construction activities, all nighttime lighting will be shielded and angled downward to reduce glare and disruption of bird flight. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. Following construction, permanent light sources will be shielded and angled downward to eliminate glare that could disturb or disorient birds in flight.

- If tree trimming or removal is planned, DLNR-DOFAW strongly recommends a qualified biologist survey for the presence of White Terns prior to any action that could disturb the trees.

- If any of the State-listed waterbirds are present during construction activities, then all activities within 100 feet (30 meters) should cease, and the bird should not be approached. Work may continue after the bird leaves the area of its own accord.

(10) Have a substantial adverse effect on air or water quality or ambient noise levels;

No long-term significant impacts to air quality, water quality, or noise levels within the Project Site are anticipated as a result of the construction and operation of the Proposed Project.

Land disturbing activities include demolition, foundation work, and potential utility repairs and upgrades. Construction and operation of the new facilities will be performed in accordance with Federal, State and County regulations, thereby minimizing potential impacts to air and water quality.

In the short-term, noise from construction activities such as demolition, clearing and paving will be unavoidable. The increase in noise level will vary according to the particular phase of construction. Noise may also increase as a result of operating power equipment during the construction period.

Construction noise impacts will be mitigated by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" regulations. These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels stated in the DOH Administrative Rules. It shall be the contractor's responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits.

In the long-term, no significant noise impacts are anticipated once the construction of the Proposed Project has been completed. Since the Proposed Project is not expected to significantly increase roadway capacity or travel demand, ambient noise levels in the vicinity attributable to the Proposed Project should not change significantly.

(11) Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

No short- or long-term significant impacts are anticipated as the Project Site is not located within an environmentally sensitive area.

According to the FIRM, Kaimukī High School is situated within two flood zone designations, Zone AE and Zone X. However, the Project Site itself is situated within Zone AE. Zone AE includes areas subject to inundation by the 1-percent annual-chance flood events. Zone AE is also within the Special Flood Hazard Area where mandatory flood insurance and floodplain management regulations apply. Zone X includes areas of minimal flood hazard where there is a 0.2 percent annual chance of flooding. In the short- and long-term, no significant impacts on flood hazards on the Proposed Project are anticipated as the proposed improvements are not anticipated to increase flood risks or cause any adverse flood-related impacts at the project area. The Proposed Project will be designed and constructed to applicable flood zone requirements.

(12) Have a substantial adverse effect on scenic vistas and viewplanes, during day or night, identified in county or state plans or studies; or

The Proposed Project will not result in significant impacts to view planes identified in County or State plans or studies. Moreover, the Proposed Project is not expected to adversely affect scenic and visual resources in the project area. The Proposed Project will not degrade lateral coastal views or mauka-makai views from areas in the vicinity of the site. The vertical components of the Proposed Project will be consistent with the visual character of the surrounding uses in terms of height and character of the campus as well as surrounding community.

(13) Require substantial energy consumption or emit substantial greenhouse gases.

The Proposed Project will not require substantial energy consumption nor produce substantial GHG emissions. Additionally, it is anticipated that the Proposed Project will implement energy efficient fixtures as feasible to reduce overall energy consumption.

(This page intentionally left blank)

Chapter 7:

Consultation

CHAPTER 7: CONSULTATION

7. CONSULTATION

7.1 Pre-Assessment Consultation

The following agencies and organizations were consulted during the preparation of the Draft EA. Consultation was conducted to solicit comments regarding potential concerns and requirements pursuant to refining the scope of EA documentation. Parties that formally replied during the pre-assessment period, are indicated by a "✓" below. All written comments are reproduced in Appendix C.

Federal Agencies

U.S. Army Corps of Engineers, Honolulu District
✓ U.S. Fish and Wildlife Services, Pacific Islands Fish and Wildlife Office

State of Hawai'i Agencies

Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Hawai'i State Energy Office
DBEDT, Land Use Commission
DBEDT, Office of Planning and Sustainable Development (OPSD)
DBEDT, OPSD – Environmental Review Program
Department of Agriculture
✓ Department of Accounting and General Services
Department of Education (DOE)
DOE, Office of Facilities and Operations
✓ Department of Defense
Department of Health (DOH)
DOH, Environmental Health Administration
Department of Land and Natural Resources (DLNR)
DLNR, State Historic Preservation Division
✓ DLNR, Division of Forestry and Wildlife
DLNR, Land Division
✓ Department of Hawaiian Home Lands
Office of Hawaiian Affairs
✓ Department of Transportation (DOT)
✓ DOT, Highways Division
✓ DOT, Airports Division

City and County of Honolulu Agencies

✓ Honolulu Fire Department
✓ Department of Environmental Services
✓ Department of Planning and Permitting
✓ Department Parks and Recreation
✓ Department of Design and Construction
✓ Board of Water Supply[1]
✓ Honolulu Police Department

[1] The Board of Water Supply provided comments on June 7, 2022, which superseded the original comments provided on April 19, 2022 in response to the Pre-Assessment Consultation.

Department of Transportation Services
✓ Department of Facility Maintenance

Government Officials

Senator Les Ihara Jr.
Representative Bertrand Kobayashi
Representative Jackson Sayama

Other Parties

Neighborhood Board No. 4 – Kaimukī
Neighborhood Board No. 5 – Diamond Head/Kapahulu/St. Louis Heights
Neighborhood Board No. 6 – Palolo
Neighborhood Board No. 8 – McCully/Mōʻiliʻili
Neighborhood Board No. 9 - Waikīkī
Hawaiʻi State Library
Kaimukī Public Library
Hawaiian Telcom
Hawaii Gas
Hawaiian Electric Company
Spectrum Hawaii
Kaimukī High School Principal

CHAPTER 8: REFERENCES

8. REFERENCES

Boden, T.A., Marland, G., and Andres, R.J. (2017). National CO2 Emissions from Fossil-Fuel Burning, Cement Manufacture, and Gas Flaring: 1751-2014, Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, doi 10.3334/CDIAC/00001_V2017.

Chaffee, David and Robert L. Spear 1994 n Archaeological Assessment of Four Hausten Street Lots in Mo`'iii `ili, Manoa, Waikiki Ahupua`a, O`ahu, Hawai'i [TMK: 2-7-9:13,14 and 2-7-10:8,9]. Scientific Consultant Services, Inc., Kane`ohe.

Chu, P.-S. 1995. Hawai'i Rainfall Anomalies and El Niño. Journal of Climate 8:1697-1703.

Chu, P.-S., and H. Chen. 2005. Interannual and Interdecadal Rainfall Variations in the Hawaiian Islands. Journal of Climate 18(22):4796–4813.

City and County of Honolulu Climate Change Commission, *Climate Change Brief*, June 2018. https://www.resilientoahu.org/s/Climate-Change-Brief.pdf

City and County of Honolulu. 2021. *One Climate One O'ahu Climate Action Plan 2020-2025.* https://www.resilientoahu.org/climate-action-plan

City and County of Honolulu, *General Plan, Objectives and Policies* Amended October 3, 2002.

City and County of Honolulu Department of Emergency Management. 2020 January. Multi-Hazard Pre-Disaster Mitigation Plan For the City & County of Honolulu.

City and County of Honolulu, Department of Planning and Permitting, *Primary Urban Center Development Plan,* June 2004.

Collins, M. et al. 2010. The impact of global warming on the Pacific Ocean and El Niño. Nature Geoscience 3:391-397.

Courtney, C.A; Romine, B.M.; Lander, M.; Hintzen, K.D.; Owens, T.M.; Pap, R.A. 2020. "Guidance for Addressing Sea Level Rise in Community Planning in Hawai'i." Prepared by Tetra Tech, Inc. for the University of Hawai'i Sea Grant College Program and State of Hawai'i Department of Land and Natural Resources and Office of Planning, with funding from National Oceanic and Atmospheric Administration Office for Coastal Management Award No. NA16NOS4730016.

Day, A. Grove 1984 History Makers of Hawaii. Mutual Publishing of Honolulu, Honolulu.

FEMA, (2000). *The Disaster Mitigation Act of 2000*.

Fukunaga & Associates, Inc. (2021). *Draft Engineering Report Civil Utilities.* DOE Job No. Q24221-19

Garza, J.A., P.-S. Chu, C.W. Norton, and T.A. Schroeder. 2012. Changes of the prevailing trade winds over the islands of Hawaii and the North Pacific. J. Geophys. Res. 117(D11):2156-2202.

Hammatt, H.H. and DW. Shideler 1991 Archaeological Disinterment of Inadvertent Finds at Site 50-80-14-4266 on Dole Street Kanewai, Manoa, Kona District, O`ahu. Cultural Surveys Hawai`i, Kailua.

Hawai'i Community Development Authority. 2015. *Innovation Block at Lot "C" Master Plan Final Environmental Assessment*. Prepared by Wilson Okamoto Corporation.

Hawai'i Climate Change Mitigation and Adaptation Commission. 2017. Hawai'i Sea Level Rise Vulnerability and Adaptation Report. Prepared by Tetra Tech, Inc. and the State of Hawai'i Department of Land and Natural Resources, Office of Conservation and Coastal Lands, under the State of Hawai'i Department of Land and Natural Resources Contract No: 64064.

ʻĪʻī, John Papa 1959 Fragments of Hawaiian History. Bishop Museum Press. Honolulu

IPCC. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp. 2014.

Keener, V.W., K. Hamilton, S.K. Izuka, K.E. Kunkel, L.E. Stevens, and L. Sun. 2013. Regional Climate Trends and Scenarios for the U.S. National Climate Assessment. Part 8. Climate of the Pacific Islands, NOAA Technical Report NESDIS 142-8, 44 pp.

Lauer, A., C. Zhang, O. Elison-Timm, Y. Wang, and K. Hamilton. 2013. Downscaling of Climate Change in the Hawaii Region Using CMIP5 Results: On the Choice of the Forcing Fields. Journal of Climate 26:10006-10030.

Macdonald, Abbott & Peterson. 1983. *Volcanoes in the Sea*. University of Hawaii Press, Honolulu, Hawaii

McAllister, J. Gilbert 1933 Archaeology of O`ahu. Bernice P. Bishop Museum, Honolulu.

Pukui, Mary Kawena, Samuel Elbert, Esther Mookini 1974 Place Names of Hawaii. University of Hawai`i Press: Honolulu.

Radke, Jill Byus. Prepared for Historic Hawaii Foundation. (2014). *Kaimuki: A Brief History*. https://historichawaii.org/2014/05/23/kaimuki-a-brief-history/

Safeeq, M., A. Mair, and A. Fares. 2012. Temporal and spatial trends in air temperature on the Island of Oahu, Hawaii. Int. J. Climatol. 33(13):2816-2835. Doi:10.1002/joc.3629

Schroeder, T.A. 1993. Climate controls. In: Prevailing trade winds. Edited by Sanderson, M. Honolulu:University of Hawai'I Press. Pp 12-36

Sea Grant. (2014). *Climate Change Impacts in Hawai'i A Summary of Climate Change and Its Impacts to Hawai'i's Ecosystems and Communities* https://seagrant.soest.hawaii.edu

State of Hawai'i Department of Commerce and Consumer Affairs. 2012. *Hawaii Broadband Strategic Plan.*

State of Hawai'i Department of Health, *Hawai'i Ambient Air Quality Data*, Clean Air Branch. Internet. Available at: http://health.hawaii.gov/cab/Hawai'i-ambient-air-quality-data/

State of Hawai'i Department of Health, *Hawai'i Administrative Rules Title 11 Department of Health Chapter 54, Water Quality Standards*, amended and compiled May 27, 2009.

State of Hawai'i Department of Health, *Hawai'i Administrative Rules Title 11 Department of Health Chapter 60.1, Air Pollution Control*, amended and compiled September 16, 2003.

Sterling, Elspeth P. and Catherine C. Summers. 1978. *Sites of Oahu*. Bishop Museum Press, Honolulu, Hawai'i

Sweet, W.V., R.E. Kopp, C.P. Weaver, J. Obeysekera, R.M. Horton, E.R. Thieler, and C. Zervas,. 2017. Global and Regional Sea Level Rise Scenarios for the United States. NOAA Technical Report NOS CO-OPS 083. NOAA/NOS Center for Operational Oceanographic Products and Service

Timm, O. et al., 2014. Statistical Downscaling of Rainfall for the Hawaiian Islands using CMIP3 and CMIP5 Model Scenarios. Asia-Pacific Data-Research Center of the IPRC. http://apdrc.soest.hawaii.edu/projects/SD/ (03/19/14)

Thrum, T.G. 1908 "Heiaus and Heiau Sites Throughout the Hawaiian Islands - Additions to Other Islands. Island of O`ahu, of 1907 List" [in Thos. G. Thrum, compiler, Hawaiian Almanac and Annual for 1909, pp. 38-47, Honolulu.

Tokinaga, H. et al. 2012. Regional Patterns of Tropical Indo-Pacific Climate Change: Evidence of the Walker Circulation Weakening. Journal of Climate 25:1689-1710.

Trauernicht, C., (2014) Wildfire in Hawaii, Hawaii Wildfire Management Organization.

U.S. Census Bureau American Fact Finder, Profile of General Population and Housing Characteristics: 2010. http://factfinder2.census.gov

U.S. Census Bureau, Honolulu County – Quick Facts from the U.S. Census Bureau: http://quickfacts.census.gov/qfd/states

U.S. Fish and Wildlife Service, National Wetlands Inventory
http://www.fws.gov/wetlands/Data/Mapper.html

United States Department of Agriculture Natural Resource Conservation Service. *Soil Classification*. Internet. Available at: http://soils.usda.gov/technical/classification/

University of Hawai'i at Hilo, Department of Geography, Atlas of Hawai'i, Third Edition, Edited by Sonia P. Juvik and James O. Juvik, University of Hawai'i Press, Honolulu, 1998.

Wolforth, Thomas R., and Alan Haun 1996 Archaeological Inventory Survey for the Kamoku-Pukele 138-kV Transmission Line Alignments, Lands of Mānoa, Pālolo, and Waikīkī, Honolu District, Island of O`ahu (TMK: 2-7, 2-8, 2-9, 3-2, 3-3, 3-4). Pau H. Rosendahl Ph.D., Inc. Hilo.

Appendix A:

Geotechnical Report

GEOTECHNICAL REPORT

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

JPB Engineering Project No. 22072.01G

GEOTECHNICAL REPORT
KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 KAIMUKĪ AVENUE
KAIMUKĪ, HONOLULU, HAWAIʻI

Project No: 22072.01G

Date: May 26, 2022

Prepared for:

Ushijima Architects, Inc.
Attn: Joleen Miranda-Pesquira
2226 Young Street, Suite A
Honolulu, Hawaiʻi 96826

Prepared by:

JPB Engineering, Inc.
47-388 Hui ʻIwa Street, Suite 16
Kāneʻohe, Hawaiʻi 96744

Authored by:

Brian T. Tabuso
Licensed Professional Engineer No. 18,027-C

This work was prepared by me or under my supervision.

Exp. 04/30/2024

JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

May 26, 2022

Project No. 22072.01G

To: Ushijima Architects, Inc.
2226 Young Street, Suite A
Honolulu, Hawai'i 96826

Attn: Joleen Miranda-Pesquira

Subject: Geotechnical Report
Kaimukī High School Girls Locker Room
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

Attached is our report of the geotechnical investigation we conducted for the proposed girls' locker room building to be constructed at Kaimukī High School. The principal conclusions and recommendations are as follow:

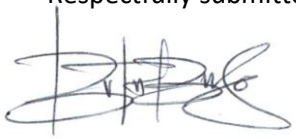
- The borings revealed surficial soil consisting of medium-stiff to very stiff, clayey silt which was encountered to a maximum depth of about six feet. Beneath the surficial zone, very loose, organic silt was penetrated to the maximum depth explored, about 14.5 feet. Stabilized groundwater was measured at an average depth of 10.5 feet below existing grade.

- We have concluded that the proposed building should be supported on conventional, continuous, and isolated, reinforced concrete, footings based in and underlain by undisturbed native soil. The proposed slab-on-grade floors and exterior flatwork should be supported on recompacted native soil, new engineered fill or a combination thereof. Specific recommendations are discussed in the report.

- JPB Engineering, Inc. should be retained to review the construction plans and specifications to determine whether the recommendations contained in this report are adequately reflected in those documents. The results of our review would be described in writing. JPB Engineering, Inc. should be retained to test and observe the earthwork construction as well as to inspect the foundation excavations.

If you have any questions regarding this report, or if we can be of assistance to you in any other way, please do not hesitate to call. Mahalo for this opportunity to be of service.

Respectfully submitted,



Brian T. Tabuso, P.E.
Project Engineer

TABLE OF CONTENTS

INTRODUCTION

Purpose

A preliminary geotechnical investigation has been conducted for the proposed girls' locker room to be constructed at Kaimukī High School located at 2705 Kaimukī Avenue in the Kaimukī neighborhood Honolulu. The purposes of this study have been to gather information on the nature, distribution and characteristics of the subsurface earth materials and ground water conditions at the site, and to prepare specific recommendations for use in design and construction.

Scope

The scope of this investigation is described in our proposal of August 25, 2021. On April 11, 2022, our field engineer conducted a reconnaissance of the property and mapped the locations of three test borings that were drilled and sampled to a maximum depth of about 14.5 feet. Our field engineer logged, classified and recovered relatively undisturbed samples of the earth materials drawn from selected vertical intervals in each test boring. Groundwater level observations were recorded during drilling and at intervals after completion of the borings, which were backfilled with tamped soil following exploration.

The samples were transported to our office for laboratory testing and further classification. The laboratory testing program comprised determinations of natural moisture content, dry unit weight, plasticity, direct shear, unconfined compressive strength and compressibility properties.

This report contains our findings regarding site soil, groundwater, and other geologic conditions; conclusions pertaining to expansive soils, soil strength, settlement, foundation conditions and recommendations for site preparation, foundations, retaining wall, floor support, drainage, and erosion control.

In Appendix A, the location of the project site is shown in relationship to surrounding landmarks and cultural features on Plate No. A1, Vicinity Map. The approximate locations of the test borings are depicted in relationship to the proposed residence, existing ground elevation contours, and the property boundaries and setbacks on Plate No. A2, Site Plan. Geotechnical descriptions and related data recorded during the field exploration phase of our study are displayed on Plates No. A3 through A5, Logs of Borings. A key to the soil symbols and identification criteria used on the logs is presented on Plate No. A6, Unified Soil Classification System.

The results of the natural moisture content and dry unit weight tests are posted on the Logs of Borings, on which are also indicated the types of other laboratory tests conducted on corresponding samples. The remaining laboratory test data are contained in Appendix B. The results of the plasticity tests are shown on Plate No. B1, Atterberg Limits Test Data. A summary of the strength tests appears on Plates No. B2 and B3, Direct Shear Test Data, and on Plates No. B4 and B5, Unconfined Compressive Strength Test Data. The results of the compressibility tests are illustrated on Plate No. B6, Consolidation Test Data.

Construction information is contained on Plate No. C1, Typical Slab Foundation Details. References consulted during the course of our investigation are listed in Appendix D.

FINDINGS

Site Description

The subject property is an irregularly-shaped parcel encompassing approximately 34.4 acres on the makai side of Kaimukī Avenue, between Kapiolani Boulevard and Kapahulu Avenue. The proposed building site will be located behind the existing gym where it is currently being used as basketball courts. The courts are enclosed by chain-link fencing. At the time of our exploration, vegetation at the proposed construction area consisted of a short cover of grass and weeds.

Geologic Setting

The subject site is located on the fringes of buried marshes that once occupied most of Waikīkī. The Mānoa-Pālolo drainage which discharges into Ala Wai Canal, constructed 1927-1928, lies immediately 'ewa of the site. The surficial soil cover consists of a silty clay loam assigned to the 'Ewa series. This soil is characterized by a moderate expansion potential, but a low corrosion potential with respect to concrete and steel (Foote, *et al*., 1972)

Earth Materials

The borings revealed surficial soil consisting of brown, very moist, medium-stiff to very stiff, clayey silt (Unified Soil Classification: MH) which was encountered to a maximum depth of about six feet. This soil is identified as a part of the 'Ewa series described above. Beneath the surficial zone, brown, very moist to saturated, very loose, organic silt (OL) was penetrated to the maximum depth explored, about 14.5 feet. Further subsurface details are depicted on Plates No. A3 through A6.

Groundwater

Each test boring was checked for the presence of groundwater during exploration and at intervals following completion. Stabilized groundwater was measured at an average depth of 10.5 feet below existing ground surface. Groundwater levels are expected to fluctuate with tidal changes, irrigation practice and rainfall.

CONCLUSIONS

Expansive Soils

The results of the Atterberg limit tests, shown on Plate No. B1, indicate that the surficial soil has moderate plasticity characteristics (plasticity index = 20 percent) and high water retention properties (liquid limit = 55 percent). Similar tests of the underlying organic silt suggest that it has very low plasticity characteristics (average plasticity index = 3 percent) and moderate water retention properties (average liquid limit = 46 percent). The plasticity index is the maximum range of water contents which a soil can assume under natural conditions. It represents the difference between the liquid and plastic limits. The liquid limit is the maximum amount of water that a soil is capable of absorbing without becoming fluid. The plastic limit is the minimum amount of water a soil can hold without crumbling.

The Atterberg limits test data demonstrate that the surficial soil is moderately expansive while the underlying organic soils are virtually nonexpansive. Expansive soils swell or heave when they absorb moisture and shrink or contract when they lose moisture.

Soil Strength

Laboratory direct shear tests conducted on selected samples of the native soil under saturated conditions indicate that it is characterized by an average internal friction angle approaching 14° and an average cohesion value of about 355 pounds per square foot, as shown on Plates No. B2 and B3. The internal friction angle is a measure of soil grittiness, while the cohesion component is a measure of soil stickiness.

Unconfined compressive strength tests completed on selected samples of the surficial soil reached an average ultimate undrained shear strength of approximately 2,110 pounds per square foot. Similar tests completed on selected samples of the underlying organic silt layer reach an average ultimate undrained shear strength of about 525 pounds per square foot. The results are illustrated on Plates No. B4 and B5.

These results indicate that the surficial soils can sustain structural loads of moderate intensity while the underlying organic silt can only support structural loads of low intensity.

Settlement

The results of the consolidation test, shown on Plate No. B6, confirm that the native clayey silt soil is nominally compressible. The calculated preconsolidation pressure, which represents the load under which a soil has been subjected in the past, is about 600 pounds per square foot at a depth of five feet, which is near the existing surcharge imposed by the overlying soil column. Therefore, the native soil is normally consolidated. The coefficient of consolidation, which represents the ratio between the applied load and expected amount of compression, was measured at about 2.65 percent. The actual amount of settlement is linearly proportional to the surcharge intensity but geometrically proportional to the thickness of the compressible strata.

Assuming a maximum foundation pressure of 1,000 pounds per square foot, if the foundations are designed in accordance with the recommendations of this report, we expect a maximum total foundation settlement of less than 0.5 inch and a maximum differential settlement of 0.25 inch in 20 feet.

Foundation Conditions

We have concluded that the proposed building should be supported on conventional, continuous and isolated, reinforced concrete, footings based in and underlain by undisturbed native soil. The proposed slab-on-grade floors and exterior flatwork should be supported on recompacted native soil, new engineered fill or a combination thereof. Specific recommendations are discussed below.

RECOMMENDATIONS

Site Preparation and Grading

Demolition, Clearing and Grubbing – Following the demolition of the structural elements, all remaining concrete slabs, foundations, and the like should be broken down into manageable sizes and the resulting debris hauled off site to an approved disposal area. Subsurface utility lines that interfere with the new construction should be dug out and removed, rerouted or capped in place. All surficial vegetation, including grasses, unwanted trees and plants, along with any roots over half an inch in diameter, should be removed from the proposed construction areas.

Excavations and depressions resulting from clearing and grubbing operations should be dug out to firm soil and backfilled with suitable materials in accordance with the following recommendations.

Subgrade Preparation – To provide uniform support, soils remaining at subgrade level should be scarified to a depth of six inches, brought to at least two percent over the optimum moisture content and compacted to not less than 95 percent relative compaction, in accordance with ASTM Designation D 1557-12.

Inability to achieve the stipulated minimum level of compaction should be used as field criterion to identify areas of loose or disturbed soil that should be overexcavated and replace with engineered fill, processed, placed and compacted as described below; or, stabilized in accordance with the recommendations of the project geotechnical engineer.

Fill Material – Prior to use, all soils intended for use as fill should be imported soil approved by the project geotechnical engineer. Imported soil to be used as fill should not exceed three inches in largest dimention, have a plasticity index not exceeding 15 when tested in accordance with ASTM Designation D 4318-10, and a maximum of 20 percent of the particles should pass the No. 100 sieve, when tested in accordance with ASTM Designation D 422-07. The California Bearing Ratio (CBR) value of the material should be at least 20 percent with a maximum swell of 1 percent when testing per ASTM Designation D 1883-16.

Fill Placement and Compaction – Fill material should be placed in horizontal lifts not exceeding eight inches in loose thickness. Each lift should be brought to at least the optimum moisture content and compacted to not less than 95 percent relative compaction, per ASTM Designation D 1557-12.

All earthwork operations should be observed and the soils tested by the project geotechnical engineer or his representative. The further recommendations of this report are contingent upon adherence to this and the previous recommendations.

Foundations

The proposed building should be supported upon conventional, isolated, reinforced concrete foundations based in and underlain by undisturbed native soil. All foundations should be at least 16 inches wide and should extend to a minimum depth of 18 inches below lowest adjacent final grade. All footing excavations should be thoroughly clean and dry prior to placement of reinforcing steel and concrete.

Foundations so established should be designed for maximum allowable net bearing values of 1,600 pounds per square foot for working load or 2,100 pounds per square foot for total load, including the effect of seismic or wind forces. These values carry safety factors of 2.0 and 1.5, respectively. Thirty-five percent of the weight of foundation concrete extending below grade should be added to the net loads at that level to account for the difference in weight between structural concrete and soil.

Resistance to horizontal foundation displacement will be provided by passive earth pressures and sliding friction. Passive earth resistance should be assumed to act as an equivalent pressure of 160 pounds per square foot exerted against any appropriate vertical foundation face. The upper most six inches of embedment should be disregarded unless protected by contiguous pavement. Sliding friction should be computed using a friction factor of 0.17 times the dead load acting along any appropriate horizontal foundation face in contact with the underlying soil. These values carry a safety factor of 1.5. If resistive components are combined, the larger should be reduced by half.

Resistance to foundation uplift will be provided by the weight of foundation concrete; soil resistance developed along shear planes extending from the outer foundation edges and upward at 60° from the horizontal; and, the weight of soil overlying the pullout envelope enclosed by the foundation edges, shear planes and finished grade. The weight of the soil within the pullout envelope should be assumed at 50 pounds per cubic foot and the resistance acting along the shear planes defining the pullout envelope should be assumed at 90 pounds per square foot. These values carry a safety factor of 1.5.

Site Class E per Table 1613.5.2 of the *International Building Code* (2006) should govern earthquake design considerations. Site profile name for Site Class E is "stiff soil." Seismic design parameters for seismic analysis are summarized on the table below.

SEISMIC DESIGN COEFFICIENTS	
MCE_R ground motion (for 0.2 second period), S_S	0.581
MCE_R (for 1.0 second period), S_1	0.17
Site amplification factor at 0.2 second, F_a	1.571
Site amplification factor at 1.0 second, F_v	4.2
MCE_G peak ground acceleration, PGA	0.267
Numeric seismic design value at 0.2 second SA, S_{DS}	0.608
Numeric seismic design value at 1.0 second SA, S_{D1}	0.476

Concrete Slabs

Floor Slab – The proposed concrete slab-on-grade floors should be at least four inches thick. The recommended minimum slab thickness is critical and must be stringently controlled. The slab should be underlain by a capillary break consisting of a blanket of crushed rock at least four inches thick. This material should consist of "3B fine" crushed rock conforming to ASTM C33-13, No. 67 gradation. An impervious membrane at least ten mils thick should be installed above the capillary break zone.

A layer of damp, clean sand about two inches thick is suggested, although not required, as a buffer over the membrane to assist in protecting it from punctures during construction, and to promote curing of the overlying slab concrete.

The slab should be reinforced with minimum No. 4 reinforcing bars spaced on maximum 18-inch centers in each direction, or galvanized, welded steel wire mesh conforming to 6" x 6"/WF1.4 x WF1.4 gauge or higher. All reinforcing should be positioned at slab middepth.

Exterior Flatwork – The walkway slabs should be at least four inches thick. As stated above, the minimum recommended slab thickness is critical and must be stringently controlled. Each slab should be underlain by at least four inches of aggregate base or "3B fine" material conforming to ASTM C33-13, No. 67 gradation.

These slabs also should be reinforced with minimum No. 4 reinforcing bars spaced on maximum 18-inch centers in each direction, or galvanized, welded steel wire mesh conforming to 6" x 6" / WF1.4 x WF1.4 gauge or higher. All reinforcing should be positioned at slab middepth. The slabs should be installed with construction joints consisting of ruled notches spaced on maximum five-foot centers.

Drainage and Erosion Control

Discharge from the building roof lines as well as runoff from the exterior flatwork areas must be directed away from the foundation lines and away from the slope. The new roof system should be provided with flashing and downspouts connected to collect and divert runoff through a closed piping system and away from any foundation. All drainage systems should be maintained on a routine basis.

Supplemental Services

JPB Engineering, Inc. should be retained to review the construction plans and specifications to determine whether the recommendations contained in this report are adequately reflected in those documents. The results of our review would be described in writing. JPB Engineering, Inc. should be retained to test and observe the earthwork construction and inspect the foundation excavations.

LIMITATIONS

This report has been prepared for the exclusive use of Ushijima Architects, Inc., and its designated agents. The information contained in this report is intended for the project described. If any part of the project concept is altered or if subsurface conditions different from those described in this report are discovered during construction, then the information presented herein shall be considered invalid, unless the changes are reviewed, and any supplemental or revised recommendations issued in writing by JPB Engineering, Inc. If more than one year passes between the date of this report and initiation of construction, the contents of this report must be reviewed and, if necessary, modified in light of intervening changed conditions.

Site conditions and cultural features described in the text are those existing at the time of our field reconnaissance and exploration, April 11, 2022, and may not necessarily be representative of such conditions at other places and times. Similarly, the test borings represent subsurface conditions at the times and locations indicated; it is not warranted that they are representative of such conditions at other locations and times. The locations of the test borings are to be considered approximate only.

Services performed by JPB Engineering, Inc. conform to generally accepted practices of other consultants who undertake similar studies at the same time and in the same geographical area as does our firm. No other warranty is expressed or implied.

APPENDIX A

Field Exploration

APPENDIX A

Field Exploration

On April 11, 2022, our field engineer conducted a reconnaissance of the site, and the surrounding vicinity. The location of the project is shown in relationship to surrounding landmarks and cultural features on Plate No. A1, Vicinity Map.

Our geotechnical exploration program was conducted under the supervision of our field representative who logged, classified, and recovered relatively undisturbed samples of the earth materials drawn from selected vertical intervals in each of three test borings. The approximate locations of the test borings are depicted in relationship to the property boundaries on Plate No. A2, Site Plan.

The borings were advanced to a maximum depth of approximately 14.5 feet below existing grade. At selected vertical intervals in each boring, relatively undisturbed samples of the earth materials were obtained by means of a 3.0-inch-O.D. (2.5-inch-I.D.) split-barrel sampler containing stacks of thin-walled, brass rings, each one inch thick. The sampler was advanced by hammer blows produced by a 140-pound hammer freely falling 30 inches, in accordance with ASTM Designation D 1586-18. The number of blows required to drive the sampler a total distance of 18 inches was recorded, and the sum of the hammer blows for the second and third six-inch increments, or blow count, was recorded for each drive. The blow counts recorded for the split-barrel sampler are approximately twice those of the corresponding "Standard Penetration" blow counts. The soil samples were sealed in moisture-proof containers and transported in shock-resistant cases to our laboratory for further classification and testing.

The earth materials were classified by color, texture, consistency, tactile moisture, and other relevant characteristics. The field classifications were recorded on the field logs, which were edited for final presentation. Groundwater level observations were made during drilling and at intervals after completion of the borings, which were backfilled with tamped soil following exploration.

The Logs of Borings are depicted on Plates No. A3 through A5. A key to the soils symbols and identification criteria used on the logs is presented on Plate No. A6, Unified Soil Classification System.

Base: United States Geological Survey, 1998, *Honolulu Quadrangle, Hawai`i - Honolulu Co., Island of O`ahu, 7.5 Minute Series (Topographic)*

VICINITY MAP

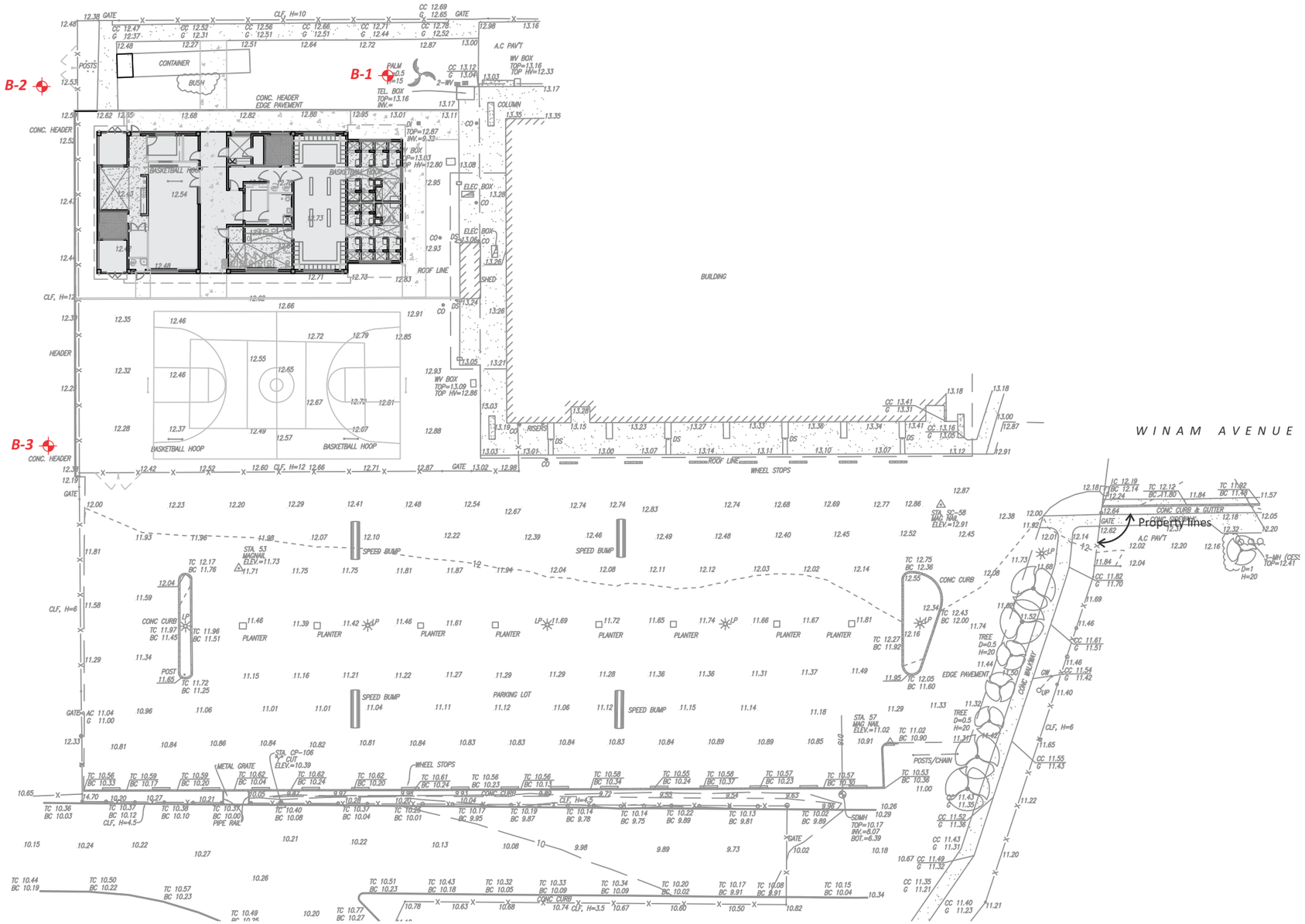
JPB ENGINEERING, INC
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. A1



SCALE-feet

0 20 40

- L E G E N D -

B-3 Approximate location of test boring

Proposed construction

Adjacent building

JPB ENGINEERING, INC
Structural & Geotechnical Engineering

Base: Controlpoint Surveying, Inc., 2021, *Topographic Survey Map, DOE Kamuki High School, Softball Field Improvements, Kaimuki, Honolulu, Oahu, Hawaii, TMK: (1) 2-7-024:001* (scale: 1"=20'), dated October 22, 2021

SITE PLAN

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. A2

BORING LOCATION: See Site Plan | **DRILLER:** JPB Engineering, Inc. | **BORING NO. B-1**

BORING ELEVATION: 12.72 feet | **LOGGED BY:** Moku Hopkins

DATE DRILLED: April 11, 2022 | **TYPE DRILL RIG:** Minuteman

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, brown, very moist, stiff
DS	72	33.0			24	SB-1				
CN	72	40.2			9	SB-2	5			medium stiff, slightly sandy
									OL	**ORGANIC SILT**, brown, very moist, very loose
AL	66	51.7		2	7	SB-3				
	68	41.1			9	SB-4	10		▼	saturated
AL	52	40.9		4	5	SB-5				
							15			Bottom of Boring No. B-1 @ 14.5 ft. Stabilized groundwater measured @ 11.0 ft
							20			

SAMPLE TYPE

BK - Bulk
CB - Core Barrel
DN - Denison Sampler
SB - Split Barrel
SP - Standard Penetration
ST - Shelby Tube

OTHER LABORATORY TESTS

AL - Atterberg Limits
CN - Consolidation
DS - Direct Shear Strength
SA - Sieve Analysis
SS - Shrink/Swell
UC - Unconfined Compression

LOG OF BORING

JPB ENGINEERING, INC
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. A3

BORING LOCATION: See Site Plan | **DRILLER:** JPB Engineering, Inc.

BORING ELEVATION: 12.53 feet | **LOGGED BY:** Moku Hopkins

DATE DRILLED: April 11, 2022 | **TYPE DRILL RIG:** Minuteman

BORING NO. B-2

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, brown, moist, very stiff
AL	86	27.1		20	38	SB-1				
UC	65	38.2	0.44		16	SB-2	5			very moist, stiff
									OL	**ORGANIC SILT**, brown, very moist, very loose
	62	53.1			5	SB-3				
UC	56	70.4	0.21		2	SB-4	10		▼	saturated
	59	70.6			6	SB-5				
							15			Bottom of Boring No. B-2 @ 14.5 ft. Stabilized groundwater measured @ 10.5 ft.
							20			

SAMPLE TYPE

BK - Bulk
CB - Core Barrel
CP - Cone Penetrometer
SB - Split Barrel
SP - Standard Penetration
ST - Shelby Tube

OTHER LABORATORY TESTS

AL - Atterberg Limits
CN - Consolidation
DS - Direct Shear Strength
SA - Sieve Analysis
SS - Shrink/Swell
UC - Unconfined Compression

LOG OF BORING

JPB ENGINEERING, INC
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. A4

BORING LOCATION: See Site Plan | **DRILLER:** JPB Engineering, Inc. | **BORING NO. B-3**

BORING ELEVATION: 12.38 feet | **LOGGED BY:** Moku Hopkins

DATE DRILLED: April 11, 2022 | **TYPE DRILL RIG:** Minuteman

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, brown, moist, stiff
UC	82	19.9	3.77		28	SB-1				
DS	66	43.2			9	SB-2	5			very moist, soft
									OL	**ORGANIC SILT**, brown, very moist, very loose
UC	63	58.5	0.93		7	SB-3				
	55	73.4			4	SB-4	10		▼	saturated
UC	51	86.1	0.43		2	SB-5				
							15			Bottom of Boring No. B-3 @ 14.5 ft. Stabilized groundwater measured @ 10.5 ft.
							20			

SAMPLE TYPE

BK - Bulk
CB - Core Barrel
CP - Cone Penetrometer
SB - Split Barrel
SP - Standard Penetration
ST - Shelby Tube

OTHER LABORATORY TESTS

AL - Atterberg Limits
CN - Consolidation
DS - Direct Shear Strength
SA - Sieve Analysis
SS - Shrink/Swell
UC - Unconfined Compression

LOG OF BORING

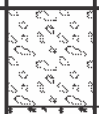
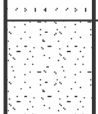
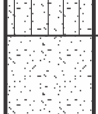
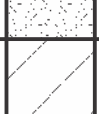
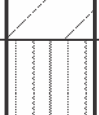
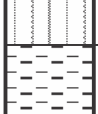
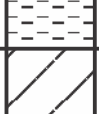
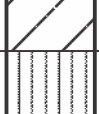
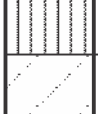
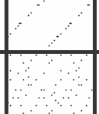
JPB ENGINEERING, INC
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. A5

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			ICON	CODE	
COARSE-GRAINED SOILS More than 50% of material is larger than the No. 200 Sieve	**GRAVEL AND GRAVELLY SOILS** Less than 50% of coarse fraction passes the No. 4 Sieve	**CLEAN GRAVELS** Less than 12% of fine fraction passes the No. 200 Sieve		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		SILTY OR CLAYEY GRAVELS At least 12% of fine fraction passes the No. 200 Sieve		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	SAND AND SANDY SOILS At least 50% of coarse fraction passes the No. 4 Sieve	**CLEAN SANDS** Less than 12% of fine fraction passes the No. 200 Sieve		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sands, little or no fines
		SILTY OR CLAYEY SANDS At least 12% of fine fraction passes the No. 200 Sieve		SM	Silty sands, sand-silt mixtures
				SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS More than 50% of material is smaller than the No. 200 Sieve	**SILTS AND CLAYS** Liquid Limit is less than 50	Plasticity index is above "A" Line		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		Plasticity index is below "A" Line		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or slightly plastic clayey silts
				OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid Limit is greater than 50	Plasticity index is above "A" Line		CH	Inorganic clays of high plasticity
		Plasticity index is below "A" Line		MH	Inorganic silts, micaceous or diatomaceous fine sands or silty soils
				OH	Organic clays of medium to high plasticity, organic silts
				Pt	Peat, humus, marsh soils with high organic content

UNIFIED SOIL CLASSIFICATION SYSTEM

JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. A6

APPENDIX B

Laboratory Testing

APPENDIX B

Laboratory Testing

The laboratory testing program included natural moisture content, dry unit weight, plasticity, direct shear, unconfined compressive strength and compressibility determinations.

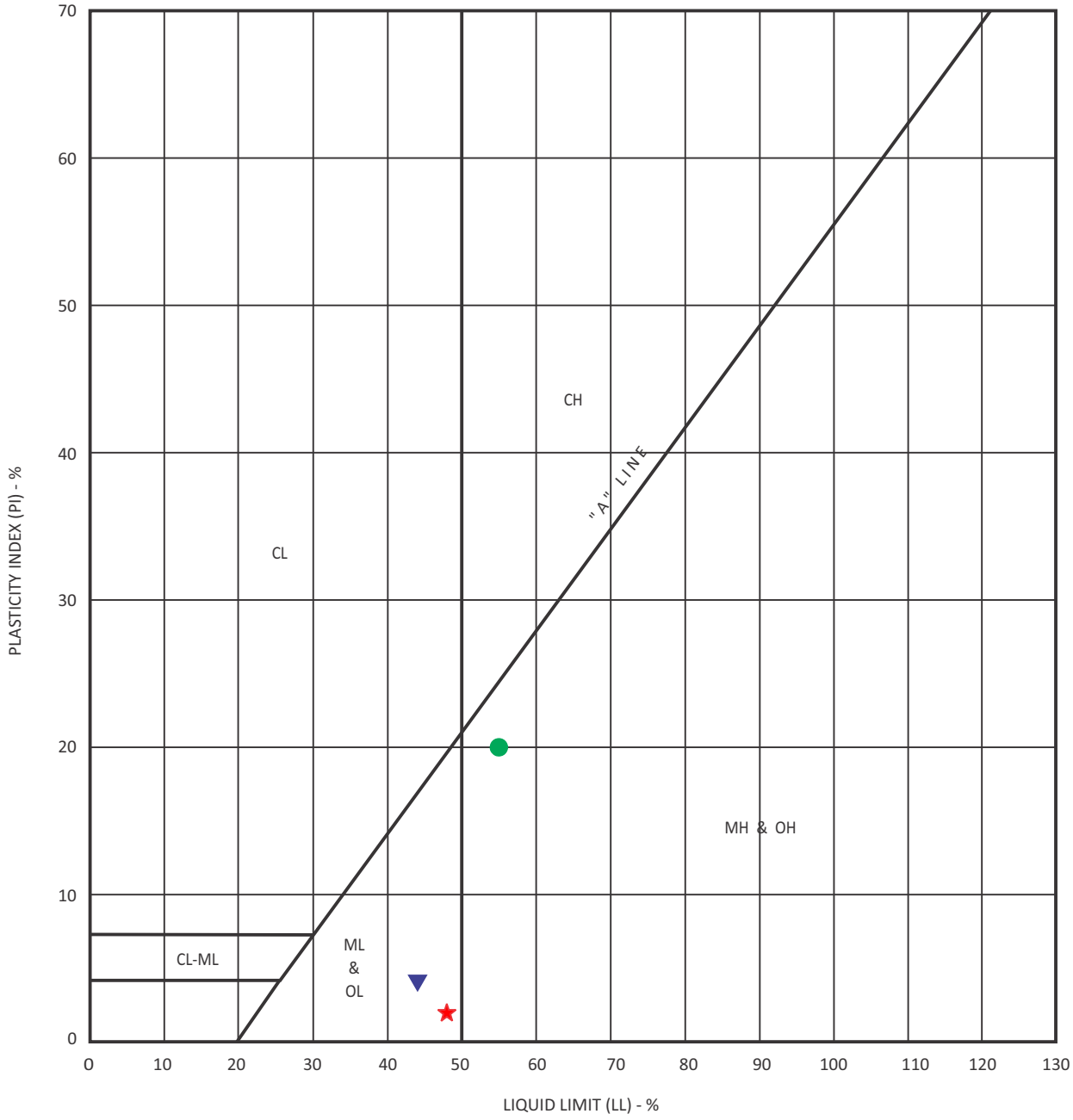
Natural moisture content tests (ASTM Designation D 2216-10) and dry unit weight tests (ASTM Designation D 2937-17) were conducted on selected samples of the earth materials recovered from each test boring. The results are posted on the Logs of Borings, opposite the depth appropriate to each sample.

Atterberg limits tests (ASTM Designation D 4318-05) were performed on a selected sample of the surficial and underlying soils to evaluate their plasticity characteristics. The results are depicted on Plate No. B1, Atterberg Limits Test Data.

Consolidated, drained direct shear tests (ASTM Designation D 3080-11) were conducted at normal pressures of 500, 1,000 and 1,500 pounds per square foot on selected samples of the surficial soil and underlying organic material to evaluate their internal strength characteristics. The data are summarized on Plates No. B2 and B3, Direct Shear Test Data.

Unconfined compressive strength tests (ASTM Designation D 2166-06) were completed on selected samples of the surficial soil and underlying organic silt to evaluate their undrained strength properties. The results are illustrated on Plates No. B4 and B5, Unconfined Compressive Strength Test Data.

A unidimensional consolidation test (ASTM Designation D 2435-04) was completed on a selected sample of the surficial soil to assess its compressibility properties. The results are portrayed on Plate No. B6, Consolidation Test Data.



Point Code	Boring No.	Sample No.	Depth (ft)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Unified Soil Classification
●	B-2	SB-1	1.0	55	35	20	MH
★	B-1	SB-3	7.0	48	46	2	ML
▼	B-1	SB-5	13.0	44	40	4	ML

ATTERBERG LIMITS TEST DATA

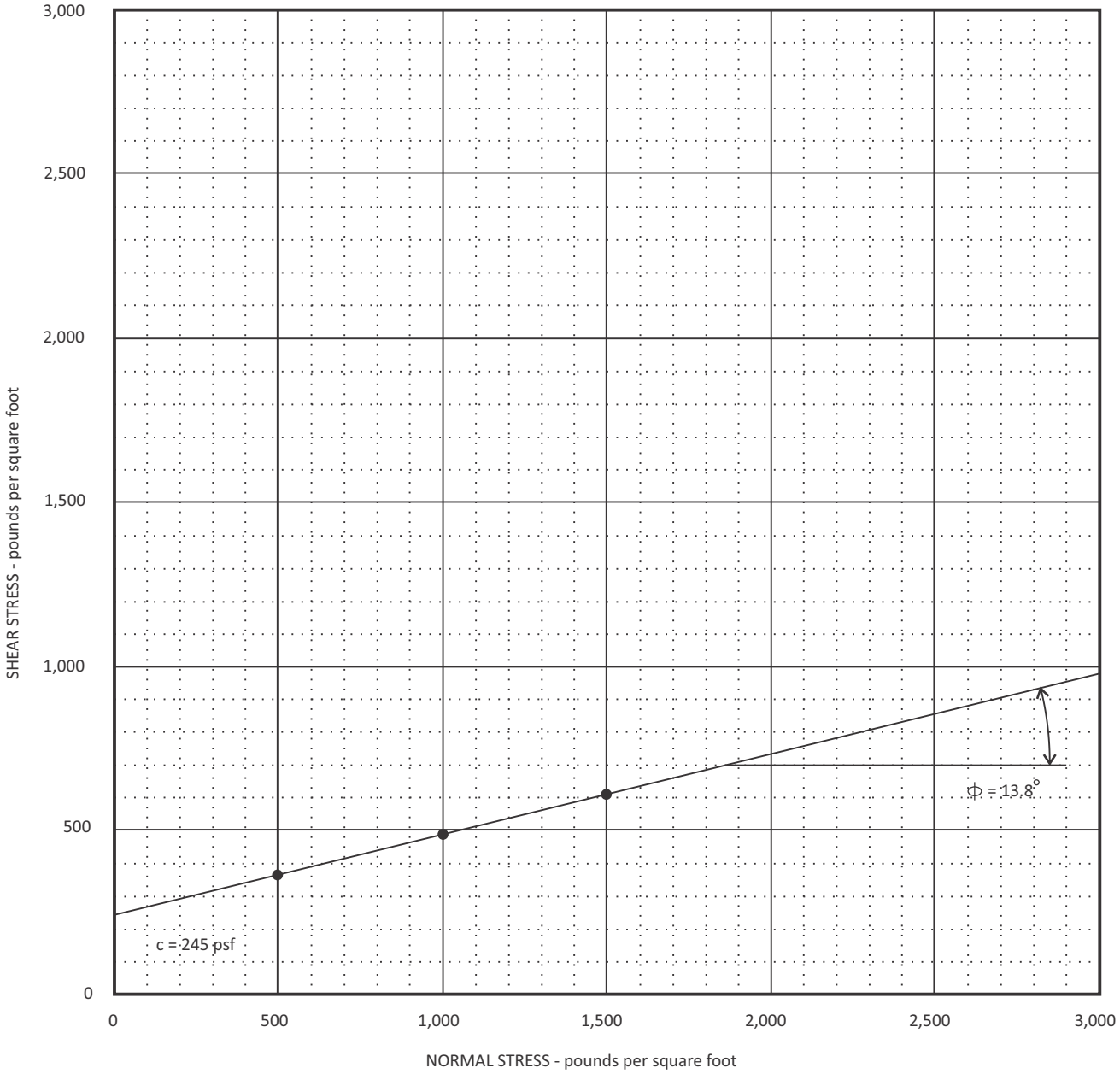
JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. B1



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-1	SB-1	1.0	62	49.2	500	370
B-1	SB-1	1.0	63	48.0	1,000	490
B-1	SB-1	1.0	64	45.9	1,500	615

DIRECT SHEAR TEST DATA

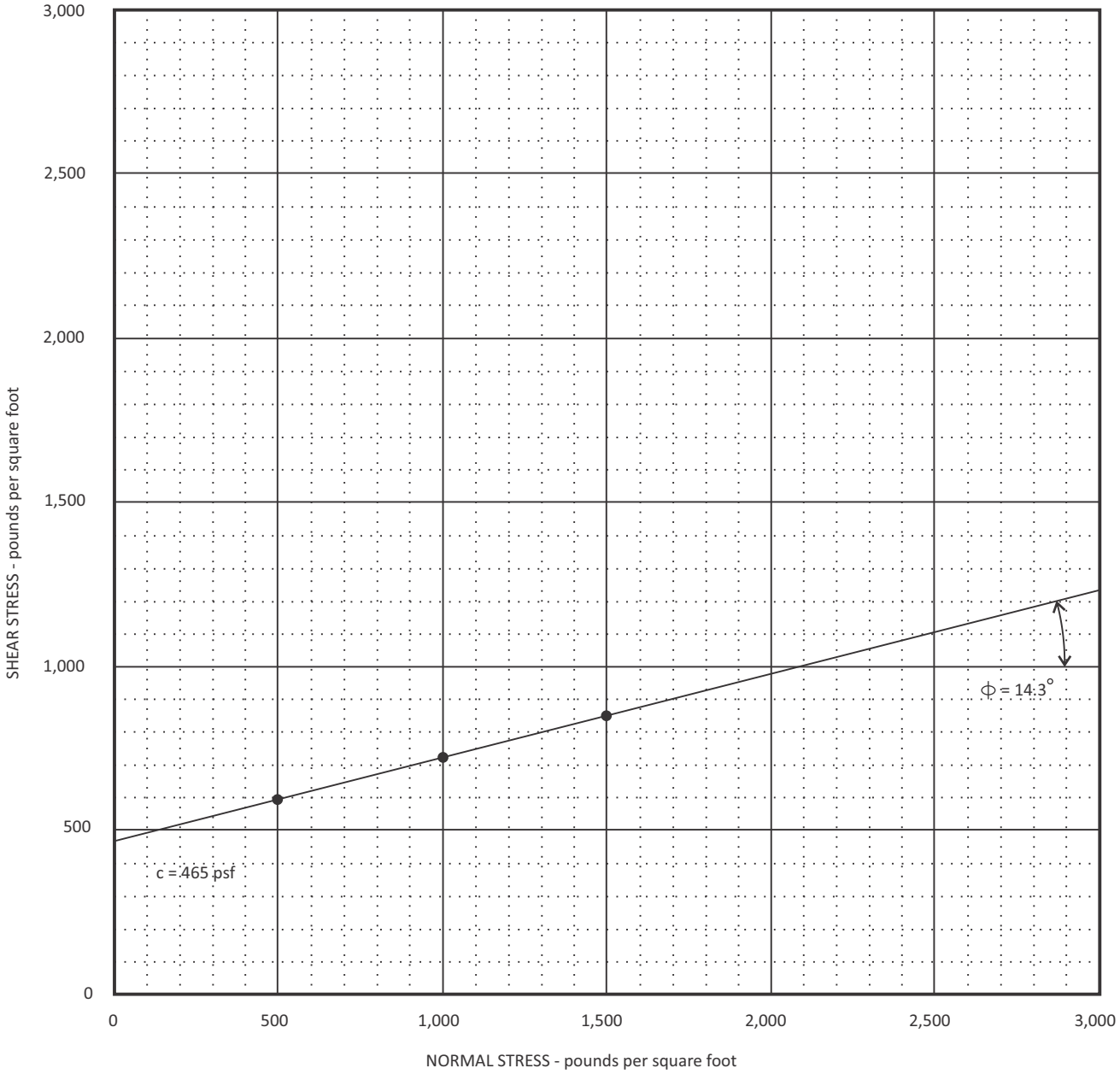
JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. B2



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-3	SB-2	4.0	66	54.3	500	590
B-3	SB-2	4.0	66	54.5	1,000	720
B-3	SB-2	4.0	66	53.6	1,500	850

DIRECT SHEAR TEST DATA

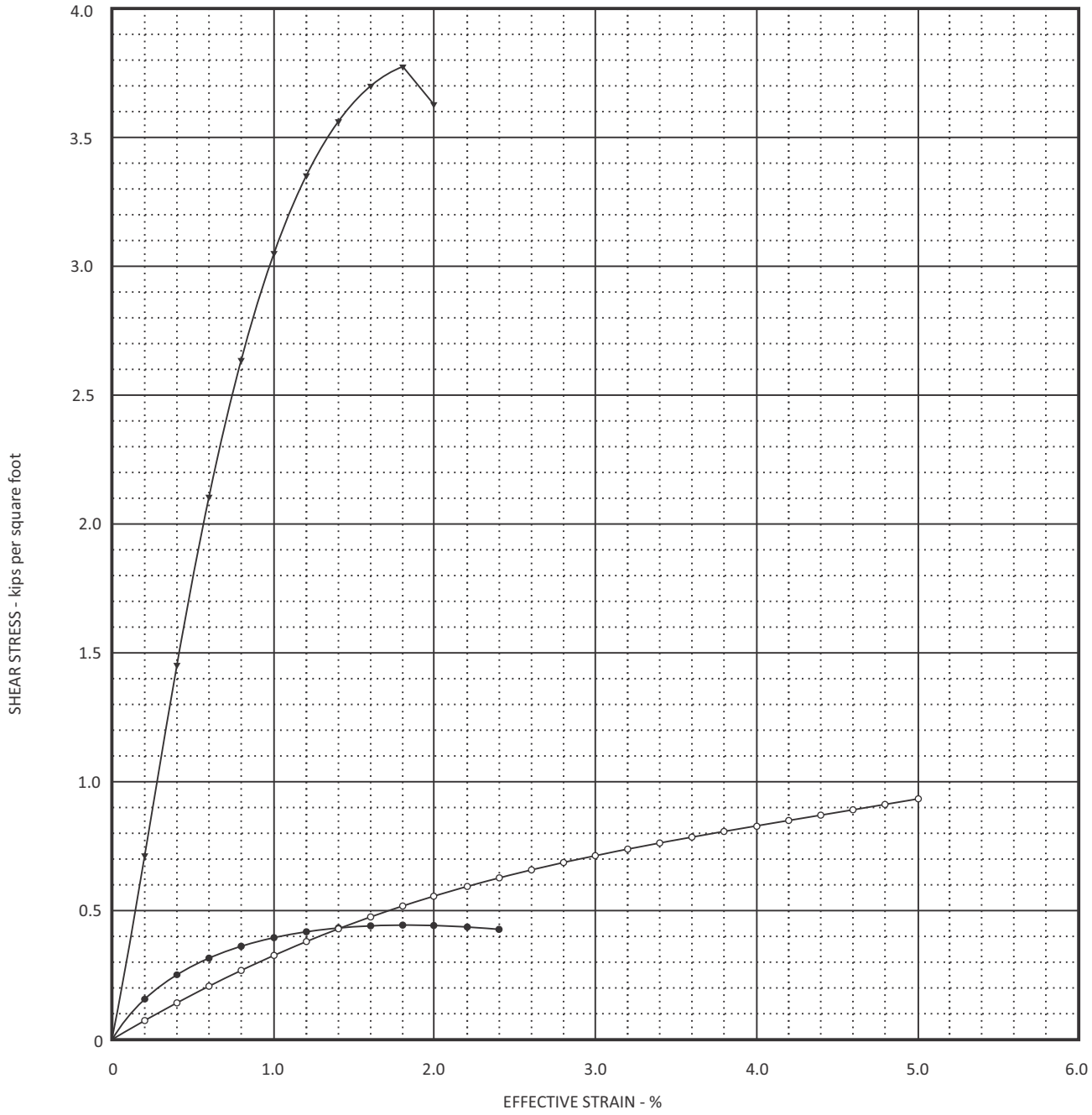
JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. B3



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
▾	B-3	SB-1	1.0	82	19.9	1.8	3,770
●	B-2	SB-2	4.0	65	38.2	1.8	445
○	B-3	SB-3	7.0	63	58.5	5.0	935

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

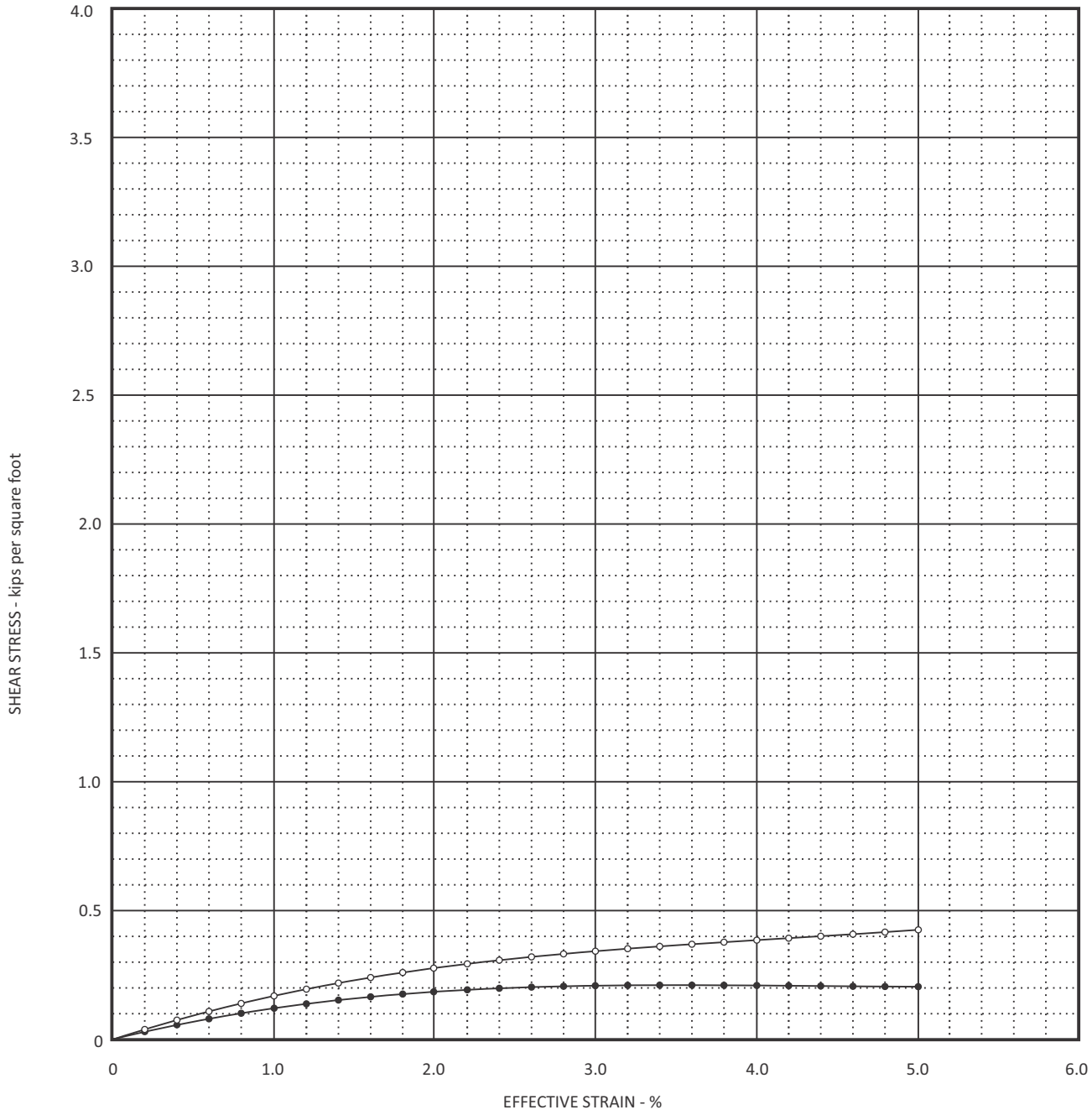
JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. B4



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-2	SB-4	10.0	56	70.4	3.8	210
○	B-3	SB-5	13.0	51	86.1	5.0	425

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

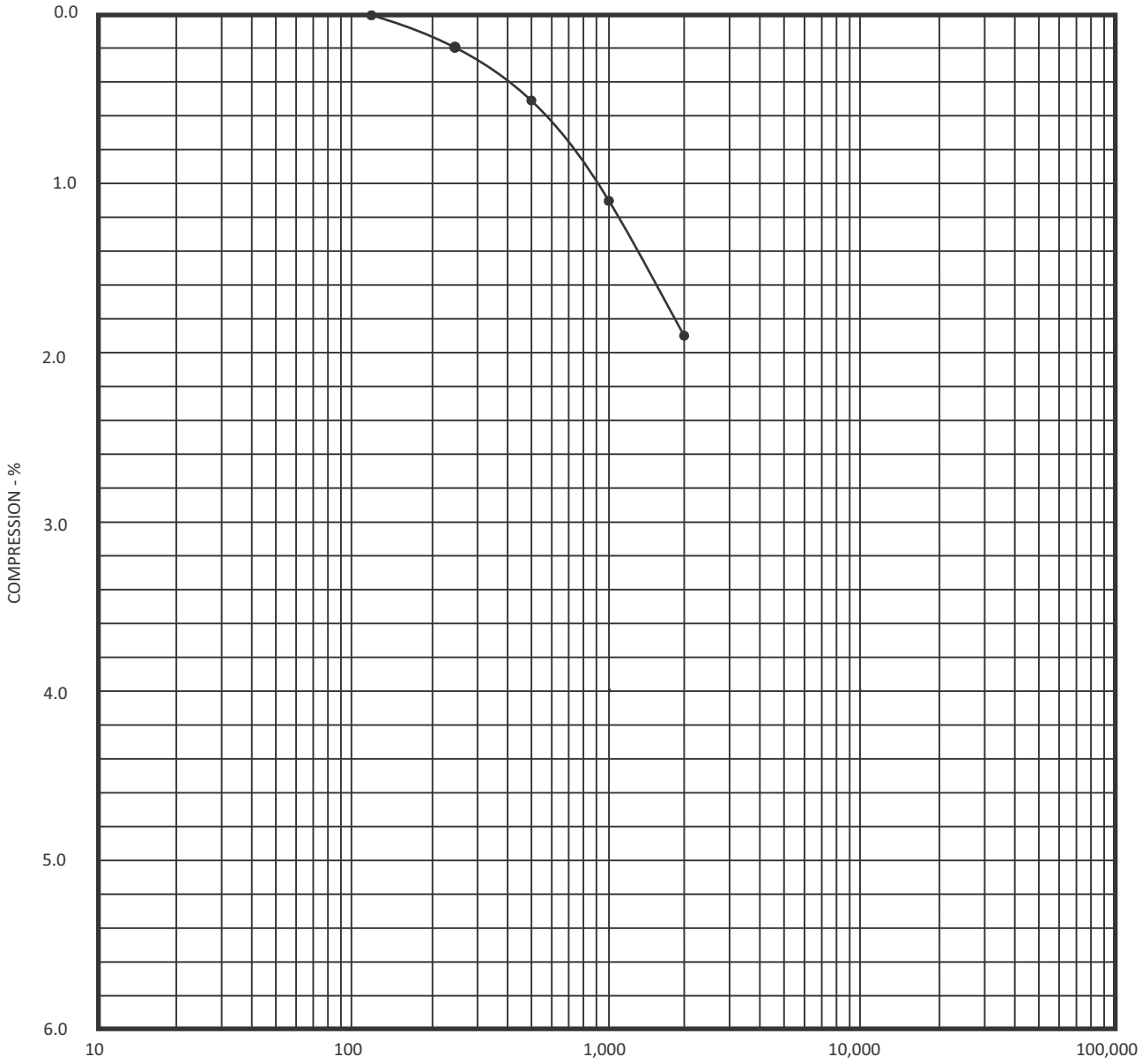
JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

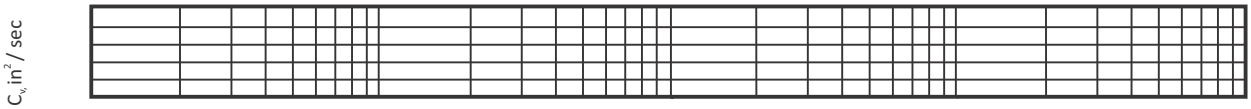
KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. B5





Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)		Moisture Content (%)	
			Before Test	After Test	Before Test	After Test
B-1	SB-2	4.0	71	65	40.2	55.9

CONSOLIDATION TEST DATA

JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai'i

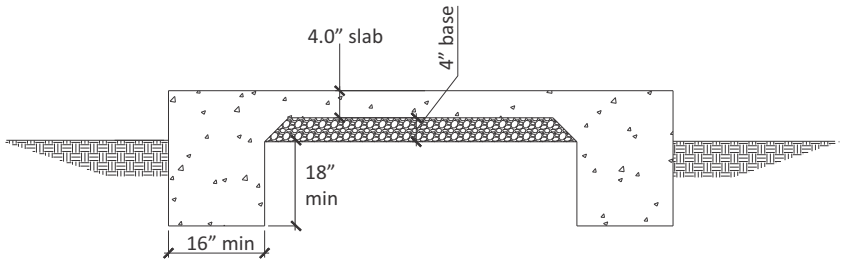
DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. B6

APPENDIX C

Construction Details



- NOT TO SCALE -

TYPICAL SLAB FOUNDATION DETAILS

JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

KAIMUKĪ HIGH SCHOOL GIRLS LOCKER ROOM
2705 Kaimukī Avenue
Kaimukī, Honolulu, Hawai‘i

DATE: May, 2022

PROJECT NO. 22072.01G

PLATE NO. C1

APPENDIX D

References

APPENDIX D

References

1. Controlpoint Surveying, Inc., 2021, *Topographic Survey Map, DOE Kamuki High School, Softball Field Improvements, Kaimuki, Honolulu, Oahu, Hawaii, TMK: (1) 2-7-024:001* (scale: 1”=20’), dated October 22, 2021.

2. Foote, D.; Hill, E. L.; Nakamura, S.; and Stephens, F., 1972, *Soil Survey of the Islands of Kaua‘i, O‘ahu, Maui, Moloka‘i and Lāna‘i, State of Hawai‘i*, United States Department of Agriculture.

3. State of Hawai‘i, Department of Taxation, 1996, *Taxation Maps Bureau Tax Map Key 2-7-024:001* (scale: 1"= 60').

4. United States Geological Survey, 1998, *Honolulu* Quadrangle, Hawai‘i – Honolulu Co., Island of O‘ahu, 7.5-Minute Series (Topographic) (scale: 1:24,000).

DISTRIBUTION

Ushijima Architects, Inc.
Attn: Joleen Miranda-Pesquira
2226 Young Street, Suite A
Honolulu, Hawai‘i 96826
joleen@usharch.com

Appendix B:

Draft Prelim Engineering Report Civil Utilities

Kaimuki High School
Girls Locker Room
DOE Job No. Q24221-19

PRELIM ENGINEERING REPORT CIVIL UTILITIES

PREFINAL Report - July 2021

Prepared by:
Fukunaga & Associates, Inc.
1357 Kapiolani Blvd., Suite 1530
Honolulu, Hawaii 96814

TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION

A. General

This Utility Preliminary Engineering Report performed a cursory evaluation of the capacity of the utilities for water, sewer, and drainage for the new girl's locker room building at the outdoor basketball courts.

B. Objectives

The prime objective of this report is as follows:

1. Provide essential information on existing utilities and evaluate water, sewer, and drainage utilities to facilitate proper planning for the new girl's locker room building.

C. Methodology

The following general work items were undertaken to accomplish the above objective:

1. Preparation of existing utility maps for water, sewer, and drainage, within the campus using available as-built construction plans.

2. Analysis of the capacity of existing on-campus utilities to provide adequate service for the new building.

3. Preparation of utility maps indicating alignment and line size of future utilities to support the new building.

C. Background Information on Property

The Department of Education, State of Hawai'i, is evaluating construction of a new girls locker room at the Kaimuki High School campus located on the TMK lot 2-7-024:001 with an area of 34.41 acres. Kaimuki High School opened in 1950 and is home to the Bulldogs and located in Honolulu.

1. The following utility improvements shall be required:

    a) Water: There are existing water lines adjacent to the new locker room and a new water service point of connection shall be provided to the facility.

b) Sewer: There are existing sewer lines adjacent to the new locker room and a new sewer service point of connection shall be provided for the facility.

c) Drainage: There is no existing underground drainage system adjacent to the new locker room. Required surface drainage improvements shall be provided however an underground detention system is not required since an increase in stormwater runoff is not anticipated from this facility.

2. The following permits and agency reviews were evaluated:

a) Grading permit and ESCP is required
b) Building permit is required
c) DCAB review is required
d) NPDES is not anticipated since the disturbed area is anticipated to be less than 1 acre
e) SHPD review is required and research will be performed if an existing AMP has already been prepared for the campus.

CHAPTER 2
PLANNING CONSIDERATIONS

A. Existing Conditions

The existing campus utility maps were compiled from available as-built drawings however there are remaining "pockets" of unknown utilities where improvements are unknown. Utility locations will need to be confirmed during the actual design phase.

The existing campus utilities and proposed location of the new girl's locker room is as shown on Figure 1 using the available information on existing buildings and utilities.

B. Enrollment

The school has an approximate enrollment of 750 students during the academic year (Grades 9 through 12).

CHAPTER 3
SEWER EVALUATION

A. General

The sewer evaluation analyzed on-campus sewer facilities for adequacy for the new girl's locker room building. The City and County of Honolulu Wastewater System Design Standards, Volume I, dated July 2017 have been adopted for use in this evaluation, and will be referenced hereinafter as the Sewer Standards.

B. Existing Sewer System

The existing sewer system near the proposed location of the new girl's locker room consists of sewer lines with 4-inches in diameter connecting into the City and County of Honolulu's sewer mains. There is a 4-inch sewer line to the north of the existing gymnasium and a 4-inch sewer line that runs near the baseball field. There is also an 8-inch sewer main along Winam Avenue.

C. Sewer System Criteria

1. Long-range Development Plans

Sewer lines should be located in accessible and open areas such as roadways, grass areas, and mall areas to facilitate maintenance and minimize conflicts with any future improvements.

2. Sewage Flows

The on-campus sewage flow is generated primarily from domestic use and ground water infiltration. Flow estimates based on the Sewer Standards are utilized for this sewer system evaluation. The estimation procedures based on the Sewer Standards are discussed in detail later in this chapter.

D. Sewer System Evaluation

The sewer system evaluation assessed on-campus facilities for adequacy with the new building.

1. On-Campus Sewer System Evaluation:

The City and County sewer connection and building permit review process includes evaluation of design peak sewage flows to be generated by the proposed facility to be discharged into the City system.

The existing and future design peak sewage flows were calculated per the Sewer Standards to verify if an increase in sewer flow would result from the new building. The existing and future design peak flow calculations are tabulated in Table 3-2 and calculated as follows:

Design Peak Flow = (Maximum Rate of Flow + DWI/I + WWI/I)

Maximum Rate of Flow = (Average Daily Flow) x (Flow Factor)
DWI/I = Dry Weather Infiltration / Inflow
WWI/I = Wet Weather Infiltration / Inflow

The first step in estimating the design peak flow is to calculate the average daily wastewater flow.

i. Average Daily Wastewater Flow

The average daily wastewater flow may be estimated using 80 gallons per day per resident and 25 gallons per day per student, faculty, or support staff member. The calculations and campus populations are reflected in Table 3-1.

TABLE 3-1
AVERAGE DAILY WASTEWATER FLOW CALCULATIONS

Average Daily Wastewater Flow	Student Population (A)	Avg. Daily Flow From Students (A) x 25 gal./day	Avg. Daily Flow Total (gallons)
Existing (Design Student Population)	750	18,750	18,750
New Girl's Locker Room	750	18,750	18,750

ii. Maximum Flow Factor

The second step in obtaining the design peak flow is to obtain the maximum flow factor which is applied to the average daily wastewater flow to obtain the maximum rate of sewage flow. In the Design Standards, a flow factor of 2.5 is used to obtain the maximum rate of wastewater flows.

iii. Maximum Rate of Sewage Flow

The maximum rate of sewage flow is obtained by multiplying the average daily wastewater flow by the maximum flow factor.

Existing Max. Rate of Flow = 18,750 gallons per day x 2.5
= 46,875 gallons per day

Future Max. Rate of Flow = 18,750 gallons per day x 2.5
= 46,875 gallons per day

iv. Dry Weather and Wet Weather Infiltration/Inflow (I/I)

The final item in the design peak flow calculation is the amount of dry weather and wet weather infiltration/inflow. The infiltration amount varies depending on materials, workmanship, ground water elevation, etc. Dry and wet weather I/I accounts for ground water leaking into the sewer through manhole covers and sewer joints. The Design Standards have established estimates for dry and wet weather I/I as follows:

Dry Weather I/I: Kaimuki High School's sewer lines are located below the normal ground water table, and the amount of dry weather I/I is estimated at 35 gallons per capita per day.

Existing DWI/I = 750 (campus population) x 35 gallons
= 26,250 gallons per day

Future DWI/I = 750 (campus population) x 35 gallons
= 26,250 gallons per day

Wet Weather I/I: Sewer lines are located below the normal ground water table, and the amount of wet weather I/I is estimated at 2,750 gallons per acre per day.

Exist. WWI/I = 34 acres x 2,750 gallons / acre
= 93,500 gallons per day

Future WWI/I = 34 acres x 2,750 gallons / acre
= 93,500 gallons per day

The design peak flow is the sum of the previously calculated items as shown in Table 3-2 and as follows:

Design Peak Flow = (Max. Rate of Flow + DWI/I + WWI/I)

Maximum Rate of Flow = (Avg. Daily Flow) x (Flow Factor)
DWI/I = Dry Weather Infiltration / Inflow
WWI/I = Wet Weather Infiltration / Inflow

TABLE 3-2
DESIGN PEAK FLOW CALCULATIONS FOR
KAIMUKI HIGH SCHOOL

Sewer System	Campus Area (Acres) (A)	Student, Faculty, and Staff Pop. (B)	Avg. Daily Flow (B) x 25 gal/day (gal.)	Max. Flow Factor	Max. Flow (gal.)	Dry Weather I/I (B) x 35 (gal.)	Wet Weather I/I (A) x 2,750 (gal.)	Design Peak Flow (gal.)
Exist.	34	750	18,750	2.5	46,875	26,250	93,500	166,625
New Girl's Locker Room	34	750	18,750	2.5	46,875	26,250	93,500	166,625

The above design peak flow calculations confirm that based on the existing student, faculty and staff population, the new building will not have any anticipated complications during building permit application for increase in generated sewer flow.

E. Sewer Improvements

Figure 1 reflects the new sewer line and alignment to service the new Girl's Locker Room Building. New sewer lines should be designed to carry the peak flow of sewage without surcharging (rule of thumb: 85% of max. capacity) in accordance with Sewer Standards. The Manning formula is recommended for use in determining the capacity of sewer lines. The formula and "n" values are given below:

$$V = (1.486/n) \times (r^{2/3}) \times (S^{1/2})$$

Where,

V = velocity (ft/sec)
n = roughness coefficient, dimensionless
r = hydraulic radius (ft)
S = slope (ft/ft)

A minimum “n” roughness coefficient value of 0.013 shall be used for all pipes.

The sewer lines shall also be designed to provide mean velocities of not less than 2.5 feet per second when flowing full to provide adequate scouring. The following minimum slopes are to be used for the different sized pipes:

Diameter	Minimum Slope
8" (upstream terminal)	0.0100
8"	0.0052
10"	0.0039
12"	0.0031
16"	0.0021
18"	0.0018
>18"	0.0016

Existing sewer line locations, diameters, manhole invert elevations, and slopes were transcribed from as-built plans and available data.

The girl’s locker room building future sewer service will be a minimum 6-inches with 1% slope with alignment as shown in Figure 1 and consists of approximately 200 feet of new 6-inch sewer line.

CHAPTER 4
WATER EVALUATION

A. General

This Water Evaluation assessed the campus water system for adequacy for the new girl's locker room building. The Water System Standards of the Board of Water Supply (BWS), City and County of Honolulu dated 2002 have been adopted for use in this evaluation, and will be referenced hereinafter as the BWS Standards.

B. Criteria for Water Service

Waterlines should be located in accessible and open areas such as roadways, grass areas, and mall areas to facilitate maintenance and minimize conflicts with any future improvements.

C. Water System Evaluation

The availability of water will be reconfirmed during building permit review for the proposed facilities but we do not anticipate any complications for water availability at this time.

E. Water Consumption Per BWS Standards

1. Estimated Water Demand Based on BWS Standards

For planning and water allocation purposes, the average daily water demand may be estimated based on BWS Standards using student population, campus acreage, building square footage, or combinations thereof.

The estimated water demand was calculated using the following combinations and as shown on Table 4-1. The existing building square footage tabulation is included in Table 4-2.

i. Student Population: 60 gallons per student per day

ii. Campus Acreage: 4,000 gallons per acre per day

iii. Building Square Footage: 120 gallons per 1,000 sf per day

Campus Acreage (Irrig.): 4,000 gallons per acre per day

2. Demand Based on Student Population

   a. Demand Based on Student Population

      The BWS Standards have established an average daily water demand rate of 60 gallons per student for planning and estimating purposes. The 60 gallons per student is conservative and includes water demand from faculty, staff, and irrigation. The estimated annual water demand based on the current student population is 16,425,000 gallons per year.

3. Demand Based on Campus Acreage

   a. Demand Based on Campus Acreage

      The BWS Standards have established an average daily water demand rate of 4,000 gallons per acre for planning and estimating purposes. The 4,000 gallons per acre is conservative and includes water demand from students, faculty, staff, and irrigation. The estimated water demand based on acreage alone is 49,640,000 gallons per year.

4. Demand Based on Square Footage

   a. Demand Based on Building Square Footage

      The BWS Standards have established an average daily water demand rate of 120 gallons per 1,000 square feet of building area for a commercial/residential mix property and an average daily water demand rate of 4,000 gallons per acre for irrigation. The estimated annual water demand based on building square footage and irrigation is 52,020,530 gallons per year.

   b. Comparison

      The 120 gallons per 1,000 square feet of building area includes water demand from students, faculty, staff, but does not include demand from irrigation (approximately 28.5 acres). Landscape irrigation may be accounted for using 4,000 gallons per acre for an estimated irrigation demand of 114,000 gallons per day.

TABLE 4-1:
METERED WATER CONSUMPTION COMPARED WITH BWS STANDARDS

	Avg. Daily Demand Based On				Gallons	
	Population: 750 students (60 gal. per student)	Acreage: 34 acres (4k gal. per acre)	Building SF: 237,689 sf (5.48 acres) (120 gal per 1,000 sf)	Acreage (Irrigation): 28.5 acres (4k gal. per acre)	Daily	Yearly
Est. i	60					
Total	45,000				45,000	16,425,000
Est. ii		4,000				
Total		136,000			136,000	49,640,000
Est. iii			120	4,000		
Total			28,522	114,000	142,522	52,020,530

TABLE 4-2
EXISTING BUILDING SQUARE FOOTAGE

Building	Existing Building Area (SF)
A	8279
B	8279
C	8279
D	8024
E	7772
F	8421
G	8421
H	8221
I	4116
J	3858
K	2058
L	7844
M	7140
N	3618
O	17580
P	896
Q	8199
R	2069
S	6720
T	2680
U	5518
V	13528
X	23904
Z	18423
SB	287
TOTAL	237,689

G. Water Demand Evaluation

The projected water demand calculations for the future girl's locker room building were calculated based on student population or building square footage since there will be no increase in acreage. Water demand projections based on the student enrollment population and building square footage are as follows:

1. Water Demand Based on Student Population

The water demand calculations were based on the design student enrollment population of 750 students. The calculations are shown in Table 4-3.

TABLE 4-3
WATER DEMAND BASED ON STUDENT POPULATION

	Student Population	Average Daily Water Demand (gal/per/day)	Total Average Daily Demand (gal/day)	Total Average Yearly Demand (gal/year)
Existing Design Student Enrollment	750	60	45,000	16,425,000

The projections reveal the projected water demand is estimated to be 45,000 gallons per day or 16,425,000 gallons per year. The BWS will confirm the availability of water during the design phase and permitting phase for the new building.

2. Projected Water Demand Based on Building Square Footage

Although the design student enrollment population remains relatively unchanged, the new girl's locker room building will modify the overall building square footage on campus.

The projected water demand calculations based on overall change in building area square footage from the new girl's locker room building is as shown in Table 4-4 with calculations shown in Table 4-5.

TABLE 4-4
BUILDING SQUARE FOOTAGE
Girl's Locker Room

Building	Building Area (SF)	Change in Building Area (SF)
Girl's Locker Room	5,000	5000
Total Change in Square Footage:		5000

TABLE 4-5
WATER DEMAND CALCULATIONS BASED ON BUILDING SQUARE FOOTAGE

	Increase in Building Area (SF) (A)	Calculated Increase in Average Daily Demand (A) x 120 gal./1000 sf (gallons)	Increase in Average Yearly Demand (gallons)	Total Average Yearly Demand with Irrigation and Existing Building Square Footage
Girl's Locker Room	5000	600	219,000	
Existing Campus (for comparison purposes)	237,689			52,020,530

The total estimated water demand based on the increase in building floor area square footage for the new girl's locker room building is 600 gallons per day or 219,000 gallons per year, indicating a 0.4 percent increase over present annual consumption.

This calculated increase in water demand based on building square footage is conservative since campus population remains relatively unchanged and activities in the new building are those being transferred from the existing girls locker room. For water service purposes, the most conservative projected water demand based on building floor area will be used rather than student population.

I. Water Distribution System Criteria

Since the BWS is the principal supplier of water in the City and County of Honolulu, their standards govern the planning and design of water distribution facilities. BWS standards applicable are summarized as follows:

1. The capacity of the distribution system shall deliver the maximum daily demand simultaneously with required fire flow with a residual pressure of 20 psi.

2. The distribution system shall deliver peak hour flow (without fire flow) with a minimum residual pressure of 40 psi.

3. Hazen Williams “C” values to be used in determining the carrying capacity of the mains:

Size	“C”
4", 6"	100
8", 12"	110
16”, 20”	120
24” and Larger	130

4. Maximum velocity in main without fire flow is 6 feet per second.

5. As stated earlier, for Water Master Planning purposes, the more conservative water demand based on building square footage shall be used.

   i. Average Daily Demand = 120 gallons per 1,000 sf of building floor area

   ii. Maximum Daily Demand = 1.5 x Average Day

   iii. Peak Hour Flow = 3 x Average Day

J. Water Improvements

The new girl’s locker room building requires a new water service point of connection as shown on Figure 1 which would be a connection to either the existing adjacent 2” water or nearby 6” water in the baseball field.

CHAPTER 5
DRAINAGE EVALUATION

A. General

This Drainage Evaluation assessed the existing campus drainage system for adequacy and compatibility for the new girl's locker room building. The Rules Relating to Storm Drainage Standards, Department of Planning and Permitting, dated January 2000, has been adopted for use in this evaluation, and will be referenced hereinafter as the Drainage Standards.

B. Existing Drainage System

The existing drainage system for the future girl's locker room building in Kaimuki High School is shown on Figure 1.

The existing underground drain lines near the proposed location of the new girl's locker room are 6 inches in diameter and lead to a drywell to the north of the existing gymnasium show on Figure 1. The parking lot adjacent to the new girl's locker room building features a 12 inch-drain line discharging to drywells.

There are storm drain inlets on Winam Avenue which connect to the 24-inch line connecting to the box culvert on Date Street. The box culvert on Date Street drains to a ditch and into Manoa Stream.

C. Drainage System Criteria

The new drainage system will consist of new drain lines ranging from 8-12 inches and an underground storm drainage detention system if required. Drain lines should be located in accessible and open areas such as roadways, grass areas, and mall areas to facilitate maintenance and minimize conflicts with any future improvements.

D. Drainage System Evaluation

The drainage system evaluation assessed various alternatives to handle the increase in runoff for the new building. The drainage system will need to be reevaluated during the design phase.

1. Surface Runoff Flows

Approximate surface runoff flow determinations were calculated per the Drainage Standards and described as follows:

a. The storm recurrence interval used was 10 years.

b. The rational formula was used to compute storm runoff quantities:

Q = CiA

Where:
Q = flow rate in cubic feet per second

C = runoff coefficient

i = rainfall intensity in inches per hour for a duration equal to the time of concentration

A = Drainage area in acres

c. Runoff coefficients were used in the computations as follows:

Roads, sidewalks and paved areas:	C =	0.90
Open vegetated areas:	C =	0.20
Gravel:	C =	0.70
Combined School and Open Area:	C =	0.60

E. Drainage Improvements

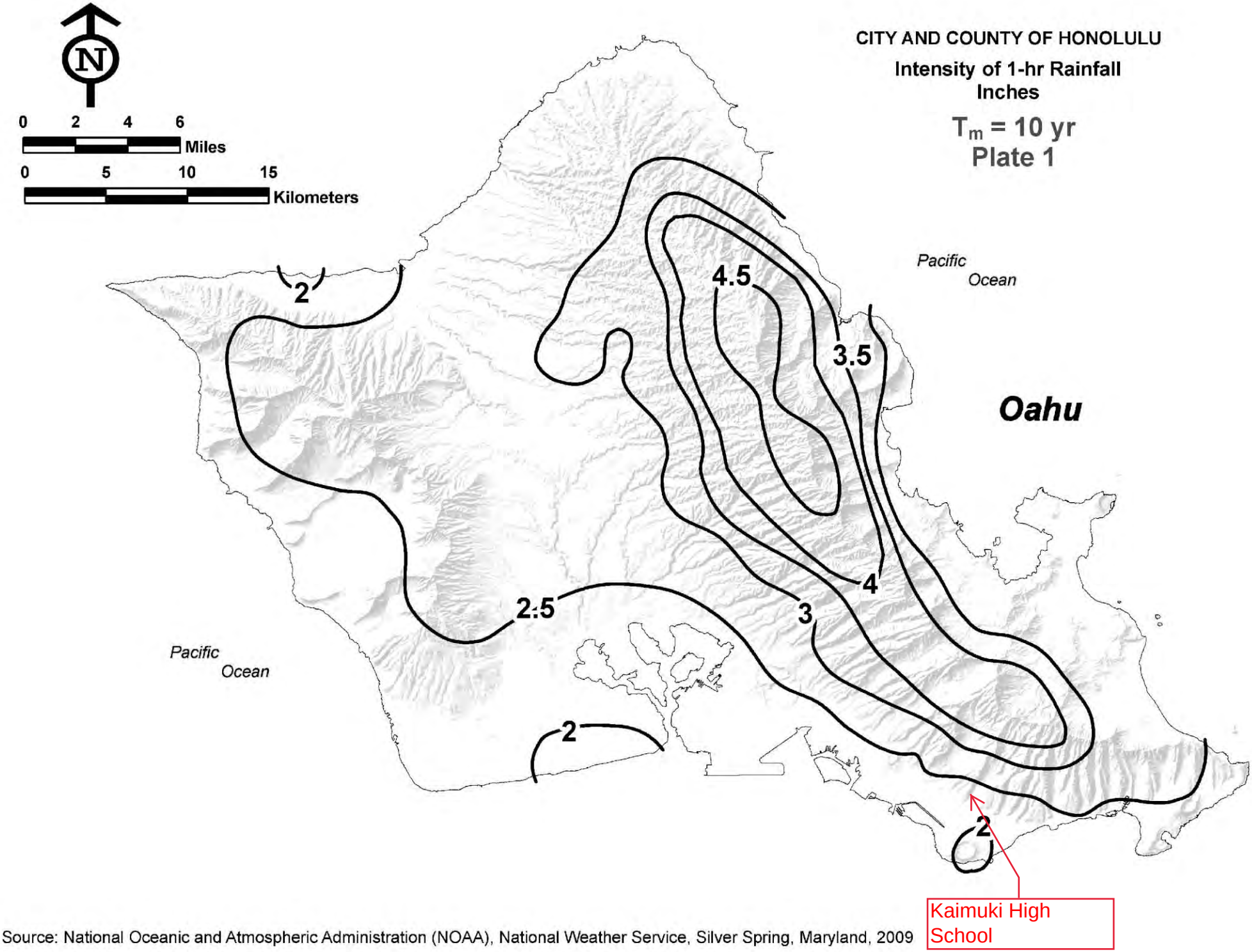
The existing campus drainage system is as shown on Figure 1.

Based on hydraulic calculations the new girl's locker room building will have a total runoff of 0.62 cfs, based on a 10-year recurrence interval, 1-hour duration rainfall. There is no increase in stormwater for the girls locker room since its location is at an existing impermeable asphalt concrete surface.

TABLE 5-1 Drainage Calculations

Drainage Area	Area (sf)	Area (ac)	% Grass/Dirt (C~0.20)	% Impervious (C~0.90)	C	I with CF of 2.5	Q (cfs)
Existing	5000	0.11	-	100	0.9	6.3	**0.62**
Proposed	5000	0.11	-	100	0.9	6.3	**0.62**
						Increase in Q =	**0 cfs**

A new underground detention system such as drywell or underground storage chambers can be installed to address localized ponding or retain any increase in storm water runoff if required.



Source: National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Silver Spring, Maryland, 2009

CHAPTER 6
SUMMARY AND COST

This Utility PER evaluated the capacity of the existing utilities for water, sewer, and drainage for the new girl's locker room building.

A. Sewer System Evaluation

The design peak flow calculations confirm that based on the existing student population, the new girl's locker room building will not require any increase in sewer capacity for the campus.

The new girl's locker room building will obtain future sewer service as shown in Figure 1 which consist of approximately 200 feet of new 6-inch sewer line. The new sewer line shall be sloped to provide adequate hydraulic capacity and the downstream sewer connection point shall be verified for hydraulic capacity during the design phase.

B. Water System Evaluation

The projected water demand calculations for the future girl's locker room building were calculated based on student population and building square footage. Water demand calculations based on student population remains unchanged since the student population remains constant however there is an increase in water demand of 600 gallons per day or 219,000 gallons per year using building square footage. The BWS will determine the availability of water during the design and permitting phase. The fixture unit counts for the new locker room will be assessed a water system facility charge.

The new girl's locker room will obtain future water service as shown on Figure 1 which consists of connection to the existing adjacent 2" or 6" water.

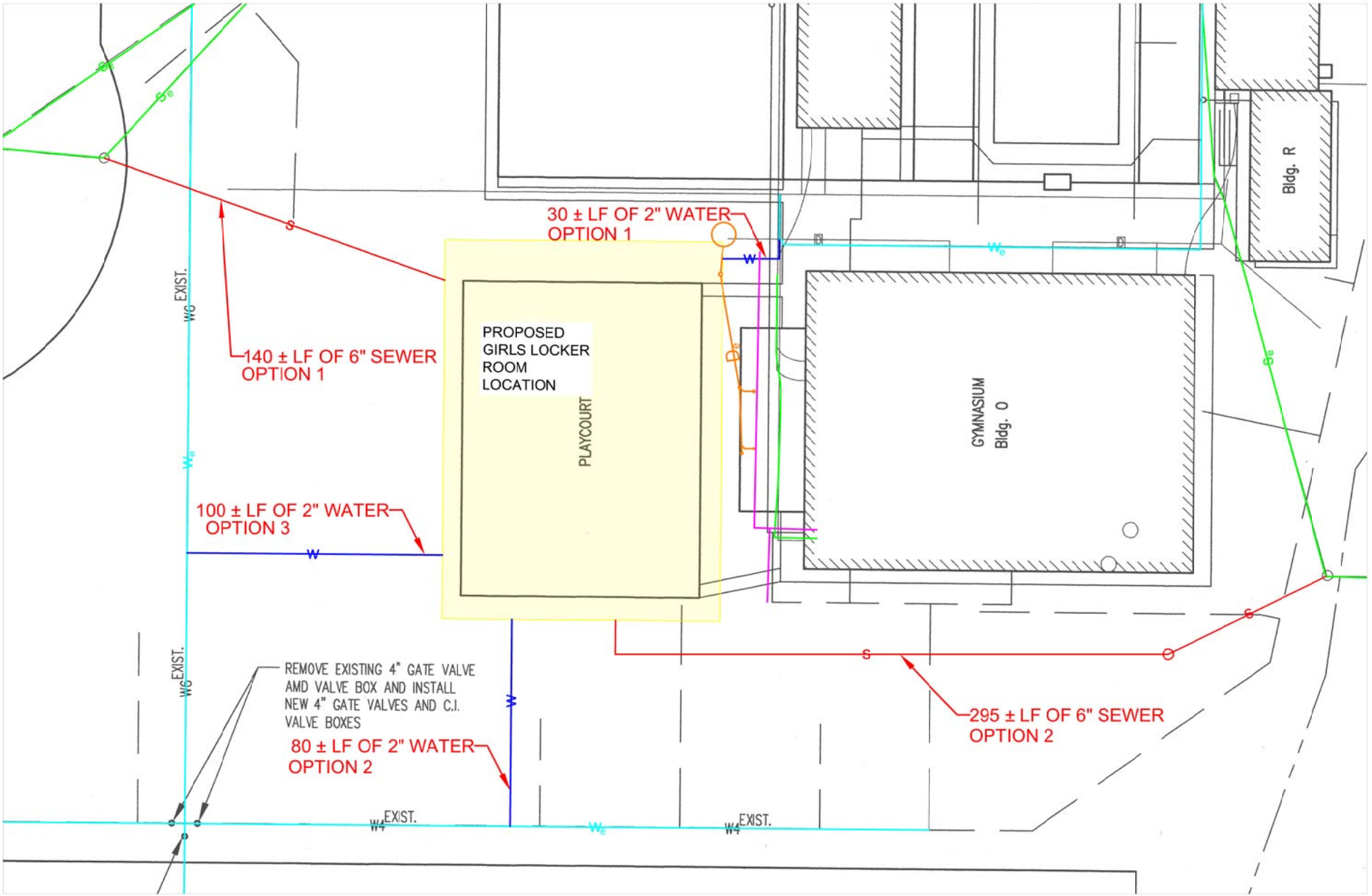
C. Drainage System Evaluation

Storm water runoff calculations for the future girl's locker room indicate that the new facility will not have an increase in runoff and drainage improvements for this scope of work is not anticipated at this time.

D. Cost

The estimated construction cost for water, sewer, drainage, and miscellaneous site improvements is $200,000.

FIGURE 1: KAIMUKI HIGH SCHOOL GIRL'S LOCKER ROOM - UTILITIES MAP



PROJECT TITLE:
KAIMUKI HS GIRLS LOCKER ROOM
PLANNING ESTIMATE FOR UTILITIES
7/14/2021

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
1	Mobilization / Demobilization	1	LS	$25,000	$25,000
2	Site Prep (Clear, Grub, Demo, etc.)	1	LS	$25,000	$25,000
3	Erosion and Dust Controls	1	LS	$15,000	$15,000
	SUBTOTAL				**$65,000**
4	2" Waterline	100	LF	$100	$10,000
5	6" Sewerline	295	LF	$200	$59,000
6	Sewer Manhole	1	EA	$15,000	$15,000
7	Misc Site Reparations	1	LS	$25,000	$25,000
	SUBTOTAL				**$109,000**

TOTAL **$174,000**

TOTAL WITH 15% CONTINGENCY (ROUNDED) **$ 200,000**

Appendix C:

Pre-Assessment Consultation Comment Letters and Responses

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai‘i 96850

April 6, 2022

In Reply Refer To:
2022-0027715-S7-001

Mr. Keola Cheng, Director-Planning
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai‘i 96826

Subject: Species List for the Proposed Kaimukī High School Girl's Athletic Locker Room TMK (1) 2-7-024:001 Honolulu, O‘ahu

Dear Mr. Cheng:

Thank you for your email of April 1, 2022, requesting a species list and guidance for the proposed construction of the Kaimukī High School Girl's Athletic Locker Room TMK (1) 2-7-024:001, on the island of O‘ahu. The proposed project is anticipated to be adjacent to the existing gym, baseball field, and tennis courts, in an area where the existing outdoor basketball courts are situated. It will encompass approximately 5,000 square feet and approximately no more than 30 feet in height.

This letter has been prepared under the authority of and in accordance with provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq*.), as amended (ESA). Based on this authority, we offer the following comments for your consideration. We have reviewed the information you provided and pertinent information in our files, as it pertains to listed species and designated critical habitat in accordance with section 7 of the ESA. There is no federally designated critical habitat within the immediate vicinity of the proposed project. Our data indicate the following federally listed species may occur or transit through the vicinity of the proposed project area: the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*); and the endangered Hawaiian petrel (*Pterodroma sandwichensis*), endangered Hawai‘i distinct population segment (DPS) of band-rumped storm-petrel (*Oceanodroma castro*), and threatened Newell's shearwater (*Puffinus auricularis newelli*) (hereafter collectively referred to as Hawaiian seabirds).

Hawaiian hoary bat
The Hawaiian hoary bat roosts in woody vegetation across all islands and will leave their young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared

during the pupping season, June 1 through September 15, there is a risk that young bats could inadvertently be harmed or killed, since they are too young to fly or move away from disturbance. Hawaiian hoary bats forage for insects from as low as 3 feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.

To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend you incorporate the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

Hawaiian seabirds

Hawaiian seabirds may traverse the project area at night during the breeding, nesting and fledging seasons (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable to light attraction.

To avoid and minimize potential project impacts to seabirds we recommend you incorporate the following measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

We appreciate your efforts to conserve protected species. If you have questions regarding this letter, please contact Charmian Dang, Fish and Wildlife Biologist (phone: 808-792-9400, email: Charmian_Dang@fws.gov). When referring to this project, please include this reference number: 2022-0027715-S7-001.

Sincerely,

Island Team Manager
O‘ahu, Kaua‘i, Northwestern Hawaiian Islands, and American Samoa

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Aaron Nadig
Pacific Islands Fish and Wildlife Office
Fish and Wildlife Service
United States Department of the Interior
300 Ala Moana Boulevard, Room 3-122
Honolulu, HI 96850

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Nadig:

Thank you for your letter dated April 22, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C. We provide the following responses to your comments:

Please note that your comments and recommendations have been incorporated relating to flora and fauna in Section 3.5 of the EA.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DAVID Y. IGE
GOVERNOR

CURT T. OTAGURO
COMPTROLLER

AUDREY HIDANO
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)22.046

APR - 1 2022

Keola Cheng
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Environmental Assessment (EA) Pre-Assessment Consultation for
Kaimuki High School Girls' Athletic Locker Room
Kaimuki, Oahu, Hawaii
TMK: (1) 2-7-024: 001

Thank you for the opportunity to comment on the subject project. We have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, your staff may call Ms. Gayle Takasaki of the Planning Branch at 586-0584.

Sincerely,

CHRISTINE L KINIMAKA
Public Works Administrator

GT:dk

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Ms. Christine Kinimaka
Department of Accounting and General Services
State of Hawai'i
1151 Punchbowl Street
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Ms. Kinimaka:

Thank you for your letter dated April 1, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge that the State of Hawaiʻi Department of Accounting and General Services does not have any comments to offer at this time as the Proposed Project does not impact any of their facilities. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

Please note that the Draft EA has been published and made available for downloading, review, and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DAVID Y. IGE
GOVERNOR
STATE OF HAWAII

JOSH GREEN
LT. GOVERNOR
STATE OF HAWAII

WILLIAM J. AILA, JR
CHAIRMAN
HAWAIIAN HOMES COMMISSION

TYLER I. GOMES
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879
HONOLULU, HAWAII 96805

April 8, 2022 Ref.:PO-22-089

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai'I 96826
Attention: Keola Cheng

Aloha Mr. Cheng:

Subject: Environmental Assessment Pre-Assessment Consultation for the Kaimukī High School Girl's Athletic Locker Room
TMK: (1) 2-7-024:001

The Department of Hawaiian Home Lands acknowledges receiving the request for comments on the above-cited project. After reviewing the materials submitted, due to its lack of proximity to Hawaiian Home Lands, we do not anticipate any impacts to our lands or beneficiaries from the project.

However, we highly encourage all agencies to consult with Hawaiian Homestead community associations and other (N)native Hawaiian organizations when preparing environmental assessments in order to better assess potential impacts to cultural and natural resources, access and other rights of Native Hawaiians.

Mahalo for the opportunity to provide comments. If you have any questions, please contact Andrew H. Choy, Planning Program Manager at (808)620-9481 or via email at: andrew.h.choy@hawaii.gov.

Me ke aloha,

for William J. Aila, Jr., Chairman
Hawaiian Homes Commission

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. William Aila, Jr.
Department of Hawaiian Home Lands
State of Hawai'i
91-5420 Kapolei Parkway
Kapolei, HI 96707

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Aila:

Thank you for your letter dated April 1, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge that the State of Hawaiʻi Department of Hawaiian Home Lands (DHHL) do not anticipate any impacts as the Proposed Project is not in proximity to DHHL land or beneficiaries. Please note that Section 3.7 of the EA discusses potential impacts to cultural resources and practices as a result of the Proposed Project. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

Please note that the Draft EA has been published and made available for downloading, review, and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

April 22, 2022

Log no. 3596

Keola Cheng
Planning Director
Wilson Okamoto Corp.
1907 S. Beretenia Street, Suite 400
Honolulu, Hawai‘i 96826

Dear Keola Cheng,

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for early consultation on a Draft Environmental Assessment (DEA) for the proposed new girl‘s athletic locker room at Kaimukī High School located at 2705 KaimukīAvenue in Kaimukī, on the island of O‘ahu, TMK: (1) 2-7-024:001. The proposed project consists of developing a modern facility that will encompass approximately 5,000 square feet (SF) of lockers and meeting area, shower and toilet stalls, a drying room, a coach’s office, equipment storage rooms, janitorial closets, a transgender room, a trainer’s room and potentially a weight training area. The proposed project would also include new utility connections for water, sewer, and electrical.

The State listed Hawaiian Hoary Bat or ‘Ōpe‘ape‘a (*Lasiurus cinereus semotus*) could potentially occur in the vicinity of the project area and may roost in nearby trees. Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by this type of fencing during flight.

Artificial lighting can adversely impact seabirds that may pass through the area at night by causing them to become disoriented. This disorientation can result in collision with manmade structures or grounding of birds. For nighttime work that might be required, DOFAW recommends that all lights used be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. For illustrations and guidance related to seabird-friendly light styles that also protect the dark, starry skies of Hawai‘i please visit: https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf

The State threatened White Tern (*Gygis alba*) or Manu o Kū is known to nest in the proposed project vicinity. If tree trimming or removal is planned, DOFAW strongly recommends a qualified

biologist survey for the presence of White Terns prior to any action that could disturb the trees. White Tern pairs lay their single egg in a branch fork with no nest. The eggs and chicks can be easily dislodged by construction equipment that nudges the trees. If a nest is discovered, please notify DOFAW staff for assistance.

State-listed waterbirds such as the Hawaiian Duck (*Anas wyvilliana*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), Hawaiian Coot (*Fulica alai*), and Hawaiian Common Gallinule (*Gallinula chloropus sandvicensis*) could potentially occur in the vicinity of the proposed project sites. It is against State law to harm or harass these species. If any of these species are present during construction activities, then all activities within 100 feet (30 meters) should cease, and the bird should not be approached. Work may continue after the bird leaves the area of its own accord. If a nest is discovered at any point, please contact the O‘ahu Branch DOFAW Office at (808) 973-9778.

DOFAW recommends minimizing the movement of plant or soil material between worksites, such as in fill. Soil and plant material may contain invasive fungal pathogens (e.g., Rapid ‘Ōhi‘a Death), vertebrate and invertebrate pests (e.g., Little Fire Ants, Coconut Rhinoceros Beetles), or invasive plant parts that could harm our native species and ecosystems. We recommend consulting the O‘ahu Invasive Species Committee (OISC) at (808) 266-7994 in planning, design, and construction of the project to learn of any high-risk invasive species in the area and ways to mitigate spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Gear that may contain soil, such as work boots and vehicles, should be thoroughly cleaned with water and sprayed with 70% alcohol solution to prevent the spread of Rapid ‘Ōhi‘a Death and other harmful fungal pathogens.

DOFAW recommends using native plant species for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. DOFAW recommends consulting the Hawai‘i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project (https://sites.google.com/site/weedriskassessment/home). We recommend that you refer to www.plantpono.org for guidance on selection and evaluation for landscaping plants.

We appreciate your efforts to work with our office for the conservation of our native species. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 295-1123 or paul.m.radley@hawaii.gov.

Sincerely,

DAVID G. SMITH
Administrator

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. David Smith
Division of Forestry and Wildlife
Department of Land and Natural Resources
State of Hawai‘i
1151 Punchbowl Street, Room 325
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, O‘ahu, Hawai‘i

Dear Mr. Smith:

Thank you for your letter dated April 22, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C. We provide the following responses to your comments:

Please note that your comments and recommendations have been incorporated relating to flora and fauna in Section 3.5 of the EA.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawai‘i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 29, 2022

LD 0302e

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Via email: publiccomment@wilsonokamoto.com

Attn: Mr. Keola Cheng

Dear Sirs:

SUBJECT: **Pre-Assessment Consultation for Draft Environmental Assessment**
Kaimuki High School Girls' Athletic Locker Room
Kaimuki, Honolulu, Island of Oahu
TMK: (1) 2-7-024:001

Thank you for the opportunity to review and comment on the subject project. The Land Division of the Department of Land and Natural Resources (DLNR) distributed copies of your request to DLNR's various divisions for their review and comment.

Enclosed are comments received from our Engineering Division. Should you have any questions, please feel free to contact Barbara Lee via email at barbara.j.lee@hawaii.gov. Thank you.

Sincerely,

Russell Tsuji

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 12, 2022

LD 0302e

MEMORANDUM

FROM: ~~TO:~~ **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division *(via email: DLNR.Engr@hawaii.gov)*
_X_ Div. of Forestry & Wildlife *(via email: rubyrosa.t.terrago@hawaii.gov)*
___Div. of State Parks
_X_ Commission on Water Resource Management *(via email: DLNR.CWRM@hawaii.gov)*
___Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District *(via email: barry.w.cheung@hawaii.gov)*

TO: ~~FROM:~~ Russell Y. Tsuji, Land Administrator *Russell Tsuji*

SUBJECT: **Pre-Assessment Consultation for Draft Environmental Assessment for Kaimuki High School Girls' Athletic Locker Room**

LOCATION: Kaimuki, Honolulu, Island of Oahu, Hawaii
TMK: (1) 2-7-024:001

APPLICANT: **Wilson Okamoto Corporation on behalf of the Hawaii Department of Education**

Transmitted for your review and comment is information on the above-referenced project. Please review the attached information and submit any comments by the internal deadline of **April 27, 2022** to barbara.j.lee@hawaii.gov at the Land Division.

If no response is received by the above due date, we will assume your agency has no comments at this time. Should you have any questions about this request, please contact Barbara Lee at barbara.j.lee@hawaii.gov. Thank you.

BRIEF COMMENTS:

( ) We have no objections.
( ) We have no comments.
( ) We have no additional comments.
(✓) Comments are included/attached.

Signed: *Carty S. Chang*
Print Name: Carty S. Chang, Chief Engineer
Division: Engineering Division
Date: Apr 20, 2022

Attachments
Cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji

Ref: Pre-Assessment Consultation for Draft Environmental Assessment for Kaimuki High School Girls' Athletic Locker Room
Location: Kaimuki, Honolulu, Island of Oahu, Hawaii
TMK(s): (1) 2-7-024:001
Applicant: Wilson Okamoto Corporation on behalf of the Hawaii Department of Education

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR, Chapter 1, Subchapter B, part 60 reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM). The official FIRMs can be accessed through FEMA's Map Service Center (msc.fema.gov). Our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT) could also be used to research flood hazard information.

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- Kauai: County of Kauai, Department of Public Works (808) 241-4896.

The applicant should include water demands and infrastructure required to meet project needs. Please note that all State projects requiring water service from their local Department/Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

The applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update projections.

Signed: 

CARTY S. CHANG, CHIEF ENGINEER

Date: Apr 20, 2022

LD 0302e

WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10627-01
March 28, 2022

Ms. Suzanne Case
Chairperson
State of Hawaii
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813

Subject: Environmental Assessment (EA) Pre-Assessment Consultation for the Kaimukī High School Girl's Athletic Locker Room
Tax Map Keys (TMKs): [1] 2-7-024:001
Kaimukī, O'ahu, Hawai'i

Dear Ms. Case:

On behalf of the State of Hawai'i Department of Education, Wilson Okamoto Corporation is preparing an Environmental Assessment (EA) for the proposed new girl's athletic locker room at Kaimukī High School. The proposed project involves the use of State lands and funds and is therefore subject to the environmental documentation requirements prescribed under Chapter 343, Hawai'i Revised Statutes (HRS).

Pursuant to the EA Early Consultation Process, we are soliciting comments you may have on the proposed project. A summary of the proposed project and associated figures are enclosed, for your review. Please submit comments via email to publiccomment@wilsonokamoto.com, or written comments via mail to:

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai'i 96826
Attention: Mr. Keola Cheng

We would appreciate your written comments by April 29, 2022. If you have any questions or require additional information, please feel free to call myself, or Mr. Dalton Beauprez at (808) 946-2277.

Sincerely,

Keola Cheng
Director – Planning

Enclosures

ENVIRONMENTAL ASSESSMENT

EARLY CONSULTATION

Kaimukī High School Girl's Athletic Locker Room

Kaimukī High School
Kaimukī, Oʻahu, Hawaiʻi

April 2022

PREPARED FOR:

State of Hawaiʻi
Department of Education
1390 Miller Street
Honolulu, HI 96813

PREPARED BY:

Ushijima Architects, Inc.
2226 Young Street
Honolulu, HI 96826

Wilson Okamoto Corporation
1907 South Beretania Street
Honolulu, HI 96826

ENVIRONMENTAL ASSESSMENT EARLY CONSULTATION PACKAGE:

| 1. CHAPTER 343, HAWAI'I REVISED STATUTES REQUIREMENTS

The State of Hawai'i Department of Education (DOE) is proposing to construct a new girl's athletic locker room at Kaimukī High School (hereafter referred to as "Proposed Project") to provide the school with a modern facility to support its women's sports teams.

The implementation of the Proposed Project will require an Environmental Assessment (EA) due to the use of State lands and funds pursuant to §343-5 (1), Hawai'i Revised Statutes (HRS), "*Propose the use of state or county lands or the use of state or county funds, other than funds to be used for feasibility or planning studies for possible future programs or projects which the agency has not approved, adopted, or funded, or funds to be used for the acquisition of unimproved real property; provided that the agency shall consider environmental factors and available alternatives in its feasibility or planning studies.*"

This Early Consultation Package constitutes the first step in the EA process and is intended to notify stakeholders of the commencement of the preparation of an EA for the Proposed Project, as well as to solicit scoping input regarding the assessment of the Proposed Project. This subject EA will be prepared in accordance with Title 11, Chapter 200.1, Hawai'i Administrative Rules (HAR) as an "Agency Action" and will include an assessment of the potential environmental, social, cultural, and economic impacts associated with the Proposed Project. Pursuant to HRS §343-5(b), the DOE will be the "Approving Agency" and will determine the significance of potential environmental impacts.

| 2. PROJECT LOCATION AND SETTING

Kaimukī High School is situated at 2705 Kaimuki Avenue in Kaimukī on the island of O'ahu and is further identified by Tax Map Key (TMK) [1] 2-7-024:001 (See Figures 1 & 2). The Proposed Project is anticipated to be constructed adjacent to the existing gym, baseball field, and tennis courts, in an area where the existing outdoor basketball courts are situated (Project Site) (See Figure 3).

Kaimukī High School opened its doors in 1950, and featured a then total of 45 classrooms, three shops, an administration building as well as a cafeteria. From 1951 to 1953 additional buildings were added to campus to house business education, agriculture, science, art, homemaking, and other programs offered in the school's educational curriculum. In 1956, the music building was constructed. Playcourts were constructed from 1957 to 1958. In 1961, a 50-meter Olympic swimming pool was added to the campus. In 1964, Kaimukī High School dedicated its new gymnasium and a separate auditorium to accommodate 600 students was also constructed.

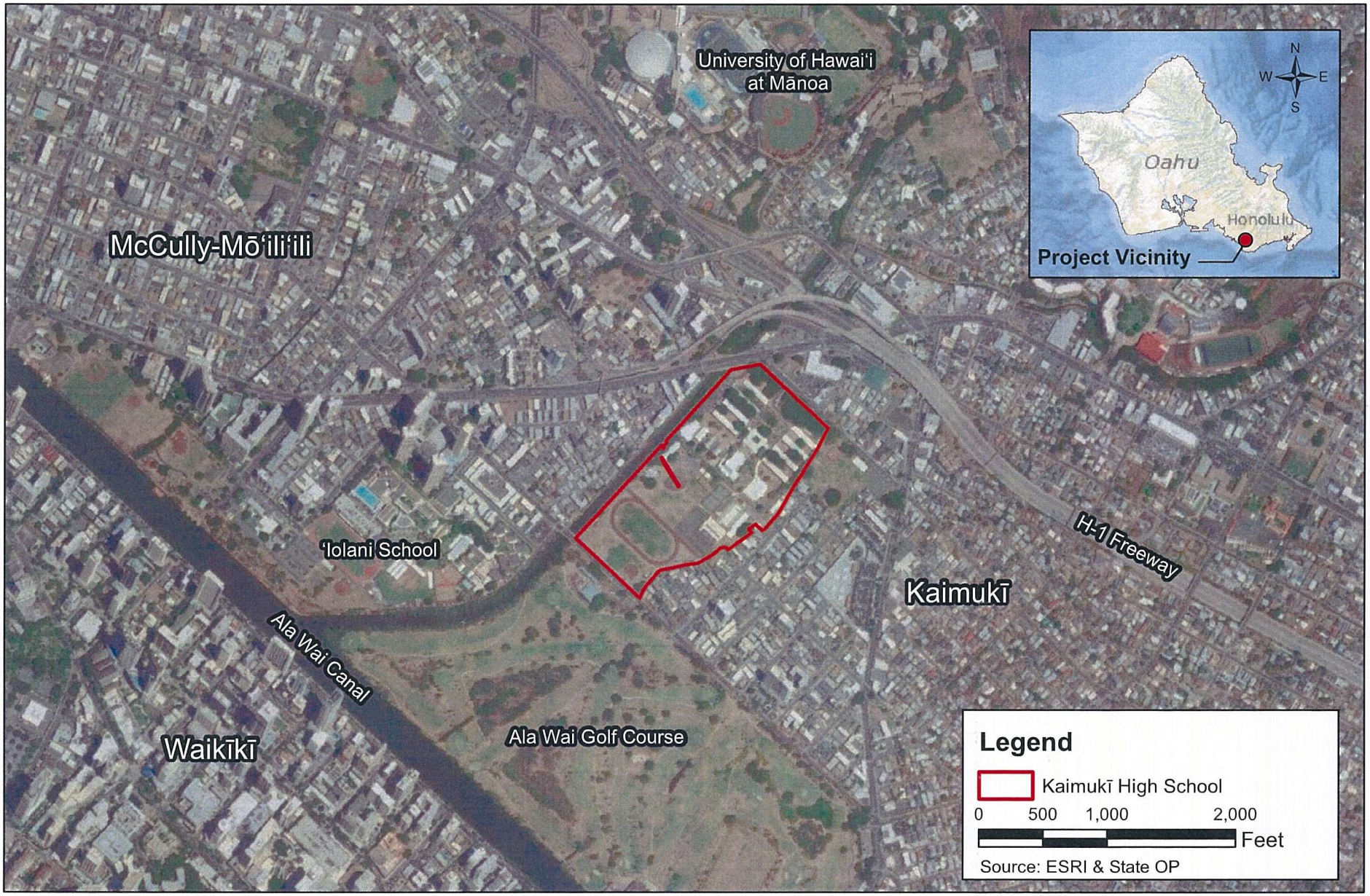


FIGURE 1

Project Location Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, O'ahu, Hawai'i

WILSON OKAMOTO CORPORATION

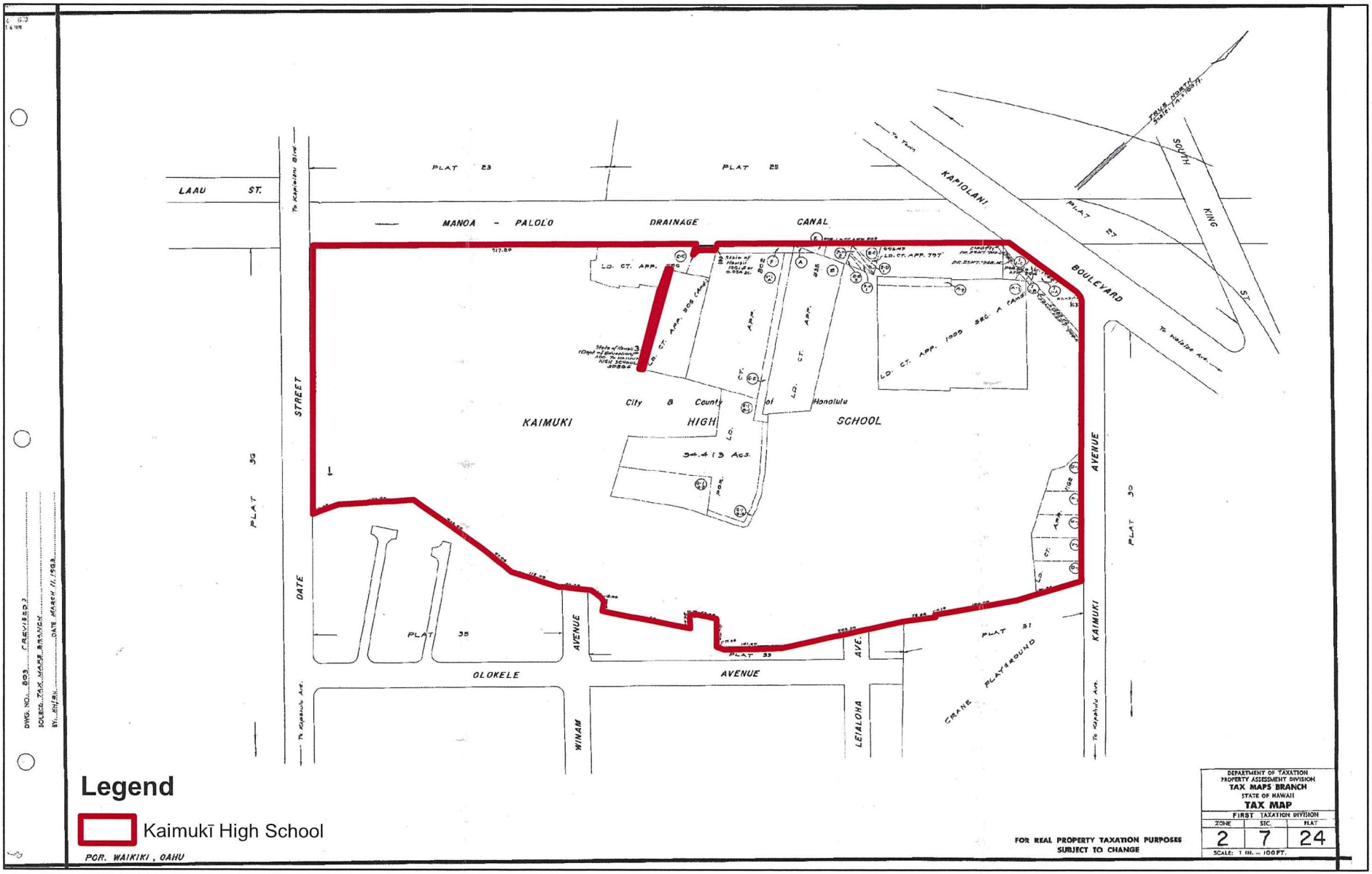


FIGURE 2

Tax Plat Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, O'ahu, Hawai'i

WILSON OKAMOTO CORPORATION

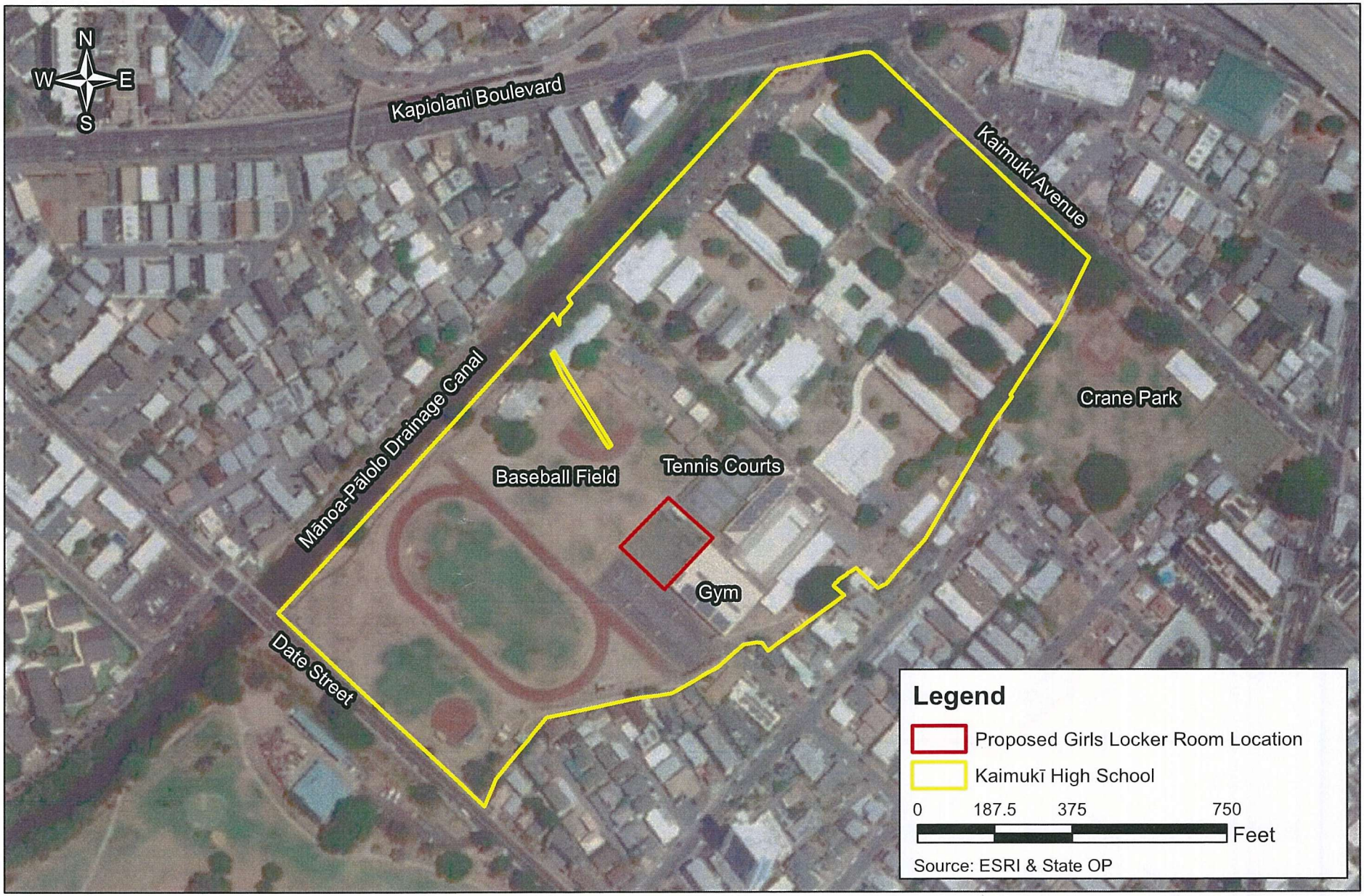


FIGURE 3

WILSON OKAMOTO CORPORATION

Proposed Girls Locker Room Location Map

Kaimukī High School Girls Athletic Locker Room
Kaimukī, Oʻahu, Hawaiʻi

The performing arts learning center was established in 1987. Today, the campus' major facilities encompass eight major classroom buildings that house approximately 82 classrooms, an administration building, library building, auditorium, and a cafeteria. Separate structures on campus include facilities for industrial arts, music, JROTC, and physical education. Athletic facilities include a 50-meter Olympic-size swimming pool, a gymnasium, outdoor basketball courts, tennis courts, and softball, soccer, baseball, football and track fields (See Figure 4). It should also be noted that Kaimukī High School is one of two high school Performing Arts Centers on O'ahu.

Kaimukī High School is a part of the DOE Kaimukī-McKinley-Roosevelt Complex area along with McKinley High School and Roosevelt High School. The school boundaries include the communities of Kaimukī, Kapahulu, Mō'ili'ili, McCully, Pālolo Valley, St. Louis Heights, and Waikīkī. The area is comprised of apartment buildings, high-rise condominiums, small businesses, older residential neighborhoods, and community parks. The Kaimukī Complex consists of ten elementary and middle schools in addition to Kaimukī High School including the following:

- Ala Wai Elementary School
- Ali'iolani Elementary School
- Hōkūlani Elementary School
- Jarrett Middle School
- Jefferson Elementary School
- Kaimukī Middle School
- Kūhiō Elementary School
- Lunalilo Elementary School
- Pālolo Elementary School
- Washington Middle School

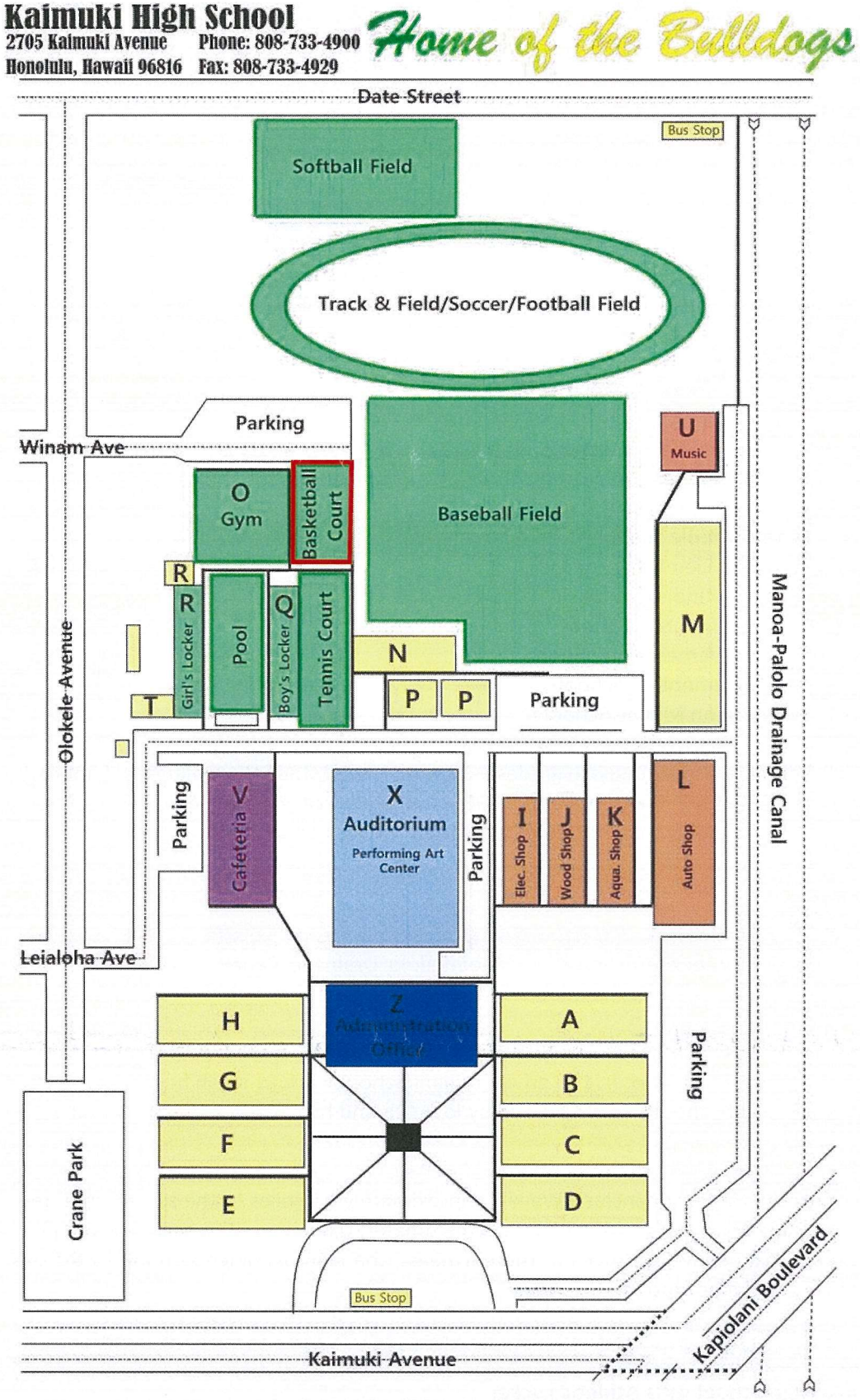
Kaimukī High School serves students in grades 9-12, with a total student enrollment of approximately 675 students for the 2020-2021 school year. The DOE is not expecting any significant increase or decrease, or any major changes to the projected school enrollment in the coming years and the Proposed Project is not expected to affect the school's current or future enrollment status.

Surrounding Uses

Kaimukī High School is bordered by the Mānoa-Pālolo Drainage Canal, Kapiolani Boulevard, Kaimuki Avenue, Crane Park, a residential neighborhood, and Date Street.

Nearby uses within a ½ mile radius include the Ala Wai Municipal Golf Course, Market City Shopping Center, Kapahulu Shopping Center, the private 'Iolani School, various small businesses and restaurants, and residential neighborhoods characterized by low-rise and high-rise buildings, as well as single family homes.

Other major uses in the region include Waikīkī approximately 0.6 miles to the south separated by the Ala Wai Canal, the University of Hawai'i at Mānoa approximately 0.6 miles to the north, Chaminade University of Honolulu approximately 0.75 miles to the northeast, the Kaimukī neighborhood to the east, and the McCully/Mō'ili'ili neighborhood to the west.



Legend

Proposed Project Site

Figure 4 Kaimukī High School Campus Map

| 3. PROJECT DESCRIPTION

| 3.1 PURPOSE AND NEED

Currently, Kaimuki High School's existing girl's locker room is outdated and overcrowded. The Proposed Project will provide the School with a much-needed modern facility that would serve its women's sports teams. The existing locker room will continue to be used for the general women's population at Kaimukī High School to serve physical education classes and curriculum.

Moreover, the Proposed Project will help meet Title IX requirements. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in any program or activity receiving Federal financial assistance. Title IX regulations require schools to achieve parity in terms of facilities that are provided for students. This includes facility elements such as locker rooms, bathrooms, showers, team rooms and lockers and pertains not only to quantity but also to quality of space and proximity to playing and practice fields.

| 3.2 PROJECT IMPROVEMENTS

The Proposed Project, as envisioned, will encompass approximately 5,000 square feet (SF) of lockers and meeting area, shower and toilet stalls, a drying room, a coach's office, equipment storage rooms, janitorial closets, and a transgender room. It is also anticipated that the Proposed Project would include a trainer's room and potentially a weight training area. The Proposed Project will be approximately 5,000 SF and approximately no more than 30 feet in height. The Proposed Project would also include new utility connections for water, sewer, and electrical. The Proposed Project would be an exclusive locker room for the female athletic teams offered at Kaimukī High School.

Kaimukī High School currently offers the following female sports at both the Junior Varsity (JV) and Varsity levels: volleyball, cross country, air riflery, bowling, cheerleading, softball, basketball, swimming, wrestling, water polo, tennis, soft tennis, judo, track, and paddling. It should also be noted that Kaimukī High School also offers a female soccer team, however, for the past four years, not enough participants have come out to field a full team and was not included in Table 1 below. Although the exact team numbers change each year, roster expectations are communicated annually to head coach and generally consist of the following roster sizes:

Table 1: Kaimukī Female High School Sports Roster Sizes

Sport	Roster Size (JV and Varsity)
Fall Sport (July – October)	
Volleyball	20
Cross Country	3
Air Rifle	8
Bowling*	4

Cheerleading	8
JV Softball (Fall Sport)	9 (JV only)
Winter Sport (October – February)	
Basketball	20
Swimming	3
Wrestling	3
Spring Sport (February – May)	
Varsity Softball (Spring Sport)	11 (Varsity only)
Water Polo	9
Tennis	4
Soft Tennis	4
Judo	3
Track	10
Paddling*	8

*An Off-Campus sport that would not use the proposed girl's locker room

Consequently, based on overlapping schedules of the various sports during the school year, it is anticipated that no more than approximately 60 occupants would be using the proposed locker room at any time.

| 3.3 PROJECT TIMELINE

Following design and permitting, construction of the Proposed Project is anticipated to commence sometime in Q3 2023, with completion targeted for Q1 2024.

The forthcoming Draft EA will provide an overview of all required permits and approvals required in association with the implementation of the Proposed Action.

| 4. CONSULTATION

As noted previously, this EA - Early Consultation Package constitutes the first step in the EA process, and is intended to notify stakeholders of the commencement of the preparation of an EA for the Proposed Action, as well as to solicit scoping input on the EA process.

This EA-Early Consultation Package has been circulated to the following parties:

Federal Agencies

U.S. Army Corps of Engineers, Honolulu District
U.S. Fish and Wildlife Services, Pacific Islands Fish and Wildlife Office

State of Hawai'i Agencies
Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Hawai'i State Energy Office
DBEDT, Land Use Commission
DBEDT, Office of Planning and Sustainable Development (OPSD)
DBEDT, OPSD – Environmental Review Program
Department of Agriculture
Department of Accounting and General Services
Department of Education (DOE)
DOE, Office of Facilities and Operations
Department of Defense
Department of Health (DOH)
DOH, Environmental Health Administration
Department of Land and Natural Resources (DLNR)
DLNR, State Historic Preservation Division
DLNR, Division of Forestry and Wildlife
DLNR, Land Division
Department of Hawaiian Home Lands
Office of Hawaiian Affairs
Department of Transportation (DOT)
DOT, Highways Division
DOT, Airports Division

City and County of Honolulu Agencies
Honolulu Fire Department
Department of Environmental Services
Department of Planning and Permitting
Department Parks and Recreation
Department of Design and Construction
Board of Water Supply
Honolulu Police Department
Department of Transportation Services
Department of Facility Maintenance

Government Officials
Senator Les Ihara Jr.
Representative Bertrand Kobayashi
Representative Jackson Sayama

Other Parties
Neighborhood Board No. 4 – Kaimukī
Neighborhood Board No. 5 – Diamond Head/Kapahulu/St. Louis Heights
Neighborhood Board No. 6 – Palolo
Neighborhood Board No. 8 – McCully/Mō'ili'ili

Neighborhood Board No. 9 - Waikīkī
Hawai'i State Library
Kaimukī Public Library
Hawaiian Telcom
Hawaii Gas
Hawaiian Electric Company
Spectrum Hawaii
Kaimukī High School Principal

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Russell Tsuji
Land Division
Department of Land and Natural Resources
State of Hawai'i
1151 Punchbowl Street, Room 220
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Tsuji:

Thank you for your letter dated April 29, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C. We provide the following responses to your comments:

As discussed in Section 3.4.2, the Proposed Project will be designed and constructed to applicable flood zone requirements, including Title 44 of the Code of Federal Regulations.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

From: Nakayama, Tad T
To: Public Comment
Cc: Ishii, Wade T
Subject: EA Pre-Assessment Kaimuki High School Girl"s Locker Room
Date: Monday, April 18, 2022 9:40:55 AM

Mr. Cheng,

Thank you for the opportunity to comment on the above project. The State of Hawaii Department of Defense has no comments to offer relative to the project.

Should there be any questions, please contact me at 808-369-3490 or tad.t.nakayama@hawaii.gov.

Thank you,

Tad T. Nakayama
Project Manager
State of Hawaii
Department of Defense – Engineering Office
3949 Diamond Head Road
Honolulu, HI 96816-4495
Phone: 808-369-3490

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Tad Nakayama
Department of Defense
State of Hawaiʻi
3949 Diamond Head Road
Honolulu, HI 96816

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Nakayama:

Thank you for your letter dated April 18, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge that the State of Hawaiʻi Department of Defense does not have any comments to offer at this time relative to the Proposed Project. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

Please note that the Draft EA has been published and made available for downloading, review, and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
DIRECTOR

Deputy Directors
ROSS M. HIGASHI
EDUARDO P. MANGLALLAN
PATRICK H. MCCAIN
EDWIN H. SNIFFEN

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

IN REPLY REFER TO:
DIR 0360
STP 8.3382

April 27, 2022

VIA EMAIL: publiccomment@wilsonokamoto.com

Mr. Keola Cheng
Director of Planning
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Pre-Assessment Consultation for the Environmental Assessment (EA)
Kaimuki High School Girl's Athletic Locker Room
Kaimuki, Oahu, Hawaii
Tax Map Key: (1) 2-7-024:001

Thank you for the letter dated March 28, 2022, requesting the State of Hawaii Department of Transportation's (HDOT) review and comment on the subject project. HDOT understands the State of Hawaii, Department of Education is proposing to build a girl's athletic locker room at Kaimuki High School, adjacent to the existing school gym, baseball field, and tennis courts. The proposed project will be an approximately 5,000 square feet facility and includes lockers, shower room, weight training room, coach office, transgender, and equipment storage.

HDOT has the following comments:

Airports Division (HDOT-A)

The proposed site is located more than five miles from the Daniel K. Inouye International Airport and therefore, HDOT-A has no comments on the proposed project.

Highway Division (HDOT-HWY)

Based on the project information provided, the HDOT-HWY finds the project does not appear to significantly impact the State highway system. However, the draft EA should provide a discussion to confirm the secondary traffic pattern/daily vehicle trips expected to be generated by the proposed use, will not contribute to traffic impacts to State highways in the area.

If there are any questions, please contact Mr. Blayne Nikaido of the HDOT Statewide Transportation Planning Office at (808) 831-7979 or via email at blayne.h.nikaido@hawaii.gov.

Sincerely,

JADE T. BUTAY
Director of Transportation

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Jade Butay
Department of Transportation
State of Hawai‘i
869 Punchbowl Street
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, O‘ahu, Hawai‘i

Dear Mr. Butay:

Thank you for your letter dated April 27, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C. We provide the following responses to your comments:

1. We acknowledge that the Airports Division has no comments regarding the Proposed Project.

2. We concur that the Proposed Project will not have any anticipated impacts on the State highway system or the surrounding roadway network. As discussed in Section 3.11, the Proposed Project will not result in additional classroom or office space (triggering additional off-street parking requirements), or an increase to faculty, staff, student enrollment, or visitors to the campus and, therefore, will not have any impacts. Moreover, the Proposed Project is anticipated to be mostly used after normal school hours by the female athletes at Kaimukī High School.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawai‘i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

April 19, 2022

Mr. Keola Cheng
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Your Letter Dated March 28, 2022 Requesting Comments on the Environmental Assessment Pre-Consultation for the Kaimuki High School Girl's Athletic Locker Room off Kaimuki Avenue - Tax Map Key: 2-7-024: 001

Thank you for the opportunity to comment on the proposed locker room project.

The existing Honolulu water system capacity has been reduced by 20 percent due to the shut-down of the Halawa Shaft pumping station. Upon learning of the fuel contamination of the Navy's Red Hill Shaft pumping station which supplies Joint Base Pearl Harbor Hickam, this pumping station was shut down to reduce the potential for fuel contamination to get into the Board of Water Supply (BWS) water system serving Honolulu from Halawa to Hawaii Kai. Water distributed via the BWS system continues to be safe to drink.

Presently, there is no moratorium on the issuance of new water meters or approval of requests for larger water meters for the Honolulu water system. If, and when, this situation changes, we will engage with related industries and the public to seek input.

Although we cannot, as a matter of course, confirm the adequacy of our water system to accommodate the proposed development, the final decision on the availability of water will be confirmed when the building permit application is submitted for approval based on the conditions in the water system at that time. The BWS reserves the right to change any position or information stated herein, up and until the final approval of the building permit application.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

We are closely monitoring water usage and will keep the public informed. If consumption by our customers exceeds the available water supply capacity, we will ask for voluntary conservation and, if necessary, mandatory conservation. Water use is seasonal and tied to weather conditions. The hot and dry summer months are when water demand is at its greatest. Please visit our website at www.boardofwatersupply.com for the latest updates and water conservation tips.

Water conservation measures are required for all proposed developments. These measures include utilization of nonpotable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The construction drawings should be submitted for our review and the construction schedule should be coordinated to minimize impact to the water system.

The BWS requires an area along the east boundary of Kaimuki High School to be clear and accessible during all phases of construction of the proposed project. The map showing the location of this required access area, circled in red, is attached.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at (808) 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

Attachment


Kaimuki High School
Olokele Ave
Olokele Ave
Olokele Ave
Olokele Ave
Leialoha Ave

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

June 7, 2022

Mr. Keola Cheng
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Your Letter Dated March 28, 2022 Requesting Comments on the Environmental Assessment Pre-Consultation for the Kaimuki High School Girl's Athletic Locker Room off Kaimuki Avenue - Tax Map Key: 2-7-024: 001

Thank you for the opportunity to comment on the proposed locker room project. The following supersedes our previous comments dated April 19, 2022:

The existing water system is currently adequate to accommodate the proposed development. However, please be advised that the existing Honolulu water system capacity has been reduced due to the shut-down of the Halawa Shaft pumping station as a proactive measure to prevent fuel contamination from the Navy's Red Hill Bulk Storage Tank fuel releases. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval, pending evaluation of the water system conditions at that time on a first-come first-served basis. The Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application.

We continue to request 10% voluntary water conservation of all customers until new sources are completed and require water conservation measures in all new developments. If water consumption significantly increases, progressively restrictive conservation measures may be required to avoid low water pressures and disruptions of water service.

Presently, there is no moratorium on the issuance of new and additional water services. Water distributed via the BWS water systems remains safe for consumption. The BWS is closely monitoring water usage and will keep the public informed with the latest findings. Please visit our website at www.boardofwatersupply.com and www.protectoahuwater.org for the latest updates and water conservation tips.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

Water conservation measures are required for all proposed developments. These measures include utilization of nonpotable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The construction drawings should be submitted for our review and the construction schedule should be coordinated to minimize impact to the water system.

The BWS requires an area along the east boundary of Kaimuki High School to be clear and accessible during all phases of construction of the proposed project. The map showing the location of this required access area, circled in red, is attached.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at (808) 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

Attachment

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Ernest Lau, P.E.
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Lau:

Thank you for your letter dated June 7, 2022, which superseded the previous comments sent by the Board of Water Supply on April 19, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

We acknowledge that the existing Honolulu water system, which provides for the Kaimukī High School campus, has been reduced due to the shut-down of the Hālawa Shaft pumping station as a proactive measure to prevent migration of fuel contamination from the ongoing Red Hill issue and that currently the BWS confirms the existing water system is adequate to accommodate the Proposed Project. However, the BWS will make a final decision on the availability of water when the building permit application is submitted for approval. Please note that we have taken your comments into consideration in preparing the EA and incorporated them with regards to the water system as it relates to the Proposed Project in Section 3.15.1 of the EA.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

RICK BLANGIARDI
MAYOR

ALEX KOZLOV, P.E.
DIRECTOR

HAKU MILLES, P.E.
DEPUTY DIRECTOR

April 12, 2022

SENT VIA EMAIL

Mr. Keola Cheng
publiccomment@wilsonokamoto.com

Dear Mr. Cheng:

Subject: Environmental Assessment (EA) Pre-Assessment Consultation for the Kaimuki High School Girl's Athletic Locker Room
Tax Map Keys (TMKs): (1) 2-7-024:001
Kaimuki, Oahu, Hawaii

Thank you for the opportunity to review and comment. The Department of Design and Construction has no comments to offer at this time.

Should you have any questions, please contact me at (808) 768-8480.

Sincerely,

for Alex Kozlov, P.E.
Director

AK:krn (877065)

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Alex Kozlov, P.E.
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Kozlov:

Thank you for your letter dated April 12, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge that the City and County Department of Design and Construction does not have any comments to offer at this time. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

Please note that the Draft EA has been published and made available for downloading, review, and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 Ulu`ohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

RICK BLANGIARDI
MAYOR

DAWN B. SZEWCZYK, P.E.
DIRECTOR AND CHIEF ENGINEER

WARREN K. MAMIZUKA
ACTING DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 22-157

April 25, 2022

Wilson Okamoto Corporation
Mr. Keola Cheng, Director-Planning
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Environmental Assessment, Pre-Assessment Consultation for the Kaimuki High School Girl's Athletic Locker Room
TMK: (1) 2-7-024:001

Thank you for the opportunity to review and comment on the subject project.

We have no comments at this time, as we do not have any facilities or easements on the subject property.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

Dawn B. Szewczyk, P.E.
Director and Chief Engineer

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Ms. Dawn Szewczyk, P.E.
Department of Facility Maintenance
City and County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, HI 96707

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Ms. Szewczyk:

Thank you for your letter dated April 25, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge that the City and County Department of Facility Maintenance does not have any comments to offer at this time as the Proposed Project does not impact any of their facilities or easements. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

Please note that the Draft EA has been published and made available for downloading, review, and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

RICK BLANGIARDI
MAYOR

DEAN UCHIDA
DIRECTOR

DAWN TAKEUCHI APUNA
DEPUTY DIRECTOR

May 3, 2022 2022/ELOG-642 (CK)

Mr. Keola Cheng, Director
Wilson Okimoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

SUBJECT: Pre-Assessment Consultation - Kaimuki High School
Girl's Athletic Locker Room
2705 Kaimuki Avenue - Waikiki
Tax Map Key 2-7-024: 001

This is in response to your letter, received March 29, 2022, requesting comments input on the scope of the forthcoming above-referenced Draft Environmental Assessment (EA) and anticipated Finding of No Significant Impact as required under Chapter 343, Hawaii Revised Statutes (HRS). We understand that the proposed activities include the construction of a new girl's athletic locker room to provide the high school with a modern facility to support its women's sports teams (Project). Further, the Project involves the use of state lands and funds, thereby triggering environmental disclosure under Chapter 343, HRS. The following are our comments for the items to address in the Draft EA:

1. The Draft EA should include a discussion of the characteristics of the proposed Project, including a discussion of future plans for development at the campus. For example, it appears that the proposed locker room will be located in an area currently occupied by a basketball court. Will Project implementation result in a future project to construct a basketball court elsewhere? Will the Project affect any existing parking, or result in the need for new or reconfigured parking?

2. Based on a review of our records, and the information provided in your request, the Project site is located in the A-2 Medium Density Apartment District.

Therefore, activities that are undertaken to implement the Project are subject to the development standards in Chapter 21, Revised Ordinance of Honolulu (ROH), Land Use Ordinance (LUO) as applicable to the A-2 District. Consistency with these standards should be discussed in the Draft EA. Will the proposed facility require Waivers to any development standards? The LUO is available on our website at:

www.honoluludpp.org/ApplicationsForms/ZoningandLandUsePermits

3. According to our records, portions of the subject property are located within Flood Zones AE and AEF, which are subject to compliance with Chapter 21A, ROH, the Flood Hazard Areas Ordinance. The Draft EA should identify whether any activities will occur within these flood zones, and what actions and or measures are proposed to comply with the Flood Hazard Areas Ordinance.

4. The Draft EA should include a discussion of the Project's compliance with the City's Rules Relating to Water Quality, and the National Pollutant Discharge Elimination System stormwater runoff requirements. For example, will there be any changes designed to manage stormwater runoff patterns? Will new or redesigned drainage facilities be required?

Thank you for the opportunity to comment on this proposal. Should you have any questions, please contact Christi Keller, of our staff, at (808) 768-8087 or via email at c.keller@honolulu.gov.

Very truly yours,

For: Dean Uchida
Director

cc: publiccomment@wilsonokimoto.com

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Dean Uchida
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Uchida:

Thank you for your letter dated May 3, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C. We provide the following responses to your comments:

1. We acknowledge your comments. Please note that the Proposed Project is anticipated to be constructed on a portion of the existing outdoor basketball court area. The basketball court will be relocated and reoriented as shown on Figure 2-2 of the EA on the remaining portion of the existing outdoor basketball court area. With regards to existing parking, the Proposed Project will not impact any of the existing parking facilities. As discussed in Section 3.11, the Proposed Project will not result in additional classroom or office space (triggering additional off-street parking requirements), or an increase to faculty, staff, student enrollment, or visitors to the campus and, therefore, will not have any long-term impacts on the availability of parking on the campus. Moreover, the Proposed Project would be used mainly after hours during various sporting seasons for female athletes at Kaimukī High School. However, short-term parking impacts may result from construction access or staging, particularly through the parking lot located adjacent to the Project Site. Prior to construction, parking areas and/or alternatives for faculty, staff, and visitors should be determined to minimize impacts to on-campus parking or on-street parking on streets in the vicinity of the campus.

2. We acknowledge your comments. Please note that Section 4.2.7 of the EA discusses the Proposed Project's compliance with the Land Use Ordinance. At this time, it is not anticipated that the

Proposed Project will require a waiver permit as it will be in compliance with applicable development standards.

3. As discussed in Section 3.4.2, the Proposed Project will be designed and constructed to applicable flood zone requirements. It is anticipated that finished floor will be raised to meet flood elevations.

4. We acknowledge your comments. Please note that Section 3.15.3 of the EA discusses the existing drainage system and anticipated improvements, as well as any potential impacts, as a result of the Proposed Project. It is anticipated that there will be no increase in stormwater for the Proposed Project since its location is at an existing impermeable asphalt concrete surface. The new drainage system will consist of new drain lines ranging from 8-12 inches and an underground storm drainage detention system if required.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

RICK BLANGIARDI
MAYOR

LAURA H. THIELEN
DIRECTOR

KEHAULANI PU'U
DEPUTY DIRECTOR

May 17, 2022

Mr. Keola Cheng, Director-Planning
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

SUBJECT: Pre-Assessment Consultation for the Draft Environmental Assessment
Kaimuki High School Girl's Athletic Locker Room
Tax Map Key: [1] 2-7-024:001

Thank you for the opportunity to review and comment at the Pre-Assessment consultation stage of the subject Draft Environmental Assessment.

The Department of Parks and Recreation's Division of Urban Forestry reviewed the submittal for the subject project and has the following comments.

As this is a State of Hawaii project, we request that the State incorporate the attached updated DPR Notes and Tree Protection and Preservation Notes for use when performing work for the above-noted project if there are construction impacts to the City street trees along Date Street due to staging and/or ingress/egress routes.

Should you have any questions, please contact Mr. John Reid, Planner at 808-768-3017.

Sincerely,

Laura H. Thielen
Director

Attachments

LHT:jr
(877296)

TREE PROTECTION / PRESERVATION NOTES

1. ABBREVIATIONS LIST:

A/EC	–	ARCHITECT / ENGINEER CONSULTANT
BWS	–	BOARD OF WATER SUPPLY
DDC	–	DEPARTMENT OF DESIGN AND CONSTRUCTION
DPR	–	DEPARTMENT OF PARKS AND RECREATION
DPP	–	DEPARTMENT OF PLANNING AND PERMITTING
DUF	–	DIVISION OF URBAN FORESTRY, DPR
FLMP	–	FORMAL LANDSCAPE MAINTENANCE PERIOD
GSTUA	–	GUIDELINES AND STANDARDS FOR TREES IN URBAN AREAS
LC	–	LANDSCAPE CONTRACTOR
OIC	–	OFFICER–IN–CHARGE, DDC
PMRS	–	PARK MAINTENANCE AND RECREATION SERVICES, DPR
QA	–	QUALIFIED ARBORIST
QAA	–	QUALIFIED ARBORIST APPLICATION
TAR	–	TREE ASSESSMENT REPORT
TPZ	–	TREE PROTECTION ZONE

2. SHOULD THE PROPOSED CONSTRUCTION IMPACT PARK TREES, STREET TREES, CITY TREES, OR PRIVATE PROPERTY TREES, THE CONTRACTOR SHALL:

   A. HIRE A QA AT NO COST TO THE CITY, THE QA SHALL:

      I. SUBMIT QAA AND INCLUDE COPIES OF THEIR CURRENT ISA CERTIFIED ARBORIST AND TREE RISK ASSESSMENT QUALIFICATION CREDENTIALS TO THE ADDRESS LISTED IN 2C OR VIA EMAIL TO **DUF@HONOLULU.GOV.**
      II. OBSERVE AND SUPERVISE THE TREE ROOT AND BRANCH PRUNING WORK TO ASSURE THE WORK PERFORMED DOES NOT DESTABILIZE THE TREE AND CAUSE FAILURE OR DEMISE OF THE TREES AND RISK PERSONAL INJURY AND PROPERTY DAMAGES.
      III. IMMEDIATELY REPORT THEIR CONCERNS TO THE DUF.
      IV. BE RESPONSIBLE FOR ENSURING THAT EXISTING TREES, LANDSCAPING, AND GRASS ARE AMPLY WATERED INSIDE THE PROJECT LIMITS LINE AND OUTSIDE THE PROJECT LIMITS LINE WHERE AFFECTED BY THE CONSTRUCTION.

   B. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL:

      I. SUBMIT CURRENT PHOTOS (DO NOT INCLUDE GOOGLE STREET VIEW PHOTOS) AND/OR VIDEO TO DOCUMENT THE EXISTING SITE CONDITIONS.

         (1) NOTE DISCREPANCIES FROM THE PLANS, ITEMS BROKEN OR DAMAGED OR IN NEED OF REPAIR, ERODED AREAS, TREES AND GROUNDS. SUBMIT MARKED SET OF PLANS WITH ITEMS MARKED IN RED TO:

         URBAN FORESTRY ADMINISTRATOR
         DIVISION OF URBAN FORESTRY
         DEPARTMENT OF PARKS AND RECREATION
         3902 PAKI AVENUE, HONOLULU, HAWAII 96815.

3. CONTRACTOR SHALL SCHEDULE A PRE–MOBILIZATION MEETING:

   A. CONTACT DIVISION OF URBAN FORESTRY (DUF), VIA EMAIL AT: **DUF@HONOLULU.GOV**

      ALLOW A MINIMUM SEVEN DAYS NOTIFICATION

   B. THE MEETING ATTENDEES SHALL INCLUDE THE QA, A/EC, DDC PROJECT MANAGER, OIC, CONTRACTOR, LC, DUF, AND PMRS STAFF.

   C. THE DISCUSSION SHALL INCLUDE, BUT NOT BE LIMITED TO:

      I. TREE ASSESSMENT REPORT, IF APPLICABLE,
      II. TREE DISPOSITION PLAN, IF APPLICABLE,
      III. TREE INVENTORY PLAN, IF APPLICABLE,
      IV. THE PROPOSED CONSTRUCTION SCHEDULE IN REGARD TO:
         (1) EXPOSING OF TREE/SHRUB ROOTS
         (2) GRADING
         (3) DEMOLITION
         (4) TRENCHING
         (5) EXCAVATION WORK, TREE/SHRUB REMOVALS
         (6) TREE/SHRUB RELOCATIONS
         (7) TREE ROOT/BRANCH PRUNING
         (8) TREE PROTECTION MITIGATION MEASURES
         (9) TREE PROTECTION ZONE FENCING ALIGNMENT
         (10) INSTALLATION OF TEMPORARY CONSTRUCTION BMPS'S SUCH AS SILT FENCE, FILTER SOCK/FILTRATION TUBE, ETC.
      V. DETERMINING VEHICULAR, AND EQUIPMENT INGRESS/EGRESS ACCESS ROUTE FROM THE STREET.
      VI. VEHICLE AND EQUIPMENT TURNING RADIUSES INCLUDING 3–POINT TURNS, TREE BRANCH PRUNING FOR SCAFFOLDING AND WORK SET–UP, LOW BRANCH PRUNING AND FROND TRIMMING WORK (FOR VEHICLE VERTICAL AND HORIZONTAL CLEARANCE).
      VII. LOCATING IRRIGATION HEADS AND UTILITY VALVE BOXES
      VIII. MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM, TREE, SHRUB, AND GRASS WATERING (INSIDE AND OUTSIDE THE PROJECT LIMITS LINE).
      IX. 120–CALENDAR DAY FORMAL LANDSCAPE MAINTENANCE PERIOD (FLMP) FOR TREE CARE.
      X. 90–CALENDAR DAY MAINTENANCE PERIOD FOR GRASS, GROUND COVERS, AND SHRUBS.
      XI. IDENTIFYING PARKING AREAS FOR WORKERS (PARKING IS NOT PERMITTED UNDER TREES AND IN GRASSED AREAS).
      XII. STAGING AND STOCKPILING AREAS TO PREVENT DAMAGE TO TREE SURFACE ROOTS AND TO PROTECT THE LANDSCAPED AREAS, GRASS, AND GROUNDS FROM COMPACTION AND EROSION.
      XIII. APPRISE (DUF) AND (PMRS) OF THE HOURS OF CONSTRUCTION FOR THE PROJECT.

4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS, INCLUDING, BUT NOT LIMITED TO:

   A. EXCAVATION PERMIT
   B. STREET USAGE PERMIT
   C. EXCEPTIONAL TREE PERMIT (DPR)
   D. TRENCHING PERMIT

5. FOR WORK ON OR IN THE VICINITY OF EXCEPTIONAL TREES OR AS DETERMINED BY DUF, THE CONTRACTOR SHALL:

   A. SUBMIT AN EXCEPTIONAL TREE PERMIT APPLICATION. REFER TO THE FOLLOWING WEBSITE: **http://www.honolulu.gov/rep/site/dpr/hbg_docs/ROH_Chapter_41a1-25.pdf**

   B. FOR TREE CROWN AND/OR ROOT PRUNING, CONTRACTOR SHALL SUBMIT AN APPLICATION FOR PRUNING. REFER TO THE FOLLOWING WEBSITE: **http://www.honolulu.gov/rep/site/dpr/hbg_docs/ET_PRUNING_PERMIT_rev_2017fillable.pdf**

   C. SUBMIT THE COMPLETED APPLICATIONS WITH ATTACHED CREDENTIALS TO:

      DUF ADMINISTRATOR
      3902 PAKI AVENUE
      HONOLULU, HAWAII 96815
      OR VIA EMAIL TO **DUF@HONOLULU.GOV**

   D. INCLUDE SUPPORTING DOCUMENTATION SUCH AS SITE MAP, PLANS, PHOTOGRAPHS, TREE ASSESSMENT REPORT, TREE DISPOSITION PLAN, IF APPLICABLE, TREE PROTECTION PLAN WITH THE APPLICATION.

6. PROHIBITED ACTIVITIES:

   A. DUMPING OF CONSTRUCTION MATERIALS, EQUIPMENT, WASTE PRODUCTS AND HAZARDOUS DEBRIS.

   B. VEHICLES STAGED, PARKED, STORED OR OPERATING WITHIN THE DRIP LINE OF THE TREES.

   C. DRIVING VEHICLES AND EQUIPMENT OVER THE TREE SURFACE ROOTS.

   D. SOIL COMPACTION AND EROSION DAMAGE OF THE GROUNDS IRRIGATION SYSTEM, TREE TRUNK, BRANCHES, ROOTS, LANDSCAPED AREAS AND GRASS.

   E. VEHICLE PARKING FOR WORKERS WITHIN THE PROJECT LIMITS LINE, GRASSED AREAS OUTSIDE THE PROJECT LIMITS LINE, STAGING AREAS, PLANTING STRIPS AND ROADWAY SHOULDERS, UNLESS OTHERWISE DETERMINED BY DUF AND PARK MAINTENANCE AND RECREATION SERVICES (PMRS) OF DESIGNATED STAFF.

7. DURING THE CONSTRUCTION PERIOD THE QA SHALL:

   A. SHALL PREPARE AN ARBORIST FIELD REPORT (INCLUDE PHOTOS) AFTER EVERY SITE VISIT AND SUBMIT TO DUF FOR REVIEW AND COMMENT IN A TIMELY MATTER.

   B. THE QA SHALL NOT SUB–CONTRACT THE WORK TO OTHER ARBORISTS WITHOUT WRITTEN APPROVAL BY DUF.

8. THE CONTRACTOR AND QA ARE RESPONSIBLE FOR:

   A. DEVELOPING A TREE WATERING SCHEDULE (WATERING DAYS, WATER USAGE, RUN TIMES, CYCLES), AND TO ENSURE THAT THE TREES AND GRASS INSIDE THE LIMITS OF WORK AND IN STAGING/STOCKPILING AREAS ARE SATISFACTORILY WATERED.

   B. ON–GOING LANDSCAPE MAINTENANCE, SUCH AS:

      I. PRUNING TREES AND HEDGES
      II. FERTILIZING, INCORPORATING SOIL AMENDMENTS.
      III. WEEDING, WATERING AND GRASS MOWING

   C. SHOULD THERE BE NO AUTOMATIC IRRIGATION SYSTEM OR IT IS DISABLED, THEN THESE AREAS ARE TO BE HAND–WATERED USING HOSES, INCLUDING AREAS OUTSIDE THE PROJECT LIMIT LINES THAT ARE AFFECTED BY THE DISABLED IRRIGATION SYSTEM.

   D. STAKING OUT THE TREE PROTECTION ZONE FENCING ALIGNMENT, IRRIGATION HEADS AND UTILITY VALVE BOXES AND ABOVE–GRADE TREE SURFACE ROOTS AND MARK WITH ORANGE–SURVEYOR'S PAINT FOR DUF REVIEW, MODIFICATION AND APPROVAL AT THE PRE–MOBILIZATION MEETING.

   E. MONITORING THE HEALTH OF THE TREES IN THE VICINITY OF THE WORK TO ASSESS THEIR POTENTIAL TO DROP LARGE BRANCHES AND/OR FAIL WHICH CAN DAMAGE THE CONSTRUCTION WORK AREA AND CAUSE BODILY INJURY TO WORKERS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:

   A. PAYING FOR ITS WATER AND ELECTRICAL USAGE FOR THE PROJECT.

   B. THE RE–GRASSING OF ALL GRASSED AREAS WITHIN THE PROJECT LIMITS LINE.

   C. RESTORATION OF DAMAGED AREA TO MATCH THE EXISTING AREAS AND FINISH GRADES.

   D. RESTORATION SHALL INCLUDE, BUT NOT BE LIMITED TO:

      I. SOIL AERATION (AERATOR EQUIPMENT).
      II. TOPSOIL.
      III. SOIL AMENDMENTS.
      IV. GRASS (SOD), SPRIGS, OR STOLONS (OR SEED).
      V. LEVEL, FINE GRADE, COMPACT WITH MECHANICAL ROLLER.
      VI. FERTILIZING
      VII. FILLING TO PROPER GRADE ALL DEPRESSIONS AND LOW SPOTS CAUSED BY THE CONTRACTOR'S OPERATIONS INCLUDING REGRASSING.
      VIII. IRRIGATION, MULCHING AND OTHER BENEFICIAL PRACTICES.
      IX. NEW GRASS TYPE SHALL MATCH THE EXISTING GRASS TYPE, UNLESS OTHERWISE DIRECTED BY OIC OR PMRS OR DESIGNATED STAFF PRIOR TO GRASS PLANTING.
      X. THE AREA TO BE RESTORED SHALL BE AERATED OR ROTOTILLED TO LOOSEN THE COMPACTION.
      XI. IF IMPORTED TOPSOIL IS REQUIRED, ROLL THE AREA TO PREVENT DEPRESSIONS AND RUTS. TOPSOIL SHALL BE PLACED NO LESS THAN ONE–HALF INCH BELOW THE TOP OF THE WALKWAYS TO PREVENT A TRIP HAZARD.
      XII. PREPARE THE AREA PRIOR TO GRASS PLANTING TO INCLUDE USE OF PRE AND POST–EMERGENT HERBICIDES.

   E. MINIMIZE ROOT CUTTING BY REROUTING THE PIPE AWAY FROM ROOTS OR SNAKE PIPE OR MICRO–TUNNEL UNDER AND/OR OVER THE TREE ROOTS FOR TRENCHING WORK INVOLVING PIPE WORK.

   F. THE CONTRACTOR AND SUB–CONTRACTORS ARE REQUIRED TO CONTINUE TO FOLLOW AND APPLY TREE PROTECTION PROTOCOLS DURING THE CONSTRUCTION WORK.

   G. INSPECTION OF ALL TREES PRIOR TO THE START OF CONSTRUCTION FOR WHITE TERNS, HAWAIIAN HOARY BATS AND OTHER THREATENED AND ENDANGERED SPECIES THAT MAY BE NESTING OR ROOSTING IN THE TREES.

   H. REPLACING GRASS THAT IS NOT READILY AVAILABLE MAY REQUIRED SAVING THE EXISTING GRASS TO BE RE–PLANTED AFTER CONSTRUCTION.

   I. INSURE THAT GRAVEL FROM THE TEMPORARY INGRESS/EGRESS CONSTRUCTION GRAVEL PAD DOES NOT SPILL ONTO GRASSED/LANDSCAPED AREAS, SIDEWALKS, WALKWAYS, DRIVEWAYS, PARKING LOT AND STREETS. CONTRACTOR SHALL BE RESPONSIBLE FOR:

      I. ANY DAMAGES TO VEHICLES.
      II. INJURIES TO PEDESTRIANS.
      III. DAMAGES TO MOWING EQUIPMENT AND INJURIES TO THE PUBLIC FROM AIRBORNE GRAVEL THROWN UP DURING MOWING.
      IV. DELAYS OR EXTENSIONS TO THE FLMP CAUSED BY GRAVEL EMBEDDED IN THE SOIL.

   J. CAREFULLY REMOVE EXISTING PAVEMENT, CURBS AND GUTTERS (IF APPLICABLE) AROUND TREES SO AS NOT TO DAMAGE THE ROOTS THAT ARE BELOW THE PAVEMENT.

      I. CONTACT DUF FOR A MEETING AT THE SITE FOR DISCUSSION PRIOR TO THE APPROVAL OF ANY DEMOLITION, GRADING, EXCAVATION, TRENCHING AND RESTORATION WORK.
      II. SHOULD THE QA BE UNABLE TO DETERMINE THROUGH VISUAL INSPECTION THE AMOUNT AND THE EXTENT OF THE ROOT SYSTEM TO BE PRUNED, DUF MAY REQUIRE THE CONTRACTOR TO USE AN AIR–WAND (AIR SPADE GUN) TO EXPOSE THE EXISTING TREE ROOTS WHEN PERFORMING EXCAVATION AND TRENCHING.

   K. FOR TRENCHING WORK, WHERE POSSIBLE, MINIMIZE ROOT CUTTING BY REROUTING THE PIPE AWAY FROM ROOTS, OR SNAKE PIPE OR MICRO–TUNNEL UNDER AND/OR OVER THE TREE ROOTS.

10. NEW TREES, REPLACEMENT TREES, RELOCATED TREES AND ROOT/BRANCH PRUNED TREES

   A. SHALL BE PRE–APPROVED AT THE NURSERY BY THE CONSULTANT'S LANDSCAPE ARCHITECT, LC, AND DUF AT LEAST TWO (2) WEEKS PRIOR TO THEIR DELIVERY TO THE PROJECT SITE. CONTACT DUF NURSERY AND LANDSCAPE SECTION VIA EMAIL AT **DUF@HONOLULU.GOV** TO SCHEDULE AN INSPECTION.

   B. DUF WILL NOT ACCEPT NEW, REPLACEMENT AND RELOCATED TREES THAT:

      I. HAVE AN UNDERDEVELOPED ROOT SYSTEM.
      II. ARE ROOT–BOUND.
      III. ARE DAMAGED DUE TO THE REMOVAL, TRANSPORT, OR INSTALLATION WORK BY THE LC, OR ITS SUBCONTRACTORS.
      IV. ARE UNHEALTHY, OR
      V. HAVE POOR STRUCTURE.

   C. FOR LANDSCAPE PLANTERS, PLANTING STRIPS AND TREE WELL PLANTINGS, DUF WILL NOT ACCEPT TREES:

      I. THAT HAVE TRUNKS WHICH ARE NOT CENTERED IN THE MIDDLE OF THE LANDSCAPE PLANTERS, PLANTING STRIP, OR TREE WELL.
      II. WHERE THE TRUNK AND/OR ROOT FLARES THAT RUB AGAINST THE TREE WELL GRATES.

   D. CONTRACTOR TO INSURE THAT THE MATURE TREE TRUNK AND CANOPY DO NOT:

      I. CONFLICT WITH OTHER TREE CANOPIES.
      II. CONFLICT WITH VEHICULAR TRAFFIC SIGHT LINES.
      III. TOUCH BUILDING FACADE, ROOF, OR AWNING.
      IV. DO NOT BLOCK STREET LIGHTING (NIGHT ILLUMINATION).

   E. TREE PLANTING:

      I. FOR FIELD STOCK TREE RELOCATIONS CONTRACTOR SHALL:
         (1) USE A WATERING PROBE TO MOVE SOIL WHILE BACKFILLING AND FILLING AIR POCKETS
         (2) CONTINUE TO PROBE THREE TIMES A WEEK FOR TWO WEEKS OR UNTIL THE AIR POCKETS ARE FILLED WITH SOIL. BACKFILL AREAS AFTER INITIAL PROBING.
         (3) LEAVE NO HOLES AROUND THE ROOT BALL WHICH MAY DRY OUT THE EXPOSED ROOTS.
      II. FOR TREE INSTALLATIONS NEAR THE GROUND WATER TABLE, THE CONTRACTOR SHALL:
         (1) NOT EXCAVATE DOWN BELOW THE GROUND WATER TABLE
         (2) PLANT ROOT BALL SHALLOW OR ABOVE GRADE WITH A MULCH LAYER COVERING THE ENTIRE ROOT BALL.
      III. IN HIGH WIND AREAS, TREES SHALL BE INSTALLED WITH THE CANOPY SLIGHTLY LEANING INTO THE WIND.

   F. THE LC AND QA SHALL CONSULT THE HAWAII PACIFIC RISK ASSESSMENT (HPWRA) WEBSITE FOR TREES HAVING POTENTIAL TO BE INVASIVE IN THE STATE OF HAWAII. **https://dlnr.hawaii.gov/hisc/files/2019/04/2018-HPWRA-FY18-Final-Report.pdf**

   G. THE CONTRACTOR SHALL PROVIDE A 120–CALENDAR DAY FLMP WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO:

      I. TREE PRUNING/PALM TRIMMING.
      II. REPAIRING STAKES, GUYS, AND TIES.
      III. CONTROLLING FOR DISEASES, INSECTS, AND PESTS.

   H. SHALL BE GUARANTEED FOR ONE YEAR

      I. FINAL ACCEPTANCE WILL BE BASED ON SUCCESSFUL COMPLETION OF THE 120–CALENDAR DAY FLMP.
      II. THE GUARANTEE PERIOD SHALL BEGIN ONLY AFTER ACCEPTANCE BY OIC, DUF, AND PMRS.
      III. THE CONTRACTOR SHALL CONTACT OIC AND DUF FOR THE COMMENCEMENT DATE OF THE ONE–YEAR TREE GUARANTEE PERIOD.

DIRECTOR, Department of Parks and Recreation — Date: 4/6/22

Revised: March 10, 2022

BY	BY	BY	BY	BY	APPROVED
					DAT. REV.
					DESCRIPTION
					INITL
					REVISION

CONSULTANT'S SEAL

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

Signature & Registration Data

DESIGN BY: XX DRAWN BY: XX
CHECKED BY: XX DATE:XX/XX/XXXX
ACCEPTED:
Chief, Facilities Division

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU

NAME OF BUILDING
TITLE OF PROJECT
ADDRESS
TAX MAP KEY

DESCRIPTION

PROJECT NO.: XX–XX–XX

DRAWING NO.:

X1

SHEET NO. . OF . | FILE NO. --

TREE PROTECTION / PRESERVATION NOTES (CONTINUE)

I. AT THE END OF THE FLMP, A FINAL INSPECTION OF THE TREES SHALL BE HELD. SHOULD THE OIC, DUF AND PMRS DETERMINE THAT ALL OR CERTAIN PORTIONS OF THE WORK ARE NOT ACCEPTABLE AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL BE REQUIRED TO:

   I. PROVIDE AN ADDITIONAL 60-DAY MAINTENANCE PERIOD AT NO COST TO THE CITY.
   II. DURING THIS PERIOD, THE CONTRACTOR SHALL MEET ALL CONTRACT REQUIREMENTS AND CORRECT ALL DEFICIENCIES.
   III. SHOULD ANY TREE SHOW DECLINING HEALTH OR FAIL TO SURVIVE THE DURATION OF THE FLMP, THE CONTRACTOR SHALL PROVIDE AND INSTALL A REPLACEMENT PLANT OF THE SAME SIZE AND SPECIES AT NO COST TO THE CITY.

J. AFTER THE SUCCESSFUL COMPLETION OF THE FLMP AND ANY EXTENSION CONTRACTOR SHALL:

   I. REMOVE THE WATERING BERMS AROUND TREES.
   II. LEVEL TO FINISH GRADE AND, IF DIRECTED BY DUF, INSTALL A FOUR-INCH THICK MULCH BLANKET.
   III. RESTORE GRASS AROUND THE TREE.

K. THE CONTRACTOR SHALL NOT BE LIABLE HOWEVER, FOR ANY TREE LOSS DUE TO THE LACK OF PROPER MAINTENANCE BY THE CITY, VANDALISM AND/OR ACCIDENT NOT CAUSED BY THE CONTRACTOR OR ITS SUBCONTRACTORS.

L. IF THE QA AND LC ARE UNABLE TO RELOCATE, PLANT NEW OR PLANT REPLACEMENT TREES AND SHRUBS WITHIN THE PARK DUE TO THE LACK OF SPACE OR UTILITY LINES, THEN THESE TREES SHALL BE PLANTED AT ONE OF THE FOLLOWING LOCATIONS AS DETERMINED BY DUF:

   I. AS STREET TREES FRONTING THE PARK.
   II. AS PARKING LOT TREES.
   III. AT A CITY-OWNED FACILITY (LOCATION DETERMINED BY DUF).
   IV. OR DELIVERED TO THE CITY TREE NURSERY.

M. PARTIAL APPROVAL FOR MULTIPLE TREE INSTALLATIONS WILL NOT BE GIVEN

11. LANDSCAPE IMPROVEMENTS, i.e. GRASS, GROUND COVERS, SHRUBS, IRRIGATION SYSTEM, GROUNDS RESTORATION AND AERATION

A. THE CONTRACTOR SHALL PROVIDE A 90-CALENDAR DAY FLMP WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO:

   I. IRRIGATION MODIFICATION, WATERING
   II. SHRUB PRUNING/TRIMMING
   III. MOWING, WEEDING, SOIL AERATION (AERATOR EQUIPMENT)
   V. RE-GRASSING, FERTILIZATION, TOP-DRESSING

B. FINAL ACCEPTANCE FOR LANDSCAPE IMPROVEMENTS, i.e. GRASS, GROUND COVERS, SHRUBS, IRRIGATION SYSTEM, GROUNDS RESTORATION AND AERATION SHALL BE AFTER THE SUCCESSFUL COMPLETION OF THE 90-CALENDAR DAY FLMP AND ANY EXTENSIONS.

C. AT THE COMPLETION OF ALL PLANTING OPERATIONS:

   I. A PRE-MAINTENANCE INSPECTION SHALL BE HELD PRIOR TO START OF FLMP.
   II. PRE-MAINTENANCE INSPECTION SHALL INCLUDE OIC, A/EC, DUF, PMRS, CONTRACTOR AND LC.
   III. ISSUANCE OF THE COMMENCEMENT DATE FOR THE FLMP IS CONTINGENT UPON ACCEPTANCE OF THE CORRECTION OF ALL DEFICIENCIES AND ACCEPTANCE BY OIC, DUF AND PMRS

D. FINAL ACCEPTANCE OF GROUND COVER PLANTING AT THE END OF THE FLMP:

   I. SHALL BE CONTINGENT UPON 95% GROUND COVER COVERAGE OF THE OVERALL AREA AND LESS THAN 5% WEEDS.
   II. INDIVIDUAL BARE SPOTS SHALL NOT EXCEED ONE SQUARE FOOT IN AREA.
   III. FINAL ACCEPTANCE INSPECTION SHALL INCLUDE OIC, DUF AND PMRS.
   IV. SHOULD ANY SHRUB SHOW DECLINING HEALTH OF FAIL TO SURVIVE THE DURATION OF THE FLMP, THE CONTRACTOR SHALL PROVIDE AND INSTALL A REPLACEMENT PLANT OF THE SAME SIZE AND SPECIES AT NO COST TO THE CITY.

E. IF WORK NOT ACCEPTABLE AT THE END OF THE FLMP CONTRACTOR SHALL:

   I. PROVIDE AN ADDITIONAL 60-CALENDAR DAYS OF MAINTENANCE AT NO COST TO THE CITY.
   II. DURING THIS PERIOD, THE CONTRACTOR SHALL MEET ALL REQUIREMENTS AND CORRECT ALL DEFICIENCIES.

F. WEEDS, DEFINED AS ANY PLANT, GRASS, BROADLEAF, OR SEDGE, OTHER THAN THAT SPECIFIED IN THE DRAWINGS, SHALL NOT EXCEED AN AREA GREATER THAN 5% OF THE OVERALL GRASS AREA, NOR SHOULD THEY CONSTITUTE MORE THAN 5% OF A 1,000 SQUARE FOOT AREA.

12. DAMAGE TO THE TREES DUE TO CONTRACTOR'S EQUIPMENT:

A. IS NOT ALLOWED. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS TO MITIGATE DAMAGES.

B. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE QA OF BRANCH, ROOT AND/OR TRUNK INJURIES TO ON-SITE, OFF-SITE AND/OR PRIVATE PROPERTY TREES DUE TO THE CONSTRUCTION WORK.

C. THE QA SHALL EVALUATE THE INJURY AND NOTIFY DUF BEFORE APPLYING TREATMENT.

D. QA SHALL SUBMIT A WRITTEN REPORT OF ALL TREE INJURIES. THE REPORT SHALL INCLUDE THE TREE'S HEALTH ASSESSMENT AND TREATMENT.

E. CONTRACTOR SHALL SUBMIT THE REPORT TO DUF AND PMRS DESIGNATED STAFF.

F. UPON APPROVAL FROM DUF, THE QA SHALL HAVE THE CONTRACTOR PERFORM REMEDIAL WORK WHICH MAY INCLUDE BARK TRACING TO CLEAN THE WOUND, PROVIDE SUPPLEMENTAL WATERING, AND MONITORING AS REQUIRED.

G. THE USE OF TREE PAINT TO DRESS TREE WOUNDS IS NOT ALLOWED.

13. TREE MITIGATION MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO:

A. WRAPPING THE TREE TRUNK WITH A THICK CARPET OR PROTECTIVE RUBBER PADDING OR "TREE TRUNK SHIELD".

B. A POLYPROPYLENE FABRIC WITH BAMBOO AND PVC PIPE INSERTS TO PROTECT THE TRUNK, ROOT FLARE, AND SURFACE ROOTS.

C. TREE PROTECTION ZONE FENCING.

D. TREE PROTECTION ZONE WARNING SIGNS.

E. THICK PLYWOOD BOARDS (FULL SIZE), STEEL PLATES.

F. HEAVY DUTY GROUND PROTECTION MATS OVER AN EIGHT-INCH ORGANIC MULCH LAYER UNDER THE TREE'S DRIP LINE.

G. PROTECTION TREE WELLS.

H. PLANTING STRIPS WITH EITHER PLASTIC BARRICADES (WATER FILLABLE) OR PORTABLE METAL BARRIERS.

14. TREE ROOT/BRANCH PRUNING BY CONTRACTOR AND LC SHALL:

A. RECEIVE APPROVAL FROM DUF PRIOR TO THE START OF THE WORK.

B. NOTIFY DUF A MINIMUM OF SEVEN DAYS IN ADVANCE VIA EMAIL (SEE NOTE 4A) TO ATTEND A MEETING WITH THE QA, LC AND CONTRACTOR TO DISCUSS THE WORK.

C. BE PERFORMED UNDER THE DIRECT OBSERVATION AND SUPERVISION OF THE QA WHO WILL BE RESPONSIBLE FOR THE FOLLOWING:

   I. INSPECT THE WORK TO PROTECT THE CITY FROM LIABILITY AND POOR WORKMANSHIP.
   II. INSURE THAT THE WORK DOES NOT AFFECT THE HEALTH AND CAUSE FAILURE OR DEMISE OF THE TREE.
   III. THE QA IS REQUIRED TO BE AT THE WORK SITE AT ALL TIMES DURING WORK PERFORMED ON OR NEAR TREES TO PROTECT THE CITY FROM LIABILITY AND POOR WORKMANSHIP.
   IV. THE QA IS RESPONSIBLE TO INSURE THAT THE WORK PERFORMED DOES NOT DESTABILIZE THE TREE, AFFECT THEIR HEALTH AND/OR CAUSE FAILURE OF DEMISE OF THE TREE.
   V. CONDUCT TREE HAZARD ASSESSMENT; INSPECT TREES FOR POTENTIAL FAILURE, CHECK ENVIRONMENT THAT MAY CONTRIBUTE TO THAT FAILURE; IDENTIFY POTENTIAL TARGETS (INJURIES TO PERSONS/DAMAGE TO OBJECTS).

D. EXPOSE THE TREE ROOTS PRIOR TO THE APPROVAL OF ANY DEMOLITION, GRADING, EXCAVATION, TRENCHING AND RESTORATION WORK.

E. IF THE QA IS UNABLE TO DETERMINE THROUGH VISUAL INSPECTION THE AMOUNT AND EXTENT OF THE ROOT SYSTEM IN LIEU OF BACKHOE EQUIPMENT AND SHOVELS, DUF MAY REQUIRE USE OF AN AIR-WAND (AIR SPADE GUN) TO EXPOSE THE EXISTING TREE ROOTS.

F. USE A CHAIN SAW WHEN MAKING THE INITIAL CUTS IN ROOT PRUNING. ALL FINAL CUTS SHALL BE MADE BY USING A SHARP HAND-SAW OR APPROVED ROOT PRUNING EQUIPMENT TO ENSURE CLEAN, NON-JAGGED CUTS.

G. FOR LARGE ROOT PRUNING USING BACKHOE EQUIPMENT FOR MAKING INITIAL CUTS THE OPERATOR SHALL NOT ALIGN THE FRONT EDGE OF THE BUCKET PARALLEL TO THE TREE ROOTS TO AVOID RIPPING ROOTS. ALL FINAL CUTS SHALL BE MADE USING A SHARP HAND-SAW OR APPROVED ROOT PRUNING EQUIPMENT TO ENSURE CLEAN, NON-JAGGED CUTS.

H. EXTENSIVE ROOT PRUNING MAY REQUIRE CROWN REDUCTION PRUNING.

15. GUIDELINES AND STANDARDS FOR TREES IN URBAN AREAS (GSTUA):

A. FOR ADDITIONAL TREE PRESERVATION AND TREE PROTECTION NOTES REFER TO THE GSTUA IN THE PROJECT SPECIFICATIONS.

DEPARTMENT OF PARKS & RECREATION (DPR) NOTES:

(FOR WORK WITHIN AREAS UNDER DPR JURISDICTION)

1. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING DIMENSIONS, AS-BUILT CONDITIONS, STRUCTURES, SITE IMPROVEMENTS, ETC., PRIOR TO BIDDING.
2. ALL INDICATED ITEMS ARE NEW UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL CONTACT THE DPR DISTRICT MANAGER, PHONE NO. (808)_____ AND DPR'S DIVISION OF URBAN FORESTRY (DUF) AT **DUF@HONOLULU.GOV** TWO WEEKS PRIOR TO START OF WORK.
4. EXCEPT FOR PORTIONS OF THE PARK GROUNDS AND FACILITIES AFFECTED BY THIS CONTRACT, THE PARK FACILITIES WILL BE IN USE BY THE PUBLIC. THE CONTRACTOR SHALL PROVIDE FULL COOPERATION WITH THE DPR TO EFFECTIVELY MAINTAIN SUCH USE OF THE PARK FACILITIES.
5. THE EXTENT OF REMOVAL AS INDICATED IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXTENT OF THE REMOVAL WORK TO PROPERLY ACCOMMODATE HIS METHOD OF CONSTRUCTING NEW WORK AS REQUIRED. ADDITIONAL REMOVAL, PATCHING, AND RESTORATION REQUIRED TO ACCOMMODATE CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE NEW WORK.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND OTHER SITE IMPROVEMENTS TO REMAIN. ANY DAMAGES RESULTING DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AND/OR REPLACED TO THE SATISFACTION OF THE OFFICER-IN-CHARGE (OIC) AT NO ADDITIONAL COST TO THE CITY AND COUNTY OF HONOLULU (CITY).
7. LOCATIONS OF ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING NEAR UTILITIES. ANY AND ALL DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE PROJECT MANAGER, THEN REPAIRED, REPLACED, AND/OR ITEM(S) RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT THEIR COST. UTILITIES SHALL INCLUDE BUT NOT LIMITED TO ELECTRICAL, TELEPHONE, SEWER, WATER, IRRIGATION SYSTEMS, ETC.
8. THE UNDERGROUND PIPES, CABLES OR DUCT LINES KNOWN TO EXIST BY THE ENGINEER FROM THEIR SEARCH OF THEIR RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE UTILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTION OF NEW UTILITIES TO THE EXISTING UTILITIES ARE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
9. NO TRACKED VEHICLES OR EQUIPMENT ALLOWED.
10. EXISTING IRRIGATION SYSTEM:

A. THE EXISTING IRRIGATION SYSTEM SHALL BE REPAIRED AND/OR RELOCATED AS SHOWN AND/OR AS NOTED ON THE PLANS AND IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR IRRIGATION AND WATER SYSTEMS OF THE DEPARTMENT OF PARKS AND RECREATION, CITY AND COUNTY OF HONOLULU.

B. THE CONTRACTOR SHALL VERIFY AND OPERATE THE EXISTING IRRIGATION, WATER AND ELECTRICAL SYSTEMS TO BECOME FAMILIAR WITH THE RESPECTIVE SYSTEMS NOT AFFECTED BY THIS PROJECT BUT WITHIN THE PROJECT LIMITS PRIOR TO THE START OF CONSTRUCTION AND DEMOLITION.

C. THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR EXISTING DAMAGES ON THE SYSTEMS IN PLACE PRIOR TO START OF DEMOLITION AND CONSTRUCTION.

D. THE CONTRACTOR SHALL COORDINATE OPERATION OF THE VARIOUS SYSTEMS WITH THE DPR'S DISTRICT MANAGER.

E. UPON COMMENCEMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT, MAINTAIN AND REPAIR THE PORTION OF THE EXISTING SYSTEMS WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT.

F. THE CONTRACTOR SHALL INCLUDE MAINTAINING WATER FOR THE FACILITIES AND IRRIGATION OF THE FIELDS AND GROUNDS TO THE SATISFACTION OF THE OIC AND SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

G. THE CONTRACTOR SHALL LOCATE, EXPOSE, AND VERIFY THESE EXISTING FACILITIES PRIOR TO COMMENCING WITH THE WORK. THE EXISTING SPRINKLER HEADS AND QUICK CONNECT VALVES MAY BE BURIED. THE LOCATION OF THE EXISTING WATER AND SPRINKLER LINES, HEADS AND VALVES AS SHOWN ARE APPROXIMATE ONLY.

H. THE CONTRACTOR SHALL PERFORM THE RELOCATION WORK IN SUCH A MANNER SO THAT SHUTTING DOWN OF THE EXISTING WATER AND SPRINKLER LINES ARE KEPT TO A MINIMUM AND ADJUST SPRINKLERS TO ASSURE PROPER COVERAGE AND OPERATION.

I. THE CONTRACTOR SHALL COORDINATE ALL SPRINKLER RELOCATION WORK WITH DPR'S PARK MAINTENANCE AND RECREATION SERVICES (PMRS) DISTRICT MANAGER.

J. THE CONTRACTOR SHALL MAINTAIN ALL AREAS AFFECTED BY THEIR OPERATIONS, INCLUDING THOSE AREAS OUTSIDE THEIR CONSTRUCTION AREA THAT MAY BE AFFECTED.

11. THE CONTRACTOR SHALL COORDINATE THEIR OPERATIONS WITH THOSE OF OTHER CONTRACTORS WHO MAY BE EMPLOYED ON ADJACENT OR RELATED PROJECTS OF THE CITY AND AVOID UNNECESSARY DELAY OR HINDRANCE IN THE PERFORMANCE OF THEIR RESPECTIVE CONTRACTS.
12. THE CONTRACTOR SHALL NOT OBSTRUCT THE ACCESS OR PARKING LOT TRAFFIC AND SHALL MAINTAIN PUBLIC USE OF THE PARKING LOT AT ALL TIMES.
13. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE OIC TO IDENTIFY ANY EXISTING DAMAGES AND/OR DETERIORATED CONDITIONS TO THE EXISTING TREES, GRASS, LANDSCAPING, WALKWAYS AND PARKING LOT TO BE USED FOR THE CONSTRUCTION ACCESS. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DAMAGES IDENTIFIED BY THE OIC PRIOR TO CONSTRUCTION.
14. UPON COMMENCEMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT, MAINTAIN, AND REPAIR ANY DAMAGES TO THE WALKWAYS AND PARKING LOT USED FOR THE CONSTRUCTION ACCESS.
15. FOR THE DURATION OF THE CONSTRUCTION WORK, THE CONTRACTOR SHALL BE REQUIRED TO WATER THE TREES, GRASS, AND LANDSCAPING THAT IS AFFECTED BY THE CONSTRUCTION WORK INCLUDING ANY IRRIGATION SYSTEM THAT EXTENDS OUTSIDE OF THE PROJECT LIMITS. THE CONTRACTOR SHALL PAY FOR ALL WATER USAGE FOR THIS.
16. FOR ALL DEPRESSIONS, LOW SPOTS, UPROOTED AREAS AND PROBLEM SPOTS AS DETERMINED BY DPR'S PMRS, THE CONTRACTOR SHALL RESTORE ALL AFFECTED AREAS ACCEPTABLE TO PMRS.
17. THE CONTRACTOR SHALL RESTORE ALL DAMAGE CAUSED BY THEIR OPERATIONS TO ORIGINAL CONDITION OR BETTER AT THEIR OWN EXPENSE. ALL RESTORATION WORK SHALL BE DONE IN ACCORDANCE WITH THE DPR STANDARDS AND ACCEPTABLE TO THE OIC.
18. THE CONTRACTOR SHALL REPAIR AND REFINISH SLABS, CURBS AND WALLS TO MATCH ADJACENT SURFACES WHERE EXPOSED OR DAMAGED DUE TO REMOVAL WORK OR THE CONSTRUCTION.
19. THE CONSTRUCTION OF IMPROVEMENTS SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND STANDARD DETAILS OF THE DEPARTMENT OF FACILITY MAINTENANCE (AS THEY MAY BE APPLICABLE). STANDARD DETAILS OF THE BOARD OF WATER SUPPLY, THE PARKS STANDARD DETAILS OF THE DEPARTMENT OF PARKS AND RECREATION, AND THE PROJECT SPECIFICATIONS AS THEY MAY BE APPLICABLE.
20. THE CONTRACTOR SHALL CONSULT WITH THE DPR TO ENSURE THAT FIXTURES ARE CONSISTENT WITH DPR SUPPLIES, FOR EASE OF MAINTENANCE AND REPLACEMENT.

DIRECTOR, Department of Parks and Recreation — Date

Revised: March 10, 2022

BY	BY	BY	BY	BY	APPROVED
					DWT. NO.
					DESCRIPTION
					DATE
					REVISION

CONSULTANT'S SEAL

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

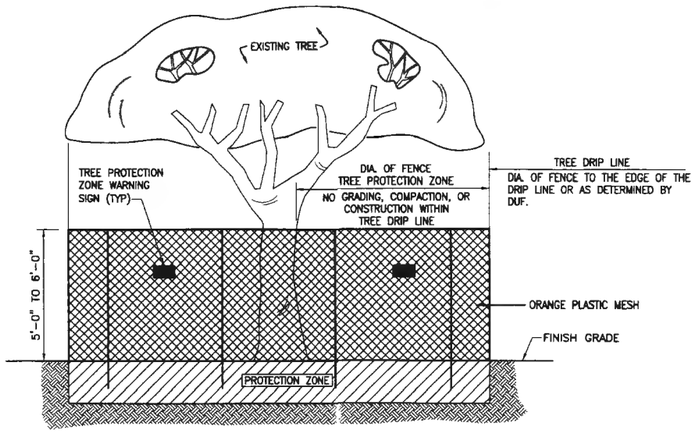
Signature & Registration Date

DESIGN BY: XX DRAWN BY: XX
CHECKED BY: XX DATE: XX/XX/XXXX
ACCEPTED:
Chief, Facilities Division

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU

NAME OF BUILDING
TITLE OF PROJECT
TAX MAP KEY
ADDRESS
DESCRIPTION

PROJECT NO.: XX-XX-XX
DRAWING NO.: X2
SHEET NO. . OF . | FILE NO. -



TREE PROTECTION ZONE FENCE NOTES:

1. FOR TREES THAT ARE IN NARROW PLANTING STRIPS, THE ENTIRE PLANTING STRIP SHALL BE ENCLOSED.
2. FOR TREE WELLS AND SMALL PLANTER AREAS THAT ARE FULL OF ROOTS, USE PLASTIC TRAFFIC BARRICADES (WATER FILLABLE) MINIMUM (3) EACH, OR TYPE 1 OR TYPE 2 BARRICADES, MINIMUM (4) EACH OR AS DETERMINED BY DUF.
3. TREE WILL REQUIRE SUPPLEMENTAL WATERING.
4. IF THE FENCE IS INSIDE THE DRIP LINE, PLYWOOD BOARDS OR STEEL PLATES OR HEAVY DUTY GROUND PROTECTION MATS OVER AN 8" MULCH LAYER WILL BE REQUIRED TO PROTECT THE TREE ROOTS AND CONSTRUCTION EQUIPMENT VEHICLES.
5. 2" GALVANIZED IRON POSTS, DRIVEN INTO THE GROUND TO MIN. 24" DEPTH, AT NO MORE THAN 10' SPACING.
6. THE GENERAL CONTRACTOR SHALL SCHEDULE AN ON SITE MEETING WITH THE DIVISION OF URBAN FORESTRY AT (808) 971-7151. DISCUSS THE INSTALLATION AND LAYOUT OF THE TREE PROTECTION FENCING.
7. AVOID DAMAGING ROOTS DURING FENCE POST INSTALLATION.

TREE PROTECTION DETAIL
NOT TO SCALE

WARNING

TREE PROTECTION ZONE

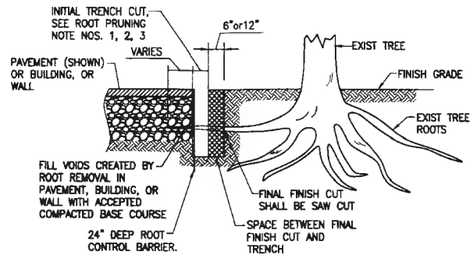
THIS FENCE AND SIGN SHALL NOT BE REMOVED WITHOUT APPROVAL FROM THE DIVISION OF URBAN FORESTRY
PHONE: (808) 971-7151

CITY AND COUNTY OF HONOLULU, DEPARTMENT OF PARKS AND RECREATION

SIGN NOTES:

1. MINIMUM SIZE OF SIGN: 8 1/2"x11"
2. SECURELY FASTEN TO FENCE
3. HANG MORE THAN ONE SIGN FOR VISIBILITY PURPOSES IF NEEDED AND AS INDICATED.
4. SIGN TO BE MADE OF WEATHERPRODF MATERIAL
5. AVOID DAMAGING TREE ROOTS DURING FENCE POST INSTALLATION

TREE PROTECTION SIGN DETAIL
NOT TO SCALE



NOTES:

1. ALL RELOCATION SHALL BE DONE UNDER THE SUPERVISION OF A QUALIFIED ARBORIST PER SPECIFICATIONS.
2. TRUNK DIAMETER OF THE TREE IS MEASURED AT 54 INCHES FROM EXISTING GROUND LEVEL.
3. THE QUALIFIED ARBORIST AND DUF/DPR SHALL DETERMINE THE AMOUNT OF THE TREE CANOPY PRUNING AFTER ROOT PRUNING.
4. WORK TO BE DONE UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
5. REMOVE AND DISPOSE OF PRUNED ROOTS AND BRANCHES.

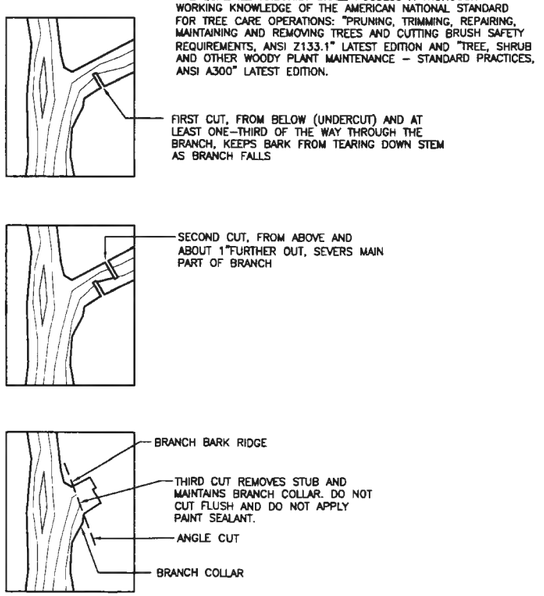
ROOT PRUNING DETAIL
NOT TO SCALE

ROOT PRUNING NOTES:

1. MAKE INITIAL TRENCH CUTS 6" BEYOND THE FINAL FINISH CUT WHEN USING A TRENCHER.
2. MAKE INITIAL TRENCH CUTS 12" BEYOND THE FINAL FINISH CUTS AND AVOID RIPPING ROOTS WHEN USING A BACKHOE AND/OR EXCAVATOR.
3. BACKFILL TRENCH WITH NATIVE SOIL DUG FROM THE TRENCH AND COMPACT ALL VOIDS TO MATCH EXISTING FINISH GRADE, AND SEED, SPRIG OR SOD WITH GRASS AS SPECIFIED.
4. WHEN USING BACKHOE EQUIPMENT FOR INITIAL CUTS, USE THE FRONT EDGE OF THE BUCKET PARALLEL TO THE TREE ROOTS (TRANSVERSE DIRECTION TO RADIATING ROOTS) TO SEVER THE TREE ROOTS TO AVOID RIPPING THE ROOTS.
5. HAND EXCAVATE AROUND ROOTS TO THE SIZE OF DESIRED ROOTBALL AND THEN PRUNE OFF PROTRUDING ROOTS BY HAND SAW OR CHAIN SAW.
6. ALL FINAL FINISH CUTS SHALL BE MADE USING A SHARP HAND SAW OR APPROVED ROOT PRUNING EQUIPMENT TO ENSURE CLEAN, NON-JAGGED CUTS.
7. WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
8. THE QUALIFIED ARBORIST AND THE DIVISION OF URBAN FORESTRY, DEPARTMENT OF PARKS & RECREATION STAFF SHALL DETERMINE THE AMOUNT OF THE TREE CANOPY THAT SHALL BE PRUNED AFTER ROOT PRUNING.
9. ALL PRUNED ROOTS AND BRANCHES SHALL BE REMOVED AND DISPOSED OF.
10. WHEN EXCAVATING ROOTS, DO NOT DAMAGE OR STRIP OUTER LAYER OF ROOT TISSUE.

NOTE:

THE QUALIFIED ARBORIST SHALL POSSESS A THOROUGH WORKING KNOWLEDGE OF THE AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS: "PRUNING, TRIMMING, REPAIRING, MAINTAINING AND REMOVING TREES AND CUTTING BRUSH SAFETY REQUIREMENTS, ANSI Z133.1" LATEST EDITION AND "TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE – STANDARD PRACTICES, ANSI A300" LATEST EDITION.



LARGE BRANCH PRUNING DETAIL
NOT TO SCALE

DIRECTOR, Department of Parks and Recreation — Date: 4/6/22

Revised: March 10, 2022

APPROVED	DATE	DESCRIPTION	SHEET	REVISION

CONSULTANT'S SEAL

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

Signature & Expiration Date

DESIGN BY: XX DRAWN BY: XX
CHECKED BY: XX DATE:XX/XX/XXXX
ACCEPTED:
Chief, Facilities Division

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU

NAME OF BUILDING
TITLE OF PROJECT
TAX MAP KEY
ADDRESS

DESCRIPTION

PROJECT NO. XX-XX-XX
DRAWING NO.:
X3
SHEET NO. . OF .
FILE NO. --

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Ms. Laura Thielen
Department of Parks and Recreation
City and County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, HI 96707

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Ms. Thielen:

Thank you for your letter dated May 17, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

Please note that implementation of the Proposed Project will not result in any impacts to City street trees.

Please note that the Draft EA has been published and made available for downloading, review, and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 ● FAX: (808) 768-3487 ● WEBSITE: http://envhonolulu.org

RICK BLANGIARDI
MAYOR

ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR

MICHAEL O'KEEFE
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
PRO 22-043

April 11, 2022

Mr. Keola Cheng
Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

SUBJECT: Environmental Assessment (EA) Pre-Assessment Consultation for the Kaimuki High School Girl's Athletic Locker Room
TMK: 2-7-024:001
Kaimuki, Oahu, Hawaii

We have reviewed the subject documents transmitted to us by your letter dated March 28, 2022. If the proposed project requires additional sewer capacity, then a sewer connection application should be submitted to the Department of Planning and Permitting, Site Development Division, Wastewater Branch.

Should you have any questions, please call Lisa Kimura, Civil Engineer, at 768-3455.

Sincerely,

Roger Babcock, Jr., Ph.D., P.E.
Director

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Dr. Rodger Babcock, Jr., P.E.
Department of Environmental Services
City and County of Honolulu
1000 Uluohia Street, Suite 308
Kapolei, HI 96707

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Dr. Babcock:

Thank you for your letter dated April 11, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

Please note that existing wastewater conditions and potential impacts related to the Proposed Project are discussed in Section 3.15.2 of the EA. The Proposed Project is not anticipated to generate additional sewer capacity needs.

Please note that the Draft EA has been published and made available for downloading, review, and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

RICK BLANGIARDI
MAYOR

SHELDON K. HAO
FIRE CHIEF

JASON SAMALA
DEPUTY FIRE CHIEF

April 18, 2022

Mr. Keola Cheng
Director - Planning
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Environmental Assessment Preassessment Consultation
Kaimuki High School Girl's Athletic Locker Room
2705 Kaimuki Avenue
Honolulu, Hawaii 96816
Tax Map Keys: 2-7-024: 001

In response to your letter dated March 28, 2022, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2018 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1, as amended.)

   A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2018 Edition, Section 18.2.3.2.1.)

2. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which

facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with Section 18.4. (NFPA 1; 2018 Edition, Section 18.3.1.)

3. The fire department access roads shall be in accordance with Section 18.2.3. (NFPA 1; 2018 Edition, Section 18.2.3.)

4. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Acting Battalion Chief Kendall Ching of our Fire Prevention Bureau at 808-723-7154 or kching3@honolulu.gov.

Sincerely,

CRAIG UCHIMURA
Acting Assistant Chief

CU/TC:bh

WILSON OKAMOTO CORPORATION

10627-01
August 23, 2022

Mr. Craig Uchimura
Fire Department
City and County of Honolulu
636 South Street
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Uchimura:

Thank you for your letter dated April 18, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

1. We acknowledge that FD access roads will be provided to the Proposed Project as appropriate.

2. We acknowledge that a water supply, approved by the City and County, capable of supplying the required water flow for fire protection shall be provided for the Proposed Project.

3. Civil drawings will be submitted to the FD for review and approval as noted in Section 4.3 of the EA.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

RICK BLANGIARDI
MAYOR

RADE K. VANIC
INTERIM CHIEF

OUR REFERENCE EO-DK

April 11, 2022

SENT VIA EMAIL

Mr. Keola Cheng
publiccomment@wilsonokamoto.com

Dear Mr. Cheng:

This is in response to your letter of March 28, 2022, requesting input on the Pre-Assessment Consultation, Environmental Assessment, for the proposed development of the new girl's athletic locker room at Kaimuki High School.

The Honolulu Police Department (HPD) recommends that all necessary signs, lights, barricades, and other safety equipment be installed and maintained by the contractor during the construction phase of the project. The HPD also recommends that adequate notification be made to residents in the area prior to deliveries or possible road closures, as any impacts to pedestrian and/or vehicular traffic may cause issues and disruptions to residents which could lead to complaints.

If there are any questions, please call Major Brian Lynch of District 7 (East Honolulu) at (808) 723-3369.

Thank you for the opportunity to review this project.

Sincerely,

DARREN CHUN
Assistant Chief of Police
Support Services Bureau

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Darren Chun
Honolulu Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, HI 96813

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Chun:

Thank you for your letter dated April 11, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawaiʻi Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C.

We acknowledge your comments. Please note as discussed in Section 3.11 of the EA that to mitigate short-term impacts related to construction work.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawaiʻi's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

From: Steven Nakashima
To: Public Comment
Subject: Kaimuki High School New Girls Locker room Project
Date: Wednesday, May 4, 2022 8:04:59 PM

One behalf of the Kaimuki High School Foundation, here are the issues that we would like to submit for consideration:

1. What affect will the new girls locker room have on entering and exiting the Gym?
2. What affect will the new girls locker room have on airflow into and out of the Gym?
3. What affect will the new girls locker room have on traffic flow in and out of that back part of campus?
4. Have safety issues been considered for users of the girls locker room as the new location will be a more isolated area from the the rest of the campus than where the girls locker rooms are now located?
5. **Access to and from the girls locker room area.** Where will the accesses to and from the girls locker room area be located:

A. in relation to the Gym,
B. in relation to the parking area outside the Gym,
C. in relation to the swimming pool area,
D. in relation to the tennis courts,
E. in relation to the track and football and softball fields., and
F. in relation to the boys locker rooms as the girls locker room will now be on the same side as the boy's locker rooms.

6. **Handicap access to the girls locker rooms.** There is a significant level drop from the pool area to the Gym area and to where the new girls locker room will be located.
A. Will there be a ramp to get from the pool area to the girls locker room?
B. Will that ramp be accessible by everyone or will it be limited to those using the girls locker room?

7. **Access to the school and the girls locker room from the Winam Avenue entrance to KHS.**
A. Is it anticipated that there will an increased use or need to use the Winam Avenue access to the Gym area with the relocating of the girls locker room?
B. If so, is there a provision in the plans for increasing the size of the entrance to the school from the Winam Avenue driveway?
C. Is there a provision for a different way of securing the Winam Avenue driveway to the school?

8. What will happen to the activities that took place on the outdoor basketball court that will necessarily be displaced by the new girls locker room?

Thank you for providing an opportunity to submit these questions and concerns. Steve Nakashima, President, Kaimuki High School Foundation

P.s. Please excuse the late submission. I thought this email was sent out earlier.

Sent from my iPad

WILSON OKAMOTO CORPORATION 75

10627-01
August 23, 2022

Mr. Steven Nakashima
Kaimuki High School Foundation
2705 Kaimuki Avenue
Honolulu, HI 96816

Subject: Environmental Assessment Early Consultation for the Kaimukī High School Girl's Athletic Locker Room Honolulu, Oʻahu, Hawaiʻi

Dear Mr. Nakashima:

Thank you for your letter dated May 3, 2022, regarding the subject Early Consultation Package for the Kaimukī High School Girl's Athletic Locker Room. We acknowledge your comments and concerns which have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix C. We provide the following responses to your comments:

1. The Proposed Project will not have any impact on entering and exiting the existing gymnasium.

2. The Proposed Project will not have any impact on existing airflow related to the existing gymnasium. The prevailing winds are from the north, northeast. The structure has courts to the north and south of the structure. The gym is located to the east with primary ventilation openings located facing away from the new building.

3. As discussed in Section 3.11, the Proposed Project will not result in additional classroom or office space, or an increase to faculty, staff, student enrollment, or visitors to the campus and, therefore, will not have any impacts regarding traffic flow. Moreover, the Proposed Project is anticipated to mostly used after normal school hours by the female athletes at Kaimukī High School.

4. We disagree that the Project Site is isolated from the rest of campus. Conversely, the Project Site was selected as it is an ideal location due to its proximity to the adjacent athletic facilities. Hence, the Project Site is centrally located to service those facilities.

5. Please note that Figure 2-2 (Site Plan) depicts the proposed orientation of the Proposed Project and how access is currently planned.

6. Please note that the Proposed Project will be ADA compliant.

7. As noted above, the Proposed Project will not result in additional classroom or office space, or an increase to faculty, staff, student enrollment, or visitors to the campus and, therefore, will not have any impacts regarding traffic flow, including on the surrounding roadway network.

8. Please note that the Proposed Project is anticipated to be constructed on a portion of the existing outdoor basketball court area. The basketball court will be relocated and reoriented as shown on Figure 2-2 of the EA on the remaining portion of the existing outdoor basketball court area. Hence, the basketball court will not be permanently displaced due to the Proposed Project.

Please note that the Draft EA has been published and made available for downloading, review and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng

Keola Cheng
Director of Planning

cc: Ms. Joleen Miranda-Pesquira, Ushijima Architects Inc.

Draft Environmental Assessment
Kaimukī, Oʻahu, Hawaiʻi
Kaimukī High School Girl's Athletic Locker Room

Wilson Okamoto Corporation